

**The Effect of Family Poverty on Children's Academic Achievement: Parental
Discussion and Neighborhood Poverty as Mediating Variables**

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ABSTARCT OF THE THESIS

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and neighborhood poverty as mediating variables

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The current study examined whether or not parent-adolescent discussions and neighborhood poverty mediated the relationship between family poverty and academic achievement in reading and math. The study used data for eighth grade participants in the Early Childhood Longitudinal Study to test these relationships. Parents of participants reported on the extent of parent-student discussion in the home. Direct cognitive assessments were given to the eighth graders during their spring of the 2006-07 school years to assess their academic achievement in reading and math. Finally, zipcodes for the participants' homes were matched with data from the 2000 census to determine the percentage of households in each zipcode below the poverty line. Multiple regressions were used to test for possible mediation effects. The results indicated neighborhood poverty partially mediated the relationship between family poverty and academic achievement in both reading and math. There was no significant correlation between parental discussion and family poverty, and consequently parental discussion could not be a mediator of the association of family poverty with academic achievement. However, there was a significant interaction between family poverty status and parental discussion

in the prediction of academic achievement indicating that parental discussion is more valuable in affluent families than in poverty stricken families. Further research is needed to examine why parental discussion is not as valuable in low income families. The results are discussed in terms of their implications for understanding the relation of academic achievement to family poverty.

The effect of family poverty on children's academic achievement: Parental discussion and neighborhood poverty as mediating variables

In American society education is important and highly valued. Through education children learn specific skills, such as literacy and quantitative abilities, that aid in their development into functional adults. Furthermore, adequately acquiring these skills during childhood and adolescence can lead to a successful future as adults. Strong reading and math skills are essential for occupational success in contemporary America. According to Meece, Eccles, and Wigfield (1990), due to society's rapid technological advances employers are seeking applicants with strong mathematical skills.

Sadly, these skills are not fully developed in all students. For example, differences have been found between males and females, Blacks and Whites, and children from poor families and children from affluent families. The focus of this study regards this last contrast: achievement differences between children from poor and affluent families. Studies have searched for possible reasons as to why children living in poverty suffer academically, such as neighborhood dynamics, teachers, and school characteristics (McLoyd, 1998). To date, there is not a full explanation for the association between family income and academic achievement among children.

The current study aimed to identify some reasons for educational disparities between children from poor families and those from affluent families. The goal was to contribute to the understanding of problems in urban education, provide possible explanations for the differences in academic achievement throughout the country, and provide beneficial information for families living in poverty. To accomplish these aims, this study compared test scores in math and reading of children living in poverty with

children from affluent families. These families participated in the Early Childhood Longitudinal Study. My hypothesis was that parental discussion and neighborhood poverty would mediate the influence of family poverty on academic achievement.

Literature Review

One thread of academic development encompasses reading and verbal ability. Cunningham and Stanovich (2001) found that insufficient reading ability in childhood can have detrimental effects on future reading and cognitive development. Verbal ability is a skill partly learned in informal contexts through listening and emulation. According to Cunningham and Stanovich (2001), most theorists agree that indirect language exposure accounts for much of children's vocabulary; learning in school contexts accounts for only a small portion of acquisition of vocabulary. Researchers also believed that reading exposure is an effective way of expanding a child's vocabulary. Reading volume – that is, the amount of reading to which a child is exposed – accounts for acceleration in various areas of literacy such as vocabulary, spelling, and ease of communicating (Cunningham & Stanovich, 2001).

Math knowledge is complex in that it requires students to learn logic, such as assigning meaning to specific symbols and understanding the function associated with them. Unlike reading and verbal skills, which children learn from their social environment, math is typically learned in more structured settings such as schools.

Past research has shown that children living in poverty perform less well in regard to academic achievement. Based on the analysis of the U.S. Department of Education's Early Childhood Longitudinal Study, before entering kindergarten, the average cognitive

score of children in the highest SES group was 60% above the scores of the lowest SES group (Lee & Burkam, 2002). Also, research has indicated that average math achievement was 21% lower for Blacks and 19% lower for Hispanics than for Whites (Lee & Burkam, 2002). Finally, research has found that race and ethnicity are associated with SES: 34% of black children and 29% of Hispanic children are in the lowest quintile of SES compared with only 9% of white children (Lee & Burkam, 2002).

The Effect of Family Poverty on Child Outcomes

Brooks-Gunn and Duncan (1997) studied the relationship between poverty and child outcomes. Prolonged exposure to poverty is detrimental: the most damaging effects seem to occur for children who live in these severe environments for many years (Brooks-Gunn & Duncan, 1997). They also found that children living below the poverty threshold performed less well than children living in moderately deprived environments. Additionally, poorer children were more likely to experience learning disabilities and developmental delays than nonpoor children.

Duncan, Yeung, Brooks-Gunn, and Smith (1998) explored the extent to which childhood poverty affects the life chances of children. They compared children's completed schooling and nonmarital childbearing to parental income during middle childhood, adolescence, and early childhood. The results showed that family income was associated more with completing schooling than with nonmarital fertility: the association of income and academic attainment appeared to be the strongest among children in low income families. Poverty has been shown to negatively impact preschool performance, test scores in higher grades, which can ultimately lead to grade failure, lack of interest in

school, and high drop out rates (Brooks-Gunn, Guo, & Furstenberg 1993; Guo, Brooks-Gunn & Harris, as cited in Duncan et al., 1998). Conversely, high parental income during a child's adolescence was found to increase entry into college.

