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### **Immigrant and U.S. Born Early Head Start Families: Exploring the Relationship Between Parenting Stress, Attachment Behaviors, Primary Caregiver Depressive Symptoms, and Parent-child Attachment in a Nationally-representative Sample**

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## Abstract

The current study sought to explore the relationship between parenting stress, attachment behaviors, primary caregiver depressive symptoms, and parent-child attachment in a nationally-representative Early Head Start sample of 2349 families. Additionally, the study explored whether there were differences between immigrant families and U.S. born families in terms of the main study variables. The study used a nationally representative secondary dataset, Baby FACES 2018 (Vogel et al., 2018). Data analysis was completed with PROCESS v. 3.3 (Hayes, 2018) in IBM SPSS v.26 (IBM, 2019). A series of mediation and moderated mediation models were tested aligning with each of the hypotheses. The main findings for the whole sample were: Higher parenting stress was associated with lesser parent-child attachment; parenting stress was associated with parent-child attachment through attachment behaviors; and depressive symptoms were a significant moderator of parenting stress and attachment behaviors. The indirect effect of attachment behaviors was not moderated by depressive symptoms. This association was similar for both U.S. born and immigrant respondents. The moderator effect was not significant for U.S. Born and Immigrant subsamples when compared separately. Immigrant respondents had greater parenting stress, lesser depressive symptoms, lower attachment behaviors and lesser parent-child attachment compared to U.S. born respondents. Post-hoc analysis revealed significant differences between the two subsamples in terms of racial and ethnic composition. And level of education of the primary caregiver. Major implications of the study include consideration of how much parental factors like primary caregiver mental health and parenting stress influence a parent's ability to be the best parent for their children and to engage in the parent-child relationship in a way that is consistent and sensitive. Second, a need to expand family well-being services through Head Start programming. Lastly, preliminary findings suggest the need to consider intersections of nationality and race/ethnicity as well as levels of education and gender.

Immigrant and U.S. born Early Head Start Families: Exploring the Relationship Between  
Parenting Stress, Attachment Behaviors, Primary Caregiver Depressive Symptoms, and Parent-  
Child Attachment in a Nationally-Representative Sample

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Dissertation

Submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in  
Marriage and Family Therapy

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To my husband, Nekabari: Thank you for being my rock throughout this whole journey. Thank you for believing in me even when I doubted myself. There are not enough thank yous in the world to tell you how much I appreciate all the sacrifices you made so that I could achieve this dream. WE did it.

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## **Chapter One**

### **Introduction**

In this study, I investigated the relationships between parenting stress, symptoms of depression, attachment behaviors, and parent-child attachment in a nationally representative sample of families in Early Head Start. Early Head Start (EHS) is a national program that serves low-income families from pregnancy up to age 3 years through a variety of childcare, home-based care, and center-based care option (OPRE, 2015). In general, parenting stress and parental mental health are widely studied as an important determinant of early childhood attachment (Badovinac et al., 2018; Dau et al., 2019). Previous research has linked parenting stress with insecure attachment (Jarvis & Creasey, 1991; Teti et al, 1991; Dau et al., 2019). Studies show that parenting stress is significantly associated with insecure attachment to both mothers and fathers the parenting stress creating psychological separation between the infants and their parents, leading to an insecure attachment outcome (Jarvis & Creasey, 1991). Attachment security, on the other hand, has been shown to be a protective factor against parenting stress (Mazzeschi et al., 2015).

Maternal depression specifically as it relates to the mother-infant attachment has been studied with wide depth and breadth (Śliwerski et al., 2020). It is suggested that the mental health of the parent is related to type of attachment relationship at this preschool stage of life (Badovinac et al., 2018). Furthermore, research has shown that even prenatal maternal health can contribute to the mother-child relationship (Hazell Raine et al., 2020). Both mothers and fathers report higher levels of depression in the years following childbirth at a rate of 14.9% for mothers and 11.5% for fathers, according to one study (Johansson et al., 2020).

Newland et al. (2008) found that rough housing play was more predictive of child attachment security to the father than father sensitivity and consistency. This finding for fathers was a unique predictor of the preschool child's attachment security, regardless of the co-parent's parenting behaviors of the father's other types of parenting behaviors. Other researchers have stressed the importance of maternal sensitivity and interactions with the child (Śliwerski et al., 2020). In fact, these interactions seem to have more of an effect on the relationship than the depressive symptoms that the parent is experiencing, regardless of the levels of depression (Śliwerski et al., 2020).

Parent mental health along with the association of parenting stress has also been studied in the Head Start population (Chung et al., 2021, Hustedt et al., 2017; Mennen et al., 2021, Wurster et al., 2020). In an intervention that targeted infant attachment through the mechanism of maternal sensitivity/responsiveness, a medium-sized effect was found for an increase in maternal sensitivity to improve attachment quality with the Home-Based Early Head Start population (Berlin et al., 2018). However, a consistent gap in the literature is the inattention to cultural differences among variables like parenting stress, parental mental health, and parent-child relationships variables. For instance, emerging research with immigrant families demonstrates that children from immigrant families are at risk in terms of socioemotional difficulties, especially if the family has low-income (Huang et al., 2017). Others have found that children of immigrants have better developmental outcomes dependent on parenting practices (Zang et al., 2021).

The phenomenon of parental mental health on the parent-child relationship may have a strictly top-down impact (Dalgaard et al., 2016; Sangalang et al., 2017), or have a bi-directional impact (Eruyar et al. 2018; Fazel et al., 2011). With a top-down impact, the parental dynamics of

trauma impact the subsequent generation. Or they occur bi-directionally, where the trauma experiences and symptoms of an individual child are also interacting with the traumatic experiences and symptoms of the parent (s). Similar attachment disruptions may occur between parent and child even when the child has not had their own trauma exposure. In one study, the researchers could not statistically confirm a correlation between the child's attachment security score and the child's psychosocial adjustment nor the association between parent's mental health symptoms and children's attachment security (Dalgaard et al., 2016). It is possible therefore, that it is not the symptoms that directly disrupt the attachments, but more the interactions of the relationship with communication and responses of the parents that disrupt attachment. This bidirectionality highlights the importance of parent-child interactions for immigrant families as well.

No known study has sought to examine whether the factors of parenting stress, depressive symptoms, and attachment behaviors together influence parent-child attachment in a sample of families from diverse backgrounds. Using a secondary dataset of families from Head Start, this study sought to investigate these associations through the following questions: is the relationship between parenting stress and parent-child attachment mediated by attachment behaviors; do symptoms of depression moderate the mediating relationship of attachment behaviors on parenting stress and parent-child attachment; and are there differences between groups of U.S.-born families and immigrant families in these associations? Attachment theory (Bowlby, 1969) provides the theoretical basis for these questions. Briefly, attachment theory is widely used to conceptualize the bond between the attachment figure (parent) and child with the underlying idea of proximity seeking behaviors and parental response to a child's behaviors to seek that proximity (Bowlby, 1969). Parent-child attachment is influenced by maternal depression,

sensitivity, and responsiveness as studied with the general population (Dau et al., 2019; Jarvis & Creasey, 1991; Śliwerski et al., 2020) and migration specific stressors in immigrant populations (De Haene et al., 2013). In predominately Latinx Head Start mothers, an increase in maternal sensitivity is shown to improve attachment quality (Berlin et al., 2018).

Data from this study were from The Early Head Start Family and Child Experiences Survey (Baby FACES) which was launched in the spring of 2009 to collect data specifically related to Early Head Start programs and the families they serve (OPRE, 2015). Since the first cohort of data collection (2009-2012), a second cohort (spring 2018) has been collected and become available for publication, with a third scheduled for collection in 2020 and publication after (OPRE, 2015, Vogel et al., 2018). The results of this research will inform not only the local Head Start locations, but can also inform other locations nationally, about parent-child relationships in Early Head Start and Head Start families as well as how this growing number of immigrant families can best be supported through comprehensive services through Head Start. This research will lead to discussions about the tailoring of services for specific populations served by Head Start programs and the implementation of subsequent policy changes.

Given the secondary nature of the study, some proxy variables were needed. For the purposes of this study, attachment behaviors, are actions that demonstrate parents' responsiveness and sensitivity to the focal child. Often, attachment is synonymous with the interaction of sensitivity and responsiveness (Beijersbergen et al., 2010; Berlin et al., 2018). For this variable, a parent-child interaction variable from the original study was used. Parent-child closeness was used as a proxy for parent-child attachment. This parent-child closeness is defined as parent's perception of their closeness to the focal child which is similar to a parent rating an attachment bond to their child, thus the choice for this variable. A parenting stress variable was

used. Parenting stress is conceptualized as psychological stress specifically associated with the demands of parenting and the parenting role, separate from other life-related stressors (Cherry et al., 2019; Deater-Deckard, 1998). Parenting stress refers to whether there is stress related to their role as the focal child's parent as evidenced by endorsement on a parental distress subscale. For this study, parental depression is defined as self-reported depressive symptoms emitting a total score. The total score falls into a range of clinical significance to non-clinical significance and that score was used as the primary caregiver depression variable.

This dissertation document will be organized into chapters, starting with this introduction. Next, the second chapter will review the current literature related to the history of Head Start (HS) and Early Head Start (EHS) and the families served by these programs. The second chapter will also include a thorough review of the literature on parent-child relationships and the influence of parental mental health on these relationships for the general population, the EHS/HS population, and for immigrant families. The study's overall theoretical framework of attachment theory will be discussed in depth with current debates in the field of attachment. Chapter two concludes with a rationale for the current study. Chapter Three outlines the methodology of the study and reviews the operational definitions for each of the variables. The methodology chapter includes this study's research questions and associated hypotheses. Additionally, the research design, procedure, and the measures used will be explained. Chapter Four presents the analysis and the associated findings of the current study. The document concludes with Chapter Five, an in-depth discussion of the findings, implications, limitations, and future areas of research.

## **Chapter Two**

### **Literature Review**

This chapter provides an overview of the literature on Head Start and Early Head Start programs and families served by these programs; parent-child relationships and the influence of parental mental health on these relationships; and comparison between US-born and immigrant families in terms of parent-child relationships and parental mental health. My theoretical orientation of the proposed study is discussed. This includes a review of the original literature on attachment theory. The current debates within the field of attachment theory and research are underscored in this section. The chapter concludes with a description of current gaps in the literature and a rationale and operational definitions for the current study are provided.

#### **Description of Head Start, Early Head Start, and Families served by these programs**

Project Head Start was started as one of the programs of the Economic Opportunity Act of 1964 as an action step of President Lyndon B. Johnson's "War of Poverty. The first eight-week summer program was launched in the summer of 1965 through the Office of Economic Opportunity (OEO) and served more than 560,000 children and families. After the summer program was so successful, Congress authorized Head Start as a part-day nine-month program in 1965. By 1975, Head Start served more than 5.3 million children. With this occasion, came the publication of the first performance standards for serving children ages 3 to 5. The standards were revised in 1998 to require certain certifications of the lead teachers (Early Childhood Learning & Knowledge Center, 2019a).

The Early Childhood Learning and Knowledge Center (2019a) describes that Early Head Start, offering services to families with children birth to 3 years, began as The Parent and Child Centers demonstration project in 1967. It was not until 1995 that the program was funded as Early Head Start, with 68 new grants. At this time, the federal Fatherhood Initiative also took



place and the Head Start Bureau funded six projects that fit in this category related to father involvement (. Projects like this are also currently funded by the Administration for Children and Families and some of the literature explored in the next section is reflective of these projects. Funding opportunities to go colleges and universities were also implemented in 2000 to better prepare Head Start staff to serve their families and were established in 2008.

Head Start started in the Office of Economic Opportunity and then transferred to Health and Human Services in 1974. With this transfer came a mandatory formula to allocate funds among states. Head Start now encompasses several programs. Home Start, which is now called “Home-Based” started as a three-year demonstration program in 1973. The Migrant Head Start program began in 1969 to provide services to children of migrant farmworkers that move across the country to pursue work. Then, in 1998, they were expanded to include services for children of seasonal agricultural workers. The American Indian and Alaska Native (AIAN) Head Start program began in 1965 and now serves 41,000 children (Early Childhood Learning & Knowledge Center, 2020c).

The Child Outcomes Framework was introduced in the early 2000’s to assess programs and to make curriculum, this was in part, due to a national push from the Bush administration’s Good Start, Grow Smart initiative (Early Childhood Learning & Knowledge Center, 2019a). In 2013, another push for early learning and universal preschool came with an expansion of home visiting programs as well as more Early Head Start-Child Care partnerships which were then expanded to full school day and full school year programs in 2015.

In 1976, Head Start focused on improving services to Spanish speaking children through the Research Workshop on bilingual and bicultural early childhood development. Summer-only programs ended in 1982 with a funding increase from Congress to convert summer-only to

school-year programs. Funding was reauthorized and the budget expanded to over one billion dollars in 1984. In the early 1990s, there was a push for higher quality services and with that came the publishing of “the Multicultural Principles for Head Start Programs”. Principles such as Principle 3, “Culturally relevant and diverse programming requires learning accurate information about the cultures of different group and discarding stereotypes” and Principle 6, “Effective programs for children who speak languages other than English require a continued development of the first language while acquisition of English is facilitated” were implemented to better serve a diverse Head Start community (Early Childhood Learning & Knowledge Center, 2020a). The Dual Language Learners Program Assessment came about in 2018 as a tool to support dual language learners and families (Early Childhood Learning & Knowledge Center, 2019a).

Head Start has always served a diverse population in terms of race, ethnicity, and language. In fiscal year 2018, when the current study data were collected, 37% of the families identified as Hispanic/Latino and 30% were Black/African-American (Early Childhood Learning & Knowledge Center, 2019b). Both race and ethnicity were asked. Families that primarily spoke a language other than English composed 28% of the population and 22% were from families that primarily spoke Spanish. This is somewhat representative of the national makeup of children birth to 5 years as well. In 2019, 24.3 % of children birth to 5 years were living in immigrant families, as defined by living with at least one immigrant parent (Migration Policy Institute, 2019). This is a shift from the 13.5% of children birth to 5 years that were living in an immigrant family in 1990. Head Start programming has also shifted demographically to reflect the national population. Some research with EHS/HS populations has explored parental mental health variables and the influence on parent-child relationships, as well as parenting-related stress (Hustedt et al., 2017; Chung et al., 2021, Mennen et al., 2021, Wurster et al., 2020).

## **Parent-Child Relationships and Influence of Parental Mental Health on Parent-Child Relationships**

Studies on parent-child relationships have mostly considered factors that influence the parent-child bond through attachment theory lens (Steele & McKinney, 2020). While a detailed description of the attachment theory follows this literature review, parenting-child attachment refers to the close bond between the attachment figure (parent) and the child reflected in proximity seeking behaviors and parental response to a child's behaviors to seek that proximity (Bowlby, 1969). Earlier studies have focused on parental mental health and parenting stress as significant predictors of parent-child attachment, especially in the early years. For instance, maternal depression as it relates to the mother-infant attachment has been studied with wide depth and breadth. This topic is of global interest and has been studied using a variety of methodologies in other countries besides the United States, including Denmark (Smith-Nielsen et al., 2016); the Netherlands (Tharner et al., 2012); Australia (McMahon et al., 2006); South Africa (Tomlinson et al., 2005); Switzerland (Righetti-Veltema et al., 2003); the UK (Murray, 1992; Hughes et al., 2001, Bergman et al., 2010); Canada (Tarabulsy et al., 2005, Ludmer et al., 2018); Italy (De Falco et al., 2014); Germany (Mehler et al., 2011); Israel (Sagi et al., 2002); and Sweden (Edhborgh, 2001, Śliwerski et al., 2020). In a recently published systematic review, maternal depression as it relates to infant attachment depended on the distinction between a depression diagnosis and depressed mood as well as antenatal versus prenatal depression (Śliwerski et al., 2020). Essentially, the disparate findings on depression influencing child attachment style are attributed to the fact that mothers who have depression are not all experiencing the same levels of depression.

Using a structured diagnostic interview that diagnosed depression, studies have found that postpartum depression affects parent-child attachment style, but only alongside other factors (Śliwerski et al., 2020). The authors stress the importance of maternal sensitivity and interactions with their child, as those seems to have more of an effect than the depressive symptoms that the parent is experiencing, regardless of the levels of depression. In 12 out of the 17 studies, depressive mood was unrelated to attachment style (Śliwerski et al., 2020). In fact, Dau et al. (2019) found that Major Depression, in pregnancy or postpartum, had no effect on maternal sensitivity, though it could be due to the smaller sample size and lack of statistical power. So, there are disparate findings in terms of the mechanism through which attachment is or is not influenced by depressive symptoms or a depressive disorder. Parenting stress, on the other hand, has been significantly correlated to attachment (Jarvis & Creasey, 1991; Teti et al., 1991; Dau et al., 2019).

Taken together, these are important considerations for the current study. The fact that the relationship between mother-infant attachment and depressive symptoms is studied globally, demonstrates that there are interactions between these two variables, but what this study goes further to underscore is that mothers who have depression are not homogeneous and therefore, the maternal mental health may interact in the mother-child dyad differently. It remains to be seen whether the strengths of the associations differ between populations as expressions of depression and parent-child attachment may differ across them (Cabrera et al., 2000; Van Ijzendoorn & Kroonenberg, 1988)

Furthermore, research has shown that even prenatal maternal health can contribute to the mother-child relationship. A systematic review of studies linking prenatal depressive symptoms and/or personality characteristics with mother-infant relationship quality found that both of these

factors are associated with the mother-infant relationship after childbirth, stressing the importance of early prenatal assessment as well as ongoing assessment of potential factors contributing to that mother-child relationship (Hazell Raine et al., 2020).

