

The Effects of Out-of-Home Placement on the School Engagement of Maltreated Children

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OUT-OF-HOME PLACEMENT AND SCHOOL ENGAGEMENT

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ABSTRACT

Children in the child welfare system face a multitude of challenges following maltreatment. These children frequently go on to report poor outcomes in many facets of their life, including education. It is thought that children who are removed from their home following maltreatment and placed in out-of-home placement (OHP), experience even more challenges due to their removal from their home and environment. The literature surrounding maltreated children's educational outcomes suggest that these children struggle in school when compared to children who have not experienced maltreatment. However, literature surrounding the educational outcomes of maltreated children who experience OHP, versus maltreated children who do not experience OHP, tend to collectively present with mixed results. The purpose of this study was to isolate the effect of OHP on the educational outcome of, school engagement, to get a clearer picture of how OHP affects the educational outcomes of maltreated children. This study utilized data from the National Survey of Child and Adolescent Well-being (NSCAW II) with a total sample of 1,490 children. Propensity score matching was employed to isolate the effect of OHP on school engagement. The results indicate that there is no statistically significant difference in the school engagement of maltreated children who experience OHP, when compared to the school engagement on maltreated children who remain in-home. Direction for future research, and clinical implications are addressed.

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GENERAL AUDIENCE ABSTRACT

Children who experience any form of abuse (physical, sexual, neglect, and other), tend to experience a number of challenges in many parts of their life following the abuse. It is thought that children who are removed from their home following abuse and placed in out-of-home placement (OHP), experience even more challenges due to their removal from their home, family, and school. OHP is when the child is removed from the home and placed with a temporary caregiver in a: family or non-family foster home, group home, residential care, etc. When looking at the challenges that these abused children face, it is common for these children to experience challenges with school and their academics. The purpose of this research study was too narrow in on how OHP affects the child's ability to do well in school, specifically how it affects the child's school engagement. School engagement is best described as the way the child interacts and responds to school, including their attitudes and thoughts about school. The results indicate that there is no significant difference in the school engagement of children who experience abuse and OHP, when compared to the school engagement of children who experience abuse and remain in their original home. The results of this research study suggest that it is less about OHP, and more about abuse, that makes it difficult for abused children to have positive school engagement.

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CHAPTER I: INTRODUCTION

The Problem and its Setting

A nationally estimated 674,000 children were victims of child abuse and neglect in 2017, approximately 9.1 victims per 1,000 children in the United States population (U.S. Department of Health and Human Services, 2019a). Child maltreatment is defined as a variety of types of abuse perpetrated on a child under the age of 18, by a person in a caretaker role, such as a parent or guardian (The Center for Disease Control, 2014), such as physical abuse, sexual abuse, emotional abuse, and neglect. Following a report of child maltreatment, Child Protective Services investigates the substantiality of the maltreatment. In cases where abuse is substantiated and severe, the child is removed from the home and placed in out-of-home placement (OHP).

OHP is defined as the temporary removal of a child from their primary caregiver/home and placement in foster care, kinship care, residential or group home setting (U.S. Department of Health & Human Services, 2019b). If the child's OHP involves living with a non-relative, this can also be referred to as non-relative foster care, whereas if the child is living with a family member or relative, this is typically referred to as kinship care or relative-foster care (U.S. Department of Health & Human Services, 2019b). Of the 674,000 children who experienced child maltreatment in 2017, approximately 442,995 of those children (66%) experienced OHP (U.S. Department of Health and Human Services, 2018). While the number of children who experienced maltreatment has decreased between 2017 and 2018, the number of children experiencing OHP has increased with every year since 2013 (U.S. Department of Health and Human Services, 2018; U.S. Department of Health and Human Services, 2019a). Children can be in OHP for various amounts of time, and in different placements, while waiting for permanency.

Research has been conducted to examine a variety of different outcomes for children involved with child welfare (e.g., physiological health, mental health, economic instability, etc.).

Children who experience maltreatment are at increased risk for poor health outcomes (Fuller-Thomson, Brennenstuhl, & Frank, 2010; Springer, Sheridan, Kuo, & Carnes, 2007), mental health disorders (MacMillan et al., 2001), increased distress symptoms (Stein et al., 2001), the perpetration of abuse of their own children and partners (McKinney, Caetano, Ramisetty-Mikler, & Nelson, 2009), and poverty (Bunting et al., 2018). Children who experience maltreatment are also commonly involved with the juvenile and adult justice systems, and struggle with substance abuse (Jacob & Ryan, 2018; Walsh, McLaughlin, Hamilton, & Keyes, 2017; Widom, 2017; Zimmerman & Kushner, 2017). Furthermore, children in child welfare frequently go on to report lower employment rates, lower intelligence quotient (IQ) scores, and lower reading abilities in young adulthood (Courtney & Dworsky, 2006; Perez & Widom, 1994). Children who are involved with the child welfare system are frequently at increased risk for poor educational outcomes compared to other children. Some studies have found that children who have experienced maltreatment suffer from lower standardized test scores, grades, and IQ scores (Coohey, Renner, Hua, Zhang, & Whitney, 2011; Fantuzzo, Perlman, & Dobbins, 2011; Geenen & Powers, 2006; Scarborough & McCrae, 2010; Villegas, Rosenthal, O'Brien, & Pecora, 2013; Zetlin, Weinberg, & Kimm, 2004). These children affected by maltreatment also report poor outcomes that affect their ability to achieve in school such as, increased school absences (Fantuzzo, Perlman, & Dobbins, 2011; Leiter, 2007), more grade repetition (Jacob & Ryan, 2018; Rosenfeld & Richman, 2003), increased need for special education programs (Jonson-Reid, Drake, Kim, Porterfield, & Han, 2004; Scarborough & McCrae, 2010; Zetlin et al., 2004), more school suspensions and discipline referrals (Fantuzzo & Perlman, 2007; Fantuzzo, Perlman, & Dobbins, 2011). Not only do these maltreated children struggle in school during their

childhood and adolescence they also show a decreased likelihood to complete post-secondary degrees in young adulthood (Villegas, Rosenthal, O'Brien, & Pecora, 2013).

The literature surrounding educational outcomes for children who have experienced maltreatment, utilizes a myriad of measurements to evaluate the child's academic performance and outcomes. One of the most common constructs measured in this body of literature is academic achievement and school performance, which typically encompasses math and reading standardized test scores and/or grades (Cheung, Lewin, & Jenkins, 2012; Coohy et al., 2011; Crozier & Barth, 2005; Fantuzzo et al., 2011; Gypen, Vanderfaeillie, De Maeyer, Belenger & Van Holen, 2017; Hegar & Rosenthal, 2009; Maclean, Taylor, O'Donnell, M., & O'Donnell, M., 2018; Pecora, 2012; Piescher, Colburn, LaLiberte & Hong, 2014; Scarborough & McCrae, 2010). Other studies focus on various facets of education, individually or together, to determine educational outcomes for these children. Educational attainment is frequently utilized to determine how much education the child has completed, specifically whether they have completed high school, a post-secondary degree, and beyond (Cage, 2018; Okpych & Courtney, 2014; Tessier, O'Higgins & Flynn, 2018; Villegas et al., 2014). School attendance is also a component of educational outcomes, because it looks further at the child's attitude or dedication toward their education, as well as their avoidance of attending school (Conger & Rebeck, 2001; Fantuzzo, Perlman, & Dobbins, 2011; Maclean et al., 2018; Rosenfeld & Richman, 2003). Drop-out rates have been used to look more closely at how long the child remained in school, and if they completed high school or a post-secondary degree, similar to educational attainment academics (McMillen, Auslander, Elze, White, Thompson, 2003; Pecora et al., 2006b). Behavioral problems in school are common for children who have experienced maltreatment, and they have also been used as a measure of educational outcomes (McMillen et al., 2003;

O'Higgins, Sebba & Gardner, 2017; Scherr, 2007). Additional to the other measures is the element of special education programming in the child's life, and if the child has needed these services in school in order for them to succeed (Johnsen-Reid, Drake, Kim, Porterfield, Han, 2004; O'Higgins et al., 2017; Scarborough & McCrae, 2010; Tessier et al., 2018).

In addition to academic achievement and the various other educational outcome measures, child welfare literature also focuses heavily on school engagement as a gauge of educational outcomes (Coohey et al., 2011; Fantuzzo & Perlman, 2007; Fantuzzo, Perlman, & Dobbins, 2011; Font & Maguire-Jack, 2013; Rosenfeld & Richman, 2003; Scarborough & McCrae, 2010). School engagement includes behavioral, cognitive, and emotional elements of a child's engagement in school (Fredricks, Blumenfeld, & Paris, 2004). These three factors (i.e., behavioral, cognitive, emotional) combined encompass the child's overall attitudes and engagement in their school setting. School engagement predicts how well a child does in school, as well as how likely they are to remain in the school setting (Font & Maguire-Jack, 2013; Fredricks et al. 2004). School engagement can be helpful to better understand how the child interacts with different parts of their school environment, such as their teachers, administration, and other students. Additionally, school engagement frequently examines how much the child enjoys school, and works hard to do well in school. School engagement can be essential when looking at educational outcomes for this population, because it can pinpoint how the child really views school, rather than using objective measures that do not take into account the child's thoughts and feelings.

Most child welfare literature focuses broadly on the educational disadvantages of children involved in child welfare, rather than examining the impact of OHP on children's educational outcomes. However, a few studies explicitly explore the educational outcomes of

children in OHP (Fantuzzo & Perlman, 2007; Fantuzzo et al., 2011; Font & Maguire-Jack, 2013; Luke & O'Higgins, 2018; Maclean et al., 2018; Piescher et al., 2014; Rosenfeld & Richman, 2003). While not all children who are involved with the child welfare system experience OHP, arguably children in OHP are particularly vulnerable to poor educational outcomes as result of their removal, displacement from the families of origin, and overall disruption to their livelihood (Blome, 1997; Rosenfeld & Richman, 2003). In addition to disruptions to their living situations, many of these children are also forced to change schools and may experience a decrease in social support while in OHP (Blome, 1997; Rosenfeld & Richman, 2003). Children in OHP tend to score lower on standardized tests and are more likely to drop out of high school than maltreated children who were never removed from their home (Fantuzzo & Perlman, 2007; Luke & O'Higgins, 2018; Piescher et al., 2014; Rosenfeld & Richman, 2003). Children in OHP are also more likely to complete high school through a GED program, and are less likely to continue on to post-secondary education (Pecora et al., 2006a). Retention rates are very low for this population due to frequent disruption in the continuity of their education, making it difficult for them to remain on track in school. When these children are moved to different school environments, sometimes as often as twice a year, it makes it hard for them to get acclimated to a new school system. Some children have to repeat a grade due to paperwork not going through when the school transfers take place. Caregiver involvement can also have an impact on children's abilities to do well in school.