Furthermore, Bradley, Corwyn, McAdoo, and Coll (2001), studied home environments of children in the United States according to age, ethnicity, and poverty status. They suggest that knowledge of a child's day-to-day exposures contributes to our understanding of the relationship between environment and development. For example, children who have access to a large number of books in their home, and are consistently being read to, develop reading and vocabulary at a faster rate than children without these experiences (Bradley et al, 2001). Unfortunately, children from poor economic backgrounds are not afforded the same luxuries and opportunities as those from wealthy backgrounds. This is one reason why differences in vocabulary and reading ability are associated with family income. Poor families are faced with the direct as well as the indirect consequences of their economic situation, including lack of resources and the stress associated with their predicament (Luster & McAdoo, 1996; McLoyd, 1990 as cited in Bradley et al, 2001). Bradley, Corwyn, McAdoo, and Coll (2001) found that being poor can affect almost every aspect of a child's home life. Such qualities as parental responsiveness, parental teaching, and the quality of the physical home environment were all associated with family income (Bradley et al. 2001).

Hoff (2003) studied whether or not the association between SES and vocabulary development were related to differences in learning language experiences. Hoff believed that higher SES mothers positively influence language development more so than lower SES mothers. As a result, Hoff hypothesized that maternal speech mediates the

relationship between SES and child vocabulary. The results of this study showed that the observed differences in vocabulary growth among various groups of children from different SES families were influenced by differences in the mothers' speech. Also, differences in child speech were directly related to SES-related differences in language use. Children from affluent families had a larger vocabulary than children of the same age from less advantaged homes (Hoff, 2003).

The Effect of Neighborhood Poverty on Child Outcomes

Leventhal and Brooks-Gunn (2000) reviewed the literature on the effects of neighborhood residence on child and adolescent well-being. They discussed neighborhood characteristics and their influence on child outcomes. Leventhal and Brooks-Gunn found that neighborhood effects, such as neighborhood poverty, negatively influences children's achievement and behavior. Not surprisingly, neighborhoods with many high SES residents were shown to have a positive effect on school readiness and achievement outcomes (Leventhal and Brooks-Gunn, 2000).

Kohen, Dahinten, Leventhal, and McIntosh (2008), studied the effects of neighborhood disadvantages on young children. This study examined the mediating effects of neighborhood SES on young children's verbal and behavior outcomes by looking at potential mediators such as neighborhood cohesion, family processes, psychological factors, and parenting behaviors. Neighborhood cohesion would be considered the closeness of a neighborhood (e.g. coming together in times of crisis). Living in a neighborhood with low cohesion was associated with less supportive family environments in which to raise children (Kohen et al., 2008). Poor family functioning

resulted in less literacy stimulation in the home. Also, parenting behaviors that were described as being consistent was associated with higher verbal ability skills. Residing in a low income and disorganized neighborhood was associated with negative family functioning (Kohen et al., 2008).

The Effect of Parental Involvement on Child Outcomes

Hill and Taylor (2004) outlined some of the mechanisms through which parental involvement affects academic achievement. Research has shown that parental school involvement has a positive influence on school-related outcomes. Parental school involvement equips parents to assist their children in school related activities. Also, parents become aware of schools' expectations for behavior and homework. Parental school involvement is also beneficial because families and schools establish appropriate behavior that is reiterated to children at home and at school (McNeal, 1999 as cited in Hill & Taylor, 2004). Parents from higher socioeconomic backgrounds are more likely to be involved in schooling than parents of lower socioeconomic status. Conversely, parents from low income backgrounds have to deal with nonflexible work schedules and stress due to residing in disadvantaged neighborhoods, which inhibits their involvement (Hill & Taylor, 2004).

Beyer (1995) studied the effect of maternal employment and parenting styles on academic achievement. The paper challenges previous research that suggests that maternal employment has a negative impact on children's academic achievement and other child outcomes. Beyer argued that maternal employment affects parenting styles which then affects academic achievement. The concern behind maternal employment is

that mothers will not have enough time to raise their children well. On the contrary, Beyer (1995) found that maternal employment had a positive impact on academic achievement for working class and disadvantaged children, and that this effect was a consequence of the effect of work on parenting style. Working parents were more likely to interact with their children, promote learning, and be warm and encouraging (Beyer, 1995) than non-employed parents, and these differences were associated with academic achievement.

Jeynes (2007) examined the relationship between parental involvement and urban secondary school student academic achievement. Jeynes argued that in urban areas parental involvement is important due to the pressing issues faced by many children (Bauch & Goldring, 1995; Hampton, Mumford & Bond, 1998 as cited in Jeynes, 2007). The results showed that overall parental involvement has a positive impact on children's academic achievement (Jeynes, 2007). It appears that children whose parents regularly communicate with their children, check homework, and have high expectations for their children positively influence student educational outcomes.

