

THE RELATIONSHIP BETWEEN PARENT-ADOLESCENT CONFLICT  
AND ACADEMIC ACHIEVEMENT

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## ABSTRACT

Previous research has shown family conflict to have a detrimental effect on the academic functioning of children and adolescents. Most research conceptualizes family conflict as marital distress or divorce. Additional factors that have been shown to effect academic functioning include cognitive ability (i.e., intelligence), academic skills (e.g., homework behaviors), and amount of resources (i.e., socioeconomic status, SES). The present study investigated whether parent-adolescent conflict is related to adolescent academic achievement after accounting for cognitive ability and homework behaviors. Participants include 74 middle school students attending public school in a low-SES urban environment.

Prior to conducting analyses, parent and adolescent reports of conflict were examined to determine whether one rater was more significantly correlated with academic achievement than the other. However, neither parent nor adolescent reports of conflict were significantly correlated with academic achievement, therefore, the average combined scores of parent and adolescent reports of conflict were used.

Multiple hierarchical regression revealed that parent-adolescent conflict did not explain significantly more variance after accounting for cognitive ability and homework behaviors. The remaining analysis tested whether parent-adolescent conflict moderated the relationship between homework behaviors and academic achievement. This analysis revealed statistically significant results: the interaction between parent-adolescent conflict and homework behaviors explained an additional 4% of the variance. The direction of the interaction's effect was surprising, however. Adolescents with neither high levels of homework problems nor high levels of parent-adolescent conflict performed the best. However, adolescents with high levels of reported homework

problems and high levels of parent-adolescent conflict performed better on a measure of academic achievement than adolescents who only had one such difficulty. Possible reasons for such a finding are discussed.

## INTRODUCTION

The importance of academic achievement to adult functioning and adjustment is evident. Children who fail to complete school work and homework are more likely to receive failing grades, be retained (Huffman, Mehlinger, & Kerivan, 2000), and experience difficulties in their peer relationships (Wentzel & Caldwell, 1997). This trajectory places them at greater risk for dropping out of school, later unemployment (Woodward & Fergusson, 2000), psychopathology (Velez, Johnson, & Cohen, 1989), substance use (Kasen, Cohen, & Brook, 1998; Wichstrom, 1998), teenage pregnancies (Feldman, 1990), and delinquent behavior (Yoshikawa, 1995). By virtue of its potential impact, academic achievement clearly warrants careful study.

Numerous studies have examined factors related to children's academic functioning. A key clinical contribution from this line of research is in the ability to identify and test the relationships of malleable environmental variables that influence academic functioning. Once these relationships are reliably established, the ability to improve children's academic functioning by changing an environmental variable becomes a viable goal. Variables identified as related to academic achievement include discipline methods and parenting style (Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987), homework behaviors and structure for learning (Toney, Kelley, & Lanclos, 2003; Miller & Kelley, 1991); parent involvement (Hoover-Dempsey et al., 2001; Keith et al., 1998), cognitive ability, (Cool & Keith, 1991; Neisser et al., 1996; Furnham, 1995), marital discord (Demo & Acock, 1988; Unger, McLeod, Broan, & Tressell, 2000; Forehand et al., 1990), psychopathology (Marmorstein & Iacono, 2004; Karustis, Power, Rescorla, Eiraldi, & Gallagher, 2000), and socioeconomic status (SES) (Blair, Blair, & Madamba, 1999; Hill, 2001). Although cognitive ability and SES are not amenable to treatment,

their consistently reported relationship to academic achievement necessitates their inclusion in studies that measure factors related to academic achievement.

The present study evaluates the relationship between family conflict and academic achievement, namely parent-child conflict. To date, studies have overwhelmingly defined family conflict as marital discord and/or divorce. Results of these studies have consistently shown that marital conflict and divorce are related to poorer academic outcomes for children. Unger et al., (2000) examined the relationship between marital conflict, family support and academic functioning of adolescents. Family support was conceptualized as perceived levels of cohesion (“how close do you feel to the rest of your family”) and involvement (“my mother watches me in sports or activities”). Results showed that family support mediated the relation between marital conflict and academic achievement. Thus, the quality of the parent-child relationship was a better predictor of academic achievement than marital conflict.

Researchers proposed that the mechanism by which marital discord and divorce impact academic achievement is through disruption of the parent-child relationship, such that families with high marital conflict, but supportive parent-child relationships do not show the same poor academic outcomes (Forehand et al., 1991; El-Sheikh & Elmore-Staton, 2004; Amato & Keith, 1991). This implicates the parent-child relationship directly, rather than indirectly via measures of marital conflict. The association between parent-child relationships and academic achievement has been largely limited to studies that conceptualize the relationship via molar constructs such as parenting styles (authoritativeness, authoritarianism, and permissiveness) rather than molecular, behaviorally defined measures of the parent-child relationship (such as the number of times parents and children discuss various topics, and the intensity of the discussions).

