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The Effects of Parental Engagement in Early Childhood on Academic Achievement in Adolescence

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THE EFFECTS OF PARENTAL ENGAGEMENT IN EARLY CHILDHOOD ON ACADEMIC
ACHIEVMENT IN ADOLESCENCE

A Thesis

Presented to

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Of Master of Science in Clinical Psychology

By Alexandria Velez

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Abstract

Parental involvement and engagement have been used interchangeably in research regarding the academic outcomes of children. The current study assessed parental engagement and its relationship to academic achievement in adolescence. Specifically, the study looked at parental engagement with children aged 3 and its effects on adolescent achievement at age 15 in 1-parent and 2-parent homes. Exploratory analyses were also conducted to examine the effect of ethnicity on the relationship between parental engagement and academic achievement. Data were taken from participants (N = 3350) who were a part of the Fragile Families and Child Wellbeing study, a longitudinal dataset. Findings showed that parental engagement was a significant predictor of academic achievement in 1-parent homes, but not in 2-parent homes. Additionally, it was found that ethnicity was a significant factor in the prediction of parental engagement on academic achievement in single parent families. Implications and future directions for research are discussed.

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Chapter I: Introduction

Parental Involvement/Engagement on Academics

Within the past decade, the impacts of parental involvement/engagement on children's education have become important in the realm of psychological research (Nunez, Suarez, Rosario, Vallejo, & Epstein, 2015). Many aspects of children's development can be affected by the relationship of the child and their caregiver. The quality of the parent-child relationship has a direct effect on overall development of children, including their academic and socio-emotional development (Rostad, & Whitaker, 2016). Behaviors that promote child outcomes are studied as either parental involvement or parental engagement, often without a clear-cut distinction (if any) between the terms. Many behaviors by parents to support child academic, behavioral and social outcomes have been studied. Supporting children in the completion of their homework is one of the most recognized forms of parental involvement, although each parent's intentions and strategies may differ (Nunez, et. al., 2015). For example, Nunez and colleagues (2015) examined the relationship between parental involvement in homework and student's motivational outcomes and found that parental involvement was associated with motivational outcomes such as, higher determination, persistence and intrinsic motivation when specifically looking at the child's time management, amount of homework completed and their overall time spent on homework. Similarly, El Nokali and colleagues (2010) found that children with higher levels of parental involvement, from birth to fifth grade, was associated with better social skills and a decrease in problem behaviors when compared to those with limited parental/adult involvement through childhood.

Studies on parental engagement also show similar positive trends. Janet Goodall (2013) examined the literature surrounding parental engagement and found that engagement within the

home was positively associated with achievement of children when compared to parent involvement in school-based activities (Goodall, 2013). Goodall also found that parental engagement includes taking a personal interest in children's learning and having educational aspirations for them as their education continued (Goodall, 2013). For example, a longitudinal study completed by Flouri (2006) examined several students their parents' educational expectations. The author found that both mother and father interest in children's education overtime was a significant predictor of their educational attainment.

Defining Parental Involvement vs. Parental Engagement

Parental involvement and parental engagement are terms that have been used interchangeably in parent/child literature, although studies have made a case for the need for distinction in measurement and conceptualization (Goodall, 2013; Goodall & Montgomery, 2014; Malm, et al., 2011). Arguments have been made for parental involvement being the behavior of having aspiration for children and engaging in activities with them (Goodall, 2013); while another group of studies define involvement as specifically related to parents engaging in their child's education and school activities (Catsambis, 2001). Current research acknowledged parental involvement to be a multi-faceted construct that intertwines having aspirations, the act of engaging and participation in children's education (Catsambis, 2001; Fernandez-Alonso, et al., 2017). Within this dimensional concept of parental involvement are many different variables that foster communication, success, and support related to children's academics (Veas, et al., 2018). Furthermore, parental supervision of schoolwork and their attitudes towards the support and help of their child's academics make up the most commonly studied aspect of parental involvement in children (Veas, et al., 2018).