Walker, Wilkins, Dallaire, Sandler, and Hoover-Dempsey (2005), revised the model proposed by Hoover-Dempsey and Sandler (1997) that explained why parents become involved in their children's education and how their involvement makes a difference in student outcomes. The model identified four psychological contributors to parents' decisions to become involved, 1) parents' beliefs about what they should do in the context of their child's education; 2) parental self-efficacy for helping the child succeed in school; 3) parents' perceptions of general invitations for involvement from the school; and 4) perceptions of general invitations for discussion from the child. The model

suggested that parents' beliefs about their responsibilities for children's schooling influenced their involvement behavior. Furthermore, in regard to invitations from others to become involved, child invitations are influential because they express the child's need to accept parental help. Additionally, parents' skills and knowledge can affect their involvement. Lareau (1989) argued that parents with little education, in comparison to those with professional degrees, feel less able to assist their children with homework, are less able to communicate with teachers, and feel out of place at school (as cited in Walker et al., 2005). Overall, the model suggests that parents who believe their involvement would be beneficial to their child's academic achievement are more likely to interact with schools and teachers than parents who doubt their discussion will make any difference.

Aims of the Study:

The broad, long term objective of this research was to identify the psychological and social factors that explain why children living in poverty develop academically at a slower rate than children residing in affluent families. The goal was to find specific underlying factors that may explain why children living in poverty are lacking academically in math and reading, in hopes of finding a possible solution to improve academic achievement amongst these students.

The purpose of the study was to determine why children living in poverty perform less well than children from affluent families. As previously mentioned, prior research has found that neighborhood characteristics, family structure (such as single-parent households) and number of siblings are factors that help explain differences in academic achievement between these two groups (Mayer, 1997). The current study

proposed that there are other significant aspects that may explain these differences in academic performance. One factor that was explored in this study is that of parental discussion, meaning family discussions about home life and school. I hypothesized that a) family discussions about school work facilitate academic achievement, and b) there are fewer family discussions, based around the child's home life and academic issues, in poverty stricken families than in affluent families.

The second factor hypothesized to mediate the association of family poverty with academic achievement is neighborhood poverty. Impoverished neighborhoods are not conducive environments for the promotion of academic achievement.

Finally, I examined interactions between family poverty status and parental discussion to assess the possibility that the association of parental discussion with academic development is moderated by family poverty status. In particular, I imagined that parental discussion might be particularly important in facilitating academic development among low income families.

The independent variable in the current research was family poverty, meaning individuals who live in households with incomes below the federal poverty threshold. This is a categorical, dichotomous variable, depending upon whether or not the household income is above or below the poverty line. The poverty threshold varies by family size and is determined by the federal government; the poverty variable is provided in the data set. The dependent variables are academic achievement scores in reading and math. These are continuous variables ranging from low academic achievement to high academic achievement (further explanation is provided later). The mediating variables are parental discussion and neighborhood poverty. Overall, it was predicted that parental

discussion and neighborhood poverty are two factors that will mediate the association of poverty with academic achievement.

Method:

This study used the eighth grade participants in the Early Childhood Longitudinal Study, also known as ECLS-K (NCES 2008-038). The study included interviews with parents, data collected from student questionnaires, and direct child assessments. The sample for the ECLS-K was representative of a cohort of children who were followed from kindergarten into middle school. The eighth grade data were collected during the 2006-07 school year. There were 6,370 participants with data for all the proposed variables. There were 3,148 females and 3,222 males. In regard to ethnicity, there were 393 Black students, 1,044 Hispanic students, 88 Pacific Islander students, and 434 Asian students; the remainder were White. The ages of the participants, which were categorized by their age in months, ranged from 1) less than 126 months to 5) 144 months or more. Finally, there were 5,765 students from households above the poverty threshold and 605 students from households below the poverty threshold.

Design

The proposed research can be characterized as a correlational study using archival data. The current study attempted to show the relationship between family poverty and academic achievement scores in reading and math. The mediating variables, parental discussion and neighborhood poverty, were also measured for each participant in order to test whether they play a significant role in academic achievement.

Independent Measure

The independent variable for this study was family poverty, and compared children from households with income below the poverty level (coded as 1) with children living in families with income sufficiently high as to be above the poverty level (coded as 0). In the ECLS, the poverty criteria were based on household size and income, with poverty thresholds drawn from federal guidelines for 2006. Generally, households making less than \$25,000 a year have incomes below the federal poverty level.

Dependent Measures

The dependent variables were academic achievement in reading and math. The ECLS-K eighth-grade direct cognitive assessments determined children's academic achievement in the spring of eighth grade. A two-stage cognitive assessment was used to measure the students' reading and mathematical skills. The first stage assessment provided an approximate assessment of the student's reading and math level. The second stage assessment was then given to the students based on their scores from the first assessment (Tourangeau, Nord, Le, and Sorongon 2009). Proficiency levels for each student were used to determine an overall reading scale score and math scale score. The eighth-grade reading assessment primarily focused on reading comprehension. The mathematics assessment addressed various content strands such as number sense, measurement, probability, data analysis, etc. (Tourangeau, Nord, Le, and Sorongon, 2009).