Unfortunately, studies that have examined the parent-child relationship have often used inadequate methodology (e.g., failing to include a measure of cognitive ability; a factor known to have a strong relationship with academic achievement).

The purpose of this study is to determine whether findings similar to those of Unger et al., (2000) will hold when examining conflict levels within the parent-child relationship, rather than assessing global traits such as cohesion, while controlling for adolescent cognitive ability. The previously mentioned factors of SES and homework behaviors will also be examined in the analysis of parent-adolescent conflict and academic achievement.

A review on adolescence and parent-adolescent relationships are presented, followed by a literature review of family conflict. Factors that have been previously studied regarding academic achievement will also be reviewed (specifically, parental style and parental involvement). Measurement issues regarding rater differences between parent- and adolescent-report of relationship characteristics are discussed. Lastly, factors associated with academic achievement, namely, homework behaviors, cognitive ability and SES, are reviewed.

### Adolescence and Parent-Adolescent Relationships

Adolescence is a unique period of transition marked by both physical and psychosocial changes. Individuals in this developmental stage undergo dramatic pubertal changes and are capable of increasingly abstract and complex reasoning. Family relationships are also altered as the process of differentiation begins to take place. This is a time when adolescents rely more on peers, seek increased independence, and are less willing to see themselves as part of a hierarchy that is headed by their parents (Fuligni & Eccles, 1993; Collins & Repinski, 1994). As a result, the parent-adolescent relationship experiences increased conflict and decreased closeness

(Steinberg & Morris, 2001). However, a decrease in closeness does not relegate the parent-adolescent relationship to one without importance. Noller (1994) found that family relationships remain important throughout adolescence. In families where relationships are seriously attenuated, however, peer influence surges and adolescents are at greater risk for adjustment problems (Fulgini & Eccles, 1993; Sheppard, Wright, & Goodstadt, 1985).

Psychologists during the first half of the twentieth century viewed significant conflict in adolescence as a vital component to healthy development (referred to as the “storm and stress” of adolescence) (Peterson & Leigh, 1990). In fact, adolescents who did not exhibit high levels of conflict with their parents were feared to suffer from stunted development. However, since then, evidence has shown that levels of conflict vary considerably and high levels are not necessarily seen as optimal (Montemayor, 1986). Although conflict is still considered to be a normal part of adolescent relationships, higher levels of intensity are associated with hostility and the limited potential for future positive interactions (Patterson, 1986; Montemayor, 1986; Laursen, 1995).

Frequency of conflict has been shown to vary across the stages of adolescence (early adolescence ages 10-12; mid adolescence ages 13-16; and late adolescence ages 17-22). Researchers have shown that the number of conflicts peak in early adolescence and taper off by mid-late adolescence (Allison & Schultz, 2004; Steinberg & Morris, 2001; Montemayor, 1986). Laursen, Coy, & Collins, (1998) found that parent-adolescent conflict frequency rates decrease linearly with age, while conflict intensity increases.

Changes in the frequency and intensity of conflict may be topic-dependent. Smetana, Daddis, and Chuang (2003) found that intensity levels of conflict varied across time depending on the topic: conflict over homework increased over time, while conflict over chores decreased

from early to middle adolescence. Sons and daughters report more conflict with their mothers than their fathers, and daughters report more intense conflict than sons (Allison & Schultz, 2004). Topics of conflict between parents and adolescents tend to revolve around issues of daily living, such as chores, hygiene, and homework, rather than issues such as smoking, alcohol, and sex (Smetana, 1988; Laursen, Coy, & Collins, 1998; Noller, 1994).

### Family Conflict and Divorce

As previously noted, much research has been done regarding the impact of family conflict on children's interpersonal, social and academic adjustment. Children in families with high levels of conflict are at greater risk for internalizing, externalizing, academic, and social competency problems (O'Keefe, 1994). The finding that children living in families with higher rates of marital conflict perform more poorly academically than peers living in families with little or no marital conflict, has been well supported in the literature (e.g., Unger et al., 2000; Neighbors, & Forehand, 1992; Rodgers & Rose, 2001; Amato & Keith, 1991). Studying children's responses to marital conflict can be useful as a basis for understanding the effects of conflict between parents and adolescents.