Parent mental health can have long term effects on their children, even into adulthood. Metz and Jungbauer (2021) interviewed adult participants who experienced childhood parental mental illness. A multitude of long-term effects were discussed by the participants, across the life cycle. These included not getting the attention they needed or feeling security with their parent in childhood and having to find an attachment figure outside of the home and issues related to personality and identity development in adolescence (Metz & Jungbauer, 2021). Perhaps most striking was that all adult participants disclosed problems in their current social relationships (Metz & Jungbauer, 2021). This goes to show how important this topic is, due to the long-lasting impact on all family members, but especially related to child outcomes.

Steele and McKinney (2020) found similar results linking parent mental health and the influences on their child's emerging adult mental health. While both maternal and paternal psychopathology were linked to internalizing and externalizing problems for their children, there was a gendered finding where the interaction between mother-daughter relationship quality was a moderating factor (Steele & McKinney, 2020). That is, daughters were more affected regardless of their relationship quality. Overall, higher parent-child relationship quality was associated with less mental health issues for the emerging adult population studied.

### ***Attachment in Parent-Preschool Child Relationships***

Emergent literature about parent-child attachment in the preschool years focuses on how preschool children's attachment security or insecurity is related to other socioemotional and cognitive processes (C. et al., 2017; Stefan & Abram, 2019). New research also demonstrates

how mental health of the parent in these attachment dyads is related to type of attachment relationship at this stage of life (Badovinac et al., 2018).

Using the Attachment Story Completion Task (ASCT), Stefan and Avram (2019) found that attachment of preschool-aged children affects their development of empathy. Specifically, the amount of perspective-taking that the child is able to participate in, is related to their attachment style to their mother. This study also draws attention to the importance of development, as older preschoolers had higher scores on empathic perspective-taking tasks. This study is a concrete example of the ways that attachment relationships can impact other processes at this vital stage and underscores the importance of the attachment relationship at this age.

An early attachment study found that parenting stress was significantly associated with insecure attachment to mothers and father (Jarvis & Creasey, 1991). Additionally, the researchers found that psychological separation due to this stress influenced the relationship between infants and their parents more than physical separation, such as child care. Parents who used different coping strategies in relation to the stress fared better than those that took more of an avoidant stance (Jarvis & Creasey, 1991). The researchers point to an interesting issue of directionality. That is, are parents good at coping with their stress leading to secure attachments or are securely attached infants leading to less parenting stress? Regardless, there is a clear association between secure attachment and lower parenting stress.

A systematic review and meta-analysis of associations between maternal depression symptoms and mother-child attachment during the preschool years found that higher levels of maternal depression are associated with disorganized/controlling child attachment (Badovinac et al., 2018). These results were found, specifically for the children in this study age two to age five years. Additionally, the effect sizes in this analysis were larger in clinical samples than

community samples, which the researchers interpret as further indication that maternal depression is most consistently and strongly linked to this attachment typology, as depression is more likely to be present in a clinical sample (Badovinac et al., 2018). These analyses have implications for therapeutic work with clinical mother-preschool child dyads.

Research on parent-child relationships in non-immigrant populations is extensive and has examined parent-child attachment linked with a variety of variables: early child-parent attachments and child's interpersonal relationships (Schneider et al., 2001; Pallini et al., 2014); the intergenerational transmission of attachment (Verhage et al., 2016); parent-child attachment and children's emotions (Cooke et al., 2019); parenting and parent-child attachment (Koehn & Kerns, 2018); and attachment and attention problems (Pallini et al., 2019).

In a more recent study, Johansson et al. (2020) found a prevalence rate of depressive symptoms in fathers that was comparable to that of depressive symptoms in mothers. While mothers are still identifying higher levels of depression in the years following childbirth at a rate of 14.9%, fathers are also experiencing similar levels at a rate of 11.5% (Johansson et al., 2020). There were differences in the ways that parental stress and attachment style interacted with depression between the fathers and the mothers. While parental stress specifically related to feelings of incompetence, social isolation and spouse relationship problems predicted the mothers' depressive symptoms, while social isolation and health problems were the parental stress issues that predicted father's depressive symptoms (Johansson et al., 2020). Additionally, preoccupied attachment style predicted fathers' depressive symptoms, but not mothers', and that association was not as strong as the parental stress association (Johansson et al., 2020). Interestingly, these three areas did interact differently based on parental role, which is important

to consider for the present study. What is especially relevant, is the fact that depressive symptoms interacted with parental stress for both groups of caregivers.

The present study will be exploring these same factors for the primary caregiver, who may be a mother (biological or adoptive), a father (biological or adoptive), or in some cases, another primary figure. This is also relevant to the current study because depressive symptoms while more expected in the postpartum period, are not as studied in the years following the child's birth. Johansson et al. (2020) found that parental stress, depression, and attachment had these connections at the two-and-a-half-year mark. The current study includes parents who are also in this time period with the focal child. The aforementioned study utilized a Swedish sample and used the Swedish Parenthood Stress Questionnaire (SPSQ) as a measure of parental stress, therefore; the results of the study are not directly comparable with the current study's nationally representative U.S. sample and measures statistically validated in U.S. populations. In addition, the current study will include low-income and immigrant families.

### ***Parent-Child Relationships and Influence of Parental Mental Health on Parent-Child***

#### ***Relationships: Head Start Populations***

These associations have not only been found in the general population, but in the Head Start population as well. Studies have explored mental health variables and their influence on parent-child relationships in relation to mother-child relationships and in relation to father-child relationships. The association with parenting stress has also been studied (Hustedt et al., 2017; Chung et al., 2021, Mennen et al., 2021, Wurster et al., 2020). In many of the studies, income is used as a variable in the conceptual and statistical models, but this often leads to homogeneity of the sample due to the fact that families must be below the poverty line to qualify for Head Start and Early Head Start programs (Early Childhood Learning & Knowledge Center, 2020b). Other



limitations related to lack of representation of the sample are also prevalent. Studies using a single EHS/HS center as a recruitment site (Hustedt et al., 2017) are more predominant than multi-site studies, which are often in a single community or county (Chung et al., 2021; Mennen et al., 2021). Nationally representative, multi-site studies are few (Cherry et al., 2019).

Chung et al. (2021) found that fathers' depression, in this sample, was significantly associated with father-child closeness and conflict but that parental self-efficacy acted as a buffer. The researchers discuss the potential of economic pressures and emotional demands for children of this age group in relation to the high levels of depressive symptoms in fathers. These findings are relevant to the current study because the sample was of Early Head Start and Head Start fathers, which are likely to be in the current study as well. Chung et al. used a small sample from one specific geographical region versus a large nationally representative sample like the present study. This is limiting statistically as well as because of context. It is unclear whether there were immigrant families involved in the study as ethnicity was not reported and race was split into two groups: African American and Whites/Others. It is unclear what the Others label represents, but it is possible that there are cultural differences even if race is not different. The researchers mentioned that it is possible that factors such as culture could be proxies for other determinants. This highlights a gap that the current study will help fill.

Similarly, maternal depression is rampant in the Head Start population, with many researchers trying to find effective solutions for treatment, given the prevalence. Mennen et al. (2021) tailored an intervention for depression to this population and found a reduction in depressive symptoms as well as improvement in reported parental stress. This particular study is relevant in that the mothers were mostly low-income first generation immigrants from Mexico as well as Central and South America, highlighting how both low-income and racial/ethnic minority

mothers have higher rates of depression as well as the relationship between depression and parental stress (Chung et al., 2021; Mennen et al., 2021).

Another intervention with the home-based Early Head Start population targeted infant attachment through the mechanism of maternal sensitivity/responsiveness (Berlin et al., 2018), this is similar to the current study in terms of the use of primary caregiver sensitivity and responsiveness as a proxy for attachment. A medium-sized effect was found for an increase in maternal sensitivity to improve attachment quality, though the researchers, similar to the current study, did not use an infant measure of attachment. The CES-D, like the current study, was used to assess for maternal depressive symptoms. Interestingly, the intervention had a large effect on maternal intrusiveness and a medium effect on overall maternal sensitivity (Berlin et al., 2018). That is, the intervention had a stronger impact for mothers who belonged to the secure attachment style classification or the anxious attachment style classification, as well as who were more intrusive. One of the most relevant aspects of the study to the current study is the Early Head start sample comprised of predominately Latinx mothers. The implementation of a community-based attachment intervention with this group was successful and demonstrates that there is a need for these types of services to Latinx mothers of Early Head Start children ages 6 months to 20 months, which are likely to be in the current study sample as well.

Parenting stress has also been frequently linked in the literature to parental depression. In a cluster analysis of Early Head Start families, the authors found three subgroups with ranges of stress (Hustedt et al., 2017). They found that perception related to experiences of stress is an important factor to consider. In fact, parenting stress, in this study, was grouped together with other stressors: relationship stress, overall family functioning, parent depression, and perceptions of family income (Hustedt et al., 2017). Hustedt et al. discuss the fact that in all three clusters a

percentage of the children reported that they spoke a language other than English at home and for another percentage, English was not the first language, and yet, cultural differences among the clusters were not discussed further.

Studies have also compared within group experiences of families with similar ethnicities. For instance, Wurster et al. (2020) examined parental mental health related to adverse childhood experiences and parental mental distress and their subsequent emotional availability for their child in the American Indian and Alaska Native communities served by Head Start. The Parenting Stress Index Short Form (PSI-SF), which is also used in the current study was used as one of the measures of parental mental distress. The researchers operationalized parental mental distress as a latent variable combining the Generalized Anxiety Disorder-7 (GAD-7) (an anxiety measure), CES-D (a depression measure), and the PSI (parenting stress measure). For the current study, depression and parenting stress will be studied as separate but interacting variables. Interestingly, the researchers acknowledged that “parents” in this sample were the biological mother most of the time, but there was some diversity of relationships (Wurster et al., 2020). Other studies did not necessarily differentiate relationships of the parent to the child unless specifically targeting just fathers (Chung et al., 2021) or just mothers (Mennen et al., 2021).

The consistent gap in the literature is the inattention to cultural differences among variables like parenting stress, parental mental health, and parent-child relationships variables. When demographics are included in the study, attention is paid to employment, education, exposure to violence in the home, and differences in income (Hustedt et al., 2017; Cherry et al., 2019).

This and other studies on non-immigrant populations demonstrate the long-term effects of parent-child attachment relationships on child outcomes and the context of displacement

and/or migration experiences may impact these attachments in immigrant families. In addition, it is important to consider national origin of the parents and the generational experience, as racial categories used in research often lump together multiple groups rather than more stratified classifications using ethnicity and consideration of generational immigration (Rumbaut, 2004).

### ***Parent-Child Relationships and Influence of Parental Mental Health on Parent-Child***

#### ***Relationships: Immigrant families***

Research demonstrates the impact of mental health on immigrant family relationships, though the literature on parent-child relationships in immigrant families varies in its findings. Some research demonstrates that children from immigrant families are at risk in terms of socioemotional difficulties, especially if the family has low-income (Huang et al., 2017). In fact, there are demonstrated differences between refugee, immigrant, and U.S.-origin youth participating in mental health services (Betancourt et al., 2017). Others have found that children of immigrants have better developmental outcomes dependent on parenting practices (Zang et al., 2021).

For example, Black children of immigrants had a significantly lower risk of being physically and psychologically abused and therefore more favorable mental health scores than their peers of Black native-born parents. These findings were similar for Hispanic children of immigrant parents versus native-born parents suggesting that parent cultural values play a role in child outcomes, specifically through the mechanism of maltreatment risk (Zang et al., 2021).

An added dimension of the immigrant family experience is the idea of multiculturalism and transnationalism. Those that use an acculturation and enculturation approach to study child outcomes, find that there are interactions between culture, parenting, and childhood factors (Huang et al., 2017). Transnationalism considers the experiences of families that have migrated

(whether through voluntary means or forced displacement) and their ongoing relationships (Stone et al., 2005; Falicov, 2005). This framework differs from a traditional acculturation model in its recognition that individuals can exist across cultures and have a sense of belonging to multiple cultures and contexts (Stone et al., 2005). Family members may live in different countries, but still remain in communication and these relationships across cultures can have an ongoing effect on the development of a child or family's identity as a whole. This approach is more closely tied to the theoretical framework of the current study.

There is also research that shows a relationship between depression, parent emotional warmth, and control when adult first generation immigrants recall their parenting experiences. Those with immigrant mothers recalled more control, overprotection, punishment and rejection and those with immigrant fathers recalled more control and overprotection compared to those with non-immigrant parents (Klein et al., 2020). Findings, however, were complex as first generation immigrants reported more paternal emotional warmth than those with non-immigrant fathers. Additionally, the phenomenon of parental mental health on the parent-child relationship may have a strictly top-down impact (Sangalang et al., 2017; Dalgaard et al., 2016), or have a bi-directional impact (Erucar et al. 2018; Fazel et al., 2012). With a top-down impact, the parental dynamics of trauma impact the subsequent generation. Or, they occur bi-directionally, where the trauma experiences and symptoms of an individual child are also interacting with the traumatic experiences and symptoms of the parent (s).

Erucar et al. (2018) examined the impact of trauma exposure on children through their own exposure as well as through their parents. Using a sample of 263 refugee parent-child dyads in Turkey, this cross sectional study found that half of the child participants scored above the clinical cut off for Post-Traumatic Stress Disorder. Also, parent psychopathology and parenting-

related stress were associated with general mental health problems in the children. Eruyar et al. underscore this finding in light of the fact these pathways and mechanisms have not been studied in the refugee parent-child literature. That is, while the researchers acknowledge that the link between trauma and child mental health problems is well-established, the nuances related to refugee parent mental health have not been a topic of research (Eruyar et al., 2018).

Unfortunately, this study was cross-sectional, not longitudinal so it is impossible to determine the long-term effects of this interaction between parent and child-related symptoms. In addition, the recruitment plan was limited in that the sample was from only two Syrian schools where families had to pay for their children to attend, though the majority of the sample had a very low income. The children in the study were ages eight to eighteen years, which is a wide age range filled with several developmental milestones. It is likely that age contributed to some of the outcomes; in fact, the researchers noted that younger children did not report as much exposure to traumatic events. Focusing on a specific age range could have led to more generalizable results.

Research demonstrates that the mental health of resettled refugee children is impacted in a variety of ways that fall under the umbrella of family characteristics and parental characteristics: conflict in the family, communication, cohesion, warmth, and involvement (Dalgaard et al., 2016; Sangalang, 2017). Even when refugee children themselves have not been exposed to trauma, there can still be a transgenerational and intrafamilial impact of trauma on the child (Dalgaard et al., 2016; Sangalang, 2017). It is likely to be similar for children who are born to immigrant parents, in that the parents themselves might have experiences one or more traumatic events and the children have not but are still affected.

Dalgaard et al. (2016) found, in a sample of 30 children who were not exposed to trauma with at least one traumatized refugee parent, that their children still have more difficulty

compared to their peers and the attachment relationship between parent and child is negatively impacted. This is an important finding because it demonstrates the ways in which trauma can be pervasive in an entire family system. In this particular study, the parental strategies for managing and discussing the traumatic events whether they hid the information, somewhat discussed it, or shared in detail with their children had differential affects (Dalgaard et al., 2016). A strength of this study is the use of the adapted Attachment Story Completion Task used by De Haene et al. (2013) with the migration-specific stressors and the finding that similar attachment disruptions may occur between parent and child even when the child has not had their own trauma exposure. However, the researchers could not statistically confirm a correlation between the child's attachment security score and the child's psychosocial adjustment nor the association between parent's mental health symptoms and children's attachment security (Dalgaard et al., 2016). It is possible therefore, that it is not the symptoms that directly disrupt the attachments, but more the interactions of the relationship and the communication and responses of the parents that disrupt.

Similarly, Sangalang et al. (2017) found that parent's trauma can adversely affect the mental health of their children in their Southeast Asian sample of 327 refugee mother-child dyads. These researchers also paid attention to whether the child was foreign-born or U.S.-born as well as differences in ethnicity of the dyad, in order to attend to group similarities and differences. Sangalang et al. (2017) did find a potential reason for the puzzling phenomenon found in Dalgaard et al.'s (2016) study. That is; maternal traumatic distress indirectly affects child mental health through overall family functioning and the mechanisms thereof (Sangalang et al., 2017). It is not about the specific symptoms, it is about the interactional patterns and the way a family functions as a result of trauma exposure that can have an impact on the child, regardless of the child's own lived experiences. This is important for family therapists as we consider the

ways in which trauma lives in families. It is also relevant to the present study as the children are U.S-born but may be living in a family system that has been impacted by the intergenerational transmission of trauma.

The current study focuses on a specific age range as well as controls for SES/income, based on the fact that all families will be enrolled in the Early Head Start program, which requires families to be at a certain income level. Also, the current study looks at nationality of parents and uses the more encompassing term, “immigrant families,” versus refugee specific, because the immigration status of the families is unknown, and it allows for a broader understanding of how immigration interacts with parenting experiences and subsequent parent-child relationships.

I examine the theoretical framework of my study in detail below before articulating the rationale and research questions for the current study.

## **Theoretical Framework**

### **Attachment Theory**

Attachment Theory was originally put forth by John Bowlby in 1969 to conceptualize the primary relationship between parent and child, based on his work as a child psychiatrist in London (Bowlby, 1969). Attachment theory focuses mainly on the bond between the attachment figure (parent) and child with the underlying idea of proximity seeking behaviors and parental response to a child’s behaviors to seek that proximity (Bowlby, 1969). Both emotion and physical contact help facilitate this bond between caregiver and child (Schaeffer & Emerson, 1964; Bowlby, 1969). It is worth noting that while Bowlby is largely credited for attachment theory, Mary Ainsworth was a significant equal, if not greater contributor to the theory (Vicedo,



2017). Ainsworth contributed field research both in cross-cultural contexts in her Ugandan studies as well as in home studies in Baltimore resulting in a widely used laboratory assessment procedure, the Strange Situation Procedure (Vicedo,2017). Ainsworth was also tasked with responding to criticisms of Bowlby's works, as Bowlby himself did not respond directly (Vicedo, 2017; Duschinsky et al., 2018; 2020).