Mediating Variables

The first mediating variable was parental discussion, defined as the frequency of family discussion within the home. For the purpose of this study the mediating variable was one factor that might explain why children living in poverty suffer academically. For reasons noted earlier, I believed that adolescents who frequently discussed school with their parents would have higher levels of academic achievement than adolescents who rarely discussed school with their parents.

The items for the mediating variable of parental discussion were drawn from the parent interview in the ECLS-K. Parental discussion concerning school activities, family structure, child's school, and parental educational expectations for the child were some of the topics covered in the eighth-grade parent interview (Tourangeau, Nord, Le, and Sorongon 2009).

The items from the parent interview that were used to represent the first mediating variable are 1) parents talk to child about their day at school 2) parent often talks about grades 3) parents talk about the future 4) parent talks about school activities 5) parent talks about troubles and 6) make decisions together. The items were measured on a four point scale ranging from never to everyday. An average was taken of all six variables to create an overall measure of parent discussion (Cronbach alpha for this scale was .64). These variables were chosen specifically to measure parental discussion because the subjects of these parent and child discussions pertained to school and/or life issues. Moreover, prior research has shown that parental discussion within the home is beneficial to a child's academic achievement (Sui-Chu & Willms, 1996).

The second mediating variable was neighborhood poverty, represented by the percentage of poverty within a neighborhood. The current study proposed that the

condition or make up of a neighborhood may influence academic achievement. Following previous research suggesting that high poverty neighborhoods are associated with slow academic development (Duncan, Yeung, Brooks-Gunn, & Smith, 1998), the role of neighborhood poverty was assessed as a mediator. In order to assess the presence of neighborhood poverty, in this study, neighborhoods were represented by zip code. The ECLS restricted data set, available to Daniel Hart, contains the zipcodes for participants' homes. These zipcodes were matched with the 2000 U.S. census data. The percentage of households in each zipcode below the poverty line was the second mediating variable.

Statistical Analyses

The data was analyzed using multiple regressions. When attempting to identify mediating relations, one must first establish a relationship between the predictor variable (in this study, family poverty) and the outcome variable (academic achievement). The proposed mediating variables (in this study, parental discussion and neighborhood poverty) must have relationships with both the predictor variable and the outcome variable (Baron & Kenny, 1986). The first step was to establish a relationship between the predictor variable, family poverty, and the outcome variable, academic achievement, by regressing academic achievement on family poverty. The second step was to establish that family poverty, the predictor variable, was related to parental discussion, the proposed mediating variable. The third step was to show the relationship between parental discussion and academic achievement. The final step was to show that the strength of the relation between family poverty and academic achievement was significantly reduced when parental discussion was added to the regression. Parallel steps

were followed to assess neighborhood poverty as a mediating variable. Parental discussion and neighborhood poverty would be clearly seen as mediators if the magnitude of the contribution of family poverty to the prediction of a cognitive skill was diminished, signified by decreased β weights in the regression analysis. Sobel tests were used to examine the significance of these decrements. The hypotheses would be confirmed in these analyses if parental discussion and neighborhood poverty mediate the relation between family poverty and academic achievement. In all analyses, adjustments were made for the potential contributions of age, gender, ethnicity, child household size, and maternal and paternal educational attainment. As previously mentioned, interactions of family poverty with parental discussion and neighborhood poverty in the prediction of academic achievement were also tested.

The ECLS data set has subject weights that allow for appropriate weighting of individual scores to ensure that results can be generalized to the population. These weights were used in the analyses to follow.

Results

Correlations of Variables

The relationships among the variables are reported in Table 1. In general, the pattern of associations is consonant with expectations derived from the previous research and reviewed in earlier sections of this paper. Family poverty was negatively associated with reading and math scores. Students from low income families had significantly lower reading and math scores than students from non-poverty families. Neighborhood poverty was significantly associated with family poverty and inversely associated with

achievement scores in reading and math. Surprisingly, and contrary to expectations, parental discussion was not significantly associated with family poverty. For reasons discussed earlier in this thesis, the lack of association between family poverty and parental discussion means that parental discussion cannot be a mediator of the association of family poverty with academic achievement. On the other hand, parental discussion was associated with increased achievement scores in both reading and math.

Regression Analyses Results

The regression analysis of reading score on parental discussion and control variables is reported in Table 2. The regression analysis of math score on parental discussion and control variables is reported in Table 3. The regression analysis of reading score on neighborhood poverty and control variables is reported in Table 4. The regression analysis of math score on neighborhood poverty and control variables is reported in Table 5.

In regard to the control variables, many of the results replicated previous findings of their relationship to poverty and academic achievement. There was a significant relationship between ethnicity and academic achievement. Blacks and Hispanics scored significantly lower than Whites in reading and math. Asians and Pacific Islanders had higher academic achievement scores in reading and math than did Whites. Maternal and paternal educational attainment were significantly associated with achievement scores in reading and math. Finally, the number of siblings in the household was associated with lower reading scores.