Blome (1997) found that children who experience maltreatment, and foster care, have less educational support from their foster care family, than those who do not experience maltreatment and foster care. The children in foster care receive less involvement and support to keep them on track to achieve post-secondary school attainment (Blome, 1997). More recent

literature exploring the educational outcomes of children in OHP examine a number of factors that influence a child's academic achievement following being removed from the home, without isolating the effect of OHP (Cage, 2018; Cheung et al., 2012; Conger & Rebeck, 2001; Cook 1994; Fantuzzo & Perlman, 2007; Fantuzzo et al., 2011; Geenen, & Powers; 2006; Geenen & Powers, 2006; Gypen et al., 2017; Hegar & Rosenthal, 2009; Jackson & Cameron, 2012; Johansson & Höjer; 2012; Maclean, Taylor & O'Donnell, 2016; Maclean, Taylor & O'Donnell, 2017; McMillen et al., 2003; O'Higgins et al., 2017; Pecora et al., 2006a; Pecora et al., 2006b; Stone, 2007; Tessier et al., 2018; Villegas et al., 2013). Few studies isolate the effect of OHP on academic engagement, academic achievement and performance, or educational experiences and aspirations (Fantuzzo & Perlman, 2007; Fantuzzo et al., 2011; Font & Maguire-Jack, 2013; Luke & O'Higgins, 2018; Maclean et al., 2018; Piescher et al., 2014; Rosenfeld & Richman, 2003).

Some scholars suggest that OHP can bring about an increased amount of stress and instability to a child's overall educational experience due to their change in living situation, and frequently a change in their school (Blome, 1997; Burley & Halpern, 2001; Cheung et al., 2012; Font & Maguire-Jack, 2013; Pecora et al., 2006a; Zima et al., 2000). Other scholars suggest that OHP offers the type of stability that allows for or promotes positive educational outcomes (Conger & Rebeck, 2001; Font & Maguire-Jack, 2013; Hegar & Rosenthal, 2009; Maclean et al., 2016; Maclean et al., 2018). For example, Font and Maguire-Jack (2013) suggest that children who experience OHP may have some benefits compared to children who were maltreated, but are never removed from the home. These benefits may stem from the support services the children in OHP receive from the child welfare system that may indirectly impact their academic outcomes. Children who are not in OHP, do not normally receive as extensive support services as children in OHP.

Overall, the literature exploring the educational outcomes of children in OHP reveals mixed findings (see Fantuzzo & Perlman, 2007; Fantuzzo et al., 2011; Font & Maguire-Jack, 2013; Luke & O'Higgins, 2018; Maclean et al., 2018; Piescher et al., 2014; Rosenfeld & Richman, 2003), which obstructs our ability to obtain a clear picture of how to best support this population educationally. Some literature suggests that children who are maltreated, but remain in their home show no significant differences in their educational outcomes than maltreated children who are not in OHP (Font & Maguire-Jack, 2013; Luke & O'Higgins, 2018; Maclean et al., 2018). Additionally, some children in OHP are able to succeed in portions of their educational outcomes, such as attendance and school engagement, compared to children who are not in OHP. Scholars propose that this success can be attributed to support from their OHP caregiver, and additional services from the Child Welfare System (Font & Maguire-Jack, 2013; Maclean et al., 2018). While other literature suggests that children who are maltreated are educationally disadvantaged by OHP, compared to maltreated children who have not been removed from their home (Fantuzzo & Perlman, 2007; Fantuzzo et al., 2011; Piescher et al., 2014; Rosenfeld & Richman, 2003). Overall, children in OHP are at risk academically. Children in OHP do not receive the same educational support from caregivers as children who are not in OHP, and they do not report as many positive educational outcomes (Maclean et al., 2017; Rosenfeld & Richman, 2003).

Significance

Child maltreatment is a pressing issue in the United States (e.g., 9.1 victims per 1,000 children) (U.S. Department of Health and Human Services, 2019a). In severe cases, children are removed from their family of origin and experience OHP. Approximately 442,995 children experienced OHP in 2017 (U.S Department of Health and Human Services, 2018). Maltreated

children experience a host of poor outcomes. For example, maltreated children are at increased risk for poor educational outcomes compared to other children including: lower standardized test scores, lower IQ scores, increased school absences, more grade repetition, increased need for special education programs, and a decreased likelihood to complete post-secondary degrees. Education is a tool that can be utilized to predict a child's overall success and well-being even into adulthood (Tyler, Johnson, and Brownridge, 2008).

Some scholars have found that children in OHP are even further educationally disadvantaged compared to their peers who were maltreated but remain in home (Fantuzzo & Perlman, 2007; Fantuzzo et al., 2011; Piescher et al., 2014; Rosenfeld & Richman, 2003). Overall, this suggests that children in OHP are at risk academically. However, other scholars have found contrasting findings that suggest there are no significant differences in the educational outcomes of children in OHP compared to maltreated children (Font & Maguire-Jack, 2013; Luke & O'Higgins, 2018; Maclean et al., 2018). These mixed findings obstruct our ability as researchers to obtain a clear picture of how to best support this population educationally. Studies which isolate the effect of OHP on educational outcomes are needed to disentangle whether educational disadvantages are attributed to child maltreatment versus OHP. In addition, studies with longer follow-up periods are needed to reveal whether educational disadvantages continue or diminish over time. As a population that is already experiencing stress from the family system due to maltreatment and abuse from their caregivers, it is important that Marriage and Family Therapists have information to assist this population in achieving academic success, in hopes to create positive outcomes for their future.

Rationale

As research has indicated, children experience a culmination of stress and complications following being removed from their home and primary caregiver, and placed in a temporary living situation (Blome, 1997; Cheung et al., 2012; Coohy et al., 2011; Rosenfeld & Richman, 2003; Zima et al., 2000). While alarming statistics suggest that a substantial number of children in the United States experience OHP each year (i.e., 442,995 children in 2017), additional research is needed to examine the educational outcomes of children in OHP, particularly research which disentangles the impact of child maltreatment from OHP. If children in OHP report even greater educational difficulty than children who are maltreated but remain in home, said knowledge can be used to inform the services provided to children in OHP. Education, particularly academic success is beneficial to children and increases the chances of other positive outcomes during adulthood (Font & Maguire-Jack, 2013; Lynch & Cicchetti, 1997). However, few studies isolate the effect of OHP on educational outcomes (e.g., Fantuzzo & Perlman, 2007; Fantuzzo et al., 2011; Font & Maguire-Jack, 2013; Luke & O'Higgins, 2018; Maclean, 2018; Piescher et al., 2014; Rosenfeld & Richman, 2003). Some studies suggest that children in OHP report similar outcomes in terms of academic achievement and school engagement to maltreated children who have never experienced OHP (Fantuzzo et al., 2011; Font & Maguire-Jack, 2013; Luke & O'Higgins, 2018; Maclean, 2018). While other studies suggest that children in OHP report poorer outcomes academically, than those children who have been maltreated, but have not experienced OHP (Fantuzzo & Perlman, 2007; Piescher et al., 2014; Rosenfeld & Richman, 2003). Such studies are also limited in length of follow-up (e.g., 18-months) and do not reveal the long-term impact of OHP on academic achievement and school engagement.

This thesis study will expand on the extant child welfare literature exploring the educational outcomes for children placed in OHP in the child welfare system. This study utilizes

propensity score matching analyses to isolate the impact of OHP on educational outcomes (e.g., academic achievement and school engagement), while quieting the effects of other potentially confounding variables. This study will expand upon current child welfare literature by examining the long-term impact of OHP on children's educational outcomes at 36-month follow-up by comparing children in OHP to maltreated children involved with child welfare who were never removed from their family of origin. This research will assist Marriage and Family Therapists (MFTs) in better understanding the challenges that children in OHP experience academically in order to better assist them therapeutically. Armed with the findings of this thesis study, MFTs will be better positioned to educate parents, permanent and temporary caregivers, teachers, and other practitioners and professionals in offering support to children during and after OHP.

Theoretical Framework

This study is informed by Family Adjustment and Adaptation Response (FAAR) theory, which was developed by Joan Patterson (2002a, 2002b). FAAR theory provides an understanding of family adaptation following a crisis such as OHP. The theory explains that successful adaptation depends on the balance or imbalance of a family's demands and capabilities. Family demands are outside forces or conditions that either require or produce change (Patterson, 1988). Family demands can be thought of as pressures, stressors, or burdens that place tension on the family system (Patterson, 1988). Unfortunately, family demands do not typically go away until some form of capability is directed at reducing them (Patterson, 1988). Family capabilities are the "tangible psycho-social resources (what the family *has*) that allows the family to meet and attend to demands" (Patterson, 2002a, p. 350). These capabilities can include resources and coping behaviors, such as tangible, financial, and emotional support from

family and community, as well as resiliency and adaptability to changing circumstances (Patterson, 2002a).

As applied to this study, FAAR theory helps to explain why some children fair better than others in terms of their educational outcomes. A child's educational outcomes (e.g., how they perform or engage in school) are regarded as a reflection of family adaptation. OHP is regarded as a period of disruption in the child's living situation that resulted from an imbalance of family demands and resources. This study includes a number of family demands and capabilities that are important in predicting children's educational outcomes. The family demands included in this study are as follows: (a) child characteristics such as gender, the presence of a learning disability, and behavioral problems, (b) caregiver and family characteristics such as parental substance use, poverty, and neighborhood problems, and (c) child welfare case characteristics such as the type of maltreatment experienced by the child, higher levels of risk to the child, and higher levels of harm to the child. In contrast, the family capabilities included in this study are as follows: (a) child characteristics such as the absence of learning disabilities and behavioral problems, (b) caregiver and family characteristics such as the absence of parental substance use, poverty, and neighborhood problems, as well as greater parental education, and (c) child welfare case characteristics such as lower levels of risk and harm to the child.

Purpose of the Study

Children involved with child welfare overall report poor educational outcomes (Coohey et al., 2011; Crozier & Barth, 2005; Fantuzzo et al., 2011; Jacob & Ryan, 2018; Rosenfeld & Richman, 2003; Villegas et al., 2013). In comparison to maltreated children, children in OHP report less positive educational outcomes (Fantuzzo & Perlman, 2007; Fantuzzo et al., 2011; Piescher et al., 2014; Rosenfeld & Richman, 2003). The small body of literature comparing the

educational outcomes of children in OHP to children involved with child welfare that were never removed from their homes have yielded mixed findings. Some studies suggest no differences in the educational outcomes of children in OHP compared to maltreated children (Maclean et al., 2018). Other studies suggest that OHP plays a significant role in shaping children's educational outcomes (Font & Maguire-Jack, 2013; Fantuzzo & Perlman, 2007). Of those studies that have found OHP has a significant impact on educational outcomes, some have found that children in OHP report poor educational outcomes (Fantuzzo & Perlman, 2007; Fantuzzo et al., 2011; Luke & O'Higgins, 2018; Piescher et al., 2014; Rosenfeld & Richman, 2003), whereas others have found that children in OHP report more positive educational outcomes compared to those who were maltreated but never removed (Font & Maguire-Jack, 2013; Maclean et al., 2018).

As such, this study aims to expand the available child welfare literature by examining the long-term impact of OHP on educational outcomes (at 36-month follow-up) by comparing the educational outcomes (e.g., school engagement) of children in OHP to those who were involved with child welfare but never removed from their homes. This thesis will use propensity score matching analyses to isolate the impact of OHP on educational outcomes (e.g., school engagement), while quieting the effects of other potentially confounding variables. This study will also expand upon extant child welfare literature by examining the long-term impact of OHP on children's educational outcomes at a 36-month follow-up by comparing children in OHP to maltreated children involved with child welfare who were never removed from their family of origin.