Parental engagement, on the other hand, is not as clearly defined in parenting research and the term is less likely to be used in comparison to “involvement.” Examination of engagement and involvement as search terms show that, literature using the term “engagement” are heavily centered in the field of early childhood development and broadly on parent-child interactions compared to the term involvement which focuses on middle-late childhood/adolescence and on specific areas such as academics and problem behaviors (Goodall, & Montgomery, 2013; Chen, Pisani, White, & Soroui, 2012). Secondly, the term “engagement” tends to be used when focusing on non-academic interactions compared to parental involvement literature that tend to heavily focuses on school involvement. Thus, parental engagement focuses more on daily interactions with children with the ultimate purpose of influencing the overall functioning and well-being of children, above and beyond school related adjustment (Goodall, & Montgomery, 2013).

Additionally, studies that have used parental engagement independently from involvement as a phrase focused more on at-home activities that foster children’s learning from birth through early childhood (compared to middle childhood and adolescence) and their future academic achievement (Goodall, & Montgomery, 2013). Chen, Pisani, White, and Soroui (2012) examined parent’s relationships with their children during early childhood. They found that specifically engaging in active reading with the child, which teaches children literacy skills, in turn promoted children’s development of language (Chen, et al., 2013). This display of parental engagement within the home additionally served as a foundation for promoting interests in other activities, such as love for music, which later influences academic achievement during school years (Chen, et al., 2013). Supporting this concept of parental engagement is the MASRL model, which shows that motivation, attributes, affect and self-regulated learning in children, which are

important pillars for academic achievement and positive behaviors in adolescence and adulthood, are embedded in parent-child communication, and interactions (Efklides, 2011; Veas, et al., 2018). Such communication and interaction starts in childhood where parents are the core source of general interactions (Baker, Bishop, Stigall, & Dulmen, 2018; Veas, et al., 2018; Efklides, 2011).

The Effects of Parental Engagement on Child and Adolescent Outcomes

Based on the possible distinction made between parental engagement and involvement above, this study is focused on parental engagement in childhood and its potential associations with academic achievement in adolescence. Therefore, for the purpose of this study, parental engagement refers to parent-child non-school focused activities related to early childhood development.

Research on parental engagement have examined parent's relationship and responses to child outcomes cross-sectionally and longitudinally. For example, a longitudinal study was conducted by Schechter (2017) to examine whether parental engagement, specifically interactions between the mother and child, would mitigate the reduced cognitive abilities recorded at birth of children who experienced distress. These children were followed through pre-school and were assessed using standardized tests for cognitive abilities during preschool years. Additionally, interactions between the mother and child were reported using the Dyadic Parent-child Interaction Coding System (DPICS), which recorded instances of parents playing and speaking with their child, and coded parent engagement with the child as positive or negative (Schechter, 2017). Results showed that higher levels of positive parental engagement significantly moderated the relationship between prenatal distress and scores on the child's cognitive development by preschool (Schechter, 2017). Findings show the power of positive

parent engagement on child cognitive functioning overtime during early childhood (Schechter, 2017). In another longitudinal study that extended the examination of mother-child interactive behaviors from infancy to adolescence, Feldman (2009) followed a group of thirty-six mothers and their children who were recruited when each child was three months old. The children and their mothers were observed at three months, and nine months, and then at two, four, six, and thirteen years of age. Over the course of the thirteen years, at the respective time points a series of cognitive assessments, home visits, and observed interactions between the mother and child were recorded. Maternal engagement variables included mother sensitivity, child social engagement, mother intrusiveness, and dyadic reciprocity (Feldman, 2009). The results showed that there were significant differences in mother-child interactions as early as during infancy, and differences in interactions for infants who adjusted well into adolescence, and later in life (Feldman, 2009). In the infants that were able to adapt better through adolescence, mother sensitivity was higher and intrusiveness was lower (Feldman, 2009). Mother sensitivity in the study was defined as communication, positive affect, affectionate touch, supportive presence, vocal clarity, and consistency of parenting style and adaptation to the child's signals, while intrusiveness was defined as manipulation of the infant's body, interruptions of the child's activities or conversations, breaking gaze with the child and disregarding the child's signals (Feldman, 2009). From these definitions, positive engagement from the mother during the early stages of life was found to be associated with positive child development into adolescence.