Attachment is developmental in that it matures over time parallel to the development of the child from infant, to toddler, to preschooler, to child, to adolescent, to adult (Bowlby, 1969). Essentially, what is changing within this relationship is the level of proximity-seeking. As an infant in the first year of life, attachment behaviors would include clinging, crying, sucking, etc. in order to seek proximity to the primary attachment figure (Bowlby, 1969). As a child grows, they demonstrate less proximity-seeking behaviors and according to Bowlby, do so with less frequency and intensity.

According to Bowlby's original theory, the connection to the primary caregiver remains fairly stable, but what changes over time is how the child responds to separation from that caregiver (Bowlby, 1969). Both proximity and intensity of connection become less important to the preschool child. In fact, Bowlby noted marked differences between ages two and four:

As a child gets older, and especially when he is past his third birthday, his demands tend to ease...Not only is his attachment behavior less frequently and less intensely activated, but it can be terminated in novel way, thanks to his increasing cognitive competence, especially greatly improved capacity to think in terms of space and time. Thus, for spells of increasing duration, a child may feel content and secure even in his mother's absence, simply knowing where she is and when she will return, or by being assured that she is available where he really wants her. (p.356)

The child no longer needs to have their mother in their sights at all times to know that she is available and no longer needs to exhibit behaviors to elicit a response from her. In other words, a preschooler is going to react different to a parent leaving than a toddler does, and this “maturational threshold” is thought occur around the third birthday because over time the child has developed a level of security and stability with the primary attachment figure and can understand and communicate that the separation is temporary (Bowlby, 1969). At this point in the child’s development, his complementary function of attachment seeking resolved by caregiving is not as necessary (Bowlby, 1980). By age three the need for proximity changes and by the age of four, children have developed a solid Internal Working Model (IWM). The Internal Working Model is the child’s mental representation of the world that they learn from interacting with their primary attachment figure (Bowlby, 1969). These IWMs are formed as the child demonstrates attachment behaviors and the primary caregiver does or does not respond with complementary caregiving behaviors, this then gets filed away for the child and the way that they view the world.

There are several ongoing debates and critiques of attachment theory as it exists: the stability of attachments over time versus change of attachments over time; attachment to one primary figure vs. multiple attachment figures; and the universality of attachment vs. the western-centric perspective of attachment. These critiques will be discussed in depth in their own sections.

There is debate about whether attachment remains stable over time or whether it changes. The two perspectives; the contextual/revisionist perspective and the prototype perspective will be discussed in the next section. The main difference between the two perspectives is whether or not attachment representations remain stable from infancy to adulthood or whether certain events

could cause less parental responsiveness and therefore disrupt the stability of the attachment representation (Fraley, 2002).

### ***Attachment Theory: Change vs. Stability Over Time***

As previously mentioned, the revisionist perspective and the prototype perspective are two explanations for attachment changes over time. While both perspectives acknowledge that internal working models can change; the revisionist perspective assumes the stance that early internal working models and attachment representations *as well as* attachment representations in later life have the possibility of changing (Fraley, 2002). The prototype perspective, on the other hand, assumes that people will seek out relationships that are consistent with their early experiences in relationships (Fraley, 2002). This means that even when there is a life event that causes a shift in the pattern, the early pattern should still remain stable because it is simply new information incorporated into an existing working model.

This contextual/revisionist perspective is in line with subsequent research with refugee family processes during forced migration. De Haene et al. (2010, p.251) explain: “While caregiver proximity and availability form essential protective factors in buffering the impact of forced migration in child refugees, the refugee family’s capacity for providing this context of emotional responsiveness is precisely what becomes subjected to extreme pressure.” That is, parental capacity to respond to the seeking of proximity (whether physical or emotional) may be challenged as survival becomes the main priority. This could have a lasting effect on the parent-child attachment relationship that was once considered secure.

Bryant et al. (2017) found that children separated from their parents during a traumatic event, even briefly, had resulting attachment issues in adulthood, demonstrating the lasting effects of such a traumatic separation on the child. While attachment research focuses on a series

of interactions over a period of time, this study shows how even a brief separation during a highly distressing event can have long-term consequences (Bryant et al., 2017). Alternatively, a child participant may have experienced a similar separation from a parent during migration affecting the attachment relationship. A third possibility is that a parent-child dyad could have experienced both aspects of this kind of separation.

Beijersbergen et al. (2012) examined the continuity of attachment from one to 14 years and found that it was dependent on the continuity of the child rearing context. The researchers found that maternal sensitive support, specifically contributed to the continuity of attachment. This research was done with low risk, middle-income families and the authors posit that multirisk families may not fare the same due to stressful events that are experienced (BeijersBergen et al., 2012). Indeed, the longitudinal research that is available shows that one's attachment to their parent affects that same child's parent-child attachments when they later become parents, displaying an intergenerational influence (BeijersBergen et al., 2012).

New research has emerged investigating the intergenerational continuities and changes in infant attachment patterns (Raby et al., 2015) Using a high risk, longitudinal sample of impoverished female participants and their children, researchers found that half of mothers who had attachment disorganization in infancy also had children who formed the same type of attachment relationship (Raby et al., 2015). This is an important finding not only because of the intergenerational findings but also because of the specific sample used. The sample used were higher risk according to the authors due to "highly stressful and chaotic early home environments" (Raby et al., 2015). Low-income parents with immigrant status may demonstrate a similar pattern in intergenerational attachment patterns as early life events may certainly be

categorized as highly stressful and chaotic due to migration experiences and living in under-resourced areas.

***Attachment Theory: Multiple attachment figures***

While attachment is often discussed as a mother-child relationship, researchers have long investigated attachment to a variety of other attachment figures. Indeed, early researchers such as Schaffer and Emerson (1964) found that at eighteen months of age, most children had an attachment to at least one other attachment figure and often to several different attachment figures. Colin (1996) argues that time; quality of care; emotional investment and social cues are what creates this attachment hierarchy for the infant. From this viewpoint, an infant would then be attached to the person that they spend the most time with; took the best care of them; cared for them, perhaps affectionally or with the use of comforting touch; and was able to respond to the infant's needs. This idea was directly challenged by Ainsworth's (1967) Ugandan study, however.

Ainsworth (1967), another original attachment researcher, found that there were infants who did not see their fathers frequently and yet experienced a strong attachment to them. This attachment was expressed by the infants in a strong way that was not equivalent to the amount of time spent with the infant. Ainsworth provided some ideas about this phenomenon:

One can only assume that there was some special quality in the father's interaction with his child—whether of tenderness or intense delight—which evoked in turn a strength of attachment disproportionate to the frequency of his interaction with the baby (p.352)

The idea that attachment is not only related to frequency of interaction is highlighted in this finding. Unfortunately, some of these early findings are not discussed as much in the contemporary attachment literature.

Attachment has been discussed in terms of primary or secondary figures. Is it biology or socialization that underlies whether someone is a primary or secondary attachment figure?

Bowlby (1969) argued the principle of monotropy meaning that a child will genetically prefer a single primary caregiver, yet even Bowlby acknowledged that mothers and fathers contribute to a child's development in different ways. It is possible that Bowlby's hypotheses too, were a product of his time and society. Rosenthal and Kobak (2010) found that the adolescents in their study identified multiple attachment figures as primary and Umemura et al. (2018) found that adolescents that had multiple versus a single primary attachment figure had better adjustments in terms of their emotional state and internalizing in both a U.S. and Czech sample.

Current consensus is that indeed, children have multiple attachment figures, but hierarchy remains an important factor. An important consideration in relation to attachment hierarchies and multiple attachment figures is the way in which mother, primary attachment figure, and secure attachment figure have been used interchangeably when that is not always the case (Umemura et al., 2013). Umemura et al. found that when distressed, toddlers preferred to interact with their primary caregivers, regardless of their attachment history. Primary caregivers in this case, were identified as the parent who spent the most time with and cared for the toddler the most).

Interestingly, Umemura et al. also found that when the toddlers were not in distress, they did not show a preference. This fits with Bowlby's original hypothesis that children prefer their primary caregiver in times of distress as an act of protection (Bowlby, 1969). An important finding to highlight from this particular study is that the primary caregiver was still the preferred parent even after controlling for parent gender (Umemura et al., 2013). Again, this demonstrates the ways that gendered or social norms may interfere with our current understanding of attachment. The authors ponder similar unanswered questions as this researcher in regard to situations where

fathers are the primary caregivers and identifies the glaring gap in the literature when it comes to caregivers other than the biological mother.

And, little is known still about how “triadic interactional patterns,” or the attachment relationships in a two-caregiver family system are related to a child’s Internal Working Model (C. et al., 2017). Using the ASCT along with other family interaction and parent measures, the researchers studied 46 Chilean and 19 German families. Both groups demonstrated more insecure attachment styles, and this was significant. This may be related to developmental stage; cultural contexts such as poverty; or even how the parents typically interact with their children outside of the study (C. et al., 2017). C. et al. posit that a cooperative alliance between the parents is an important contributor to a secure family base, meaning that when co-parents can mutually agree on expectations/roles and work together to respond to their child’s needs, the child is more likely to be securely attached within that triad. Though exploratory in nature, this triadic exploration is a contribution to the dyad (heavily mother-child) focused attachment literature.

Again, research predominately focuses on westernized groups that are white, heterosexual, and middle class. It follows then, that studies show such consistency when investigating the same populations. What about when the social processes are different, such as those children raised by same-sex parents, what are those attachment relationships like? Little literature exists in this area, especially given the diverse makeups of families: same-sex couples that have children using a donor; couples that were in heterosexual relationships previously and had biological children; or adoption (Patterson, 2000). What has been found is that regardless of family type, adolescents’ psychosocial adjustment and school outcomes are similar, and those who have closer relationships with their parents also had parent-reported better school

adjustment (Wainright et al., 2004). As other researchers have noted (Gutierrez et al., 2018), there was a lack of an attachment lens in this study, therefore close relationships do not automatically equate attachment relationships. Gutierrez et al. (2018) is one of the only studies with a specific attachment lens examining the association between attachment and later romantic relationships for children who have had a parent in a same-sex relationship. They found that higher attachment outcomes predicted higher romantic relationship quality and participants and there were gender-related differences (Gutierrez et al., 2018). Those whose mothers had a same-sex relationship reported higher attachment outcomes but the same was not statistically significant for fathers who had a same-sex relationship (Gutierrez et al., 2018). While this study is not without limitations, given that it is one of the first of its kind, it speaks to the need for more inclusion in research.

Using a more diverse sample in terms of community, race, ethnicity, SES, education, and one or two-parent households, Newland et al. (2008) found that rough housing play was more predictive of child attachment security (to the father) than father sensitivity and consistency. This was a unique predictor of the preschool child's attachment security in this study, regardless of the co-parent's parenting behaviors or the father's other types of parenting behaviors. This demonstrates how attachment security may be expressed differently in the context of father relationships when compared to attachment security in mother relationships.

Another area where the literature is lacking is in assessing how hierarchies may change over time. Early attachment researchers acknowledged that there is a window for attachment to occur and explained this through the high rate of mother mortality during childbirth. Current literature focuses on a developmental approach to the change in attachment hierarchies. That is, research is focused on adolescent's reorganization of attachment hierarchies as a developmental



process (Umemura et al., 2018). It does not consider the other ways in which parents may be physically present or absent in a child's life nor does it consider the ways that a parent may be emotionally present or absent in a child's life.

***Attachment Theory: Universal Construct or Western-Centric Construct***

Perhaps unsurprisingly, the literature examining multiple attachment figures overlaps with the cross-cultural attachment literature. Indeed, in cultures with multiple attachment figures such as in a polymeric culture, the primary caregiver and the biological mother are not necessarily the same figure. Marvin et al. (1977) found that in more than half of these cases, the caregiver was not the biological mother. The same can be said for differences in fathering relationships. Cabrera et al. (2000) highlight how meaning and roles of fathers, including cultural and ethnic variations may have varying influences on their children.

Van Ijzendoorn & Kroonenberg's (1988) meta-analysis of the Strange Situation Procedure found that A classifications are more prevalent in Western European countries, while C classifications are more frequent in Israel and Japan. That is, insecure avoidant types were found more in Western European countries, while Israel and Japan demonstrated more ambivalent types (Ainsworth, 1970). Additionally, the Western European countries had similar profiles (Van Ijzendoorn & Kroonenberg, 1988). The researchers acknowledge that one cannot assume that patterns of secure attachments like we use the term in U.S. research are prevalent in other countries (Van Ijzendoorn & Kroonenberg, 1988). This is important to highlight that while a measure may be used with similar findings interculturally and cross-culturally, the manifestations of these findings cannot be assumed to be the same, that is an understanding of U.S. research cannot be assumed in cross-cultural research.

Since then, cross-cultural attachment research has taken place over the past fifty years in several countries, including: Uganda, Kenya, Nigeria, Mali Zambia, South Africa, China, Israel, Japan, and Indonesia, with findings that attachment categories are the same across cultures (Van Ijzendoorn & Sagi-Schwartz, 2008). Critics of the research argue that these studies utilize a more etic rather than emic approach, meaning that it takes the westernized theory and tests it across cultures rather than deriving theory within the culture (Jackson, 1993; Van Ijzendoorn & Sagi-Schwartz, 2008). Still others argue for a balance between universality and context (Van Ijzendoorn & Sagi-Schwartz, 2008).

One adaptation of the original theory that has been put forth is Crittenden's (2006) Dynamic-Maturational Model of Attachment. This model has built on attachment theory to provide a developmental theory focused on protection from danger and reproduction. The DMM differs from a traditional model of attachment because it considers each individual within their own context to account for how strategies develop (Crittenden, 2006). Additionally, it discusses coping as attempts for survival and children are classified into a cluster rather than described by symptoms or a disorder. The main ideas are patterns of attachment; self-protective strategies learned in interaction with protective figures; symptoms are functional; strategies will change when they no longer fit the context, or the person has other strategies that may be safer given the context; and treatment should help people to think about the contexts of their strategies and responses and strive for safety in context (Crittenden, 2006). This adaptation could be helpful in considering immigrant families within their unique contexts.

The debate about attachment as a universal construct can be further highlighted by Vicedo (2017) and Duschinsky et al.'s (2020) subsequent response. Vicedo (2017) argues that there are several issues with attachment theory research. First, that Bowlby did not consider

alternate explanations that did not fit with his own theoretical assumptions even when researchers like Margaret Mead criticized some of his original assertions around the impact of maternal separation on an infant (Vicedo, 2017). Bowlby also relies on a biological basis for the attachment bond but did not consider data from cultures other than his main subjects in post-WWII England (Vicedo, 2017). Vicedo (2017) goes on to critique the lab-based, western-focused attachment studies by Bowlby and Ainsworth that do not consider cultural context, nor “complex systems of relations” that a child is involved in. Lastly, Vicedo (2017) critiques the heavy reliance on the Strange Situation Procedure to measure secure attachment in terms of maternal sensitivity leading to extensive literature focused on the idea that maternal sensitivity or insensitivity can lead to a lifetime of consequences for a child.

Duschinsky et al. (2020) responded to Vicedo’s (2017) critiques in an article titled, *Attachment histories and futures: reply to Vicedo’s ‘Putting attachment in its place’*. The authors respond critiques made by Vicedo in terms of historical relevance to contemporary research; the conceptualization of caregiving; and the validity of the Strange Situation Procedure (Duschinsky et al., 2020). Duschinsky et al. (2020), in turn, critique Vicedo for focusing so heavily on Bowlby and Ainsworth and essentially ignoring the decades of attachment research since the theory was developed. The authors point out measures and constructs that have been used in recent research in addition to the Strange Situation Procedure and also agree with some of Vicedo’s critiques of Bowlby’s original theory in terms of putting it in its temporal place (Duschinsky et al., 2020).

One of the interesting statements made by the widely published attachment researchers in this paper is, “We fully acknowledge that most of Bowlby’s ideas were not well-grounded in adequate supporting evidence, were influenced by contemporary ideologies, and that caution is

needed in using those that have not seen adequate testing” (Duschinsky et al., 2020, p.139). I find this extremely interesting, given that attachment research since Bowlby’s theoretical assumptions has largely summarized and quoted Bowlby’s original assertions without major critique. Even in popular psychology, attachment terminology is widely-used and understood perhaps without consideration for whether the assertions were challenged or tested in any way, to Vicedo’s (2017) point, there are several issues with original attachment research including lack of consideration of cultural context.

While I agree that Vicedo’s (2017) critique of the theory was extremely lacking, especially in terms of knowledge of current attachment literature, I also agree with the critique of the original premises of Bowlby’s theory. In terms of theory development, it should be noted which aspects of a theory get perpetuated without critique and which aspects continue to be challenged and expanded upon. A theory is, by definition, a set of guiding principles to provide explanations (David et al., 2014). Perhaps, in the case of attachment theory more of a nuanced understanding is needed.

The current study, therefore, seeks to test the associations of attachment behaviors and parent-child attachment through the proxies of parent-child interactions reflecting parental responsiveness and sensitivity, as well as parent-child closeness and whether this relationship is the same for U.S. born and immigrant samples. Interactions of responsiveness and sensitivity are proxies for attachment behaviors because these behaviors from the parent to the child will determine attachment outcomes. Parent-child closeness is another way to describe a bond, or an attachment. Specifically, the relationships between parenting stress, attachment behaviors from the parent to the child, parent-child attachment, and primary caregiver depressive symptoms will be tested.