CHAPTER II: LITERATURE REVIEW

Introduction

There is a dearth of research devoted to the educational outcomes of children in the child welfare system. These studies tend to focus on a number of various outcomes, and factors that are attached to maltreatment and the child welfare system. A number of studies explore the educational outcomes of children generally affected by maltreatment, who also may have had any involvement with the child welfare system (Coohey et al., 2011; Crozier & Barth, 2005; Fantuzzo & Perlman, 2007; Fantuzzo et al., 2011; Geenen & Powers, 2006; Maclean et al., 2017; Maclean et al., 2018; Rosenfeld & Richman, 2003; Tessier et al., 2018; Villegas et al., 2013). While other studies focus explicitly on the educational outcomes of children who experience OHP, while simultaneously looking at other factors (Cage, 2018; Cheung et al., 2012; Gypen et al., 2017; Maclean et al., 2017; O'Higgins et al., 2017; Pecora et al., 2006a; Pecora et al., 2006b; Tessier et al., 2018; Villegas et al., 2013). Additionally, there are studies that have sought to isolate the impact of OHP on the educational outcomes of maltreated children (Fantuzzo & Perlman, 2007; Fantuzzo et al., 2011; Font & Maguire-Jack, 2013; Luke & O'Higgins, 2018; Maclean et al., 2018; Piescher et al., 2014; Rosenfeld & Richman, 2003).

In this literature review, I will review the available scholarly literature related to: (a) the educational outcomes of child welfare involved children, (b) the educational outcomes of children in OHP, and (c) other factors associated with educational outcomes. Given this gap within child welfare literature, this thesis study will enhance the understanding of the impact of OHP on children's educational outcomes by examining differences in the educational outcomes of children in OHP compared to children involved with the child welfare system who never experienced OHP.

Educational Outcomes of Child Welfare Involved Children

There is a body of literature devoted to the educational outcomes of children in the child welfare system (Coohey et al. 2011; Crozier & Barth, 2005; Fantuzzo & Perlman, 2007; Fantuzzo et al., 2011; Geenen & Powers, 2006; Jacob & Ryan, 2018; Maclean et al. 2018; Tessier et al., 2018). Educational outcomes can include academic achievement or performance, academic or school engagement, grade repetition, drop-out, and graduation. These educational outcomes matter because they can be an indicator of a child's overall well-being and aptitude for future success (Tyler et al., 2008). Children in the child welfare system face a multitude of challenges that other children who do not experience maltreatment typically do not. These challenges can include: struggles with mental health, substance abuse, poor physiological health, and involvement in the juvenile justice system following maltreatment, that other children typically do not (Cheung et al., 2012; Fuller-Thomson et al., 2010; Jacob & Ryan, 2018; MacMillan et al., 2001; Springer et al., 2007; Walsh et al., 2017; Widom, 2017; Zima et al., 2000; Zimmerman & Kushner, 2017).

The majority of literature suggests that children who have any involvement with the child welfare system have poor educational outcomes (e.g., academic achievement, school engagement, etc.) compared to children who do not have any involvement with child welfare (Coohey et al., 2011; Fantuzzo et al., 2011; Piescher et al., 2014; Rosenfeld & Richman, 2003). Involvement in the child welfare system can put strain on their academic achievement, and overall cognitive functioning (Crozier & Barth, 2005). Children who experience maltreatment are often in households with many risk factors (e.g., family poverty, caregiver mental health problems, prior child welfare involvement, clinical behavior problems, etc.), and those factors greatly impact the child's cognitive and emotional functioning (Crozier & Barth, 2005). Children

who experience neglect often experience chaotic and violent living environments, where they have witnessed, or experienced violence acted upon them, that then affects their ability to focus on school and learning (Beckwith, Howard, Espinosa, & Tyler, 1999; Crozier & Barth, 2005). Additionally, maltreated children may not have the kind of support system that allows them to be encouraged, pushed, and excel academically (Rosenfeld & Richman, 2003).

Educational Outcomes of Children in Out-of-Home Placement (OHP)

Children in OHP may be at an even greater educational disadvantage. Children who are placed into OHP are often uprooted from their current home, caregiver/parents, and school environment (Burley & Halpern, 2001; Pecora et al., 2003; Piescher et al., 2014). These disruptions can negatively affect the child's learning, and continuity of education, due to loss of school records, repetition of grades, and delays in starting at new schools (Berrick, Courtney, & Barth, 1993; Blome, 1997; Pecora et al., 2003; Rosenfeld & Richman, 2003). Maltreated children who are uprooted from their environments and thrust into a new home and school often struggle socially and tend to withdraw from their peers (Canning, 1974; Fantuzzo & Perlman, 2007). Research suggests that these disruptions and social difficulties may be associated with poor educational outcomes for youth in OHP (Fantuzzo & Perlman, 2007; O'Higgins et al., 2017; Rosenfeld & Richman, 2003). Children who are placed with caregivers who provide more support, encourage literacy in the home, and hold higher general expectations for academic achievement tend to have more positive outcomes academically (Cheung et al., 2012). Children in OHP also tend to score lower on standardized tests and are more likely to drop out of high school than maltreated children who were never removed from their home (Fantuzzo & Perlman, 2007; Luke & O'Higgins, 2018; Piescher et al., 2014; Rosenfeld & Richman, 2003). Children in OHP are also more likely to complete high school through a GED program, and are less likely to

continue on to post-secondary education (Pecora et al., 2006b). Retention rates are very low for this population due to frequent disruption in the continuity of their education. When these children are moved to different school environments, sometimes as often as twice a year, it makes it hard for them to get acclimated to a new school system. Some children have to repeat a grade due to paperwork not going through when the school transfers take place. Caregiver involvement tends to have an impact on children's abilities to do well in school. Children who are placed with caregivers who provide more support, encourage literacy in the home, and hold higher general expectations for academic achievement tend to have more positive outcomes academically (Cheung et al., 2012). Additionally, the literature, to date, surrounding the educational outcomes of children in OHP has revealed mixed findings regarding school engagement.

School engagement. School engagement has been an important educational outcome often explored for children in the child welfare system (Coohey et al., 2011; Scarborough & McCrae, 2010), as well as children in OHP (Fantuzzo & Perlman, 2007; Fantuzzo et al., 2011; Font & Maguire-Jack, 2013; Rosenfeld & Richman, 2003). School engagement encompasses children's overall attitudes towards school and how they act in classroom behaviorally, cognitively, and emotionally (Fredricks et al., 2004). The term school adjustment is a similar concept often used interchangeably with school engagement, though it refers to the work habits and social skills of children in OHP (Fantuzzo & Perlman, 2007). While Fantuzzo & Perlman (2007) found that children who experience OHP report poor work habits and social skills in school, Fantuzzo et al. (2011) found that there were no significant effects on school engagement specifically related to OHP. Children's school engagement has also been found to benefit from OHP (Font & Maguire-Jack, 2013). For example, Font & Maguire-Jack (2013) found that

children in OHP report better cognitive and emotional engagement in school compared to maltreated children who had never been removed from the home. These authors hypothesize that children in OHP receive additional support from the child welfare system or their temporary caregivers that encourages positive school engagement.

Factors Associated with Educational Outcomes

While OHP plays a potentially important role in shaping children's educational outcomes, there are also a number of other factors at play including child, caregiver, and child welfare case related characteristics. It is important to remember that whether or not a child is in OHP is only one of the many factors that may help or hinder their educational outcomes. For example, child characteristics such as a child's age, grade level, gender, race, ethnicity, mental health needs, special education needs, and cognitive status may be considered. Caregiver characteristics might include the caregiver's level of education, income or poverty, mental health needs, and substance/alcohol abuse. Lastly, child welfare case characteristics might include the type of maltreatment, type of placement setting, and whether the abuse was substantiated. Some studies have found that OHP has limited effects on children experiencing maltreatment in regards to their educational outcomes, and that there are other factors that determine the positive or negative outcomes such as child age, socioeconomic status, ethnicity, type of maltreatment, and behavioral problems (Cage, 2018; Cheung et al., 2012; Rosenfeld & Richman, 2003; Tessier et al., 2018). Other literature suggests that children in OHP fair better academically based on caregiver involvement, while children of male gender, certain ethnic minority status, and those needing special education fair worse (O'Higgins et al., 2017).

Child characteristics. Previous literature on the educational outcomes of children in OHP have included child characteristics that may impact the child's academic and OHP

experience. These child characteristics include: age (Cage, 2018; Font & Maguire-Jack, 2011; Maclean et al., 2018; Tessier et al., 2018), gender (Fantuzzo et al., 2011; Font & Maguire-Jack, 2011; Maclean et al., 2018; Tessier et al., 2018), race (Burley & Halpern, 2001; Fantuzzo et al., 2011; Font & Maguire-Jack, 2011; Piescher et al., 2014), and ethnicity (Fantuzzo et al., 2011; Font & Maguire-Jack, 2011; Tessier et al., 2018). Other factors that may specifically impact the child's educational outcomes, are also frequently examined in the literature surrounding children in OHP. These factors include: developmental delay/cognitive impairment (Font & Maguire-Jack, 2011; Maclean et al., 2016; Maclean et al., 2018; Villegas et al., 2013), mental health problems (Font & Maguire-Jack, 2011; Tessier et al., 2018), and special education needs (Burley & Halpern, 2001; Geenen & Powers, 2006; Tessier et al., 2018). All of these factors can be taken into consideration when looking at how the child responds to their OHP situation, and how they engage with school.

Beyond simply including child characteristics in previous studies, some scholars have found the following factors to be significantly associated with educational outcomes. Child's gender (Cheung et al., 2012; Conger & Rebeck, 2001; Fantuzzo et al., 2011), race (Conger & Rebeck, 2001; Fantuzzo et al., 2011), and ethnicity (Burley & Halpern, 2001; Fantuzzo et al., 2011; Hegar & Rosenthal, 2009) have been found to impact educational outcomes for those children who experience OHP. For instance, male gender was significantly associated with academic achievement in reading, math, and language, as well as school engagement, particularly attendance and suspensions (Fantuzzo et al., 2011). A child being African American or Hispanic was also associated with academic achievement and school suspensions (Fantuzzo et al., 2011; Hegar & Rosenthal, 2009). Tessier et al. (2018) found that female gender, and positive mental health predicted positive educational outcomes for children in OHP. While, special

education needs, ethnicity minority status, and behavioral problems were associated with poor educational outcomes for children in OHP.

Caregiver characteristics. Previous literature on the educational outcomes of children in OHP have included caregiver and family characteristics such as level of education, income or poverty, mental health needs, substance abuse, and involvement in the child's education as potentially meaningful factors to consider. Furthermore, some scholars have found some of these factors to be significantly associated with educational outcomes. Caregiver age (Maclean et al., 2018), education (Cheung et al., 2012; Fantuzzo et al., 2011; Maclean et al., 2016), mental health and substance use (Maclean et al., 2016; Maclean et al., 2017; Maclean et al., 2018), have been found to be significant factors. Poverty is also an important factor for determining educational outcomes (Fantuzzo et al., 2011; Maclean et al., 2016; Piescher et al., 2014). Scholars Fantuzzo et al. (2011) found that lower maternal education and poverty were significantly associated with being at risk for academic achievement, as well as issues in school attendance and suspensions.