Hypothesis testing results

As previously mentioned, there was no significant correlation between parental discussion and family poverty. Therefore, the hypothesis that parental discussion would mediate the relationship between family poverty and academic achievement was not supported. Because there was not a significant relationship between family poverty and parental discussion, there was no support for the hypothesis that there are fewer family discussions in poverty stricken families than in affluent families. There was a significant main effect of neighborhood poverty and achievement scores for both reading and math scores. High percentages of neighborhood poverty were associated with lower reading and math scores. When the achievement scores were regressed simultaneously on both neighborhood poverty and family poverty, there was a slight decrease in the effect of family poverty on academic achievement. Although the effect of family poverty was not completely diminished, the results of the Sobel tests indicated that this decrease was significant. Therefore, there was some support for the hypothesis that neighborhood poverty would mediate the relationship between family poverty and achievement scores in math and reading.

Interaction Effect

Interactions were tested to determine whether or not parental discussion and neighborhood poverty could help explain the relationship between family poverty and academic achievement. There was a significant interaction effect between family poverty and parental discussion associated with reading scores and math scores. This means that the effect of parental discussion differs depending on whether a child's family lives below the poverty threshold or above the threshold. Figures were constructed to show the

relationship between achievement scores and frequency of parental discussion, which are represented by averages, based on a family's poverty status. The results indicated that for children from non-poverty families, parental discussion was more tightly associated with reading scores than was found among children from poverty stricken families. Figure 1 illustrates this pattern. Parental discussion also was correlated more highly with math scores for children from non-poverty households than the parallel correlation among low income families—indeed, Figure 2 suggests that parental discussion is negatively associated with math achievement in families with incomes below the poverty line.

Discussion

Parental discussion and neighborhood poverty were predicted to mediate the relationship between family poverty and achievement scores in reading and math. There were significant associations between neighborhood poverty and family poverty as well as neighborhood poverty and academic achievement. As a result, evidence indicated that neighborhood poverty partially mediated the relationship between family poverty and achievement scores in both reading and math. Conversely, there was no significant relationship between family poverty and parental discussion; therefore parental discussion could not mediate the relationship between family poverty and academic achievement. Also, the hypothesis that there are fewer family discussions and interactions, based around the child's home life and academic issues, in poverty stricken families than in affluent families was not supported.

As previously mentioned, the broad, long term objective of this research was to identify the psychological and social factors that explain why children living in poverty

develop academically at a slower rate than children in affluent families. The results of this study replicated past findings regarding the possible factors that influence academic achievement. For example, both mother and father educational attainment was associated with higher reading and math scores. Also, the number of siblings within the household was associated with lower reading scores. It is also important to note that higher percentages of neighborhood poverty are associated with lower scores in reading as well as in math. These findings provide parents with useful information in regard to how their decisions regarding their families as well as their personal academic achievement can affect their children.

The current study found some support for the hypothesis that neighborhood poverty would diminish the effect of family poverty on academic achievement in reading and math. In other words, it appears to be the case that eighth-graders from poor families living in affluent neighborhoods experience better academic outcomes than they would if the same eighth-graders lived in poor neighborhoods. As mentioned in the introduction, neighborhood poverty negatively affects many aspects of a child's well-being. Children who live in poor neighborhoods are exposed to crime, their neighborhoods are resource poor, and they attend inadequate schools (Evans, 2004). It is not apparent which factors associated with neighborhood poverty are most detrimental to child outcomes, but in regard to education it seems that school quality would play a major role. For instance, in the Moving to Opportunity Study families were given the option to move from their low income neighborhood to a low poverty neighborhood. The results of the study indicated that there was not a significant difference in educational performance for children who moved from their poor neighborhood (U.S. Department of Housing and Urban

Development & Office of Policy Development and Research, 2003). Although the children now resided in a low poverty neighborhood they still attended the school that was located in their old neighborhood, which may account for why there was not a significant change in their academic performance. This finding suggests that perhaps the quality of the school where these children are attending is more influential on academic achievement than the quality of the neighborhood where they reside. Moreover, parents should take the necessary steps to counteract this problem by possibly moving to a neighborhood with better schools. This information is also beneficial to policy makers that could initiate neighborhood remodeling efforts and strategies to improve schools in low income areas.

Furthermore, the results of this study provide some evidence that parental discussion is not as beneficial for children from poor families as affluent families. One possible explanation for this is that poor families are overwhelmed with so many hardships that depress academic achievement that parent-child discussion can affect school work little. According to Engle and Black (2008), children living in poor families are susceptible to many adverse problems, such as social difficulties, health problems and poor well being, which can negatively impact their achievement in school and overwhelm potential benefits from family discussions. As a result, even if parental discussions are prevalent in low income households, there are still so many other prevailing issues, that it may not be enough to foster a significant change in school achievement.

An interesting finding was that there was a significant interaction between poverty status and parental discussion in the prediction of reading and math scores. Parental discussion was more closely associated with higher reading and math scores for

children from non-poverty households. These findings suggest that in non-poverty households, when parents are talking to their children about school and life issues, these conversations are having a positive influence on their achievement in school. The effect of parental discussion appears to be more valuable for children who do not live in poverty. As previously stated, a possible reason for this could also be that there are so many other negative problems present in poverty stricken families, that even if a parent does often talk to their child it really does not have a large effect on their achievement in school. Also, the type of talk or why parents are talking to their children about certain life or school issues may be important factors. It is plausible that parents are talking to their children about grades but are yelling at them for not doing well in school. According to Hart and Risley (2003), children from poor family hear larger amounts of discouragements rather than encouragements.