Effects of the Absence of Parental Engagement during Childhood and Adolescent Outcomes

While parental engagement with children in their early years promotes healthy development, lack of parental engagement during this period could have substantial negative

effects on numerous areas of child functioning including difficulties in behavioral, emotional and cognitive functioning (Chapple, Tyler, & Bersani, 2018; Kwok & Gu, 2018; Spratt, et al., 2012). Studies on neglect, which magnify limited emotional and/or physical parental engagement, have revealed the negative impact that limited active engagement in childhood can have on children later in life (Chapple, Tyler, & Bersani, 2018; Kwok & Gu, 2018; Spratt, et al., 2012). For example, Spratt and colleagues (2012) completed a study on a cohort of sixty children between the ages of three and ten. Twenty-eight of the children had no known history of neglect, while the remaining thirty-two participants all had a recorded history of neglect during early childhood (Spratt, et al., 2012). Each of the children underwent a series of testing measuring their intellectual, behavioral, and overall cognitive abilities. When the groups of children were compared, the children with no reported history of neglect out-performed the children who had been exposed to neglectful situations on each of the measurements that were given (Spratt, et al., 2012).

Additionally, a longitudinal study was completed on adolescents who experienced neglect in childhood, looking at their mental wellbeing in adolescence. Kwok and Gu (2018) examined 1709 participants, with a mean age of 13.6, at time period 1 in the study with 1326 of the 1709 participants returning to participate in time period 2 of the study. In time period 1, participants were given measures regarding their experience of childhood neglect in addition to tests measuring levels of depressive symptoms, hope, and suicidal ideation. A follow-up study was conducted 1 year later where the participants were given the depressive symptoms, hope, and suicidal ideation measures once again. The results showed that adolescents who reported greater levels of neglect in childhood also reported greater levels of suicidal ideation (Kwok & Gu, 2018).

Similarly, another study was completed by Chapple and colleagues (2018), who used data from the National Longitudinal Survey of Youth (NLSY-Child). Chapple and colleagues used data taken from the mother when the children were age 3 and 5, and data and assessments taken from the mother and child at age 11 and 13. Measures regarding physical, emotional and educational neglect were recorded at ages 3 and 5, while measures of self-control, peer rejections, and violent behaviors were recorded at ages 11 and 13. Results found that higher levels of reported childhood neglect predicted violence in adolescents (Chapple, Tyler & Bersani, 2018). The results of these studies mentioned above strongly suggest that the absence of parental engagement during childhood development does have a negative effect on behavioral, emotional, and cognitive development and functioning in adolescence.

Effects of Family Structure and Parent engagement on child and Adolescent outcomes

Besides the presence or absence of parental engagement, family structure also influences child outcomes (Hilton, Desrochers & Devall, 2001; Sun & Lu, 2011; Amatto, Patterson & Beattie, 2015; Mostafa, Gambardo & Joshi, 2018). Many studies have shown that children from two parent households fare significantly better on almost all child outcomes compared to single parent households. One reason why family structure is important in child development and outcomes may be the extra/double investment possible in two parent households compared to one parent. The resources a 2-parent household could provide, including financial and social support are vital components for children's educational success (Coleman, 1988) while in single parent households of that support is typically from one person. For example, in a study by Heiland and Liu (2006), the authors were interested in understanding factors associated with the behavior and physical health of children who were born out of wedlock compared to those born to married parents. The results showed that children from 2-parent homes with a more stable

family structure lived healthier lives with less physical ailments, such as asthma, when examined at age 1 when compared to children at age 1 from the less stable single parent home.

In another study, Mostafa and colleagues (2018) explored the emotional and behavioral outcomes of children in mid-childhood from different family structures including, biological parents, stepparents, single parents, and full and stepsiblings. This study used data from the MCS, a longitudinal survey that represented 19,000 children. Data were collected from the older, co-resident siblings of the children involved with the survey when they were ages 3 and 5. Measures of child well-being, emotional and behavioral problems were given and divided into family type classification. Results of the study found children in families with unmarried parents showed higher levels of internalizing and externalizing behaviors (Mostafa, Gambardo, & Johi, 2018).