Child welfare case characteristics. Previous literature on the educational outcomes of children in OHP have also included child welfare case characteristics in their research. Type of maltreatment (Fantuzzo et al., 2011; Font & Maguire-Jack, 2011; Maclean et al., 2018), placement setting (Coohey et al., 2011; Maclean et al., 2017; Tessier et al., 2018), and whether a case was substantiated (Fantuzzo et al., 2011; Maclean et al., 2016; Maclean et al., 2018), have all been considered pertinent elements to better understanding the child's setting, and further make sense of their educational outcomes. Tessier et al. (2018) found that neglect was significantly associated with poor educational outcomes when compared to the other forms of maltreatment.

CHAPTER III: METHOD

Data Source and Study Design

The present study was executed using data from the National Survey of Child and Adolescent Well-being (NSCAW II) (Dowd et al., 2014). The NSCAW II was the second version of the NSCAW study, which was designed to examine the well-being, needs, and services received by children involved in the U.S. child welfare system (Dowd et al., 2014). The NSCAW I and NSCAW II were considered the first national study of child welfare which collected data from multiple informants (i.e., children, caregivers, caseworkers, and teachers), rather than just collecting data from professionals working with child welfare cases. The NSCAW data not only allow for the examination of the child's experiences in the child welfare system, but also for the exploration of how their family and community environments contribute to a better understanding of both child and family well-being.

The NSCAW II utilized a longitudinal cohort design to collect data at child welfare investigation case closure (i.e., baseline). Baseline data collection began in April, 2008 and ended in December, 2009. The 18-month follow-up (i.e., wave 2) data collection occurred between October, 2009 and January, 2011. The 36-month follow-up (i.e., wave 3) data collection occurred between June, 2011 and December, 2012. The 36-month follow up data collection was split up by age cohorts; data collection for infants started in June, 2011 and data collection for non-infants started in August, 2011. The study operated in 81 counties in 30 states, with 76% of the counties remaining from the sampling that participated in the NSCAW I. The study included 5,872 children sampled from cases closed during a 15-month period beginning in February, 2008. These children ranged in age from birth to 17.5 years of age during the sampling period (Dowd et al., 2014).

Data was collected via multiple methods through interviews or assessments at various time points over the span of three years. Baseline assessments or face-to-face interviews were conducted with, “children, their parents or other permanent caregivers, non-parent adult caregivers (e.g., foster parents and custodial kin caregivers) if applicable, teachers (for school-aged children), and child welfare investigators” (Dowd et al., 2014, p. 1-3). Key respondents were identified for each sampled child, to provide the order in which interviews were conducted. Caregivers of children younger than 11 years old were considered key respondents for that case, and children ages 11 to 17 years old were considered their own key respondent. The adult “most knowledgeable” about the child, was chosen in households in which more than one caregiver had co-resided with the child for two months or more. In situations in which there were multiple respondents for this position, NSCAW II applied a commonly used hierarchy of parent-child relationships to determine the caregiver, this hierarchy was also used on the National Institute of Mental Health (NIMH) Methods for Epidemiology of Child and Adolescent Mental Disorders Study (MECA). The hierarchy order was as follows: mother (biological, stepmother, adoptive mother, and foster mother), grandmother, father (biological, stepfather, adoptive father, and foster father), aunt, adult sister (biological, step, adoptive), uncle, adult brother (biological, step, adoptive), and then other (Dowd et al. 2014).

The adult key respondent was asked to sign an informed consent granting the study permission to interview the sampled child. NSCAW ensured that its, “field representatives were carefully trained to confirm with the agency that the adult respondent chosen had legal guardianship and the resulting legal right to permit the child’s participation” (Dowd et al. 2014, p. 4-16). All interviews and assessments conducted with caregivers and children took place in-

person. Caregiver interviews averaged 107 minutes in length, while child interviews average 76 minutes in length (Dowd et al., 2014).

Teacher assessments were conducted in a different manner in order to protect the confidentiality of the participants. These assessments only took place after the study acquired an authorized release to contact the teacher, from the legal guardian/caregiver of the child. Teachers completed questionnaires that were mailed to them following a pre-notification mailing letter. Teachers were then sent a pre-notification letter asking for their participation in the National Teacher Survey of Children and Adolescents. The NSCAW project name was not utilized in this portion of the study in order to conceal the child's involvement in the child welfare system from the teacher. Follow-up interviews or assessments were conducted with the same individuals interviewed at baseline (wave 1), 12 months (wave 2), and 36 months (wave 3) after the close of the investigation or initial assessment. However, teachers were not surveyed at wave 3 (Dowd et al., 2014).

NSCAW II sampling procedures. The NSCAW II sample was replicated from the NSCAW I study. The eligible files that created the sample for NSCAW II consisted of children in the United States who were subjects of child abuse or neglect investigations (or assessments) conducted by Child Protective Services (CPS), and who lived in states not requiring a CPS agency to first contact the caregiver, before a NSCAW field representative (Dowd et al., 2014). The NSCAW II used the NSCAW I primary sampling units (PSU), as well as the same stratification and primary stage units. For the NSCAW II sample, the United States was divided into nine strata (regions). Eight of the stratas consisted of the eight states (referred to as Key States) that had the largest caseloads in the child welfare system. The ninth, and final, strata consisted of the remaining 38 states and the District of Columbia (Dowd et al., 2014). Each strata

had its own PSU, defined as “geographic areas that encompass the population served by a single CPS agency” (Dowd et al., 2014, p. 2-2). In non-metropolitan areas, these PSU normally consisted of one or two counties. In larger metropolitan areas, the city was broken down into smaller areas so that fewer CPS agencies had to be covered in order to obtain the sample. The within-PSU sampling frame was then collected based on the time in which a file was opened investigating child abuse or neglect. All within sample PSUs were files of children investigated as victims of abuse or neglect between the months of February, 2008 through April, 2009 (Dowd et al., 2014). The participating agencies provided eligible files to the study each month that encompassed the files created in the previous month. The PSU consisted of children ages 0-17.5, which was different than the NSCAW I that only allowed children 0-14 years old. Children were eliminated from the sample if they had already been added in a previous month, or if they had a family, or same household, member who had already been a part of the study’s sample (Dowd et al., 2014).

NSCAW II recruitment. Families were recruited through CPS agencies. NSCAW field representatives gave the participating CPS agencies the option of two recruitment methods to collect families to participate in the study. The first option was a direct contact of sampled families by a NSCAW field representative, recruiting participants. The second option was a postcard with passive consent, meaning the families had to send a postcard back denying their participation in order not to be contacted for further participation. No response meant that the family had consented to being further contacted for participation. All but three sites opted for the direct field representative contact of sampled families, versus the passive consent process (Dowd et al., 2014). Approximately 45 days after the close of the investigation, families were sent a personalized introductory letter from a field representative asking for their participation in the

study, and a NSCAW II frequently asked question sheet. The introductory letter (see Appendix B) detailed the “importance of the study, the study’s sponsorship and non-affiliation with the local CPS agency, confidentiality of data, and the fact that participation in the study provides each family the opportunity to register their experiences” (Dowd et al., 2014, p. 4-13). The field representative visited the households of the families who had received letters or attempted to reach them by telephone, 3-5 days after mailing the letter, and scheduled a face-to-face interview with both the child and the caregiver to go over study participation (Dowd et al., 2014).

NSCAW II total sample. A total of 5,872 children from birth to 17.5 years old were sampled in the NSCAW II cohort.

Sample description for this study. From the NSCAW II total sample ($N = 5,872$), this secondary data analysis utilizes a sample of 1,490 children (466 children in OHP at baseline and 1,024 children who remained in home). Children who were under the age of four at baseline, and children over the age of fifteen at the 36-month follow-up, were dropped from the analyses, as they were missing pertinent school and academic information because it did not apply to them.

The unweighted baseline characteristics are depicted in Table 1. The mean age of children in the sample was 8.84 years old ($SD = 2.99$) and 52.6% were male. The majority of the sample remained in-home following maltreatment ($n = 1,024$ children), while the other 466 children experienced OHP. More than one third (38.2%) of these children needed special education services in school, and even less (24.3%) had an emotional/mental health problem. Over half (55.2%) came from families that were 100% or less above the federal poverty level, meaning these families were equal with the annual federal poverty level, or below. Around one quarter (24.4%) of the caregivers of these children had less than a high school degree, and over half (65.2%) of caregivers had part-time jobs, were unemployed, or did not work. Less than half

of these caregivers (48.7%) also received services for mental health problems, and even less received services for a drug (34.3%) and alcohol (26.0%) problem. Additionally, more than one third (35.1%) if children came from households where they experienced neglect as a form of maltreatment.

Table 1
Unweighted sample characteristics at baseline (n = 1490)

		Total Sample			OHP (n = 466)			In-Home (n = 1024)		
		n	Percent or Mean	SE or SD	n	Percent or Mean	SE or SD	n	Percent or Mean	SE or SD
Child Characteristics										
Age (4 - 15)		1490	8.84	2.99	466	8.88	3.06	1024	8.82	2.97
Gender										
	Male (0)	784	52.60		258	55.40		526	51.40	
	Female (1)	706	47.40		208	44.60		498	48.60	
Race										
	American Indian/Alaskan Native	158	10.60		54	11.60		104	10.20	
	Asian/Hawaiian/Pacific Islander	56	3.80		14	3.00		42	4.10	
	Black	456	30.60		186	39.90		270	26.40	
	White	782	52.50		198	42.50		584	57.00	
	Unknown	38	2.60		14	3.00		24	2.30	
Hispanic Ethnicity*		400	26.80		133	28.50		267	26.10	
Developmental Delay*		108	7.20		51	10.90		75	7.30	
Mental Health/Emotional Problem*		362	24.30		164	35.20		198	19.30	
Needs Special Education*		569	38.20		242	51.90		327	31.90	
Primary Caregiver and Family Characteristics										
Race										
	American Indian/Alaskan Native	108	7.20		31	6.70		77	7.50	
	Asian/Hawaiian/Pacific Islander	64	4.30		27	5.80		37	3.60	
	Black	456	30.60		185	39.70		271	26.50	

	None	506	34.00	79	17.00	427	41.70
	Mild	465	31.20	127	27.30	338	33.00
	Moderate	369	24.80	164	35.20	205	20.00
	Severe	150	10.10	96	20.60	54	5.30
Level of Risk							
	None	406	27.20	77	16.50	329	32.10
	Mild	337	22.60	71	15.20	266	26.00
	Moderate	353	23.70	118	25.30	235	22.90
	Severe	394	26.40	200	42.90	194	18.90

Note: * 1 = "yes", 0 = "no".

Missing data. Missing data for the present study was examined for common patterns of missingness. The most common pattern was no missing data. When data were missing, the majority of variables had fewer than 10% missing, with only seven variables having more than 10% missing. The variable with the most missing data was caregiver mental health (30% missing). Participants with missing data were compared to those with complete data with regard to age, gender, and education, and reflected no significant differences between participants. Missing data was attended to by using multiple imputation, as it has proven to be the most effective when compared to other methods such as, listwise deletion and mean substitution (Croy & Novins, 2005).

Procedures

Ethics approval for this secondary data analysis was acquired from the Virginia Polytechnic Institute and State University's Institutional Review Board (IRB) (Study Number 18-1108). See Appendix A for documentation of IRB approval.

Measures

School engagement. School engagement has been defined as the behavioral, cognitive, and emotional responses of the child towards school (Fredricks et al., 2004). School engagement was measured at baseline, 18-month, and 36-month follow-up by examining the child's overall

disposition towards school and learning. School engagement was completed by the child in the interview with the NSCAW II field representative. Only children who attended school completed the measure. In other words, children who were homeschooled and under school age (6 years-old and under) were excluded. School engagement was measured using the U.S. Department of Education, Office of the Under Secretary, Drug Free School Outcome Study (Silvia, Thorne, & Tashjian, 1997).