## Study Rationale

Existing literature on attachment is limited by a lack of attention to cultural differences. In addition, Early Head Start studies mostly focus on family well-being in general terms, whereas this study focuses on family well-being specifically through the mechanism of parent-child attachment relationships. Given the multitude of stressors that many of the Early Head Start community is under, it would behoove Head Start programs to know how parenting stress, specifically, interacts with parent mental health and in that parent-child relationship. Parenting stress and primary caregiver depression have both been widely studied in general populations and in a few cases, in the EHS/HS populations, but not considering ways that attachment behaviors may mediate the relationship between parenting stress and parent-child attachment. That is, specific sensitive and responsive behaviors from the parent to the child, may change the relationship between high levels of parenting stress and disruptions in their closeness and attachment. Parenting stress is widely studied in the literature and helps to eliminate the broad nature of identifying stress, in general. Parenting stress specifically considers stress related to the parenting role and therefore is more measurable. Also, primary caregiver depression has not been used in the literature as a moderator of the relationship between parenting stress and attachment behaviors. These statistical relationships in the present study will provide more information about the mechanisms through which attachment occurs and is disrupted in the Early Head Start/Head Start populations and whether this relationship is the same when for both U.S. born and immigrant parents. This information is important for families as a whole to be served through EHS/HS. Though children are the primary recipients of services, this study could point to the importance of parental factors and their influence on the parent-child relationship, which ultimately affect the child that is served through EHS/HS.

The Baby FACES 2018 dataset is a newly available dataset, and it is nationally representative so findings could be generalizable to EHS/HS programs across the country. While many studies link parental mental health variables, such as depression with parental stress and parent-child relationships, this study is unique in three main ways: first, I investigate whether the relationship between parental stress and parent-child attachment can be explained through attachment behaviors; second, I examine whether different levels of depressive symptoms influence this relationship; and third, I explore whether the relationship between the variables are the same for the U.S. born and immigrant parents.

## Chapter Three

### Methodology

#### Research Questions

The current quantitative study seeks to test how parenting stress, attachment behaviors from the parent to the child, parent-child attachment, and primary caregiver depressive symptoms interact in a nationally representative sample of families in Early Head Start which includes U.S. born and immigrant families (See Figure 1).

**Research Question 1:** Is the relationship between parenting stress and parent-child attachment mediated by attachment behaviors?

Hypothesis 1.1: Higher parenting stress will be associated with lesser parent-child attachment.

Hypothesis 1.2: Attachment behaviors will mediate the relationships between parenting stress and parent-child attachment.

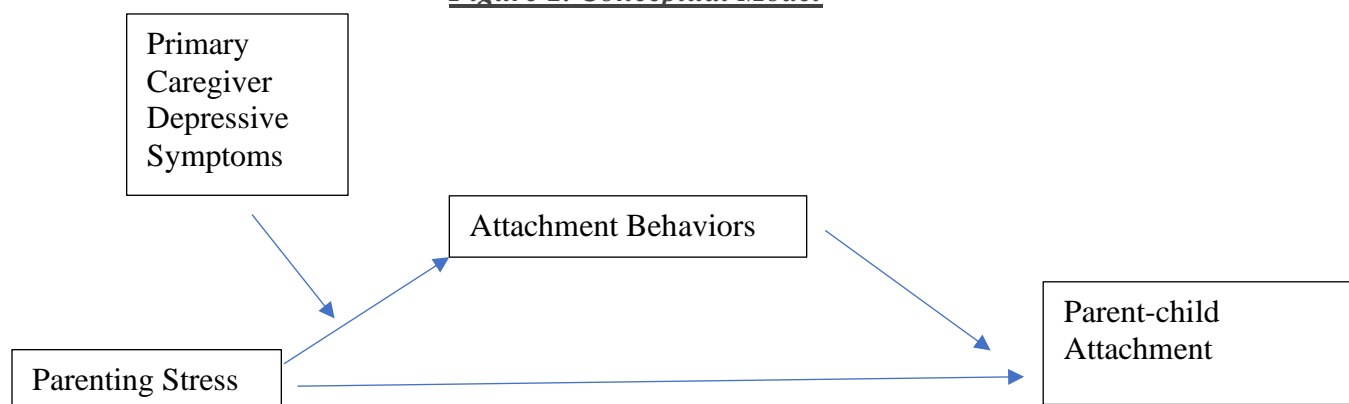
**Research Question 2:** Do symptoms of depression moderate the mediating relationship of attachment behaviors on parenting stress and parent-child attachment?

Hypothesis 2: The relationship between parenting stress and attachment behaviors will be stronger among primary caregivers with depression. That is, parents who endorse depressive symptoms will report higher levels of parenting stress and fewer attachment behaviors. This relationship will moderate the mediating relationship of attachment behaviors on parent-child attachment.

**Research Question 3:** Are there differences between groups of U.S. born families and immigrant families?

Hypothesis 3: The strength of the associations will be different between U.S. born and immigrant families.

***Figure 1. Conceptual Model***



### **Operational Definitions**

Attachment behaviors, for the purposes of this study, are behaviors that demonstrate parents' responsiveness and sensitivity to the focal child. Often, attachment is synonymous with the interaction of sensitivity and responsiveness (Berlin et al., 2018; Beijersbergen et al., 2010). A parent-child interaction variable will be used as a proxy for attachment behaviors. In turn, parent-child closeness will be used as a proxy for parent-child attachment. This parent-child closeness is defined as parent's perception of their closeness to the focal child which is similar to a parent rating an attachment bond to their child. Parenting stress is conceptualized as psychological stress specifically associated with the demands of parenting and the parenting role, separate from other life-related stressors (Deater-Deckard, 1998, Cherry et al., 2019). Parenting



stress refers to whether there is stress related to their role as the focal child's parent as evidenced by endorsement on a parental distress subscale. For this study, parental depression is defined as self-reported depressive symptoms emitting a total score. The total score will fall into a range of clinical significance to non-clinical significance and that score will be used as the primary caregiver depression variable. Examples of items are listed below.

### **Research Design**

This study uses Baby FACES 2018, a nationally-representative descriptive dataset for analysis. Baby FACES is the Early Head Start Family and Child Experiences Survey. Data in this longitudinal study were collected in several cohorts, using a cross-sectional approach starting in 2009. Baby FACES 2018, used for this current project is considered the second cohort of the study, with a third not yet available (2020 data). The difference between the first cohort (2009-2012) and this second cohort (spring 2018), is that the recent one is more comprehensive. That is, the redesigned version of Baby FACES, used for the 2018 dataset, included a nationally representative sample of different types of programs, different staff types, both teachers and classroom observations, and children aged .0 to 46.8 months, not just the newborn through age one that the original dataset included. This more inclusive dataset aimed to address how Early Head Start services support infant and toddler growth and development in the context of nurturing, responsive relationships (Vogel et al., 2018).

### **Sample**

For Baby FACES 2018, the researchers collected data from a nationally representative sample of Early Head Start programs, including: parents, teachers, home visitors, and Early Head Start directors, and pregnant women in Regions I through X. These are regions across the continental United States: Boston (Region 1), New York City (Region 2), Philadelphia (Region

3), Atlanta (Region 4), Chicago (Region 5), Dallas (Region 6), Kansas City (Region 7), Denver (Region 8), San Francisco (Region 9), and Seattle (Region 10) (Office of Regional Operations, 2021). The information gathered was about the parents and children involved in Early Head Start and Head Start programs. Programs that did not provide direct services to children and families were excluded from the sample. The researchers also excluded Head Start and Early Head Start programs in Regions XI, the American Indian and Alaska Native, and XII, the Migrant and Seasonal Head Start. They cite exclusion due to cost (Vogel et al., 2018; Office of Regional Operations, 2021).

The researchers identified using a probability proportional to size method. That is, they selected 308 Early Head Start programs from the 2015-2016 Head Start Program Information Report then chose 167 of those (Vogel et al., 2018). A response rate of 84 percent was eligible and willing to participate, that is 137 out of the original 167 selected. Vogel et al. randomly sampled centers, home visitors, classroom teachers, and children within each classroom. For the current study, the relevant participants are the 2,204 children and their parents that participated in the study, an 88% response rate (Vogel et al., 2018).

### **Recruitment Methods and Data Collection**

All Baby FACES 2018 data was collected in the spring of 2018, specifically from February 2018 to July 2018. Vogel et al. (2018) collected data regarding family and child characteristics; home environment; family well-being; parent engagement; parent-child relationships; and parent-staff relationships. This parent and family-level data were collected via parent surveys, and parent reports of the focal child.

### **Procedure**

Data were collected by phone, in person, or on the web. Staff had the option to complete surveys in person or via web-based or paper form. All parents completed their child reports by paper form. This current study utilizes part of the parent data collected via paper from parent surveys and parent reports of the focal child during the study period.

## **Measures**

The Baby FACES 2018 study utilized a variety of observational data and survey report by Early Head Start center and program directors, staff (both lead teachers and home visitors), and parents. For the current study, only demographic information and the measures of family well-being that were collected as part of the parent and family-level domain are used for analysis. These include: the Center for Epidemiologic Studies Depression Scale-Revised (CESD-R; Eaton et al., 2004); the Parenting Stress Index Fourth Edition Short Form (PSI-4; Abidin, 2012); Child-Parent Relationship Scale, Short Form (CPSR-SF; Driscoll & Planta, 2011); and The Healthy Families Parenting Inventory (HFPI) Parent-Child Interaction subscale (Krysick & LeCroy, 2012). Reliability indices for all measures are in Table 1.

**The Center for Epidemiologic Studies Depression Scale-Revised (CESD-R;** Eaton et al. 2004) was used to measure depressive symptoms in parents. This is a 20-item self-administered screening tool identifying both psychological distress and depression symptoms over the past week or so. Each item is reported by the parent on a 5-point scale with 4 as the highest frequency of symptoms (nearly every day for two weeks) and 0 as the lowest frequency of symptoms (less than one day). For the current study, total score was used as the *parental depression* variable. This scale provides both a total score as well as a rating of clinical significance, ranging from a major depressive episode to no clinical significance with a total score range of 0-60. The total score used for this study will inform whether the primary caregiver

reports depressive symptoms. This scale has been widely used in Community Mental Health Assessment Surveys, in the National Health and Nutrition Examination Surveys, and with undercounted populations (Eaton et al., 2004). It has been translated into 14 different languages. Sample items include, “I lost interest in my usual activities;” “Nothing made me happy;” and “I was tired all the time.”

**Parenting Stress Index Fourth Edition Short Form (PSI-4-SF;** Abidin, 2012) was used to assess parenting stress in relation to the study child. This version of the PSI is 36-items in length and contains three subscales along with a total score. This scale can be used for parents of children age 0-12 years (Vogel et al., 2018). For the current study, the parental distress subscale was used as the *parenting stress variable*. If a parent endorses higher scores on this subscale, they are likely to be experiencing higher levels of distress, specific to parenting, whereas lower scores would indicate less parenting-related stress. Example items include, “I find myself giving up more of my life to meet my child’s needs than I ever expected” and “Since having a child, I feel that I am almost never able to do things that I like to do.”

**The Healthy Families Parenting Inventory (HFPI;** Krysik & LeCroy 2012) Parent-Child Interaction Subscale was used to assess aspects of parents’ responsiveness and sensitivity to the focal child. For Baby FACES 2018, the researchers used the 10-item subscale only (Vogel et al., 2018). For the purposes of the current study, the total score of the subscale parent-child interaction was used as the *attachment behaviors* variable, as this scale contains items such as, “parent responds quickly to child’s needs” and “can tell what the child needs” (Krysik & LeCroy, 2012). The original researchers chose this subscale as a measure of the parent-child relationship because the items pertain to parental responsiveness and sensitivity (Vogel et al.,

2018). For the current study, this subscale also fits in terms of a measure of attachment, which is often synonymous with parental responsiveness and sensitivity.

**Child-Parent Relationship Scale, Short Form (CPSR-SF;** Driscoll & Planta, 2011) was used to assess how the parent perceives their relationship with their focal child (Vogel et al., 2018). This scale has two subscales: Conflict and Closeness. For the current study, the sum of the items on the Closeness subscale was used for the *parent-child attachment variable*. If a parent rates the items with a high score, they perceive their relationship as close, whereas those that rate the response items with low scores providing an overall low subscale score, perceive their relationship with their child as not close. An example item includes, “share an affectionate, warm relationship.”

### **Reliability of Measures**

Reliability analyses were conducted for the standardized measures. The original researchers provided reliability data for all scales that were used for the current study. The measures used for the current study showed good psychometric properties for the most part. Reliabilities for the PSI-4, parental distress subscale; HFPI, parent-child interaction scale, and the CESD-R total score all showed Cronbach’s alphas above .80. The Parent-child Closeness subscale demonstrated an alpha of 0.69, perhaps because of the smaller number of items in the scale.

***Table 1. Reliability of Measures***

<b>Measure</b>	<b>Number of Items</b>	<b>Sample Size</b>	<b>Response Range</b>	<b>Cronbach’s alpha</b>
PSI-4, Parental Distress Subscale	12	2,404	34-85	0.91
Parent-Child Closeness	7	2,391	7-35	0.69

HFPI Parent-Child Interaction	10	2,372	10-50	0.83
CESD-R total score	20	2,192	0-60	0.91

*Table adapted from Vogel et al. (2018)*

**Demographic Information** was collected as part of Baby FACES 2018. Information regarding race, ethnicity, respondent's relationship to the focal child, mother's age at birth, respondent's age at time of survey, income, languages spoken in the home and to the child, household members, education level, employment status, and health were collected. For the current study, demographic information related to the primary caregiver's place of birth, race/ethnicity, gender, and education were used for statistical analysis in an effort to explore similarities and differences.

### **Data Analysis**

Data were first analyzed using descriptive statistics using SPSS. Model estimations were completed with PROCESS v. 3.5 (Hayes, 2018) in IBM SPSS v.26 (IBM, 2019). A series of mediation and moderated mediation models were tested aligning with each of the hypotheses that attachment behaviors will act as a mediator between the relationship between parenting stress and parent-child attachment and depression as a moderator. The final moderated mediation model was tested for immigrant families and for US-born families.

### **Missing Data**

The researchers already accounted for missing data before publishing the dataset. If participants were missing data for more than 25% of the items for a composite variable, they did not impute

the data for that participant (Vogel et al., 2018). A total of 2847 respondents completed the study, however the variable about respondent's country of origin was missing data for some participants. Only those who responded to the country of origin item were included in the study sample. Responses to the item "Respondent born in the United States" with the option of yes or no was used as the primary caregiver nationality variable. The variables demonstrated acceptable skewness and kurtosis values (-2 to 2 and -3 to 3, respectively), with the exception of the CESD-

R kurtosis which was moderately skewed to the upper levels (9.12).

## Chapter Four

### Results

#### Descriptive data

##### Participants: Demographics

A final sample of 2349 respondents were used in analyses. Respondents ranged in age from 15-74 years old (Table 2) and included a variety of relationships with the focal child, including: birth mother; non-birth mother, birth father, non-birth father; grandparent, or other (Table 3). The majority of respondents were the focal child's birth mother (88.4%). Table 4 shows race/ethnicity breakdown of the sample. The majority of the sample identified as either Hispanic (39.7%); Black, non-Hispanic (28.4%) and White, non-Hispanic (26.7%). Most of the respondents were born in the U.S. (73.8%), but for those that were not born in the U.S., 60.8% of the immigrant respondents had been in the U.S. for ten or more years (Tables 5 & 6). The majority of participants had a high school education (Table 7) and were either working full-time or not currently working (Table 8). These demographics are reflective of Head Start families for the fiscal year 2018, where 37% identified as Hispanic/Latino and 30% were Black/African-American (EARLY CHILDHOOD LEARNING AND KNOWLEDGE CENTER, 2019b). Additionally, 1.2% of respondents met criteria for Major Depressive Episode; 91.1% showed no clinical significance on the measure of depressive symptoms.

*Table 2. Respondent's Age at Survey*

Age Category	Percent of Respondents
17 or younger	1.5%
18-19	2.3%
20-24	19.5%
25-29	28.5%
30-34	23.6%
35 or older	24.5%



**Table 3. Respondent's Relationship to Child**

<b>Relationship</b>	<b>Percent of Respondents</b>
Birth mother	88.4%
Non-birth mother	2.1%
Birth father	4.9%
Non-birth father	.2%
Grandparent	3.1%
Other	1.2%

**Table 4. Respondent Race/Ethnicity**

<b>Race/Ethnicity</b>	<b>Percent of Respondents</b>
White, non-Hispanic	26.7%
Black, non-Hispanic	28.4%
Hispanic	39.7%
American Indian/Alaska Native	1.2%
Multiracial, non-Hispanic	2.8%
Other, non-Hispanic	1.2%

**Table 5. Respondent Born in the U.S.**

No	26.2%
Yes	73.8%

**Table 6. Respondent's years in the U.S., if born elsewhere**

<b>Number of Years</b>	<b>Percent of Respondents</b>
5 years or less	17.5%
6-10 years	21.6%
More than 10 years	60.8%

**Table 7. Highest Education Completed by Respondent**

<b>Education Level</b>	<b>Percent of Respondents</b>
Less than High School	21.8%
High School/Equivalent	31.7%
Vocational/Technical School	3.8%
Some College but No Degree	23.5%
Associate's Degree	8.4%

Bachelor's Degree	8.7%
Graduate Degree or Higher	2.2%

**Table 8. Respondent Employment Status**

Employment Status	Percent of Respondents
Full-time (35+ hours/week)	38.0%
Multiple part-time jobs (35+hours/week)	3.0%
Part time job(s) (<35 hours/week)	20.3%
Working, hours not provided	.2%
Not working	37.5%
Retired/Disabled/Unable to Work	.9%

### Hypothesis Testing

Next, research hypotheses were tested using inferential statistical analysis and model estimations using PROCESS.