Lastly, Wu and colleagues (2008) looked at how family structure influenced children's psychosocial outcomes. This study used 5 waves of data collected on children from birth to early adulthood, using 4 questionnaires measuring internalizing and externalizing behaviors of the child. Questionnaires were completed by the parents and children ranging from ages 10-15 (Wu, Hou, & Schimmele, 2008). Additionally, family structure was operationalized into eight categories: stable step-marital families, cohabiting-to-marital families, disrupted marital families (divorce), disrupted cohabiting families (non-marital union dissolution), other family types, and stable biological marital families (reference group). The results of the study displayed that children from non-married households had a harder time adopting prosocial behaviors such (Wu, Hou & Schimmele, 2008). Wu and colleagues explained that marital termination was a predicting factor in the challenges experienced by the children. There was a strong positive association with single-parent family structure and economic deprivation, ineffective parenting

practices, parental absence, and exposure to familial conflict (Wu, Hou, & Schimmele, 2008). These findings support the existing notion that 2-parent homes provide more stability and availability of parents for children when compared to single-parent families.

Rationale for the Current Study

Since current research in the parenting field tends to focus less on parental engagement (non-school focused activities) and its associations with future academic achievement in school, this study therefore sought to examine the relationship between parental engagement in early childhood in 1-parent versus 2-parent homes on academic achievement during adolescence. Specifically, parental engagement was studied in pre-school children. This was because child development studies show that environmental factors, such as engagement, play a large role in how children develop emotionally, psychologically, and cognitively before and during that time (De Young, Kenardy, & Cobham, 2011). Academic achievement was examined at adolescence, approximately age 15, which is an important period where children now adolescents, increasingly build autonomy, respond to the world based on increased cognitive functioning and upbringing (parent-child interactions), as well as are able to provide self-report of their own behaviors. It was therefore hypothesized that:

H1: Parental engagement at age 3 in 2-parent households will predict higher scores in academic achievement during adolescence at age 15.

H2: Parental engagement at age 3 in 1-parent households will predict lower scores in academic achievement during adolescence at age 15.

Operational Definitions. Parental engagement in this study was operationally defined as the frequency of parental non-school activities spent with the child (e.g., reading stories, playing

with toys). Academic achievement in adolescence in this study was operationally defined as the composite score of Math, Science, English/Language Arts, and Social Studies/History at age 15.

Chapter II: Methodology

Participants

The current study used data from the Fragile Families & Child Wellbeing Study (FFCWS; Reichman, Teitler, Garfinkel, & McLanahan, 2001), which is a recently ended longitudinal study that followed a cohort of nearly 5,000 children born in the United States between 1998 and 2000 and includes interview data from mothers, fathers, and children. The mothers and fathers were interviewed following the birth of their child, and were interviewed again when their child reached ages 1, 3, 5, 9, and 15. Children (adolescents) began to give self-reports at ages 9 and 15. For this study, data were from baseline and two of the following waves: wave 3 and wave 6. In wave 3 (year 3 of child), mothers and fathers answered a battery of questions regarding social relationships, parenting behaviors, physical and mental health, marital relationships, employment status at age, while in wave 6 (year 15 of child) adolescents answered a battery of questions about well-being and academics, including their current grades in school.

Three waves of data were used for this study: Baseline data (provided by the mothers and father before their child was born) was used as related to demographics. Wave 3 contained data from children aged 3 years and measured the level of parental engagement. Wave 6 was the wave in which adolescent data were collected including grades. Based on these criteria and key variables, the overall sample size for this study was $N = 3350$, which is much larger than the minimum sample required ($N=119$) to detect medium effects of three predictors on Academic achievement at $p \leq .05$. This study received Institutional Board approval before data were analyzed.

Measures and Materials

Parental Engagement. Parental engagement at year 3 (wave 3) was a constructed variable using 13 self-report items used by FFCWS. These questions were responded to by father and/or mother. Items asked how many days a week parents interacted with the children based on a variety of behaviors including: reading stories to the child, singing songs or nursery rhymes to child, and hugging or showing physical affection to child. Responses ranged from 0 = (none) to 7 = (7 days per week). The mean score of mother and father engagement was used and summed into a composite score, with the score ranging from 0-91. The higher the score, the higher the level of parental engagement reported. In this study, this scale has a Cronbach alpha of $\alpha = .67$.