Children answered 11 questions about how they felt about school on a scale indicating how true the statement was for them. The 11 items included were as follows: (1) enjoys being at school, (2) hates being at school, (3) tries to do best work at school, (4) finds school work too hard, (5) finds class interesting, (6) fails to complete assignments, (7) sent to office/stay after school, (8) gets along with teachers, (9) listens carefully in school, (10) gets homework done, and (11) gets along with other students. The response options ranged from never (1), sometimes (2), often (3), and almost always (4). Negatively worded questions (items 2, 4, 6, 7) were reverse coded. Higher scores (closer to 4) reflected higher levels of school engagement, whereas lower scores (closer to 1) reflected lower levels of school engagement. These questions were then divided into three subscale groups to highlight emotional school engagement (comprised of items 1, 2, 4, 5), cognitive school engagement (comprised of items 3, 6, 9, 10), and behavioral school engagement (items 7, 8, 11). School engagement has been used as an indicator of educational outcomes in other studies examining child welfare involved children, and child welfare involved children in OHP (Coohey et al., 2011; Font & Maguire-Jack, 2013). Reliability and validity for this scale is not available. The assessment of school engagement at the 36-month follow-up was utilized for this study.

Treatment variable.

Out-of-Home Placement. The child's baseline placement status was acquired from the NSCAW II derived and recoded variables under child setting. The caregiver and/or child reported whether or not the child was in OHP at baseline (1 = Yes, 2 = No). This variable was recoded to reflect, 0 = No, 1 = Yes.

Child characteristics.

Child age. Children's baseline age was acquired from the NSCAW II derived and recoded variables. The child's age in years was based on both child and caregiver report. The child and/or caregiver chose from ages 0-17.5 years. Children who were under the age of four at baseline, and over the age of fifteen at the 36-month follow-up, were dropped from the analyses, as they were missing pertinent school and academic information at those ages.

Child gender. Child gender was determined based on child, current caregiver, and caseworker report. When discrepancies arose, the child's gender was determined based on the most recent non-missing report of gender. Gender was also acquired from the NSCAW II derived and recoded variables. The variable was dichotomized to reflect if the child was a male (0) or a female (1).

Child race. Child and caregivers reported on the child's race at baseline. Race was acquired from the NSCAW II derived and recoded variables. When more than one race was reported from different respondents (i.e., caregiver, caseworker, or child), then the rarest race was chosen based on the 1990 U.S. Census data assignment of rare to most common races. Race options from most rare to most common included: American Indian, Asian/Hawaiian/Pacific Islander, Black, White, and Other. Unknown race was created to account for the respondents who reported that their race was Unknown or Other.

Child ethnicity. Child ethnicity at baseline was reported on by the child and current caregiver. Child ethnicity was acquired from the NSCAW II derived and recoded variables. The question asked the child and/or caregiver if the child was Hispanic and the options included: Yes (1), No (2), Don't Know (-1). This variable was recoded and dichotomized to reflect, 0 = No, 1= Yes. Five children whose ethnicity was unknown were recoded from "don't know" to "no."

Child developmental delay. Teachers reported on the child's current mental retardation or developmental delay. Teachers chose from the following options to reflect if the child had a developmental delay: Yes (1), No (2). This variable was recoded to reflect, 0 = No, 1= Yes.

Child mental health/emotional problem. Teachers reported on the child's current emotional problems such as: depression, anxiety, eating disorder, and other emotional problem. Teachers chose from the following options to reflect if the child had an emotional problem: Yes (1), No (2). This variable was recoded to reflect, 0 = No, 1= Yes.

Child needs special education. Teachers reported on the child's current receipt of special education services in school. Teachers chose from the following options to reflect if the child was receiving special education: Yes (1), No (2). This variable was recoded to reflect, 0 = No, 1= Yes.

Caregiver and family characteristics.

Caregiver race. Caregivers reported on their race. Race was acquired from the NSCAW II derived and recoded variables. When more than one race was reported from different respondents (i.e., caregiver or caseworker), then the rarest race was chosen based on the 1990 U.S. Census data assignment of rare to most common races. Race options from most rare to most common included: American Indian, Asian/Hawaiian/Pacific Islander, Black, White, and Other.

Unknown race was created to account for the respondents who reported that their race was Unknown and Other.

Caregiver education. The child's current caregiver's education was assessed at baseline. The caregiver education was acquired from the NSCAW II derived and recoded variables. The variable represented the current caregiver's highest level of education. Caregivers indicated their level of education with the options of: "ungraded", "less than high school", "high school", and "high school plus." This variable was recoded and dichotomized to reflect if the caregiver had a less than high school education or not. "ungraded" and "less than high school" were collapsed into "less than high school" (1) and everything else was collapsed to reflect more than a high school education (0).

Caregiver employment. Caregivers reported on their current employment status at baseline. Caregiver employment was acquired from the NSCAW II derived and recoded variables. Options for employment status included: full-time (1), part-time (2), unemployed (3), do not work (4), or other (5). Do not work (4) and other (5) were collapsed into other (4).

Caregiver alcohol problem. Caregiver alcohol problems were assessed at baseline. This variable was based on caseworker report. Caseworkers were asked whether the caregiver had needed services for an alcohol problem. The response options were: Yes (1) and No (2). This variable was recoded to reflect, 0 = No, 1 = Yes.

Caregiver drug problem. Caregiver drug problems were assessed at baseline. This variable was based on caseworker report. Caseworkers were asked whether the caregiver had needed services for a drug problem. The response options were: Yes (1) and No (2). This variable was recoded to reflect, 0 = No, 1 = Yes.

Caregiver mental health problem. Caregiver mental health status was assessed at baseline. This variable was based on caseworker report. Caseworkers were asked if the current caregiver needed services for an emotional, psychological, or other mental health problem like depression, bipolar disorder, schizophrenia, etc. Caseworkers chose from the following options: The response options were: Yes (1) and No (2). This variable was recoded to reflect, 0 = No, 1= Yes.

% Federal Poverty Level. Caregiver income/poverty was assessed at baseline by using their percent federal poverty level, as reported on by the caregiver. Federal poverty level is annually assessed by the Census Bureau to determine the threshold for poverty in the United States for households (MPH@GW, 2018). The Federal Poverty Level reflects the income needed in order for the household to meet their basic needs. The federal poverty level varies by number of people in the household/family. When a family is assessed at 100% Federal Poverty Level, it means that the family is exactly in line with the poverty level of the country, and when a family is below 100% they fall below the Federal Poverty Level of the country, meaning they are not meeting their basic needs (MPH@GW, 2018). This variable was acquired from the NSCAW II derived and recoded variables. Options for % Federal Poverty Level included: <50% (1), 50% - <100% (2), 100% - 200% (3), or >200% (4). This variable was recoded to reflect options Yes (1) and No (0). Options 1 (<50%) and 2 (50% - <100%) were collapsed into “Yes,” meaning the family is below the Federal Poverty Level. Options 3 (100%-200%) and 4 (>200%) were collapsed into “No,” meaning the family is above the Federal Poverty Level.

Neighborhood problems. Caregivers were asked to reflect what problems they experience in their neighborhood and community. The question asked for respondents to select which problems they experience in their neighborhood, including: assaults and muggings,

delinquent activity and presence of drug gangs, open drug use and dealing, unsupervised children, and groups of teens hanging out. This question was recoded to be individual and dichotomized questions for each problem option. The variable then reflects, 0 = No, 1 = Yes, for each problem. The variable was also summed from 0 to 5, in order to reflect the sum total of neighborhood problems each participant (caregiver) reported.

Child welfare case characteristics.

Most severe type of maltreatment. This study will look at the most severe type of maltreatment that the child allegedly experienced, employing an adjusted version of the Maltreatment Classification Scale (Manly, Cicchetti, & Barnett, 1994). The type of maltreatment was acquired from the derived and recoded variables. The caseworker reported on the type of maltreatment at baseline. The types of maltreatment included: (1) physical maltreatment, (2) sexual maltreatment, (3) emotional maltreatment, (4) physical neglect – failure to provide, (5) neglect – no supervision, (6) abandonment, (7) moral/legal maltreatment, (8) educational maltreatment, (9) exploitation, (10) other maltreatment, (11) substance exposure, (12) domestic violence, (13) substance abusing parent, (14) voluntary relinquishment, (15) children in need of services, and (16) investigation only way to get services. A number of categories were collapsed for the purpose of this secondary data analysis. Physical and sexual maltreatment remained intact. Neglect included emotional maltreatment, physical neglect or failure to provide, and lack of supervision. Abandonment, moral and legal maltreatment, educational maltreatment, exploitation, other maltreatment, substance exposure, domestic violence, substance abusing parent, voluntary relinquishment, children in need of services, and investigation only way to get services, were collapsed into other maltreatment.

Level of harm. The level of harm of the maltreatment was based on caseworker report at baseline. Caseworkers were asked, “For the next set of questions, please do not be concerned with whether or not the report was substantiated when offering your responses. Regardless of the outcome of the investigation, how would you describe the level of harm to the child? Would you say... none, mild, moderate or severe?” Response options were as follows: (1 = none, 2 = mild, 3 = moderate, 4 = severe). This variable was recoded to reflect, 0 = none, 1 = mild, 2 = moderate, 3 = severe.

Level of risk. The level of risk of the maltreatment was based on caseworker report at baseline. Caseworkers were asked, “Regardless of the outcome of the investigation, how would you describe the level of severity of risk? Would you say... none, mild, moderate or severe?” Response options were as follows: (1 = none, 2 = mild, 3 = moderate, 4 = severe). This variable was recoded to reflect, 0 = none, 1 = mild, 2 = moderate, 3 = severe.

Data Analysis

NSCAW II weights. Sample weights were included in the NSCAW II data to allow for population estimates and to account for the sampling aspect of the study’s design (NSCAW Research Group, 2010). While sample weights were included within the NSCAW II data, they were not utilized for the purposes of this study for a number of reasons. First, we did not use the entire Child Protective Services (CPS) sample. Second, we employed propensity score matching analyses – an analytic approach wherein cases are resampled based on propensity scores, therefore, the NSCAW II weights no longer apply (Barth, Gibbons, & Guo, 2006). As previous scholars have cautioned, choosing not to use the NSCAW weights should not play a role in influencing the results, with the only exception being that it limits generalizability to the sample

used rather than the national child welfare population (Berger, Bruch, Johnson, James, & Rubin, 2009).

Propensity score matching. Stata Statistical Software: Release 15 (StataCorp, 2017) was utilized to execute the propensity score matching analyses for this study. As an analytic strategy, propensity score matching is helpful in isolating the effect of one variable (either a treatment or an unchanging static variable) on an outcome of interest. Most often the isolated variable is an action or intervention that is believed to cause an effect on an outcome. However, propensity score matching can also be used to isolate the effect of a static variable (e.g., OHP). In this study the treatment effect is OHP and school engagement (emotional, cognitive, and behavioral) is the outcome of interest. Previous research suggests that a variety of child, caregiver, and caseworker characteristics also impact school engagement. These important child, caregiver, and caseworker characteristics were included as covariates in the propensity score matching. Propensity score matching factors in the covariates entered into the model and then produces an estimated effect. In this study, the propensity score matching produces an estimate of the effect of OHP on outcomes of emotional, cognitive, and behavioral school engagement.