**Research question 1:** Is the relationship between parenting stress and parent-child attachment mediated by attachment behaviors?

**Hypothesis 1.1:** Higher parenting stress will be associated with lesser parent-child attachment.

Pearson correlations of the main variables in the study are shown in Table 9. Analysis indicated that associations between all variables were in the hypothesized direction. Specifically, Parenting stress and parent-child attachment were significantly and negatively correlated [ $r = -.18, p < .01$ ].

This lends support to the first hypothesis that higher parenting stress will be associated with lesser parent-child attachment. The strength of the association was weak, however.

**Table 9. Correlations, Means, and SD**

	1	2	3	4
1. Primary Caregiver Depression	-	.41**	-.25**	-.09**
2. Parenting Stress	.41**	-	-.41**	-.18**
3. Attachment Behaviors	-.25**	-.41**	-	.38**
4. Parent-Child Attachment	-.09**	-.18**	.38**	-
M	4.81	21.07	45.53	30.98
SD	7.53	8.39	4.69	3.95

\*\* Correlation is significant at the 0.01 level

**Hypothesis 1.2:** Attachment behaviors will mediate the relationships between parenting stress and parent-child attachment.

***Hypothesis 1.2: Model 1 (Mediation)***

The second hypothesis in research question one sought to confirm whether the association between parenting stress and parent-child attachment can be explained by attachment behaviors<sup>1</sup>. Though mediation models are intended to provide causal analysis of pathways between independent variable (IV) and dependent variable (DV), in cross-sectional data, mediation analysis point towards associations and not causal relationships. A direct effect refers to the association between the independent and dependent variable; an indirect effect refers to the association of IV and DV through a mediator; and the total effect refers to the estimates of the entire model (see Figure 2). The mediation model was estimated using model 4 in PROCESS (Hayes, 2018). PROCESS runs a series of regression models simultaneously to estimate the relative influence of the IV and mediator on the DV. Significance of models are inferred using values of bootstrapped confidence intervals.

Results of the mediation model are shown in Table 10. Model estimates show that the direct effect of parenting stress on parent-child attachment was not significant [b= -.01, p=.27], however, the indirect effect of the mediator was significant [b= -.07, p<.001]. This indicates that the association between parenting stress and parent-child attachment is explained through attachment behaviors. That is, those who reported higher parenting stress showed fewer attachment behaviors and lesser parent-child attachment. The finding that direct effect was not

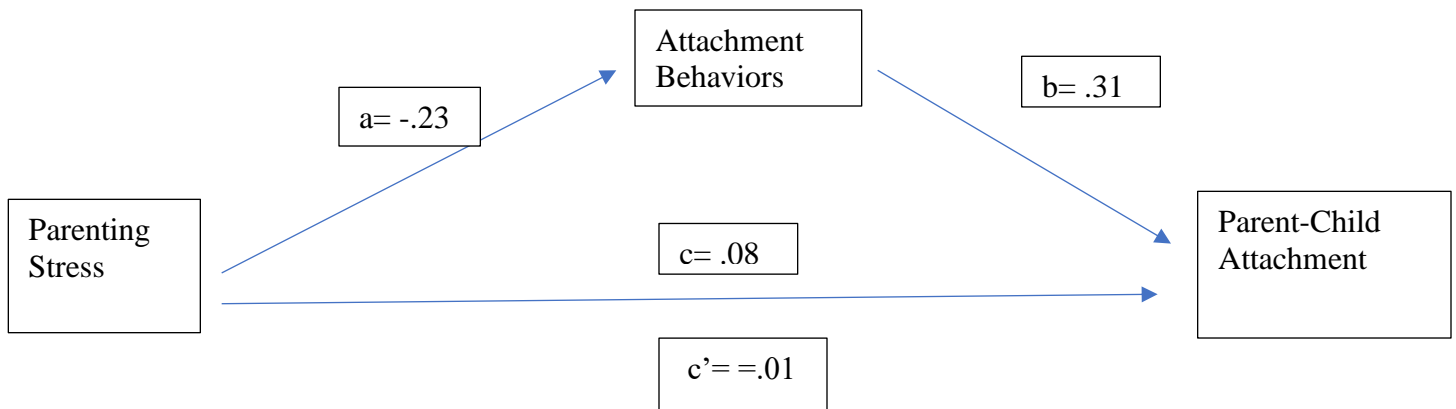
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<sup>1</sup> It is important to note that parent-child attachment variable was measured through a proxy variable of parent-child closeness and attachment behaviors through proxy variables of parent-child interactions. Thus, I sought to test that hypothesis that parent-child interactions would explain the association between parenting stress and parent-child closeness.

significant, but the indirect and total effects were shows that the association between parenting stress and parent-child attachment was entirely through attachment behaviors.

The model predicted 3.79% of the variance in parent-child attachment [ $R^2 = .38$ ,  $F(3.00, 2021.00) = 113.10$ ,  $p < .001$ ].

**Figure 2. Mediation Model**



**Table 10. Model 1: Mediation with entire sample**

Model 1 Mediation with entire sample (n =2025)		
Predictors	b	t
Parenting Stress	-.23	-19.97
Attachment Behaviors	.31	16.20
$R^2$	3.79%	
F	398.99	

**Research question 2:** Do symptoms of depression moderate the mediating relationship of attachment behaviors on parenting stress and parent-child attachment?

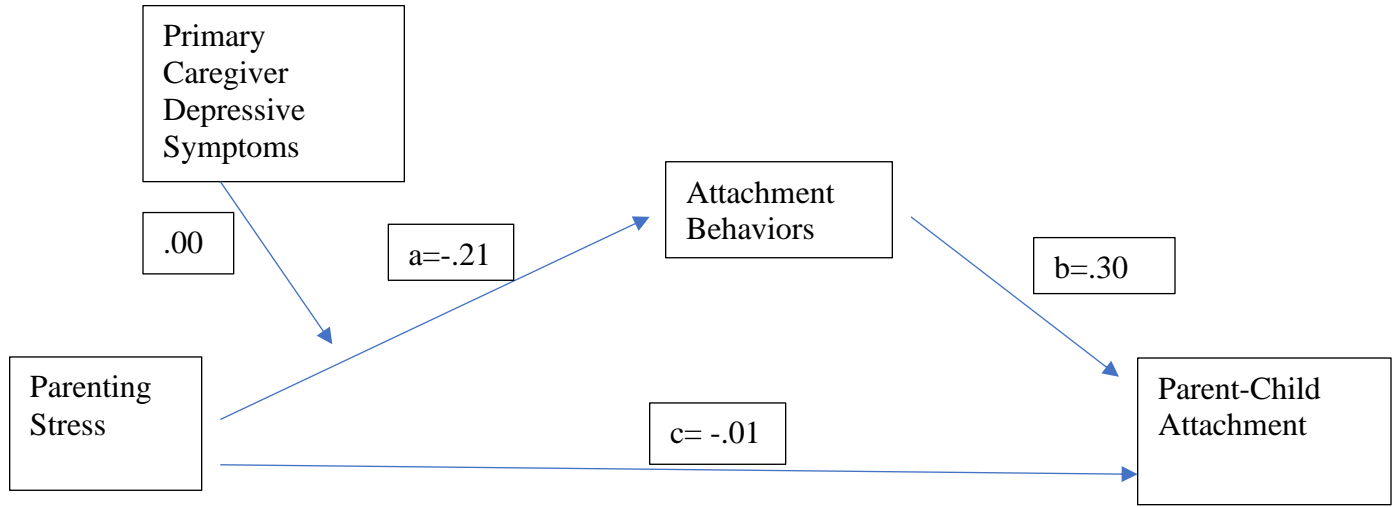
**Hypothesis 2:** The relationship between parenting stress and attachment behaviors will be stronger among primary caregivers with greater depressive symptoms. That is, parents who endorse greater depressive symptoms will report higher levels of parenting stress and fewer attachment behaviors. This relationship will moderate the mediating relationship of attachment behaviors on parenting stress and parent-child attachment (Figure 3). That is, the indirect effect of attachment behaviors will vary according to levels of depressive symptoms.

**Hypothesis 2: Model 2 (Moderated mediation)**

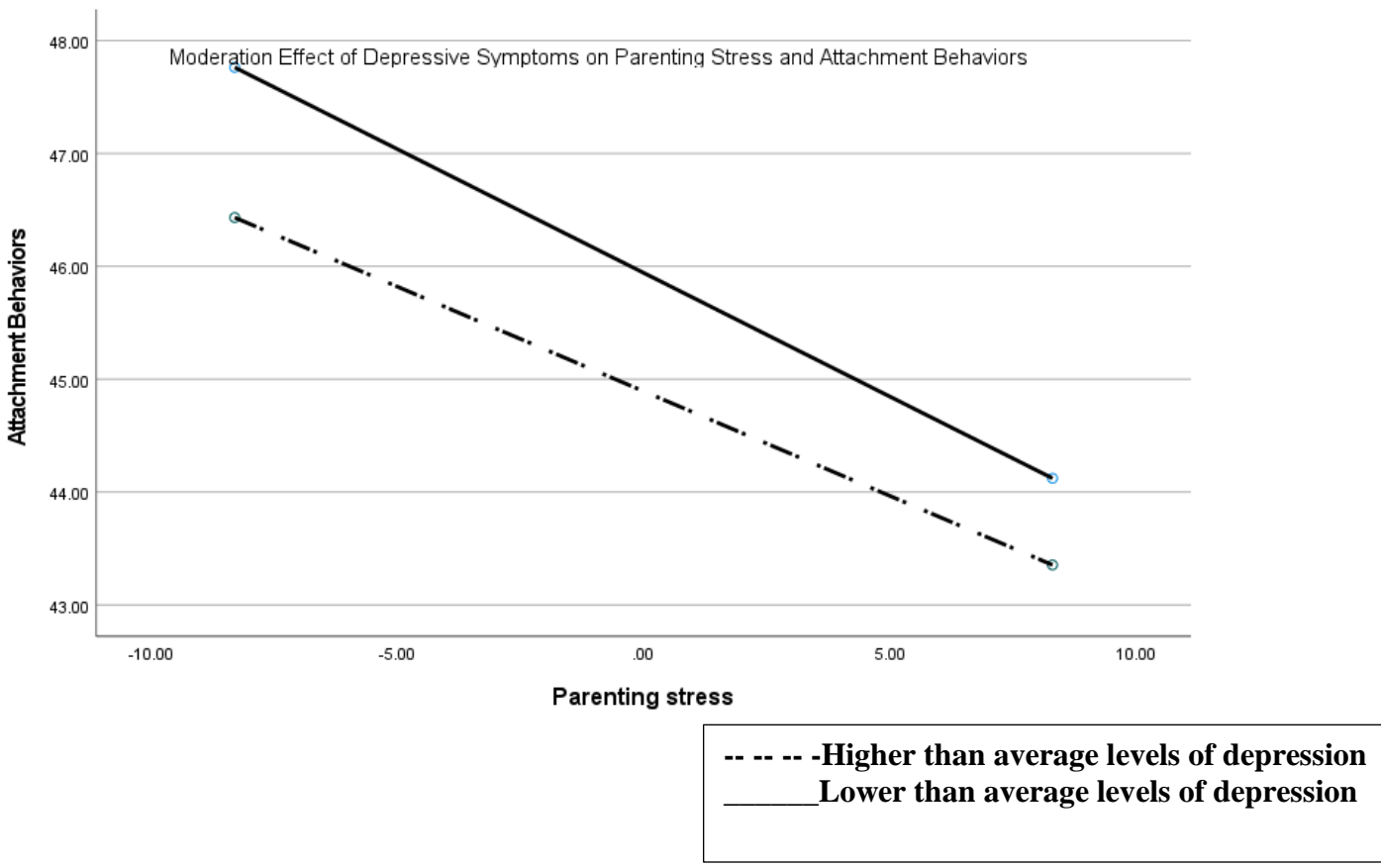
A full moderated mediation analysis using model 7 in PROCESS v 3.3 (Hayes, 2018) was estimated. First, examining the interaction effect of the IV and moderator variable on the dependent variable attachment behaviors allows us to determine whether levels of depressive symptoms influence the relationship between parenting stress and attachment behaviors. Table 11 shows estimates of the model. The interaction effect was significant [ $b=.00$ ,  $p< .05$ ] indicating that there was a moderating effect of the relationship between parenting stress and primary caregiver depression on attachment behaviors. Figure 3 clarifies this moderator relationship. Essentially, attachment behaviors were lowest for those with high parenting stress and greater depressive symptoms. Attachment behaviors were highest for those with lower parenting stress and lesser depressive symptoms. Further, the indirect effect of attachment behaviors was significant for respondents with both greater ( $b = 0.014$ ;  $t = -12.537$ ;  $p< .001$ ) and lesser depressive symptoms ( $b = 0.014$ ;  $t = -12.537$ ,  $p< .001$ ).

The Index of Moderated Mediation (IMM), however, was not significant indicating that the indirect effect of attachment behaviors on parenting stress and parent-child attachment was not influenced by levels of depressive symptoms.

*Figure 3. Moderated Mediation: Model 2*



*Figure 4. Moderation Effect of Depressive Symptoms on Parenting Stress and Attachment Behaviors (full sample)*



**Table 11. Moderated Mediation Models, 2, 3, and 4. Moderated Mediations-Models 2, 3, and 4**

Model 2 Moderated Mediation with entire sample (n =1992 )			Model 3 Moderated Mediation with Immigrant respondents (n = 485)		Model 4 Moderated Mediation with US Born respondents (n = 1507 )	
Predictors	b	t	b	t	b	t
Parenting stress	-.21	-16.42	-.17	-5.58	-.21	-16.02
Attachment behaviors	.30	16.04	.31	8.61	.30	12.79
Parenting stress x Depressive symptoms	.00	2.28	.01	1.87	.00	1.84
R <sup>2</sup>	17.47%		9.78%		22.24%	
F	140.31		17.38		143.31	
Index of moderated mediation	.00 (-.00,00)		.00 (-.00, .00)		.00 (-.00, .00)	

\* $p < .05$

Note: The beta values are standardized coefficients, thus they can be compared to determine the relative strength of different variables in the model.

**Research question 3:** Is there a difference in associations between US Born and Immigrant respondents?

**Hypothesis 3.1:** There will be significant group differences between US Born and Immigrant respondents in levels of parenting stress, depressive symptoms, attachment behaviors, and parent-child attachment.

An analysis of Variance (ANOVA) was conducted to determine whether there were differences between US-born parents and immigrant parents for each of the variables (parental depressive symptoms, parenting stress, attachment behaviors, and parent-child attachment). Groups were created based on self-report of respondent's country of origin. There were statistically significant differences between U.S. born and immigrant parents for all variables. For immigrant parents, depressive symptoms were lower than for US-born parents, despite parenting stress being higher. Attachment behaviors and parent-child attachment were lower for



immigrant parents compared to US-born parents. However, effect sizes show that the magnitude of group differences were small.

**Table 12. Means, Standard Deviation and One-Way ANOVA**

Measure	US Born		Immigrant		F	$\eta^2$
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Parenting Stress	20.81	8.161	21.86	8.992	df = (1, 2053), 6.124**	0.003
Depressive Symptoms	5.193	7.730	3.793	6.809	df = (1, 2302), 17.411***	0.008
Attachment Behaviors	45.932	4.296	44.337	5.555	df = (1, 2064), 46.402***	0.022
Parent-Child Attachment	31.198	3.653	30.299	4.679	df = (1, 2042), 19.892***	0.010

Note: \*\*  $p < 0.01$ ; \*\*\*  $p < 0.000$ ;  $\eta^2$  = Eta square showing effect sizes of group differences.