Smith, Berthelsen, and O'Connor (1997) examined the impact of marital conflict and violence on child adjustment. Child adjustment (as measured with the Child Behavior Checklist) was associated not with parenting discipline practices nor consistency, but with the amount of conflict to which children were exposed, how the children responded in the face of conflict, and whether they imitated the maladaptive behaviors they observed.

Rodgers and Rose (2001) found that adolescents in divorced families do not perform as well academically as their peers in never-divorced two-parent families and that school

attachment was a stronger predictor of academic achievement for children in divorced families, than for children in two-parent families. Forehand, et al. (1990) looked at interparental conflict, parent visitation, and adolescent cognitive competence among divorced families. They found that adolescents' cognitive competence, as rated by a teacher, decreased when interparental conflict was high, and that frequent parent visitation served as a protective factor. This lends support to the idea that the parent-child relationship may have a more direct bearing on child outcomes than interparental conflict per se.

Amato and Keith (1991) conducted a meta-analysis of parental divorce and child adjustment. They considered the following three perspectives as to why children from divorced families have more adjustment problems: parental absence, economic disadvantage, and family conflict. The parental absence perspective posits that difficulties are due to having only one parent. This perspective does not consider the reasons why one parent is absent, thus, children who have lost a parent due to death are considered to be at the same disadvantage as children who have lost a parent due to divorce. The economic disadvantage perspective says that it is not the family structure that matters, but the level of economic resources a family has. Lastly, the family conflict perspective states that rather than being due to family structure or lack of resources, it is the level of family conflict that best explains child adjustment and well-being. Results indicate that the family conflict perspective has the strongest empirical support, followed by the economic disadvantage perspective, which has modest support, and lastly, the parental absence perspective, which has only minimal support. The authors conclude that all perspectives contribute to the understanding of family factors and child well-being, however, family conflict was most consistently associated with child adjustment (Amato & Keith, 1991). Although this

study conceptualized family conflict as parental discord, it noted that parental discord results in deterioration of the parent-child relationship.

A study that compared the effects of marital conflict and parent-child conflict separately was conducted by El-Sheik and Elmore-Staton (2004). They found that after accounting for marital conflict, parent-child conflict predicted additional unique variance of child externalizing disorders.

Several theories have been proposed to explain the impact of marital conflict on child adjustment. Social learning theory posits that child adjustment problems directly result from witnessing poor parental conflict resolution skills. Thus, children learn to model the dysfunctional behavior they observe. Family systems theory asserts that marital conflict indirectly results in adjustment problems by disrupting family functioning and taking the parents' focus away from the child (Robin & Foster, 1989; Smith et al., 1997). This disruption to the parent-child relationship interferes with the parents ability to attend to their child's needs and results in poor parental effectiveness and consistency (Patterson, 1982).

It is important to note that not all children in high-conflict families develop problematic outcomes. It has been found that when there is marital conflict, the presence of a supportive parent-child relationship is a buffer for maladaptive outcomes (Forehand et al., 1991). For example, supportive parent-child relationships have been shown to buffer the negative effects of poverty and homelessness on children's academic achievement (Miliotis, Sesma, & Masten, 1999).

Although *positive* parent-child relationships can buffer the negative effects of marital conflict, *negative* parent-child relationships can also be influential. Crosnoe and Elder (2004)

considered the impact of peer and teacher relationships on academic competence as compared to the influence of the parent-adolescent relationship. They found that even when there were positive peer and teacher relationships present, poor parent-adolescent relationships remained a significant risk factor for academic difficulties.

### Parenting Style and Parental Involvement

Studies that have considered the effects of the parent-adolescent relationship on academic outcomes, have overwhelmingly conceptualized the quality of the relationship via parenting styles, such as authoritative, authoritarian, permissive, and indulgent (e.g., Bean, Bush, McKenry, & Wilson, 2003; Dornbusch, Ritter, & Leiderman, 1987).

Parenting Styles are typically defined along three dimensions: behavioral control (e.g., monitoring), psychological control (e.g., intrusiveness, demandingness), and parental support (e.g., warmth, acceptance, responsiveness) (Baumrind, 1966; Bean, et al., 2003). The global nature of these constructs have been criticized by behaviorally-oriented researchers who point out the lack of observable, behaviorally-based definitions (Shek, Chan, & Lee, 1997).

Few studies have incorporated both a global measure of parenting as well as specific parenting behaviors. One study that included both types of parenting measures (Shek, Chan, & Lee, 1997) examined the relationship between global and specific measures of parenting practices and adolescent adjustment in a sample of Chinese students with low academic achievement. Results revealed that both types of measures (i.e., measures of parenting style and measures of specific practices) were correlated with adolescent adjustment.