Propensity score matching is used to create vastly similar groups. Children in OHP were matched with children who were involved in the child welfare system, but were never removed. These groups were matched on the child, caregiver, and child welfare case characteristics outlined in the measures section. A propensity score was created which represents the probability of the child being in the treatment group (Rosenbaum & Rubin, 1983). These matched comparison groups were created using Stata's `psmatch2` command. Multiple matching models were tested. The final model displayed the best balance, wherein statistically significant differences between groups were minimized.

Propensity score matching was utilized to examine the impact of OHP at baseline on emotional, cognitive, and behavioral school engagement at 36-month follow-up. Propensity score matching has been used as a data analytic technique in other maltreatment studies exploring the impact of OHP on educational outcomes (e.g., Font & Maguire-Jack, 2013; Maclean et al., 2018). The type of propensity score matching employed was nearest neighbor matching with replacement. Replacement was used to identify each child's best match regardless of if that control was used for multiple children in the treatment group. Replacement was employed to ensure that a child's best possible match was utilized, as this was preferred over making less desirable matches if the propensity score matching had been employed without replacement. After acceptable balance was established in the matching, the matched comparison groups were analyzed using regression analyses which produced the additional covariance adjustments and estimated effects.

CHAPTER IV: RESULTS

Descriptive Statistics

School engagement was assessed across follow-up at 36-months for the total sample ($n = 1,490$), the children who experienced OHP ($n = 466$), and children who stayed in-home ($n = 1024$) following maltreatment (see Table 2). The mean score for emotional engagement for the total sample was 2.5 with a standard deviation of 0.37. The mean score for emotional engagement of the children in OHP was similar ($M = 2.5$; $SD = 0.38$) and slightly lower for the children in-home ($M = 2.4$; $SD = 0.35$). The mean score for the cognitive engagement of the total sample was 2.9 with a standard deviation of 0.52. The mean score for cognitive engagement was similar for both the children in OHP ($M = 2.9$; $SD = 0.50$), and for the children in-home ($M = 2.9$; $SD = 0.55$). The mean score for the behavioral engagement of the total sample was 2.6 with a standard deviation of 0.46. The mean score for behavioral engagement was similar for both the children in OHP ($M = 2.6$; $SD = 0.44$), and for the children in-home ($M = 2.6$; $SD = 0.48$).

Table 2
School engagement across follow-up

	Total Sample ($n = 1490$)		Out-of-Home Placement ($n = 466$)		In-Home ($n = 1,024$)	
	Mean	SD	Mean	SD	Mean	SD
Emotional Engagement	2.5	0.37	2.5	0.38	2.4	0.35
Q1: How often do you enjoy being in school?	2.8	1.01	2.8	1.00	2.8	1.01
Q2: How often do you hate being in school?*	2.0	0.92	2.0	0.90	2.0	0.95
Q4: How often do you find school work too hard to understand?*	2.3	0.79	2.3	0.79	2.2	0.75
Q5: How often do you find your classes interesting?	2.7	0.93	2.7	0.93	2.7	0.94
Cognitive Engagement	2.9	0.52	2.9	0.50	2.9	0.55
Q3: How often do you try to do your best work in school?	3.3	0.83	3.4	0.82	3.3	0.84
Q6: How often do you fail to	2.1	0.87	2.1	0.87	2.7	0.88

complete or turn in your assignments?*						
Q9: How often do you listen carefully or pay attention in school?	3.1	0.83	3.2	0.83	3.1	0.83
Q10: How often do you get your homework done?	3.2	0.91	3.2	0.89	3.1	0.94
Behavioral Engagement	2.6	0.46	2.6	0.44	2.6	0.48
Q7: How often do you get sent to the office, or have to stay after school, because you misbehaved?*	1.4	0.69	1.4	0.70	1.4	0.68
Q8: How often do you get along with your teachers?	3.2	0.89	3.2	0.88	3.2	0.92
Q11: How often do you get along with other students?	3.1	0.93	3.1	0.92	3.1	0.92

Note. * Item was reverse coded.

Propensity Score Matching Model

The results of the propensity score matching model are as follows: Reasonable balance was established in the matching model/comparison group. Reasonable balance was taken into account when differences on variables in the model were minimized as much as possible. Reasonable balance was also considered when efforts were made to produce minimal statistically significant differences in the model. As a result, when working to produce minimal statistically significant differences in the model, one statistically significant difference was that children in OHP were more likely to experience neglect as their most severe type of maltreatment ($M = .35$), compared to children who remained in-home ($M = .27$). The most balanced model was chosen for matching. The propensity score matching post-match balance statistics are found in Table 3.

Table 3

Propensity score matching post-match balance statistics (n = 1490)

	Out-of-Home Placement (n = 466)	In-Home (n = 1,024)
Child Characteristics		
Age (4 - 15)	8.88	8.95
Gender (0 male, 1 female)*	0.45	0.47
Race		
American Indian/Alaskan Native	0.12	0.13
Black	0.40	0.34
White	0.42	0.47
Hispanic Ethnicity*	0.29	0.24
Developmental Delay*	0.11	0.09
Mental Health/Emotional Problem*	0.35	0.41
Needs Special Education*	0.52	0.53
Primary Caregiver & Family Characteristics		
Less than High School Education*	0.20	0.18
% Federal Poverty Level		
< 50%	0.11	0.11
50% - <100%	0.29	0.29
Neighborhood problems (0-5)	0.79	0.80
Child Welfare Case Characteristics		
Most Severe Type of Maltreatment		
Physical	0.17	0.20
Sexual	0.12	0.10
Neglect	0.35	0.27
Level of Harm (0-3)	1.59	1.53
Level of Risk (0-3)	1.95	1.89

Note. * 1 = "yes", 0 = "no".Bolded numbers indicate statistically significant difference $p \leq 0.05$

Propensity Score Model Estimated Effects

The estimated effect of OHP on school engagement at 36-months is presented in Table 4. The final model ($n = 717$) was comprised of 466 children in OHP who were matched to 251 children who remained in-home. The decrease in sample size is a result of nearest neighbor matching with replacement. The best possible match for each child in OHP is pulled from the in-home sample and (at times) more than one child in OHP is matched to the same in-home child,

because that particular child was multiple children's closest possible match. The propensity score matching model was run with and without replacement and the results did not differ. For pragmatism and efficiency, only the results with replacement are presented. Furthermore, the results with replacement indicated that OHP was not statistically significant at the 36-month follow-up. Children who experience OHP are at no more risk for lower school engagement, than are the children who remained in-home. The estimated effects of OHP on emotional, cognitive, and behavioral school engagement are presented in Table 4.

Table 4

Estimated effect of OHP on school engagement from the propensity score matching models

	Treat. Effect	SE	Confidence Interval	
Emotional Engagement	-0.079	0.046	-0.169	0.010
Cognitive Engagement	0.086	0.048	-0.009	0.181
Behavioral Engagement	-0.002	0.048	-0.097	0.093

Note. No statistically significant differences ($p \leq 0.05$) were found.

CHAPTER V: DISCUSSION

The fundamental purpose of this study was to determine the differences in school engagement for children who were placed in OHP following maltreatment versus maltreated children who remained in home. The unweighted descriptive statistics suggest that the total sample of maltreated children reported average levels of emotional school engagement ($M = 2.5$, $SD = 0.37$) and behavioral school engagement ($M = 2.6$, $SD = 0.46$), with only slightly higher levels of cognitive school engagement ($M = 2.9$, $SD = 0.52$). Such findings are congruent with previous research that suggests that maltreated children are at risk for poor educational outcomes (Coohey et al., 2011; Fantuzzo & Perlman, 2007; Rosenfeld & Richman, 2003). Descriptively, children in OHP report similar levels of emotional, cognitive, and behavioral school engagement compared to their maltreated peers at 36-month follow-up.

The main finding of the propensity score matching was that children in OHP did not report statistically significant differences in school engagement when compared to children who remained in-home. In particular, the impact of OHP at baseline did not have a statistically significant effect on the emotional, cognitive, or behavioral school engagement of children at 36-month follow-up. In other words, children who experienced OHP at the start of the study, reported similar school engagement at 36-month follow-up, when compared to children who did not experience OHP at the beginning of the study. This indicates that OHP did not affect these children's school engagement over time, if their school engagement was similar to the other children who were not in OHP. After considering other important covariates in the propensity score matching model, the effect of OHP is not significant. Children in OHP appear to report similar levels of emotional, cognitive, and behavioral engagement to their maltreated peers. The primary takeaway is that children who experience maltreatment generally struggle with poor

educational outcomes. While previous research suggests mixed results regarding the impact of OHP on educational outcomes (i.e., some scholars have found detrimental effects, while others have found that children fair better educationally during or after OHP), our findings suggest that OHP does not have a statistically significant effect on school engagement at long-term follow-up.

Our results are consistent with previous studies isolating the effect of OHP on educational achievement, which suggest that both maltreated children who were never removed and those who experienced OHP report similar educational outcomes (Fantuzzo et al., 2011; Maclean et al., 2018). In particular, Maclean et al. (2018) found that children in OHP had similar academic achievement and suspensions to their maltreated peers who have not experienced OHP. These authors did find that children in OHP had fewer absences than their peers who remained in home, suggesting that while in OHP they were receiving additional school support, or encouragement, to attend school that may not occur while remaining in their home following maltreatment. Overall, Maclean et al. (2018) concludes that both groups of maltreated children (i.e., those never removed and those in OHP) reported poor educational outcomes. Similarly, Fantuzzo et al. (2011) found that OHP had no significant effect on second grader's reading, math, language, and science achievement. Their study looked at a number of variables (e.g., maternal risks, health risks, homelessness, and substantiation) that may impact academic achievement. Fantuzzo et al. (2011) suggested that other risk and demographic factors experienced by maltreated children impacted their educational outcomes, but not OHP.

While we found no significant effects of OHP on the emotional, cognitive, and behavioral school engagement of maltreated children, such findings contrast with previous literature which suggests that children in OHP are particularly vulnerable to poor academic

outcomes. For instance, Fantuzzo and Perlman (2007) found that children in OHP are at increased risk for poor literacy and science achievement, when controlling for demographics and birth risks. Similarly, Piescher et al. (2014) found that children who experienced maltreatment were at increased risk for poor academic performance compared to children who were never maltreated, and that children who experienced OHP had even poorer academic performance than both groups, when race and economic status were not controlled. Their study found that when controlling for race and economic status, children in OHP and children who remained in-home reported no differences in academic performance. In contrast, Rosenfeld and Richman (2003) compared children in OHP to children in the general population, who may not have experienced maltreatment. They found that children who experienced OHP had lower grades than children who did not experience OHP. However, it is unclear whether this difference is from the presence of maltreatment alone, or the added effect of OHP. In contrast with their results for achievement, children who experienced OHP had no significant differences in school engagement than children who did not experience OHP. Differences between our results and findings from previous studies may also be attributed to our focus on school engagement, as opposed to other educational outcomes such as achievement. Academic achievement may look different for this population because it is conceptually different than school engagement. School engagement looks as the child's attitudes and feelings about school, cognitively, emotionally, and behaviorally. While school achievement looks solely at the objective measure of how well the child does, without taking into account the child's subjective views and perceptions about their own school involvement. Additionally, our control of important covariates may have also impacted the differences between our results with findings from previous studies.