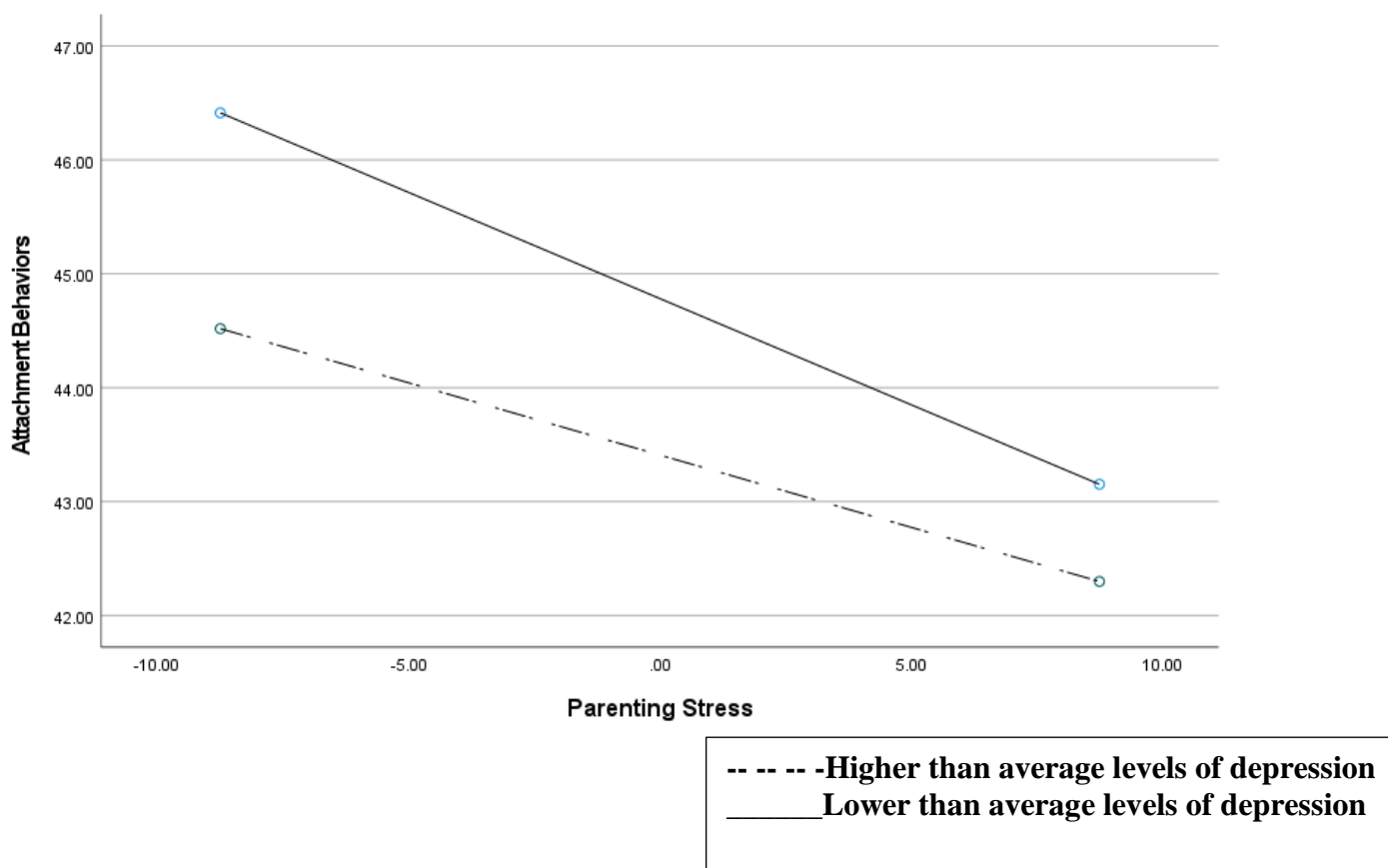
**Hypothesis 3.2:** The strength of association between the study variables will be different for US Born and Immigrant respondents.

Next, the overall model, a moderated mediation analysis, was run separately with Immigrant families and US-Born families to identify differences in specific effects.

***Model 3: Moderated Mediation with Immigrant subsample***

Table 11 shows the model estimates for Model 3. When run with an Immigrant subsample, the interaction effect was not significant, indicating that the moderator was no longer significant for Immigrant respondents. When examining the moderating effects of depressive symptoms, Figure 5 shows a larger gap in the slopes between those with greater and lesser depressive symptoms. Again, the indirect effect of attachment behaviors was significant for respondents with both greater ( $b = 0.035$ ;  $t = -3.655$ ;  $p = 0.003$ ) and lesser depressive symptoms ( $b = 0.032$ ;  $t = -5.722$ ,  $p < .001$ ). However, the index of moderated mediation was not statistically significant showing that overall model was not significant.

***Figure 5. Moderation Effect of Depressive Symptoms on Parenting Stress and Attachment Behaviors (Immigrant subsample)***

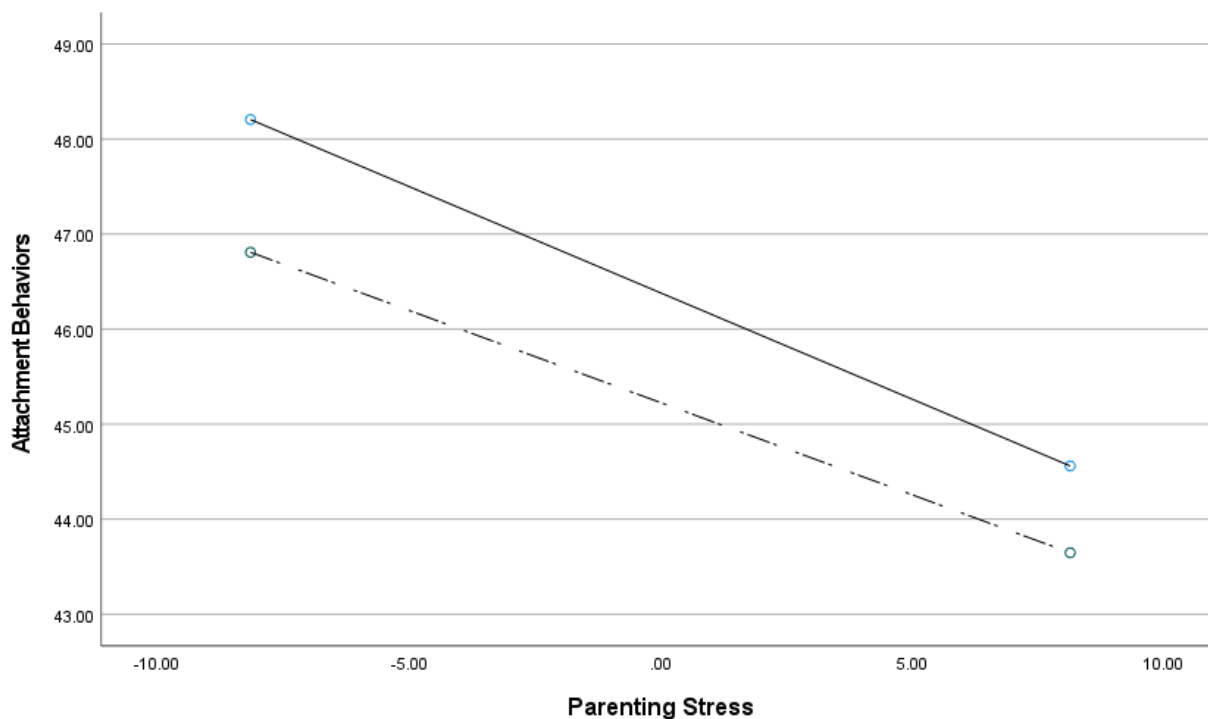


***Model 4: Moderated Mediation with US-Born subsample***

When run with a US-born subsample, again, both the interaction effect of the moderator (depressive symptoms) on parenting stress and attachment behaviors was not significant. the indirect effect of attachment behaviors was significant for respondents with both greater ( $b = 0.015$ ;  $t = -12.429$ ;  $p < .001$ ) and lesser depressive symptoms ( $b = 0.015$ ;  $t = -14.766$ ,  $p < .001$ ). However, similar to earlier results, the overall moderated mediation was not significant.

The moderating effects of depressive symptoms on parenting stress and attachment behaviors are plotted below (Figure 6). This graph looks much more similar to the overall sample than the Immigrant-born subsample graph. Again, at the same levels of parenting stress, those with higher than average levels of depression reported less attachment behaviors.

***Figure 6. Moderation Effect of Depressive Symptoms on Parenting Stress and Attachment Behaviors (U.S. subsample)***



--- Higher than average levels of depression  
 \_\_\_\_\_ Lower than average levels of depression

## Post-hoc Analysis

While the overall moderated mediation model was not significant for both immigrant and US Born subsamples, there were a few differences that warranted further exploration. First, depressive symptoms were no longer a moderator of parenting stress and attachment behaviors when the sample was separated based on where the respondent was born. Second, though statistically insignificant, there appeared to be some differences in how levels of depressive symptoms influenced parenting stress and attachment behaviors for the immigrant subsample. Additionally, in earlier analyses, significant group differences were noted between the US born and immigrant samples on the mean scores of the main variables. Thus, in order to further explore other variables that may be influencing the associations between variables, I conducted post hoc analysis using demographic data. Specifically, I explored whether there was difference in the demographic composition of the two groups using a chi-square test of independence.

### Results of Chi-Square

A post-hoc chi-square test was run comparing the two subsamples: immigrant families and U.S. families in terms of race/ethnicity, levels of education, and gender. Findings demonstrated significant differences between the two subsamples in terms of two of the three tested demographics. The difference in race/ethnicity between immigrant families and U.S. born families was statistically significant,  $\chi^2 (5, N = 2333) = 561.67, p < .001$ . Differences in levels of education were significant as well,  $\chi^2 (6, N=2338) = 154.48, p < .001$ . U.S. born and immigrant families did not show significant difference in gender,  $\chi^2 (1, N=2349) = 1.42, p = .233$ . The majority of immigrant respondents were Hispanic (76.68%), while the largest racial/ethnic group represented by the U.S. born respondents was White, non-Hispanic (34.98%). About a third of immigrant respondents had less than a High School education (35.91%), while a third of U.S.

born respondents had a High School or equivalent education (32.70%). Immigrant families had a slightly higher percentage of male respondents (6.34%) compared to the U.S. born subsample (5.07%), but not enough to be of statistical significance.

Overall, these post-hoc findings point to the importance of attending to potential differences between the groups and other factors that may be interacting as well. While there are some similarities between groups, as evidenced by findings applicable to the whole sample, there are also some differences between the two subsamples that warrant more study. Further exploration is needed to determine exactly what these differences mean.

*Table 13. Results of Chi Square*

<b>Demographic</b>	<b>Immigrant respondents</b>	<b>US Born respondents</b>	<b>Chi-square statistic</b>
Race/Ethnicity	(N=609) Hispanic (76.68%) Black, non-Hispanic (15.60%) White, non-Hispanic (3.45%)	(N =1724 ) White, non-Hispanic (34.98%) Black, non-Hispanic (32.89%) Hispanic (26.62%)	561.67*
Gender	(N=615) Female (93.66%) Male (6.34%)	(N=1734) Female (94.93%) Male (5.07%)	1.42
Education	(N=607) Less than High School (35.91%) High School or Equivalent (28.83%) Bachelor's degree (12.85%) Some College but no degree (11.53%)	(N=1731) High School or Equivalent (32.70%) Some College but no degree (27.67%) Less than High School (16.81%) Bachelor's Degree(7.22%)	154.48*

Note: \*p <0.05

### **Summary of findings**

Findings of the study are summarized below:

1. Higher parenting stress was associated with lesser parent-child attachment.
2. Parenting stress was associated with parent-child attachment through attachment behaviors. That is, higher parenting stress was related to fewer attachment behaviors and lesser parent-child attachment.
3. Depressive symptoms were a significant moderator of parenting stress and attachment behaviors. That is, higher depressive symptoms exacerbated the negative association between parenting stress and attachment behaviors. This moderator effect was not significant for US Born and Immigrant subsamples when compared separately.
4. The indirect effect of attachment behaviors was not moderated by depressive symptoms. That is, the “pathway” of parenting stress influencing parent-child attachment through attachment behaviors was the same for respondents with all levels of depressive symptoms. This association was similar for both U.S. born and immigrant respondents.
5. Immigrant respondents had greater parenting stress, lesser depressive symptoms, lower attachment behaviors and lesser parent-child attachment compared to U.S. born respondents.
6. Post-hoc analysis revealed significant differences between the two subsamples in terms of racial and ethnic composition and level of education, but not gender of the parent.

## Chapter Five

### Discussion

The current quantitative study sought to test how parenting stress, primary caregiver depressive symptoms, attachment behaviors, and parent-child attachment interact in a nationally representative sample of families in Early Head Start which includes U.S born and immigrant families. Previous research discusses the prevalence of maternal depression and its relationship to the mother-infant attachment system (Śliwerski et al., 2020). Additionally, previous studies with the Head Start population show an association of parenting stress and parent mental health issues (Hustedt et al., 2017; Chung et al., 2021; Mennen et al.; 2021; Wurster et al., 2020). Research with immigrant and refugee families has put forth similar findings around the phenomenon of parent mental health and the parent-child relationship (Sangalang et al., 2017; Dalgaard et al., 2016). The current study addresses the gaps in the literature regarding comparing U.S. born and immigrant samples on parenting stress, depressive symptoms, and attachment variables together. The focus on specific subsamples of immigrant families and U.S. born families within the Early Head Start population allows for the results to inform programs and services for both Early Head Start as well as clinicians working with immigrant families in the community.

In this chapter, I will discuss the results as it relates to each research question and associated hypotheses of the current study. I will finish with limitations, implications, and areas of further research. The main questions that I explored were: 1) Is the relationship between parenting stress and parent-child attachment mediated by attachment behaviors; 2) Do symptoms of depression moderate the mediating relationship of attachment behaviors on parenting stress

and parent-child attachment; and 3) Are there differences in these relationships between groups of U.S. born and immigrant families?

For this study, a parent-child interaction variable was used as a proxy for attachment behaviors. Attachment behaviors are from parent to child, when they are participating or not participating in interactions in the relationship in a responsive and sensitive way. A parent-child closeness variable was used as a proxy for parent-child attachment, as parental report of closeness to their child is synonymous with attachment (from parent to child). A parenting stress variable was used for parenting stress, that is stress specifically related to the role of parenting. Lastly, a total score from the CESD-R scale was used as a parental depression variable.

### **Parenting Stress, Attachment Behaviors, and Parent-Child Attachment**

The first research question explored the relationship between parenting stress, parent-child attachment, and attachment behaviors. Based on previous research linking parenting stress and insecure attachment (Jarvis & Creasey, 1991; Teti et al., 1991; Dau et al., 2019) and attachment security as a protective factor against parenting stress (Mazzeschi et al., 2015). I first hypothesized that parenting stress and parent-child attachment would be negatively correlated. Findings of the study supported my first hypothesis of a negative association between parenting stress and parent-child attachment. Higher levels of parenting stress were associated with lower levels of attachment. With less stress influencing the parenting role, it seems that parents would be able to better connect with their child and their relationship would be closer. This is in line with earlier studies showing a connection between these two variables (Jarvis & Creasey, 1991; Teti et al., 1991; Dau et al., 2019; Mazzeschi et al., 2015).

In addition, it is possible that trauma and intergenerational trauma may have an effect on the attachment relationship (Dalgaard et al., 2016; Eruyar et al. 2018; Fazel et al., 2012,



Sangalang et al., 2017), though PTSD and other trauma-specific variables were not included in the current study. It is possible that trauma may be influencing the current results.

Second, findings also showed a significant indirect effect of attachment behaviors on parenting stress and parent-child attachment. This means that parenting stress has an effect on parent-child attachment through behaviors of parental responsiveness and sensitivity (attachment behaviors). So, when a parent is experiencing stress related to their child, that could influence how they are responding in their interactions with that child, and could, in turn influence their attachment with that child. This finding is important when considering previous research about impoverished families and those considered high risk due to highly stressful home environments (Raby et al., 2015). In the current study it was through the mechanism of attachment behaviors, that is the way that the parent interacted and responded to that child, that influenced their attachment relationship. When a parent is experiencing more stress, they may not be able to respond sensitively or consistently which could decrease the amount of closeness with the child.

These findings are in line with previous studies linking maternal sensitivity and parenting stress (Beijersbergen et al., 2010; Dau et al., 2019). In fact, other researchers have explained this mechanism of maternal sensitivity similarly to the current study in that higher stress may lead to a decrease of flexibility and responsiveness of the mother in adapting to the needs of the child due to a lower acceptance of the child overall (Dau et al., 2019). In a Head Start sample of predominately Latinx mothers, a medium-sized effect was found for an increase in maternal sensitivity to improve attachment quality during an attachment intervention (Berlin et al., 2018), again highlighting the importance of maternal sensitivity as it relates to the attachment relationship. The current study also underscores the importance of parental sensitivity, those attachment behaviors, that are the mechanism through which the parent-child attachment

relationship is affected. This finding also informs points of early intervention to help alleviate parental stress while simultaneously helping develop ways of increasing responsiveness to their infants and toddlers.

### **Parenting Stress, Depressive Symptoms, Attachment Behaviors, and Parent-Child Attachment**

My second research question explored the moderating effect of primary caregiver depression on parenting stress and attachment behaviors as it related to the mediation of parenting stress through attachment behaviors on parent-child attachment. This second hypothesis relates to the overall sample. There was a significant moderating effect of primary caregiver depression on parenting stress and attachment behaviors. Those with low levels of depression had more attachment behaviors (sensitive and responsive parent-child interactions) compared to those with average levels of depression and those with high levels of depression. This aligns, clinically, with how depressive symptoms affect an individual. Symptoms like anhedonia (loss of interest), fatigue, and sadness may influence how a parent interacts with their child. If they are feeling tired, disinterested, and down overall, they may not interact with their child as much or be in a place to respond as consistently with high levels of sensitivity.

Śliwerski et al. (2020) had similar findings that postpartum depression affected attachment style, but only alongside other factors and thus, they stress the importance of maternal sensitivity and interactions with their child, as those seems to have more of an effect than the depressive symptoms. Conversely, in the same meta-analysis, they found that depressive symptoms were unrelate to attachment style in 12 out of 17 studies, which they attributed to the use of a self-report measure (Śliwerski et al., 2020). The current study used a self-report measure and still found significant links, though perhaps our reasonings are similar. Śliwerski et al. posit

that depressive symptoms and attachment behaviors may have a reciprocal relationship. Perhaps that is also what is happening to some extent in the current study. It could be that the parent-child interactions of sensitivity and responsiveness are influenced by levels of depression and perhaps that is why those with low levels of depression are able to interact with their children more than those with high levels of depression. What remains true is that depressive symptoms do not only affect that individual parent, but also influence the parent-child relationship as well. Given previous research about the long-term effects of parent mental health on their children into adulthood and lack of security with their parent in childhood (Steele & McKinney, 2020; Metz & Jungbauer, 2021), it would be important to consider parental experiences of depression early on.