Academic Achievement. Academic achievement was measured using four self-report items from Wave 6 (age 15) of FFCWS: “Grade in English or Language Arts?”, “Grade in Math?”, “Grade in History or Social Studies?”, “Grade in Science?” Responses include ‘A’, ‘B’, and ‘C’. For data analyses, these grades were recoded to Missing = (Refuse, Don’t know, Missing, Multiple answers, N/A Homeschooled and Skipped); 1 = C, 2 = B, and 3 = A. The recoded variables were summed into one composite score that ranged from 4-12. The higher the score, the higher the level of academic achievement that had been attained in the academic year. In this study, this scale had a Cronbach alpha of $\alpha = .69$.

Covariates. The covariates used in this study included gender and ethnicity of the child, mother and father education, and parental income. Gender of the child was coded as 1= Boy and 2 = Girl. Three major ethnicities were represented in the data – White, Black and Hispanic. To examine the unique effects of parental engagement on each ethnic group, three dummy coded variables were created with each ethnicity =1, and all others =0. Gender and ethnicity were chosen as covariates based on the findings of a study by Sutton and colleagues (2018) who found

that gender and ethnicity played a large role in the academic performance of adolescents upon entering high school and continuously throughout their high school education (Sutton, Langenkamp, Muller, & Schiller, 2018).

Mother and father education were chosen as covariates due to findings of studies that show parental education as significant predictors of higher academic expectations for children, which in turn affect the child's overall course of academic achievement (Kim, Sherraden, Huang, & Clancy, 2015). In this study, parental education was dummy coded as 0 = high school education or lower, and 1 = college education and higher. Lastly, income was selected as a covariate. Studies have also shown that lower income can present children with greater difficulties in academics (Powell, Peet & Peet, 2002). Income was constructed in the FFCWS as a ratio (percentage) on a scale of 1- 5, where 1= 0-49%, 2 = 50-99%, 3 =101-199%, 4 =200-299% and 5 =300% and more. Income scores below 99% represented poverty line and below and income scores from 100% and higher indicated income above the poverty line. Income was therefore used as a continuous variable in this study, with higher scores indicating higher income/SES. These covariates were entered into all models to account for them while identifying the unique variances associated with the key variables of interest in each model.

Analyses

All statistical analyses were conducted using the Statistical Package for Social Sciences (SPSS V25.0). Data taken from the Fragile Families and Child Wellbeing dataset were cleaned and recoded (academic achievement). Descriptive analyses were ran to examine the variability and normality of the data. Two hierarchical linear regression analyses were conducted to test the stated hypotheses in one parent and two parent homes. Specifically, the predictor (i.e., parental

engagement) was regressed on academic achievement, controlling for parental education, ethnicity, gender and income.

Chapter III: Results

In the current study, analyses were conducted using SPSS version 25. Descriptive analyses were conducted to examine the distribution of the data and to identify any outliers. A summary of the characteristics of the sample are outlined in Table 1. Mean engagement levels at age 3 were close but higher for parents from 1-parent homes ($M = 5.15$) compared to 2-parent households ($M = 4.98$). The mean academic achievement score for adolescents in 1-parent homes was lower ($M = 10.38$) compared to children in 2-parent homes ($M = 11.49$). To determine if there was a significant difference in the mean levels of parental engagement and academic achievement, a Levene's test of equality of variances was ran. Results showed that parental engagement in 1-parent homes was significantly higher than engagement in 2-parent homes at age 3 ($F = 49.78$, $t = 5.45$, $df = 2832.77$, $p = <.01$; equal variances not assumed). Scores for academic achievement on the other hand, was significantly higher in 2-parent homes when compared to academic achievement of children from 1-parent homes ($F = .51$, $t = -10.29$, $df = 3068$, $p = <.001$; equal variances assumed).