Parental involvement is also a commonly assessed measure of parental influence. This construct, while not receiving the same criticism from behavioral researchers, has been given

inconsistent definitions and has been measured in numerous ways. As a result, the literature regarding parental involvement have yielded contradictory findings (Hoover-Dempsey et al., 2001; Unger, et al., 2000). Studies that have found a *positive* relationships between parental involvement and academic achievement include Keith (1991) and Steinberg, Brown, and Dornbusch, (1996), whereas studies reporting a *negative* association or the lack of an association include Singh et al., (1995) and Watt, Moorehead-Slaughter, Japzon, and Keller, (1990).

The negative association found by Singh et al., (1995) relates to one of four parental involvement components that were researched using the National Education Longitudinal Study of 1988. The four components are parental aspirations for the child's education, parent-child communication about school, home structure, and parent participation in school activities. The only component to have a positive effect on academic achievement was parental aspiration. Parent-child communication and parent participation in school had no effect on achievement. Home structure had a counter-intuitively small negative effect on achievement. The authors address the difficulties in defining and measuring these components of parental involvement.

Cooper, Lindsay, and Nye (2000) investigated several studies on parental involvement and found that many studies lacked adequate methodology, e.g., relying on only one question to assess involvement. Further contributing to the inconsistent findings are the various definitions of involvement (ranging from quantitative to qualitative aspects) and the varying breadth of the context of involvement (restricted to one domain, such as school activities, or broadened to include multiple domains) (Cooper, Lindsay, & Nye, 2000).

Research has shown no clear method that is preferred when studying this construct. The present study will measure parental involvement indirectly via parent and adolescent reports of

conflict and frequencies of discussions which include questions about the strength of the relationship (similar to the notion of support), quality (e.g., parental warmth), and frequency of discussions.

### Assessment of Parent-Adolescent Conflict

A difficulty in assessing parent-adolescent conflict is that parents and adolescents often do not agree (Steinberg, 2001; Pelton & Forehand, 2001; Gonzales, Cauce, & Mason, 1996). Adolescents tend to rate family functioning as more negative (less cohesive, less adaptable) than their parents (Noller, 1994). In a study comparing ratings of one's own video-taped family interaction with ratings of another family, families tend to rate their own family more positively than the other family. However, this is not true when looking specifically at adolescent ratings. In this study, adolescents rated their own family in a similar fashion to how an "outsider" rated them. This means that even though families tend to rate themselves more positively than another family, adolescents do not. This may be seen as lending support to the notion that adolescents' negative views are the result of having adopted a more objective, outsider's perspective of their own family (Noller, 1994).

Several studies indicate that adolescent ratings are more strongly associated with adolescent outcomes than parent ratings (e.g., Kramer et al., 2004; Repinski & Shonk, 2002; Gonzales, et al., 1996). Yet, despite identifying adolescents' ratings as more objective, there are data that contradict this. In a study comparing families that were referred to a clinic for relationship problems and families who were not referred, Noller and Callan (1990) found that parents in non-clinic families rated their families more positively than parents in clinic families, but adolescent ratings in both groups did not show a similar pattern. Both groups of adolescents

rated their families in a similar negative fashion. Because it is more likely that family functioning differs between families that are seeking clinical intervention and those that are not, this supports the notion that parents are more sensitive and accurate reporters of family functioning than adolescents (Noller & Callan, 1990). The present study will examine whether adolescent-report, parent-report, or the combined average of the two are more highly correlated with adolescent academic achievement.

### Homework Behaviors

Homework is a common demand of most adolescents, and in some cases it is the source of conflict with parents. There is a wide variation to parental involvement in homework, depending on characteristics of the adolescent (age, learning difficulties, cognitive abilities) and characteristics of the parent (personality, attitudes about homework, own academic ability, time, and resources).

The advantages and disadvantages of assigning homework have been debated by parents and educators. Opinions that homework is critical are countered with opinions that it is a waste of time, a hindrance, and that it allows children to practice mistakes (Keith, Diamond-Hallam, & Fine, 2004; Walberg, Paschal, & Weinstein, 1985).

A meta-analysis of 15 carefully selected studies on the effects of homework revealed that homework has large and consistent positive effects on children's academic achievement (Walberg, Paschal, & Weinstein, 1985). Improvements in children's achievement were noted even when teachers assigned homework and did not give any feedback or grade, however, graded work resulted in higher achievement gains than ungraded work. The effects of homework on achievement are evident in several subject areas (particularly reading and social

studies) and across lower and middle socioeconomic groups. Tymms and Fitz-Gibbon (1992) found that after controlling for ability and prior achievement, homework had a positive influence on current achievement. However, the benefit of working several more hours per week was minimal. Cooper (1989) reported that positive homework effects were not evident in elementary school, but were increasingly evident in middle and high school.