It may be particularly important to consider the interaction of parenting stress and depressive symptoms when assessing or intervening in early attachment behaviors. Findings of this study suggest that when more depressive symptoms are present (higher levels of primary caregiver depression), parents are less likely to be sensitive and responsive, even though all the parents may be experiencing the same levels of stress. Again, this shows how much depressive symptoms may interact with parenting stress to influence parent-child interactions. This finding relates to previous research that perception related to experience of stress is important to consider (Hustedt et al., 2017). It is possible that parents who are experiencing depressive symptoms may feel like the stress is amplified because they are struggling in other areas of their mental health. If a parent is experiencing higher than average levels of depressive symptoms, it is possible that they are meeting criteria for a Major Depressive Episode, and they may not be able to “show up” in the parent-child relationship as they would normally.

***Differences between US Born and Immigrant families.***

Research question three asked about differences between U.S born and immigrant families. The ANOVA showed significant group differences between U.S. born and immigrant families, in terms of two main demographic variables: race/ethnicity and level of education, but there still could be other factors interacting in the relationships with the main study variables that warrant further exploration. Interestingly, the moderated mediation analysis was run with the two separate subsamples, and neither was significant overall, but the mediation (indirect effect of parenting stress through attachment behaviors on the parent-child attachment relationship) remained significant for both. There does seem to be some difference between the two groups in terms of slope of the moderating effect of symptoms of depression on attachment behaviors. Consistent with previous research on low-income and racial/ethnic minority mothers, the respondents in the current study also had a stronger relationship between depression and parental stress (Chung et al., 2021; Mennen et al., 2021), as demonstrated by the moderating effects in the immigrant subsample. This finding is particularly informative because immigrant respondents had overall lower levels of depression compared to U.S. born respondents. However, immigrant respondents that were in the category of higher than average levels of depression were struggling more than their U.S. born counterparts with similar levels of depression. Again, this points to outside factors beyond that of depressive symptoms and parenting stress. Other factors may be influencing these parents and their ability to be present and responsive to their child.

At this time, I cannot say exactly why the differences were found. One could surmise that racial/ethnic differences (Pascoe & Richman, 2009; Tor et al., 2021), migration experiences (George, 2010), the lived experience of being an immigrant parent in this country (Hanna & Ortega, 2017; Gonzalez & Mendéz-Pounds, 2018), dealing with the loss of their home and loss of connection to their culture (Gangamma, 2018), or a variety of other factors could be

influencing the relationship among the variables. Another consideration could be the way that depressive symptoms were measured in this study. The CESD-R is a validated tool with many language translations; however, previous research has demonstrated that there are culturally specific mental health symptoms and cultural idioms of distress that do not necessarily have the same meaning as the westernized and English interpretation of these symptoms (Im et al., 2017). It is possible that though the CESD-R was picking up on depressive symptoms, that we do not have a full understanding of how these symptoms are affecting individuals and what other ways they may be experiencing distress or mental health issues.

A further possibility could be protective factors and resilience. It could be that immigrant families are experiencing less depression overall because there is a sense of community and support, involvement in a religious or faith community, personal spirituality, and other coping strategies (Elshahat & Moffat; Ruby, 2020). Resilience has been previously found to protect against depression and distress (Elshahat & Moffat, 2021). This finding may fit with current study as well. Perhaps, the families involved in the current study are demonstrating resilience in the face of adverse circumstances such as poverty, immigration-related struggles, and other stressors. High levels of ethnic identity have also been found to be a protective factor (Leong et al., 2013), and perhaps this is part of the interplay of the current findings. This was not specifically measured in the current study, participant were only asked how they identified, not how strongly they identified. There is also an idea in the literature of the “immigrant paradox” where being foreign-born is a protective factor against mental health issues compared to a similar sample of U.S. counterparts (Alegría, 2008; Leong et al., 2013). The mechanisms of how this paradox occurs are still not fully known.

Overall, the question remains whether this finding is an issue of diagnostics, cultural relevance, or simply better mental health due to personal and collective resilience, protective factors, or being born outside of the U.S.

In an effort to explore possible differences between the two subsamples, post-hoc chi-square tests were run. There were significant differences in the racial composition between immigrant and U.S. born families in terms of race/ethnicity and levels of education. Immigrant respondents were 76.68% Hispanic and 3.45% White, non-Hispanic, whereas the U.S. born respondents were 26.62% Hispanic and 34.98% White, non-Hispanic. It is important to consider how intersections of race, ethnicity, and culture work together to inform lived experiences and how those experiences affect the parent-child relationships. It is possible that immigrant parents may endorse higher levels of depressive symptoms due to factors like racism and xenophobia (Wieling et al., 2020). The social and political climate of an area may influence the way that an immigrant primary caregiver feels about themselves and about their role as a parent in the United States (Wieling et al., 2020).

A little more than a third of the immigrant respondents had less than a High School Education (35.91%), while a third US Born respondents had a High School or equivalent education (32.70%). It is possible that parents who have less education are working multiple part-time jobs that could shape the way that they are able to be there for their child. Primary caregivers who work multiple jobs then come home to “second shift” (aka engaging in the parenting role) may experience more role strain because of outside factors (Hochschild & Machung, 1989).

Lastly, the immigrant families had a slightly higher percentage of male respondents (6.34%) than the U.S. born families (5.07%). While still a small percentage and not statistically

significant in the current sample, it is worth exploring how male primary caregivers are impacted by outside factors, especially when considering how in the U.S., there are gendered expectations about caregiving (Hochschild & Machung, 1989; Newkirk et al., 2017).

Factors related to acculturation may be contributing to the results of the current study. The immigrant subsample looked similar to the overall subsample, perhaps because 60.8% of the immigrant subsample had been in the U.S. for ten years or longer, enough time for multicultural values to permeate. Further exploration is needed to see how these differences may connect to the variables in the current study.

### **Limitations**

The current study is not without its challenges. First, given the use of secondary data, proxy variables were used for attachment behaviors and for parent-child attachment. For example, a parent-child interaction variable assessing levels of responsiveness and sensitivity was used as an attachment behavior proxy and a parent-child closeness variable was used for parent-child attachment. While responsiveness and sensitivity were ultimately what this study was exploring, more specific interactions may be explored further. Additionally, closeness could be used interchangeable with words like bond and attachment but is not referring to the specific attachment relationship. Ideally, a validated attachment survey would be used to collect data about the parent-child attachment relationship. Additionally, both parent and child data would be beneficial to collect given that attachment is a dyadic relationship.

The use of the CESD-R may be an additional limitation as there may be differences in cultural meanings of depression. In addition, while the CESD-R has been translated into Spanish, the current secondary dataset used the English version for both primarily English-speaking families and for primarily Spanish-speaking families. This could lead to differences in

interpretation based on the interpreter administering the survey. Best practice is to have the survey questions be equivalent when working with cross cultural and cross-national surveys (Behr & Shishido, 2016). Due to the cross-sectional nature of the data, no causal influences may be drawn from the data. Though the implications are generalizable, the downside is that the findings may not be specific enough to reflect differences in individual families. That is, it is nationally representative and certainly representative of Head Start programs, but there are unique and individual nuances between families, and it is possible that the findings would not apply to all families that fall into this population.

### **Study Implications**

This study has multiple clinical, research, and policy implications. Overall, one of the main takeaways of the current study is the need to consider Early Head Start families as a whole in service provision. Though the children are the main recipients of services, this study highlights how much parental factors like parental mental health and parenting stress influence a parent's ability to be the best parent for their children and to engage in the parent-child relationship in a way that is consistent and sensitive.

### ***Clinical Implications***

Considering the early childhood timeframe when the initial internal working models are formed, it is important to find ways to support secure attachment between parents and their children (Bowlby, 1969). Given this finding, it would be important for providers to consider ways to address parenting stress. This may look like therapeutic services or parenting support groups to be able to find ways to cope with the stress that comes with being a parent to a young child. Also, because attachment has an intergenerational aspect, it would be important to address the attachment relationship and repair and strengthen that relationship to prevent future



generations from experiencing similar levels of mental health and/or relational struggles (BeijersBergen, 2012; Verhage et al., 2016). Head Start already has a family well-being component that addresses needs like housing stability, financial security, and continuing education as well as programs to support and strengthen parent-child relationships. This is the specific area that this study could contribute to. This study underscores the importance of fostering the parent-child relationship and attending to factors that negatively impact it (parenting stress and depressive symptoms). This calls for an expansion of the family well-being component and programs to consider services like family therapy as part of Head Start programming.

When we look at the mechanism through which the attachment relationship is influenced, there are some similarities between immigrant families and U.S. born families and some differences, especially when we consider the impact of depression on the parent-child relationship. Again, the important takeaway is that both immigrant primary caregivers and U.S. born primary caregivers may be experiencing differing levels of depression. It would be imperative to assess the levels of symptoms to see if clinical levels of depression are being experienced to be able to offer clinical support. In considering depressive symptoms, it is important to consider cultural meanings of depression and to provide culturally sensitive mental health services to individuals and families (Im et al., 2017). Additionally, preliminary findings suggest the need to consider intersections of nationality and race/ethnicity as well as levels of education. There are several factors that are contributing to the differences between immigrant families and U.S. born families, all of which lend to further exploration. For consideration at this point, staff and providers may consider how a family's race, nationality, gender, and level of education intersect in a particular family and what needs arise.

Both subsamples experienced changes in the parent-child attachment through attachment behaviors. This is an area that clinicians may want to focus on in practice. How is the parent interacting with their child? Are they responding consistently and with sensitivity? It is true that sensitivity may be more of an arbitrary concept so it would be of important for clinicians to consider ways in which parent-child relationships look similar and different across cultures. Expressions of sensitivity and responsiveness may be different as well. What we do know is that the responsiveness and sensitivity do play an important role in the attachment relationship (De Haene et al., 2010; Berlin et al., 2018).

To summarize – clinicians should pay attention to depressive symptoms and parenting stress; be open to exploring differences in expressing symptoms of distress, parental responsiveness and sensitivity, and closeness; work with other providers in Head Start to be able to effectively identify families who need therapeutic care.

### ***Implications for Early Head Start and Head Start***

Findings from this study will inform program directors, staff, and teachers who serve families through Early Head Start and Head Start programs. This study will strengthen the ability to build empirically supported attachment-informed interventions to provide more comprehensive care for families.

This study is aligned with the Head Start goals of sustaining the participation of the hardest to serve populations in Head Start; comprehensively meeting the needs of children and families through Head Start services; and tailoring, differentiating, or individuating services to the unique needs of Head Start children/families. The importance of parent attachment behaviors, especially in the presence of high levels of parenting-related stress and depressive symptoms were highlighted. Assessment and interventions that target parenting-related stress and

depressive symptoms of primary caregivers could be implemented as part of Early Head Start programming. Wrap around services that support the parents in their role and help facilitate the parent-child relationship could be explored.

Findings will benefit policy makers, program administrators, and practitioners as they consider the unique needs and contexts of immigrant families served through Head Start. This research can inform not only local Head Start agencies, but other locations nationally as well about parent-child relationships in families headed by immigrant parents as well as how this growing number of families can best be supported through comprehensive services through Head Start. Considering differences between U.S. born and foreign-born parents in terms of parenting stress, depressive symptoms, and attachment with their child can help individuate and tailor services for specific populations served by Head Start and Early Head Start programs and subsequent policy changes may be implemented. Additional family supports like parenting groups could become the norm and funding could be provided for mental health and family therapy services through Head Start locations. Immigrant families may need different kinds of supports related to parenting that are culturally and linguistically tailored.

### **Future Directions**

Further research is needed to explore other differences between immigrant and U.S. born families in terms of attachment relationships and mental health. Despite being a popularly used theory in clinical practice with families, with numerous empirical studies citing its effectiveness (Bakermans-Kranenburg et al., 2003; Diamond et al., 2016; Steele & Steele, 2018; Berlin et al., 2016), there is a significant gap in culturally responsive attachment-based practice with families from marginalized backgrounds. Further research could use cultural informants and cultural brokers in a Community Based Participatory Research study to understand the meanings of

depression for each culture (Israel et al., 2001). Cultural differences in expressions of attachment may also be considered for further research (Im et al., 2017). The idea of responsive and sensitive parenting may look different between cultures, but the important part may be that the parent is responding consistently (current study; Mazzeschi et al., 2015). Further exploration of cultural expressions and mechanisms through which the attachment relationship is influenced is needed for culturally responsive interventions (Carlson et al., 2004; Seponski et al., 2013). One way to explore these factors in the future would be to divide the sample and examine these factors separately.

Another area for future research relates to family structure. It could be that those living in different family structures (i.e. single-parent, dual parent, inter-generational households) may experience different outcomes. A possibility for future exploration would be to use family structure as a control variable.

Lastly, future studies could explore the role of acculturation as it relates to mental health and attachment variables. Previous research has found that greater levels of acculturation are related to higher levels of parental nurturance and less intergenerational conflict with their children (Liu et al., 2017). Perhaps this is why the full sample and the immigrant subsample had similar findings, again, because the current immigrant subsample had mostly been in the U.S. for ten years or more. In other studies, acculturation has not explained the differences between Hispanics and non-Hispanic blacks (Driver & Amin, 2019). Future research could explore how acculturation acts as a factor influencing the current study variables.

In terms of the advancement of research, this is a newly available dataset, so the pioneer findings will be important for researchers, clinicians, educators, and policy makers alike to understand how primary caregiver mental health and levels of parenting stress, along with factors

such as the migration experience can influence the attachment relationship. Future studies could consider multiple perspectives such as multiple caregivers as well as the child's experience of the attachment relationship. Both of these things could be important when considering pathways through which parent-child attachment occurs and is affected. It would be important to have multiple informants (perhaps other staff members) report on their observations of the parent-child relationship. Additionally, studies that consider the intersections of other factors such as nationality, race/ethnicity, education, and other stressors related to belonging to a low-income family are needed.

### **Conclusion**

Using a nationally representative dataset of Head Start families, and situated within attachment theory, this study sought to investigate factors associated with parent-child attachment in a sample of U.S. born and immigrant respondents. The main research questions were: is the relationship between parenting stress and parent-child attachment mediated by attachment behaviors; do symptoms of depression moderate the mediating relationship of attachment behaviors on parenting stress and parent-child attachment; and are there differences between groups of U.S. born families and immigrant families? The study used a nationally representative secondary descriptive dataset called Baby FACES 2018 (Vogel et al., 2018). Data analyses were completed with PROCESS v. 3.5.3 (Hayes, 2018) in IBM SPSS v.26 (IBM, 2019). A series of mediation and moderated mediation models was tested aligning with each of the hypotheses. A final sample of 2349 respondents ranging from 15-74 years old was used. The majority of respondents were the focal child's birth mother and identified as either Hispanic (39.7%); Black, non-Hispanic (28.4%) and White, non-Hispanic (26.7%). Most of the respondents were born in the U.S., but for those that were not born in the U.S., 60.8% of the

immigrant respondents had been in the U.S. for ten or more years. The majority of participants had a high school education and were working full-time or not currently working.

The main findings for the whole sample were: Higher parenting stress was associated with lesser parent-child attachment; parenting stress was associated with parent-child attachment through attachment behaviors; and depressive symptoms were a significant moderator of parenting stress and attachment behaviors. The indirect effect of attachment behaviors was not moderated by depressive symptoms. That is, the “pathway” of parenting stress influencing parent-child attachment through attachment behaviors was the same for respondents with all levels of depressive symptoms. This association was similar for both U.S. born and immigrant respondents.

The moderator effect was not significant for US Born and Immigrant subsamples when compared separately. Immigrant respondents had greater parenting stress, lesser depressive symptoms, lower attachment behaviors and lesser parent-child attachment compared to U.S. born respondents. Post-hoc analysis revealed significant differences between the two subsamples in terms of racial and ethnic composition, level of education, and gender of the parent.

Major limitations included the use of proxy variables for attachment behaviors and parent-child attachment; the use of single versus multiple informants; the cross-sectional nature of the secondary dataset; and the use of the CESD-R which may not yield cultural meanings of depression. Major implications of the study include: consideration of how much parental factors like depressive symptoms and parenting stress influence a parent’s ability to be the best parent for their children and to engage in the parent-child relationship in a way that is consistent and sensitive; expansion of family well-being services through Head Start programming; and preliminary findings suggest the need to consider intersections of nationality and race/ethnicity

as well as levels of education and gender in future research. There may be several factors that are contributing to the differences found between immigrant families and U.S. born families, all of which lead to further exploration.

In terms of the advancement of research, this is a newly available dataset, so the pioneer findings will be important for researchers, clinicians, educators, and policy makers alike to understand how primary caregiver mental health and levels of parenting stress, along with factors such as the migration experience can influence the attachment relationship.

This research will inform culturally appropriate services to be provided to families in the future. Attachment theory is one of the most popular theories to explain early childhood development and family relationships, and attachment-based family therapy is backed by over fifteen years of research (Diamond et al., 2016). Yet, despite this popularity and evidence-base, very little has been done with immigrant and refugee families. The field of marriage and family therapy has a responsibility to serve all clients in culturally responsive ways so having this knowledge can inform course of treatment. For marriage and family therapy training programs, this information can help educate future generations of therapists to understand how theoretical orientations do or do not fit for specific populations. It will lead to a broadening of understanding of a population that is often marginalized.