Pearson correlations was used to assess the relationships between the key study variables and the demographic variables. The associations between the predictors, covariates (ethnicity, income, gender, and mother and father education) and academic achievement are outlined in Table 2. The strongest significant associations for parental engagement was with ethnicity (White) in 1-parent ($r = .08$) and Hispanic in 2-parent ($r = -.13$) homes. For academic achievement, the strongest associations were with income in single parent homes ($r = .10$) and father's education ($r = .23$); while the weakest associations were between gender (male/female) and Hispanic ethnicity ($r = -.003$).

To examine the hypotheses proposed, 2 linear regression analyses were completed. The regression models examined the relationship between parental engagement at year 3 and academic achievement at year 15 in the 1-parent sample (n=1487) versus the 2-parent sample (n=1583).

For the 1-parent sample, the overall model was significant $R^2 = .03$, $F(8,1319) = 5.31$, $p = < .05$ showing that parental engagement at year 3 was associated with academic achievement at year 15 in 1-parent homes. The overall model and effects are presented in Table 3.

Additionally, the covariates - level of income $\beta = .19$, $p = < .01$, gender $\beta = .50$, $p = < .001$, and being Hispanic $\beta = .70$, $p = < .05$ all showed significant effects on academic achievement, while ethnicity, specifically being White or Black as well as parental education was not significantly associated with academic achievement.

When 2-parent homes were examined in the third regression, results showed that parental engagement at year 3 in 2-parent homes did not significantly predict academic achievement at year 15 ($R^2 = .09$, $F(8,1476) = 20.53$, $p = .11$). The overall model and effect sizes are presented in Table 3. Additionally, the covariates including level of income $\beta = .26$, $p = < .001$, gender $\beta = .56$, $p = < .001$, and father education $\beta = .75$, $p = < .001$ were significant predictors of academic achievement, while mother education and ethnicity were not significant.

Table 1

Descriptives of study Variables

Variables	1 Parent				2 Parent					
	N	Overall (%)	M	SD	Range	N	Overall (%)	M	SD	Range
Mother Education (Baseline)	2005	100.0	.31	.444	.00-1.00	2159	100.0	.45	.50	.00-1.00
HS or Less	1465	73.1	---	---	---	1196	55.4	---	---	---
Higher Edu.	540	26.9	---	---	---	963	44.6	---	---	---
Father Education (Baseline)	1892	100.0	.38	.414	.00-1.00	2147	100.0	.42	.49	.00-1.00
HS or Less	1478	78.1	---	---	---	1245	58.0	---	---	---
Higher Edu.	414	21.9	---	---	---	902	42.0	---	---	---
Poverty (Yr 3)	1487	100.0	2.41	1.26	1-5	1583	100.0	3.4	1.38	1-5
Gender (Baseline)	1487	1.48	---	---	1-2	1583	100.0	1.49	.50	1-2
Boy	766	38.1	---	---	---	812	51.3	---	---	---
Girl	721	35.9	---	---	---	771	48.7	---	---	---
Ethnicity (Baseline)										
Black	894	62.7	.63	.48	.00-1.00	540	36.0	.36	.48	.00-1.00
Hispanic	276	19.4	.19	.40	.00-1.00	443	29.6	.30	.46	.00-1.00
White	157	11.0	.11	.31	.00-1.00	378	25.2	.25	.43	.00-1.00
Parental Engagement (Yr 3)	1472	100.0	5.15	.94	.00-7.00	1580	100.0	4.98	.761	2.04-7.00
Academic Achievement(Yr 15)	1487	100.0	10.38	2.96	1.00-16.00	1583	100.0	11.49	3.01	1.00-16.00

Table 2

Spearmen's Correlations of study Variables (2 parent homes (lower left) versus 1 Parent Homes (upper right))