Additionally, differences in parenting behaviors based on income may also be a possible explanation for this finding. According to Engle and Black (2008), harsh parenting styles are often seen in low income families which are centered on control instead of shared interactions that encourage positive socioemotional development. Again, underlying factors associated with poverty may be the reason why there are obvious distinctions between parenting methods seen in poverty and non-poverty households. In low income families, parents may be suffering from stress, depression, and financial worries which then adversely affect how they interact with their children (Aber, Bennett, Conly & Li, 1997). As a result, these negative interactions may be having detrimental effects on the child's emotional development as well as inadvertently affecting their performance in school.

Although parental discussion could not diminish the effect of family poverty on academic achievement, it does play a major role in school achievement, independently. The results showed significant main effects of the relationship between parental discussion and academic achievement in both reading and math. Although this relationship seems more pertinent in affluent families there was a slight increase in reading scores for children living in poverty. This finding is important such that it provides parents with useful information about the role they play in their child's academic success. Something as simple as parents engaging in meaningful conversations with their children can make a difference in their achievement in school. The major aim of this current study was to point families in the right direction in hopes of improving children's achievement in school especially those from low income families.

The results of this study indicated that there was not a significant relationship between family poverty and parental discussion. It is important to note that this may be due to the lack of reliability of the discussion variable. As mentioned earlier, there were six items taken from the parent interview, regarding the extent of parent-student discussion in the home, that were averaged together to create an overall measure of parental discussion. The subjects of these variables included parents talking with their children about school issues as well as general life issues. Some of the questions were very broad and may not have been as effective as the more specific questions, for example the questions that specifically addressed school issues. Perhaps using more explicit items that referred to life issues might have yielded a more reliable and valid measure of parental discussion.

The current study had several limitations. First, in the analyses of the data the multiple regressions did not utilize multi-level modeling, and consequently the estimates of the effects, and the standard errors of these effects, may not be accurate. The current study only measured the outcome variables at a single level, which does not account for the variance between neighborhood groups. Second, family poverty was measured as a dichotomous variable being either below the poverty threshold or above the poverty threshold. As a result, this did not take into account families that were right above the threshold that may have been more closely related to families below the poverty line than to families way above the line. Third, the information for the parental discussion variable was elicited through self-reports thus there is a possibility that the survey questions were not answered truthfully. Fourth, the data was collected for the ECLS which is a longitudinal study; therefore there was some attrition in the sample, and those who remained in the study may not be representative of the general population. Fifth, the parental discussion variable was represented by specific discussion questions, thus excluding other beneficial conversations that may take place between parents and children. Finally, the current study could not control for all possible confounding variables.

Despite these limitations, the current study found useful information that contributes to the literature. Many of the previous studies on the influence of parental discussion on school outcomes focused on school related interactions that take place in the home. The current study included discussions about school issues as well as life issues in the operationalizing of parental discussion. The findings add to the literature by

suggesting that discussion between parents and adolescents about school and life is beneficial to the academic achievement of teenagers.

There are many opportunities for further research on this topic based on the findings from this study. It is apparent that when children are talking to their parents, this interaction may be influential to their academic performance. One finding in the study was that parental discussion matters more for children from affluent families than in poverty stricken families. One explanation for this may be that parents from low income families are talking to their children but doing so harshly. A future study could examine the types of interactions seen in families from different socioeconomic backgrounds and the emotional impact they have on children. More research is needed to identify which factors associated with neighborhood poverty seem to have the most adverse impact on child outcomes. A lot of research has focused on the detrimental effects of poverty, more work should be done on educating people on how to cope with and counteract the many adversities associated with living in poverty. Providing families with this information may help them become better parents which ultimately will positively affect their children in the long run.

Table 1
Correlations among variables

*p < .05

<i>Variable</i>	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>	<i>(7)</i>	<i>(8)</i>	<i>(9)</i>	<i>(10)</i>	<i>M</i>	<i>SD</i>
Poverty (1)	1.00										0.09	0.29
Parental Discussion (2)	0.00	1.00									1.66	0.38
Reading Score (3)	-.31*	0.08*	1.00								174.78	25.88
Math Score (4)	-.27*	0.09*	0.71*	1.00							145.49	20.53
Neighborhood Poverty (5)	0.33*	-.07*	-.30*	-.29*	1.00						0.10	0.08
Maternal Education (6)	-.32*	0.03*	0.39*	0.35	-.27*	1.00					4.91	1.85
Paternal Education (7)	-.32*	0.06*	0.40*	0.37*	-.32*	0.60*	1.00				4.91	2.08
Female (8)	0.01	0.00	0.08*	-0.06	0.00	-0.01	-0.00	1.00			0.49	0.50
Age (9)	-.03*	-.01	0.03*	0.04	-.03*	0.00	0.00	-.08*	1.00		12.89	0.79
Child Household size (10)	0.28*	0.11*	-.10*	-.06*	0.09*	-.10*	-.05*	0.02	-.01	1.00	1.53	1.13