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### **Education**

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Masters Project: *A Review of Home-Based Family Therapy Programs for Children Who Have Experienced Trauma with a Focus on Attachment and Resilience and Questions for In-home Service Delivery Providers*  
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*Graduated Magna Cum Laude and Alpha Kappa Sigma*  
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### **Additional Training**

- 2019            Narrative Exposure Therapy (NET) Training, University of Minnesota, September 2019
- 2017            Medical Family Therapy Intensive, University of Rochester School of Medicine and Dentistry, June 2017

### **Research Experience**

- 2019-2021    **Project Coordinator.** Impact of Refugee Gardening on Mental Health, Economic

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- 2019-2021 **Project Manager.** Development of a collaborative training module for interpreters and practitioners of psychotherapy  
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- 2019 **PhD Student Researcher.** *Discrimination, Depression, and Dyads*  
Syracuse University  
Study conducted as part of the AAMFT Minority Fellowship Program
- 2017-2018 **Project Manager.** SEEDLingS (Study of Environmental Effects on Developing Linguistic Skills) Follow-up Study  
Duke University  
P.I. Erika Bergelson, PhD
- 2014-2016 **Project Coordinator.** SEEDLingS (Study of Environmental Effects on Developing Linguistic Skills)  
University of Rochester  
P.I. Erika Bergelson, PhD (Funder: NIH-Mechanisms of Word Learning in Early Infancy)
- 2013-2014 **Research Assistant.** Project STEP (Successful Transitions in Ecological Perspectives)  
Mt. Hope Family Center, University of Rochester  
P.Is. Patrick Davies and Melissa Sturge-Apple (Funder: Eunice Kennedy Shriver National Institute of Child Health and Human Development)
- 2012 **Research Team Member.** Unmitigated Communion and Attachment  
Roberts Wesleyan College  
P.I. Rodney Bassett, PhD
- 2012 **Research Assistant.** Child Abuse and Trauma Related Psychopathology  
Mt. Hope Family Center, University of Rochester  
P.I. Dante Cicchetti, PhD and Fred Rogosch, PhD (Funder: National Institute of Mental Health)
- 2012 **Independent Study.** Eating Disorders  
Roberts Wesleyan College  
Advisor: Jennifer Aube, PhD
- 2010 **Integrative Research Team Member.** Integration of Psychology and Theology

## Roberts Wesleyan College

**Awards and Honors**

- 2018-2019 AAMFT Minority Fellowship Program: Doctoral Fellow
- 2016-2017 Departmental Scholarship Recipient, University of Rochester, Rochester, NY
- 2011-2012 Class of 1945 Endowed Scholarship, Roberts Wesleyan College, Rochester, NY
- 2009-2012 Dean's List with High Honors, Roberts Wesleyan College, Rochester, NY
- 2009-2012 Presidential Scholarship, Roberts Wesleyan College, Rochester, NY

**Grants Awarded**

Tor, S. (2021) Summer Dissertation Fellowship, Syracuse University, Syracuse, New York.  
Amount: \$4,000

Tor, S. (2019-2020) Travel Grant Award, Graduate Student Organization, Syracuse University,  
Syracuse, New York. Amount: \$350

Gangamma, R. Development of a collaborative training module for interpreters and practitioners of psychotherapy. Central New York Community Foundation, Syracuse, New York, January-December 2019. Amount: \$19,760

Role: Project Manager; Contributed to design development, conducted literature review, assisted in writing of proposal, involved in development of training module and co-facilitating training and follow-up sessions

Gangamma, R, Minkoff-Zern, L, & Walia, B. Impact of gardening on mental health, community building, and economic well-being in Central New York. Fahs-Beck Foundation, February 2019-February 2021. Amount: \$20,000

Role: Project Coordinator; Assisted in writing of proposal, edited document, in charge of participant recruitment, involved in data collection and assistance in data analysis and publication

Walia, B., Gangamma, R, & Minkoff-Zern, L. Impact of gardening on mental health, community building, and economic well-being in Central New York. Lerner Center Faculty Fellow, Syracuse University, January 2019-2021, Amount: \$25,000

Role: Project Coordinator; Assisted in writing of proposal, edited document, involved in participant recruitment, data collection and assistance in data analysis and publication

Tor, S. AAMFT Minority Fellowship Program Doctoral Fellow 2018-2019. Amount: \$20,000

**Grants Submitted**

**Tor, S.** Parent-child attachments in resettled refugee families living in a transnational context. Submitted for the Early Care and Education Research Scholars: Head Start Dissertation Grant, June 2020. Not funded.

Gangamma, R, Minkoff-Zern, L, & Walia, B. Impact of gardening on mental health, community building, and economic well-being in Central New York. CUSE grants, January 2019. Not accepted.

Role: Research Assistant; Assisted in writing of proposal, edited document, will be involved in participant recruitment, data collection, and assistance in data analysis and publication

Gangamma, R, & Stone Fish, L. A collaborative model for addressing mental health disparities in underserved ethnic minority populations. LOI submitted to the New York Health Foundation Special Projects Fund, October 2018. Not invited for full proposal.

Role: Key personnel; assisted in project design and proposal writing

Gangamma, R, Minkoff-Zern, L, & Walia, B. Improving Refugee Mental Health, Community Building, and Economic Well-being through Gardening in Central New York. LOI submitted to the Russell Sage Foundation. Not invited for full proposal.

Role: Research Assistant; Conducted literature review

## **Publications**

**Tor, S.,** Watson, D., & Tadros, E. (2021). Discrimination, Depression, and Dyads. *The American Journal of Family Therapy*. <https://doi.org/10.1080/01926187.2021.1909512>

Lewis, F., **Tor, S.,** Rappleyea, D. Didericksen, K, & Sira, N. (2021). Behavioral Health and Refugee Youth in Primary Care: An Ecological Systems Perspective of the Complexities of Care. *Child and Youth Services Review*, 120. <https://doi.org/10.1016/j.childyouth.2020.105599>

Gangamma, R., **Tor, S.,** Whitt, V., Hollie, B., Gao, Q., Stevens, A., Hutchings, R., & Stone Fish, L. (2020). Perceived discrimination as a mediator of ACEs and psychological distress. *The American Journal of Family Therapy*. <https://doi.org/10.1080/01926187.2020.1813656>

Bergelson, E., Amatuni, A., Dailey, S., Koorathota, S., & **Tor, S.** (2018). Day by day, hour by hour: Naturalistic language input to infants. *Developmental Science*, 22 (1), e12715-n/a. <https://doi.org/10.1111/desc.12715>

Grimm, J. P., Barnett, K. L., Bassett, R. L., Pearson, S. M., Cornell, A., **Morton, S,** Scott, K & Stevenson, P. (2012). Revisiting the issue of influential sources in the integration of psychology and theology: More than a decade summary. *Journal of Psychology and Theology*, 40(1), 5-15. <https://doi.org/10.1177/009164711204000102>

\*Last name changed from **Morton** to **Tor** in 2016

### **Manuscripts under review**

**Tor, S.\***, Tadros, E.\*, & Patton, R. Examining the association between fatherhood attitudes and parental warmth among a sample of incarcerated fathers. Manuscript under review.

\*denotes equal first authorship

Walia, B., Gangamma, R., **Tor, S.**, Minkoff-Zern, L. Promoting Economic Well-Being, Mental Health and Food Sovereignty through gardening: A Multidisciplinary Perspective. Manuscript under review.

Gangamma, R. & **Tor, S.** Building a collaborative training program for family therapists and spoken language interpreters. Manuscript under review.

**Tor, S.**, Tadros, E., & Su, Z. Exploring the Relationship Between Experience of Stability in Family of Origin and Consensus of Coparenting in Incarcerated Coparenting. Manuscript in progress.

### **Book Chapters**

Tedeschi, L., **Tor, S.**, & Gangamma, R. (2021). Utilizing spoken language interpreters in family therapy. In K.S. Brown (Ed.) American Association for Marriage and Family Therapy Systemic Ethics Textbook (1<sup>st</sup> ed). (Chapter under review). AAMFT.

### **Ad Hoc Manuscript Reviews**

2021 NCFR Annual Conference Proposal Reviewer

2020 Journal of Marriage and Family

### **National Presentations**

Gangamma, R. Minkoff-Zern, L., Walia, B. **Tor, S.** (2020). The role of gardening in promoting food sovereignty, economic well-being, and mental health in resettled refugees. Accepted for Symposium at Work Family Relations Network Conference, 2020-2021. New York, NY (Conference changed to online format with different presentation days due to Covid-19).

Gangamma, R., Hollie, B., **Tor, S.**, Reichert Schimpff, T., & Stone Fish, L. (2019). *University-community collaborations to reduce barriers to family therapy services: Case examples of working with resettled refugees and low-income families of color*. Presented for Symposium at National Council on Family Relations Annual Conference, Fort Worth, TX.

**Tor, S.** (2019). Discrimination, Depression, and Dyads. Presented for the Minority Fellowship Program Institute, May 2019, Arlington, VA.

**Tor, S.** Gangamma, R., & Watson, D. (2018). *Association Between Relational Injuries and Relational Ethics*. Presented for Research Discussion at American Association of Marriage and Family Therapy Annual Conference, Louisville, KY.

Gangamma, R., Glebova, T., Coppola, J., **Tor, S.** & Watson, D. (2018). *Relational Ethics Mediating Stressful Events and Psychological Distress*. Poster presented at the National Council on Family Relations Annual Conference, San Diego, CA.

**Tor, S.**, & Watson, D. (2018). *Serving Syracuse: Using Quantum Graphic Information System technology to compare clinic clientele with Syracuse City data*. Poster presented at New York Association for Marriage and Family Therapy Annual Conference, Manhattan, NY.

Koorathota, S., **Tor, S.**, Amatuni, A., & Bergelson, E. (2016). *6- and 7-month-olds' Noun Input: Human and Automated Corpus Analysis*, International Congress on Infant Studies, New Orleans, LA.

Coe, J. L., Davies, P. T., Sturge-Apple, M. L., **Morton, S. M.**, & Ripple, M. T. (2015). *The multivariate roles of family instability and interparental conflict in predicting representations of security in the family*. Poster presented at the Biennial Conference of the Society for Research in Child Development, Philadelphia, PA.

Bassett, R. L., Philips, C., Cornell, A., **Morton, S.**, Buettner, K., Wolfson, E., Majors, A., & Alwardt, S. (2013). *Considering the connection between adult attachment style and self-sacrifice: An experiment*. Poster presented at the meeting of the Christian Association for Psychological Studies International Meeting, Portland, OR

\*Last name changed from Morton to Tor in 2016

### **Local Presentations**

**Tor, S.** (2019). *Coding and Mental Health*. Presentation at the American Association of Professional Coders (AAPC) "May Mania" Seminar, Utica, NY

Gangamma, R. & **Tor, S.** (2019). *Refugee families: Context of traumatic experiences, mental health symptoms, and Interventions*. Training for the Leadership Team of Hopeprint Inc., Syracuse, NY

Gangamma, R., & **Tor, S.** (2018). *Mental health awareness training for case managers of Refugee and Immigrant Self-Empowerment (RISE)*, Syracuse, NY

**Tor, S.** (2017). *A Review of Home-Based Family Therapy Programs for Children Who Have Experienced Trauma with a Focus on Attachment and Resilience and questions for in-home service delivery providers*. Poster presented at the University of Rochester School of Medicine and Dentistry Psychiatry Department Poster Presentation.

### **Courses Taught**

2019            **Co-Instructor.** MFT 684: Family Therapy Perspectives of Cultural Diversity, Syracuse University, Department of Marriage and Family Therapy

2019            **Co-Instructor.** MFT 600: Migration and Mental Health, Syracuse University,

## Department of Marriage and Family Therapy

2018 **Co-Instructor.** MFT 682: Marriage and Family Therapy Theory and Techniques, Syracuse University, Department of Marriage and Family Therapy

**Guest Lectures**

2020 **Guest Lecturer.** *Therapy with Families Affected by Relational Violence.*  
Lecture for HFS 479: Power, conflict, Violence, and the Family  
Syracuse University, Department of Human Development and Family Science

2020 **Guest Lecturer.** *Ethnicity and the Refugee Experience.*  
Lecture for MFT 684: Family Therapy Perspectives of Cultural Diversity,  
Syracuse University, Department of Marriage and Family Therapy

2019 **Guest Lecturer.** *Therapy with Families Affected by Violence.*  
Lecture for HFS 479: Power, conflict, Violence, and the Family  
Syracuse University, Department of Human Development and Family Science

2018 **Guest Lecturer.** *Culturally Responsive Research to Reduce Mental Health Disparities.*  
Lecture for MFT 663: Applied Research in Social Work  
Syracuse University, Department of Marriage and Family Therapy

2017 **Guest Lecturer.** *Experiential Family Therapy.*  
Lecture for MFT 681: Introduction to Family Systems  
Syracuse University, Department of Marriage and Family Therapy

**Service to the Department and University**

2020 **Committee Member:** Identity-Related Trauma Task Force  
Role: Co-Facilitator. Ongoing Group Listening Circles for Discussing Racial Injustice.

2020 **Co-Facilitator.** Interfaith Dialogue Dinner Series, “Common and Diverse Ground: Raising Consciousnesses by Acknowledging the ‘Hidden’ Things that Divide Us,” co-sponsored by Hendricks Chapel, the Office of Interdisciplinary Programs and Outreach in the Burton Blatt Institute, Intergroup Dialogue and the Office of Diversity and Inclusion.

2019-2020 **Committee Member:** Accreditation Committee

2019-2020 **Facilitator,** Climate Forums, Department of Marriage and Family Therapy, Syracuse University

2018-2019 **Supervisor-in-training,** Department of Marriage and Family Therapy, Syracuse University

2018-2019 **Doctoral Student Representative**, Department of Marriage and Family Therapy, Syracuse University

### **Clinical Experience**

- 2019-present **Marriage and Family Therapist**. Internship at Syracuse Couple and Family Therapy Center and its satellites to serve refugee clients. Syracuse, NY
- 2018 **Marriage and Family Therapist**. Bhutanese Community Center, Syracuse, NY
- 2017-2019 **Marriage and Family Therapist**. Syracuse University Couple and Family Therapy Center, Syracuse, NY
- 2016-2017 **Marriage and Family Therapy Trainee**. Strong Family Therapy Services, University of Rochester Medical Center, Rochester, NY
- 2016-2017 **Marriage and Family Therapy Trainee**. Hillside Children's Center, Hillside Family of Agencies, Rochester, NY
- 2013 **After-School Counselor**. PATHS (Promoting Alternative Thinking Strategies) Program, Mt. Hope Family Center, Rochester, NY
- 2012 **Undergraduate Psychology Intern**. Rochester Mental Health Center, Rochester, NY
- 2011 **Undergraduate Social Work Experience**. PATHS (Programme for Advancement Through Health and Education). Kingston, Jamaica
- 2011 **Peer Counselor**. Roberts Wesleyan College, Rochester, NY
- 2010-2011 **Evaluator**. Salvation Army Christmas Assistance Program, Salvation Army, Rochester, NY

### **Community Outreach**

- 2019-present University-Community Collaboration with Peace Inc. Head Start to increase access to mental health care for refugee clients
- 2019 Interview with Spectrum News Syracuse about the development of a collaborative training module for interpreters and practitioners of psychotherapy
- 2018-2019 University-Community Collaboration with the Bhutanese Community Center to increase awareness and access to mental health care for refugee clients
- 2018-present Collaboration with RISE (Refugee and Immigrant Self-Empowerment) to increase awareness and access to mental health care for refugee and immigrant clients



2018-2019 University-Community Collaboration with NAWE (New American Women's Empowerment) of Syracuse, NY to increase awareness and access to mental health care for refugee and immigrant clients

### **Professional Affiliation**

2019-present Student Member, Society of Refugee Healthcare Providers

2019-present Student Member, National Council on Family Relations (NCFR)

2015-present Pre-Clinical Fellow, American Association of Marriage and Family Therapy

### **Other Professional Activities**

2019 AAMFT Minority Fellowship Program: Advocacy Visit to Capitol Hill  
Advocated for Medicare reimbursement; funding for the Minority Fellowship Program; and discussed the importance of refugee research with Senator Chuck Schumer's Office and House Representative Joseph Morelle's Office

2017-2018 **MFT Research/Question Development Project Consultant**, Association for Advanced Training in the Behavioral Sciences, Ventura, CA

### **Professional Development**

2019 *MFPCC Summer Series: Cultural Competence & Health Disparities Curriculum* Webinars

2019 *Cultural Neuroscience: Child and Adolescent Brain Development*, AAMFT Continuing Education Course

2018 *Soul Work: Unmasking internalized superiority and overcoming internalized inferiority, a two-day conference for people of color and white allies*, Stamford, Connecticut

2017-2018 *Gender Expansive Support Team Trainings and Member of Gender Expansive Support Treatment Team*, Department of Marriage and Family Therapy, Syracuse University

2017 *Direct Assessment and Treatment of Emotional Factors in Psychosomatic Conditions*; University of Rochester Medical Center, Rochester, NY

2017 *Medical Family Therapy Intensive*, University of Rochester Medical Center, Rochester, NY

2017 *Safe Space Training*, University of Rochester Medical Center, Rochester, NY

2017 *Using Books (And Other Story-Making Tools) To Enhance Clinical Work and Our Personal Lives*, Kaethe Weingarten, PhD, University of Rochester Medical Center, Rochester, NY

- 2017 *Monroe County System of Care Compassion Fatigue Training*, Hillside Family of Agencies, Rochester, NY
- 2016-2017 *Exploring Sensitive Topics Meetings*, University of Rochester Medical Center, Rochester, NY
- 2016 *Expanding Attachment Frames in Couples Therapy*, Aaron Black, PhD, Monroe Community Hospital, Rochester, NY
- 2016 *Interpersonal Violence Workshop*, Kate Cerulli, PhD, University of Rochester Medical Center, Rochester, NY
- 2016 *Trauma-Focused Cognitive Behavioral Therapy Web Training*
- 2016 *Therapeutic Use of Weight Training Module*, Hillside Family of Agencies, Rochester, NY
- 2016 *Commitment to Living Training Seminar*, Tony Pasani, PhD, University of Rochester Medical Center, Rochester, NY
- 2015 *Re-imagining Our Responses to Hardship, Oppression and Trauma*, Vikki Reynolds, PhD, Rochester Educational Opportunity Center, Rochester, NY