Our findings also differ from a previous study that suggests that OHP has a positive impact on children's emotional and cognitive school engagement (i.e., Font and Maguire, 2013). Font and Maguire (2013) found that children had higher levels of emotional and cognitive engagement when placed in OHP at wave 2 (12-month follow-up), versus children who did not experience OHP at that time. However, their study found similar results to ours in regards to behavioral engagement. In particular, Font and Maguire-Jack (2013) found that children in OHP at both waves, and those who are reunified between wave 1 and 2, had similar school engagement to children who were never removed. Their study suggested that this outcome may be reflective of the support and resources that maltreated children receive early on from the child welfare system, while in OHP. This is consistent with our study's findings that suggest that after a longer period of time (36-months), children in OHP, school engagement looks similar for children in OHP and children who remain in-home. Font and Maguire-Jack's (2013) results for children entering OHP at wave 2 may differ from ours due to the important case variables that their study considered (e.g., substantiation, reunification, and continuous OHP across waves), and the length of follow-up. These contrasts in methodology may account for the differences in results for cognitive and emotional school engagement at wave 2.

This study contributes to the literature surrounding maltreated children's educational outcomes, in many ways, specifically the impact of OHP on school engagement. This study expands upon the previous studies that have isolated the effect of OHP on school engagement, by examining the effects of OHP at long-term follow-up. By utilizing the most recent version of the NSCAW II data, the results provide an up-to-date, and applicable, view of what is currently happening regarding maltreated children's school engagement. This study also gathered information from multiple informants including the child, current caregiver, and child welfare

caseworker, creating a more complex view of the child. Similarly, many important covariates were included in this study to better understand the complex influences that may impact educational outcomes. Lastly, this study took into account those important child, caregiver/family, and case characteristics related to educational outcomes, and matched the children who experienced OHP and those who remained in-home. After matching the two groups, this study utilized a rigorous statistical approach to estimate the effect of OHP on school engagement. These approaches expand on the literature, and provide a unique perspective to measuring the effect of OHP and maltreatment on educational outcomes.

These results should be interpreted with a number of cautions. First, while this study was successful in isolating the effects of OHP on school engagement, other factors not included in the propensity score matching could be influential in their impact on school engagement. Some important factors that were not included in this study include: the type of OHP, the relationship with the foster caregiver, and how many school changes the child experiences. The type of OHP the child experiences brings about different interactions. Children placed in a group home may not have a caregiver with the undivided attention, and educational support, that the child may need following maltreatment in order to succeed academically. Similarly, when children are placed in kinship care or foster care, it is unclear how the child will interact with that caregiver, and how invested their OHP caregiver will be in the child's academic success and school engagement. School changes can also greatly impact a child's school engagement. When the child is forced to transition between multiple schools, it may greatly impact the child's ability to have positive school engagement when they know they may not be there for long before they are sent to the next school. What can be concluded, is that while the propensity score matching approach allows us to isolate a single effect, while quieting the noise of other important

covariates or confounding variables, its results are limited to the variables included in the propensity score matching model. Lastly, our findings are limited to the comparison between maltreated children who experienced OHP and those who were never removed, and should not be interpreted in comparison to children who have never been maltreated in the general population.

Another caution for interpretation is that this study was designed to assess the impact of OHP at baseline on school engagement at long-term follow-up (i.e., 36-months). Other scholars have explored the impact of OHP have found different results. For example, Font and Maguire-Jack (2013) found that children in OHP have higher levels of emotional and cognitive school engagement compared to maltreated children were never removed. The differences between the results of this study compared to Font and Maguire-Jack (2013) could be attributed to differences in the covariates included in the propensity score matching models or differences in the length of follow-up. For example, Font and Maguire-Jack (2013) took into account reunification, and if the child was reunified versus never removed. They also examined how OHP affected school engagement on its own, but also took into account continuous OHP, and how that may have affected the child's school engagement at 12-month follow-up. This study did not take into account how reunification and continuous OHP may have an impact on how OHP influences school engagement. Furthermore, while Font and Maguire-Jack (2013) also utilized NSCAW II data, they examined the effect of OHP on school engagement at 18-month follow-up. This study's 36-month follow-up results may suggest that the potentially positive impact of OHP found by Font and Maguire-Jack (2013) leveled out across further follow-up to the point where it became no longer statistically significant at 36-month follow-up. While Font and Maguire-Jack (2013) suggest that children in OHP may have more resources and support due to the

involvement of the child welfare system, and involved substitute caregivers, our findings suggest that the benefits of baseline OHP may taper off over time. Children's continuous OHP and reunification may also be influential, as we may see children who remain in care reporting different levels of school engagement.

Moreover, this study's research questions were grounded in Patterson's (2002a, 2002b) Family Adjustment and Adaptation Response (FAAR) Theory. The theory suggests that families experience crisis (maltreatment and OHP), as a result of an imbalance of demands and capabilities. FAAR theory also suggests that families are able to accomplish resiliency and adjust their capabilities to meet the heavy demands that had brought them to crisis in the first place. This study supports FAAR theory assumptions in that these families have definitely experienced an imbalance of the resources leading them to the crisis of maltreatment and OHP. However, the families in this study have not yet reached full adaptation and balanced out their demands, as the study assumes the family must accomplish in order to reach resiliency. This study supports FAAR theory's assumption that families must be able to increase their capabilities in order to reach a more stable, adapted, and resilient family unit for all members. The children in this study are part of family units that have not yet reached adaptation and resilience, as proven by their low school engagement scores across the board. These families must receive additional support and resources to increase their capabilities, and weigh out their demands. This study supports the notion that families who experience crisis must have an increase in capabilities and resources, in order for all family members to adapt to the original crisis.

Limitations and Recommendations for Future Research

While this study has a number of strengths it is also not without its limitations. As previously mentioned, this study used propensity score matching to isolate the effect of OHP on

educational outcomes. Using propensity score matching can be both a strength and a limitation of this study. As a strength, propensity score matching is useful in isolating the impact of one variable of interest. While propensity score matching can be useful in isolating one effect, it limits the ability to examine how other potentially important variables, aside from OHP, impact a child's educational outcomes. For example, our models did not account for placement type or the role of siblings, both of which are known to impact educational outcomes (Font, 2014; Hegar & Rosenthal, 2009; O'Higgins et al., 2017). Additionally, Font and Maguire-Jack (2013) included substantiation as an important covariate to consider for the child's outcomes. It may be important for future research to consider whether the abuse was substantiated or not. Lastly, another important covariate that may be examined more closely, is the role of hispanicity. The sample had a large portion of participants (~27%) who indicated that they were of Hispanic ethnicity. Future research may explore the role of being Hispanic, and how experiencing OHP for this population, affects school engagement.

While this study explored the emotional, cognitive, and behavioral school engagement of maltreated children at 36-month follow-up, it only considered whether the child experienced OHP at baseline and did not account for reunification, OHP, or placement moves between baseline and 36-month follow-up. It is possible that some of these children moved in and out of placement or reunified during the course of data collection. School changes often coincide with changes in a child's home environment or placement status. In addition to placement status, this study did not consider the type of placement that children in OHP experiences. Placement type may also play a role in shaping children's emotional, cognitive, and behavioral engagement. In essence, not all placement types are equal and some may be better suited to support children's school engagement (e.g., kinship placements or family foster care). Some studies have found that

different caregivers in foster care provide help with homework, and other school involvement support, that is associated with more positive educational outcomes (Burley & Halpern, 2001; Cheung et al., 2012; Pears et al., 2010). It may be important to consider how foster caregivers play a role in the child's education considering the child may have been removed from their previous school environment. Previous caregivers who had maltreated the child may not have had any involvement with the child's education, and this may prove to be a positive influence for the child while in care. It may be important for future research to consider if the child is at a new school due to their OHP situation, when being interviewed about their school engagement. It could be assumed that a child would engage with a new school environment differently, than they may engage with a school in which they have been at for a longer period of time. Similarly, if the child has been reunified and is back in their previous school, they may be responding to questions differently based on the comparison to their OHP school experience. Additionally, even though our study looked at a long-term follow up of 36-months, it may be important to look even further at how OHP and maltreatment affect children after 36-months and potentially into young adulthood. Furthermore, it may be important to consider what school engagement looks like for different age groups. School engagement for maltreated children could differ between early childhood and adolescence. Future research may consider splitting the sample and examining how OHP affects children from different age groups.

Given the aforementioned limitations to the use of propensity score matching, future research may benefit from applying different statistical analysis to compare and contrast the types of findings that result. For example, regression models may be suited to explore the impact of additional variables beyond OHP, and the testing of potential mediators and moderators of the relationship between maltreatment and educational outcomes may prove fruitful. Additionally,

models that account for educational outcomes across time may provide further insight into the static or evolving educational trajectories of maltreated children, and specifically children who experience OHP compared to those who are continuously in OHP. Lastly, it may be less about OHP in general, and more about the type of placement the child experiences that generates educational differences for children in OHP. Placement type may impact the type of educational support the child may need throughout their time in OHP. This study's model did not account for placement type, but may be an important area for future consideration.

Clinical Implications

This study provides clinicians, specifically Marriage and Family Therapists (MFTs), with additional information about maltreated children's emotional, cognitive, and behavioral school engagement. With the knowledge produced in this thesis, MFTs can better understand how children's school engagement is affected by maltreatment, and how all the different people in the child's life can best of support. Building on the notion that all behavior makes sense in context, MFTs should be aware that maltreated children are potentially at increased risk for poor educational outcomes. Assuming that maltreated children may struggle educationally, additional supports should be put into place to assist these children and buffer against the detrimental impact of maltreatment. Educational support for the child following maltreatment could be approached systemically, in that multiple people in the child's life can provide support for the child in order for them to succeed academically. MFTs training can best help these children from a systemic perspective by providing information and support to the child's different systems in their life.

For example, MFTs may consider how both permanent and substitute caregivers can offer educational support to a child following maltreatment and during their time in OHP. MFTs

may assist foster caregivers by encouraging and educating them to monitor the child's academic success. Foster caregivers can also be encouraged to have regular check-ins with the school and the child's teachers, and provide assistance with homework and school assignments. Both clinicians and child welfare professionals can work to foster a supportive educational environment for the child in order to reduce the negative impacts of maltreatment. Child welfare professionals can also be a support to the foster caregiver to provide this information, and also check-in with the school themselves. It may be important for the child welfare professionals to have a role in educating the foster caregiver on how essential their attitudes and perceptions about education are as a model to the child. Additionally, if foster caregivers and child welfare professionals are doing regular check-ins with the school, they can also employ teachers to get involved in helping these maltreated children.

Teachers can become aware of the potential struggles these children face with engagement in the classroom and attaching to the temporary school, and work to adjust their teaching strategies accordingly. There are many takeaways that clinicians, child welfare professionals, foster caregivers, and teachers can gain from the results of this study. One of the major takeaways for all of these support systems, especially for teachers, is the idea that when school engagement is supported and encouraged, then school achievement is more likely to increase. However, school engagement may not increase as a result of a push for increased school achievement. Therefore, it may be most beneficial for teachers and caregivers to find ways to support the child's school engagement first before working to increase the child's school achievement, because school achievement may come as a result. MFT's may also be helpful to these support systems by teaching them ways to be supportive to the child following maltreatment, in order to increase school engagement. MFT's may guide parents, caregivers,

teachers, and caseworkers in some of the following practices: normalizing the child's experience, responding in a nurturing and warm way, avoiding criticizing/blaming/shaming, being understanding when the child is not engaged at school or performing well, remaining positive, remaining calm, being attentive to their needs, etc. These are a few of the many ways in which MFT's can draw from their training in order to create a safe a nurturing environment for the child to be able to engage positively in school following maltreatment. MFT's can play a critical role in the healing process for these children, to better help their support systems understand how to best respond to their needs.