Variables Names	1	2	3	4	5	6	7	8	9
1 Parental Engagement (Yr 3)	---	.065*	.097*	.016*	-.015	.054*	.074**	-.025	-.013
2 Academic Achievement (Yr 15)	.037	---	.100*	.031	.084**	.089**	.034	-.050	.046
3 Mother Education (Baseline)	.020	.207**	---	-.076	-.022	.277**	.075	.078	.029
4 Father Education (Baseline)	.612	-.423	.554**	---	-.054	.080	.019	.011	-.071
5 Gender (Baseline)	.031	.098**	-.022	-.378	---	-.015	.018	.022	-.023
6 Poverty (Yr 3)	.028	.244**	-.101	.514	-.009	---	.178**	-.120**	-.011
7 White (Baseline)	.079**	.170**	.066	.315**	.006	.368**	---	-.457**	-.172**
8 Black (Baseline)	.044	-.151**	.006	-.471	.006	-.165**	-.436**	---	-.636**
9 Hispanic (Baseline)	-.122**	-.021	-.003	-.645	-.003	-.233**	-.376**	-.487**	---

* $p < .05$. ** $p < .01$. 1-parent home (N = 1487), 2-parent home (N = 1583)

Table 3

Overall Regression showing the effects of parental engagement at age 3 on academic achievement at age 15

Variables	β	SE	t	p
1 Parent				
Intercept	7.08	.66	10.72	<.001
Parental Engagement (Yr 3)	.19	.09	2.23	.03
Mother Education (Baseline)	.28	.20	1.38	.17
Father Education (Baseline)	.37	.21	1.71	.09
Income (Yr 3)	.19	.07	2.73	.01
Gender (Baseline)	.50	.16	3.08	<.001
White (Baseline)	.35	.39	.89	.38
Black (Baseline)	.29	.33	.88	.38
Hispanic (Baseline)	.70	.36	1.94	.05
2 Parent				
Intercept	7.39	.67	11.12	<.001
Parental Engagement (Yr 3)	.16	.10	1.58	.11
Mother Education (Baseline)	.36	.19	1.87	.06
Father Education (Baseline)	.75	.19	3.93	<.001
Income (Yr 3)	.26	.07	3.87	<.001
Gender (Baseline)	.57	.15	3.80	<.001
White (Baseline)	.26	.29	.89	.37
Black (Baseline)	-.32	.28	-1.15	.25
Hispanic (Baseline)	.24	.29	.84	.40

Note: bolded show significant effects. * $p < .05$. ** $p < .001$. 1-parent home (N = 1487), 2-parent home (N = 1583)

Chapter IV: Discussion

This study used longitudinal data to examine parental engagement in early childhood (age 3) and its effects on academic achievement in adolescence (age 15). It was hypothesized that the level of parental engagement experienced in early childhood would positively affect the level of academic achievement. Secondly, this association will be different for adolescents in 1- and 2-parent homes. Specifically, it was expected that parental engagement in 2-parent homes at age 3 would be associated with higher academic achievement in adolescence due to the availability of the parents, potential higher income and greater stability, compared to limited availability of resources, parents' time and subsequent negative effects associated with growing up in single parent homes (Amato, Patterson, & Beattie, 2015; Hilton, Desrochers, & Devall, 2001; Sun & Li, 2011). Results partially rejected hypothesis 1, and partially supported hypothesis 2, in that, while the levels of parental engagement at age 3 significantly and positively predicted academic achievement in adolescence, parental engagement in 1-parent homes (not 2-parent homes) at age 3 significantly and positively predicted academic achievement a decade later. Additionally, the significant effects of parental engagement was found among children from Hispanic 1-parent homes.

There may be plausible explanations for these findings. First, the small yet significant differences found between parental engagement and academic achievement in 1-parent and 2-parent homes sounds counterintuitive, but may suggest that while parental engagement at age 3 in 1-parent homes significantly predicted academic achievement at age 15, for children in 2-parent homes parental engagement was not a sole/necessary/strong predictor associated with academic achievement by adolescence. Nonetheless, the findings regarding the significance of childhood parental engagement on future academic outcomes in adolescence is consistent with

previous research completed by Feldman and colleagues (2009) that also showed positive longitudinal effects of parental engagement on adolescence. Additionally, the protective nature of engagement for children from Hispanic homes supports evidence that shows that ethnic identity in addition to family structure does play a role in child outcomes (Heard, 2007). In this study, childhood parental engagement did not predict academic achievement in the second minority group (African Americans). This may suggest variability in effects of childhood parental engagement across minority groups, beyond comparisons with a majority group (whites).