Table 2
Regression of reading score on family poverty and control variables with and without parental discussion

<i>Variable</i>	<i>Without Mediator</i>		<i>With Mediator</i>	
	<i>Estimate</i>	<i>SE</i>	<i>Estimate</i>	<i>SE</i>
Intercept	147.64*	1.524	142.56 *	1.927
Poverty	-13.39*	1.069	-13.32*	1.068
Parental Discussion			3.27*	0.751
Black	-11.09*	1.051	-10.86*	1.051
Hispanic	-4.72*	0.767	-4.54*	0.767
Pacific Islander	7.11*	1.506	7.21*	1.505
Asian	7.85*	1.030	7.32*	1.036
Female	4.64*	0.565	4.65*	0.564
Maternal Education	2.63*	0.195	2.64*	0.194
Paternal Education	2.49*	0.173	2.47*	0.173
Age	1.00*	0.356	1.02*	0.355
Child Household Size	-0.76*	0.260	-0.886*	0.261

* $p < .05$

Table 3
Regression of math score on family poverty and control variables with and without parental discussion

<i>Variable</i>	<i>Without Mediator</i>		<i>With Mediator</i>	
	<i>Estimate</i>	<i>SE</i>	<i>Estimate</i>	<i>SE</i>
Intercept	126.4*	1.247	121.9 *	1.568
Poverty	-9.30*	0.872	-9.23*	0.871
Parental Discussion			2.91*	0.615
Black	-9.96*	0.859	-9.75*	0.858
Hispanic	-2.61*	0.629	-2.45*	0.629
Pacific Islander	4.75*	1.234	4.83*	1.232
Asian	7.22*	0.845	6.75*	0.850
Female	-2.25*	0.462	-2.24*	0.461
Maternal Education	1.91*	0.159	1.91*	0.159
Paternal Education	1.98*	0.142	1.96*	0.142
Age	0.69*	0.291	0.716*	0.290
Child Household Size	0.115	0.213	0.005	0.213

* $p < .05$

Table 4
Regression of reading score on family poverty and control variables with and without neighborhood poverty

<i>Variable</i>	<i>Without Mediator</i>		<i>With Mediator</i>	
	<i>Estimate</i>	<i>SE</i>	<i>Estimate</i>	<i>SE</i>
Intercept	147.6*	1.524	152.9*	1.608
Poverty	-13.39*	1.069	-11.14*	1.086
Neighborhood Poverty			-36.65*	3.783
Black	-11.09*	1.051	-9.64*	1.054
Hispanic	-4.72*	0.767	-3.65*	0.770
Pacific Islander	7.11*	1.506	5.03*	1.511
Asian	7.85*	1.030	7.47*	1.023
Female	4.64*	0.565	4.65*	0.561
Maternal Education	2.63*	0.195	2.54*	0.193
Paternal Education	2.49*	0.173	2.24*	0.174
Age	1.00*	0.356	0.92*	0.353
Child Household Size	-0.76*	0.260	-0.74*	0.258

* $p < .05$

Table 5
Regression of math score on family poverty and control variables with and without neighborhood poverty

<i>Variable</i>	<i>Without Mediator</i>		<i>With Mediator</i>	
	<i>Estimate</i>	<i>SE</i>	<i>Estimate</i>	<i>SE</i>
Intercept	126.4*	1.247	130.8 *	1.315
Poverty	-9.30*	0.872	-7.40*	0.886
Neighborhood Poverty			-30.78*	3.080
Black	-9.96*	0.859	-8.74*	0.861
Hispanic	-2.61*	0.629	-1.73*	0.630
Pacific Islander	4.75*	1.234	3.01*	1.237
Asian	7.22*	0.845	6.91*	0.839
Female	-2.25*	0.462	-2.24*	0.458
Maternal Education	1.91*	0.159	1.83*	0.158
Paternal Education	1.98*	0.142	1.77*	0.143
Age	0.69*	0.291	0.631*	0.289
Child Household Size	0.115	0.213	0.128	0.211

* $p < .05$

Figure Captions

Figure 1. Relationship between poverty status and reading scores based on frequency of parental discussions.

Figure 2. Relationship between poverty status and math scores based on frequency of parental discussions.

Figure 1.