While this study's results shed a light on the need for support following maltreatment, these results also indicate a need for prevention strategies to avoid maltreatment in the first place. This study's results indicate that children are negatively impacted by maltreatment across the board, further suggesting that sometimes it is not enough to react to the maltreatment, but that we need to be proactive about avoiding it. Children would benefit if they have never experienced maltreatment in the first place, and their caregivers were given the resources necessary to avoid maltreating their children. There are many populations who may be at increased risk of perpetrating abuse on their children. Some of these populations may include: trauma survivors, individuals struggling with mental health or substance abuse problems, immigrant populations who are not aware of the impact of maltreatment from a cultural perspective, etc. These populations may be provided with support, information, and resources to help them better outweigh the demands they may be experiencing. MFTs, clinicians, case workers, caregivers, temporary caregivers, and teachers can benefit by knowing the effect that maltreatment has on children's school engagement, and how they can best support these children both proactively and reactively. Therefore, the primary take-away for MFTs and clinicians working with this

population, is that while OHP does not have a significant impact on school engagement at 36-month follow-up, maltreated children as whole (regardless of whether they remain in home or experience OHP) may struggle to engage in school. These children are important and should be advocated for by their support systems.

Conclusion

This study sought to explore the differences in educational outcomes, specifically school engagement, between maltreated children who have experienced OHP, and maltreated children who remained in-home. The study found that maltreated children do not have any statistically significant differences in school engagement when they are placed in OHP versus remaining in-home. This study added to the literature that suggests that children who experience maltreatment are still at risk academically, and should be provided with additional support and resources in order for their school engagement to be higher than average. Additional research is needed to further understand the long-term educational outcomes of maltreated children. Future research may consider other factors that influence school engagement for children in OHP, such as type of placement, the role of siblings, and relationship quality with the substitute caregiver(s). Clinicians may find it important to consider ways in which this population may need additional support to decrease the detrimental impact of maltreatment on educational outcomes.

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Appendix A: IRB Approval Letter



Office of Research Compliance
 Institutional Review Board
 North End Center, Suite 4120
 300 Turner Street NW
 Blacksburg, Virginia 24061
 540/231-3732 Fax 540/231-0969
 email irb@vt.edu
 website <http://www.ibr.vt.edu>

MEMORANDUM

DATE: December 12, 2018
TO: Ashley Landers, Kasey Danielle Reichard
FROM: Virginia Tech Institutional Review Board (FWA00000572, expires January 29, 2021)
PROTOCOL TITLE: Educational Outcomes of Children in Out-of-Home Placement
IRB NUMBER: 18-1108

Effective December 8, 2018, the Virginia Tech Institution Review Board (IRB) approved the New Application request for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report within 5 business days to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at: <https://secure.research.vt.edu/external/irb/responsibilities.htm>

(Please review responsibilities before the commencement of your research.)

PROTOCOL INFORMATION:

Approved As: Expedited, under 45 CFR 46.110 category(ies) 5
 Protocol Approval Date: December 8, 2018
 Protocol Expiration Date: December 7, 2019
 Continuing Review Due Date*: November 23, 2019

*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

FEDERALLY FUNDED RESEARCH REQUIREMENTS:


Per federal regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals/work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.

Invent the Future

Appendix B: NSCAW II Recruitment Letters

Parent Lead Letter (Version 1C)



NATIONAL SURVEY OF CHILD AND ADOLESCENT WELL-BEING

RTI • P.O. Box 12194 • Research Triangle Park, North Carolina 27709-2194 USA

[PARENT NAME]

[Date]

[Address]
[Address #2]
[City, State, Zip]

Dear Parent,

The *National Survey of Child and Adolescent Well-Being (NSCAW)* is currently conducting interviews with selected children and families. The NSCAW is a Congressionally mandated study of children and families who have had contact with the child welfare system. The study is sponsored by The Children’s Bureau and the Administration for Children and Families (ACF), an agency within the U.S. Department of Health and Human Services. ACF has hired RTI International (RTI), a not-for-profit survey research organization, to conduct the study.


By participating in the survey, you will have a unique opportunity to talk about your experiences with the child welfare system, your level of satisfaction with the services your family may have received, and about your child, **[NAME OF CHILD]**. This will help us better understand the issues that affect children and families like yours. The results of the study will be used to make improvements to the child welfare system. Because your contribution is important, we will pay you \$50 for participating in this round of interviews. We will also give your child a gift certificate for participating. The amount of the gift certificate is \$20 for children age 11 or older and \$10 for children age 10 or younger.

We realize you are busy, taking care of a family, working outside the home, or going to school — possibly all three. A professional RTI representative in your area who will contact you will conduct the interview whenever it is convenient for you and your child.


Your help in this study is voluntary, but we urge you to participate. The information you provide will be completely confidential, as required by law. Neither this project nor the local representative who will contact you is affiliated with the child welfare agency. No individual participant or family will be identified in reports or data files released by RTI. Your participation will not affect any benefits or services you or your child receive.

Additional information about the study is in the enclosed fact sheet. A professional RTI representative will try to reach you by telephone to schedule the interview. However, if the interviewer is not able to reach you by telephone, she/he will come to explain the survey in person, and will be glad to answer any questions you have. Please ask to see her/his personal identification card; an example of the ID card is shown below.

Your help is extremely important to the success of this study, and I thank you in advance for your cooperation.



Sincerely yours,



Mary Bruce Webb, Ph.D., Project Officer
Administration for Children and Families

Name of Interviewer Who Will Contact You: _____

Version 1C March 2008

Legal Guardian Lead Letter (Version 1 F)



NATIONAL SURVEY OF CHILD AND ADOLESCENT WELL-BEING

RTI • P.O. Box 12194 • Research Triangle Park, North Carolina 27709-2194 USA

**[LEGAL GUARDIAN]
[Address]
[Address #2]
[City, State, Zip]**

[Date]

Dear Legal Guardian,

The *National Survey of Child and Adolescent Well-Being (NSCAW)* is currently conducting interviews with selected children and families. The NSCAW is a Congressionally mandated study of children and families who have had contact with the child welfare system. The study is sponsored by The Children's Bureau and the Administration for Children and Families (ACF), an agency within the U.S. Department of Health and Human Services. ACF has hired RTI International (RTI), a not-for-profit survey research organization, to conduct the study. The results of this study will be used to make improvements to the child welfare system.

[NAME OF CHILD], a child for whom you (or your state or agency) are the legal guardian, is among more than 8,000 children randomly selected for participation in the study. By participating, respondents have a unique opportunity to talk about their experiences with the child welfare system. This can help us better understand the issues that affect children and families. We would like to talk with the child to learn how the system serves children with different needs. Because every child's participation is important, we will give each child a gift certificate for participating. The amount of the gift certificate is \$20 for children age 11 or older and \$10 for children age 10 or younger.

We realize you are busy. The professional interviewer who will contact you can meet with you to discuss the consent for the child interview whenever it is convenient for you.

Your consent for the child's participation in this study is voluntary, but we urge you to allow the child to participate. Each child's participation will help us learn about the child welfare system from a child's point of view. The information the child provides will be completely confidential, as required by law. Neither this project nor the local representative who will contact you and the child is affiliated with the child welfare agency. No individual participant or family will be identified in reports or data files released by ACF. The child's participation will not affect any benefits or services the child or his/her family receives.

Additional information about the study is in the enclosed fact sheet. A professional RTI representative in your area will try to reach you by telephone to schedule the interview. However, if the interviewer is not able to reach you by telephone, she/he will come to explain the survey in person, and will be glad to answer any questions you have. Please ask to see her/his personal identification card; an example of the ID card is shown below.

Your help is extremely important to the success of this survey, and I thank you in advance for your cooperation.

Sincerely yours,

Mary Bruce Webb, Ph.D., Project Officer
Administration for Children and Families



Name of Interviewer Who Will Contact You: _____

Version 1 F March 2008

Q & A Fact Sheet – Caseworkers (Version 1 A)

Version 1 A, March 2008



QUESTIONS AND ANSWERS ABOUT THE

**THE NATIONAL SURVEY OF CHILD AND
ADOLESCENT WELL-BEING (NSCAW)
Caseworker Survey**

Your agency is participating in an important study called the *National Survey of Child and Adolescent Well-Being*. In Spring 2008, we will begin to measure changes that may have resulted from state budget cuts to these agencies, different reasons that families may be coming into contact with the system, and different ways that agencies are dealing with situations like yours. In this brochure, you will find answers to some of the most common questions that are asked about the study.

What is the National Survey of Child and Adolescent Well-Being (NSCAW)?

The National Survey of Child and Adolescent Well-Being (NSCAW) is a Congressionally mandated study designed to collect nationally representative longitudinal data from children and families in the child welfare system. Information is also collected from teachers and caseworkers. The data will be used to learn about the needs of children and families, about the kinds of services used by children and families, and about other services provided by child welfare agencies. In addition, this national study that examines child and family well-being outcomes within the context of their experience in the child welfare system.

Who is doing this study?

The study is being sponsored by the Administration for Children and Families (ACF) of the U.S. Department of Health and Human Services. RTI International (RTI) has been hired to conduct the survey, and is not affiliated with the child welfare agency.

Who is RTI International (RTI)?

RTI is a private, not-for-profit research organization located in North Carolina founded in 1958 by the University of North Carolina at Chapel Hill, Duke University in Durham, and North Carolina State University in Raleigh. RTI conducts research projects for a wide variety of government agencies, universities, and private companies.

How were children chosen to participate?

Most surveys involve drawing a scientific sample from the population of interest and then concentrating the study on this relatively small sample. This is also the approach that will be used in the NSCAW. First, a random sample of about 100 child welfare agencies are being drawn from the entire U.S. Now, within each of these agencies, we are scientifically selecting a sample of children who came into contact with the child welfare system during a 12-month period of time. This will result in a group of about 5,700 children for the study that will represent all children in child welfare agencies across the entire U.S.

What is the NSCAW Caseworker Survey?

During the next 12 months, children will be selected from your agency for inclusion in this study. Note that you may be asked to complete interviews for more than one child during the year. We will work with you to find a convenient time to do the interview.

If you completed the investigation or assessment on any selected case, we will ask you to complete an interview so we can obtain some basic information about the circumstances surrounding the investigation/assessment and the report or other situation that led to it, about the characteristics of the family, and about the factors that contributed to your recommendation. We will contact you about this interview shortly after we have completed an interview with the child or his/her caregiver. When we contact the family, we will seek permission from the child's parent or legal guardian to keep and use these data in our research. If that permission is not granted, we will retain only a small portion of the data for purposes of calculating weights for participants' data, to statistically adjust for those who choose not to participate.

Note that you may be asked to complete interviews for more than one child during this round of interviewing. We will work with you to find a convenient time to do the interview(s).