Secondly, for academic achievement in this study, mean scores were higher for children in 2-parent homes compared to 1-parent homes as expected (Amato, Patterson & Beattie, 2015; Sun & Li, 2011; Hilton, Desrochers & Devall, 2001; Sun & Li, 2011). However, parental engagement in 2-parent homes did not predict academic achievement in this sample. This result may be explained by other factors in 2-parent homes that were not accounted for in this study, such as parental expectations, increased availability of the parents to the children (thereby less value for engagement), less family stress and a stable family structure which allows the child to flourish academically (Amato, Patterson, & Beattie, 2015; Sun & Li, 2011; Hilton, Desrochers, & Devall, 2001; Sun & Li, 2011).

Limitations and Future Directions

Some limitations may be associated with the findings of this study. First, all the variables used for this study were taken from a large longitudinal dataset that used self-report as a way of collecting information efficiently. Creating variables from self-report measures, such as parental engagement and academic achievement leaves room for bias or unreliable responses. For example, the academic achievement was constructed from grades that were reported by the

adolescents themselves. Future studies should consider multi-informant data where possible, or standardized tests, in order to ensure stronger validity and reliability of constructs. For instance, academic achievement could be measured using the results from an IQ test such as the Wechsler Intelligence Scale for Children-Fifth Edition (WISC-V) which provides highly reliable and valid measures of current intelligence (Wechsler, 2014).

Given the self-report data that were used to create the measures in this study, the Cronbach alpha of the parental engagement and academic achievement scales were below the typical cutoff of 0.8, thereby indicating moderate reliability. Future studies should consider more robust measures that produce higher reliability and validity. Regarding the parental engagement scale, the mean score of mother and father engagement was used. Future studies should look at mother and father engagement simultaneously to understand the unique influence that mothers and fathers may separately have on their children's academic achievement.

Another limitation identified was that majority of children in single parent homes were from one ethnic group (African American), future studies should look at a more evenly distributed population of families with stable and unstable family structures and from all ethnic groups for a better understanding of patterns across ethnic groups. Furthermore, more studies should examine similarities and differences in engagement and achievement across minority groups in addition to the typical comparisons between minority groups clustered as one group versus a majority group.

Lastly, future studies should examine other predictors, moderators or mediators associated with parental engagement and adolescent academic achievement across ethnic groups.

Implications of Study and Conclusion

The current study is one of the very few studies to examine the direct effects of parental engagement (non-school activities) in early childhood on academic achievement over a decade later, particularly with this national dataset. Three waves of longitudinal data were used from the Fragile Families Child and Wellbeing Study. Findings from this study indicate that parental engagement in 1-parent homes was a significant predictor of academic achievement among adolescents especially for children with Hispanic ethnic origins. Parental engagement in 2-parent homes was not a significant predictor of academic achievement regardless of ethnicity. This finding is similar to other parent engagement studies that show positive associations with adolescent outcomes including academic achievement (Feldman, 2009; Schechter, 2017), but contrary to findings related to the protective nature of two-parent homes. Such findings show the importance of not generalizing research findings, as well as the importance of careful examinations of the impact of factors such as culture and ethnicity in understanding parent-child interactions cross-sectionally and longitudinally.

These results have implications. With this study providing information on how parental engagement in early childhood predicts academic achievement in single parent families, parent education about the important role of engagement in early childhood continues to be important, even more so for single parent families regarding its protective nature over time. Additionally, these findings could be of importance in therapy and school counseling. For example, existing studies show that lower levels of parental engagement are associated with higher levels of child problem behaviors and difficulty in school performance (Leach & Tan, 1996; McNeal, 1999; Veas, et al., 2018; Hill, et al., 2004). Based on this study's findings, school counselors and mental health professionals could continue to encourage and empower parents especially those from 1-parent homes and of Hispanic origins. Lastly, the long-term impact of parental

engagement on academic achievement (approximately 12 years) could also serve as additional psychoeducation that counselors and professionals use to explain to parents the benefits of parental engagement a decade later.

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