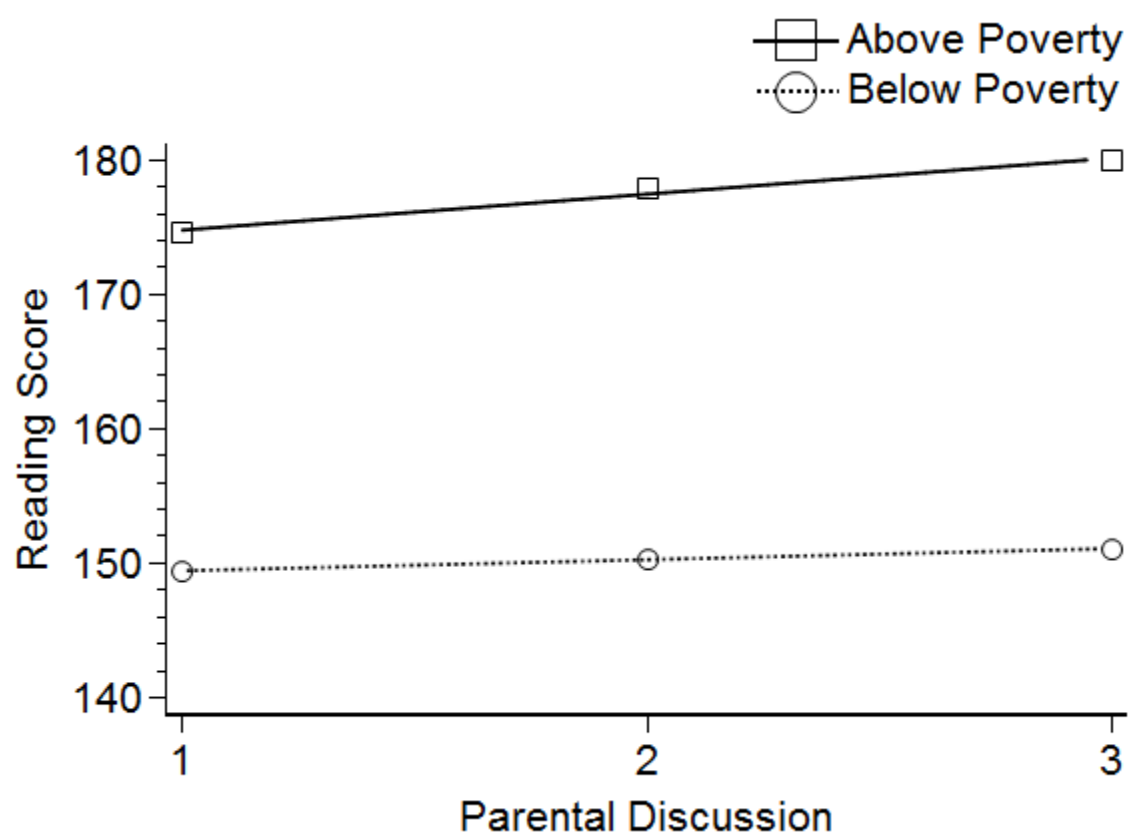
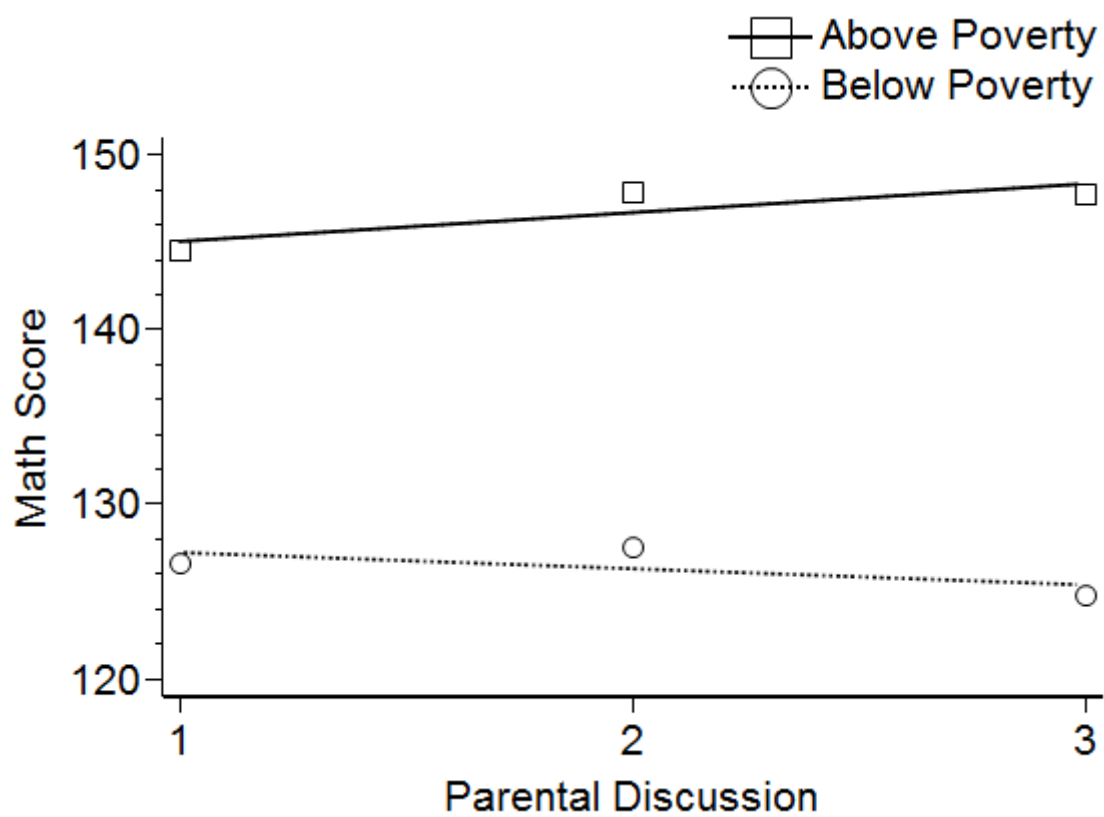


Figure 2.



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