Not all studies concur. Out of 20 studies that experimentally manipulated the presence of homework, 6 did not show a positive relationship between homework and achievement (Cooper, 1989). Further, the effects of homework may be curriculum and difficulty-dependent. Cool and Keith (1991) found that homework had less influence on achievement for students who were taking less demanding courses, whereas for those taking more demanding courses, the effects of homework increased. Location may even play a role. Keith, et al., (2004) compared the effects of completing homework in class versus out of school. Homework that was completed in school had no effect on grades, whereas homework completed out of school had a substantial impact. Because it is typically done in the home, homework may have a larger impact on the parent-child relationship than other academic skills such as test-taking strategies. Homework behaviors are an important measure of academic skill and may have implications for parent-adolescent conflict.

To assess academic skill, including homework, the present study will use the Homework Problems Checklist (e.g., “complains about homework... fails to bring home materials”) as reported by parents and the broader measure of academic skill (the Diagnostic Checklist of School Success, DCSS). The DCSS has four sections: homework, organization, test preparation and test taking, and reading comprehension.

## Cognitive Ability and Socioeconomic Status

Unfortunately, most studies that have investigated academic achievement, have neglected to include well-standardized and reliable measure of cognitive ability. Without a valid measure of cognitive ability, great caution must be used when interpreting results with respect to academic achievement. In an effort to increase interpretability of results, the present study will include the Wechsler Abbreviated Scale of Intelligence (WASI), an abbreviated measure of cognitive ability that has been deemed both highly reliable and valid (Keith, 2000; Stano, 2004).

One's access to resources has clear implications for many outcomes, including academic achievement. Parents in low-income communities are less engaged with homework, less likely to attend events at school, and are more likely to defer to teacher opinion (Drummond & Stipek, 2004). Ginsburg and Bronstein (1993) reported that socioeconomic status (SES) accounted for a substantial portion of the variance in children's academic performance. DeGarmo, Forgatch, and Martinez (1999) found SES to be significantly related to parenting practices which had direct affects on achievement.

Effects due to SES do not always remain when other variables are considered. Mulkey, Crain, and Harrington, (1992) found that the effects on academic achievement due to SES, parental absence, and parent education level were reduced to zero once the behavioral variables were controlled (i.e., school absence, homework behaviors, lack of contact with non-custodial parent, and frequent dating).

Because SES has been consistently shown to have an impact on academic achievement, the present study will limit participant recruitment to lower income families in order to experimentally control for this variable. One benefit to recruiting with individuals from low-

income families is that traditionally, these individuals have not been well represented in psychological research. However, in so doing, the external validity of the study is reduced.

### Summary

Academic achievement is an important predictor of adjustment and has been associated with several factors such as parenting styles, parental involvement, family conflict, homework behaviors, cognitive ability and SES. The relationship between family conflict and children's academic achievement has been well established and largely limited to marital conflict. For example, children of divorced parents tend to perform more poorly and have lower grades than children living in never divorced, two-parent families (Unger et al., 2000). Amato and Keith (1991) examined three alternative hypotheses of divorced families to determine which was most consistently associated with child and adolescent functioning: family structure (one vs. two-parent homes); family resources; and family conflict. They found the strongest and most consistent support for the family conflict perspective. The family conflict perspective states that it is the level of conflict in the home (not the family structure or amount of resources) that best predicts child outcomes. Although family conflict is often defined as marital conflict, conflict between parents has been shown to result in the deterioration of the parent-child relationship.

Evidence exists for both positive and negative effects of the association between parent-child relationships and child adjustment. Positive parent-child relationships may act as buffers to marital conflict (Forehand, et al., 1991) whereas negative parent-child relationships can serve as significant risk factors despite the presence of other positive relationships (i.e., relationships with peer and teachers) (Crosnoe & Elder, 2004).

Challenges exist when trying to measure parent-adolescent conflict because parents and adolescents often do not agree. There is conflicting evidence as to whose perspective is best to use when studying conflict levels in parent-adolescent relationships (e.g., Gonzales, et al., 1996). The present study will consider whether a primary rater or an average of the two raters is more strongly correlated with adolescent academic achievement.

Cognitive ability is a key variable for studies about academic achievement. Unfortunately, its assessment has been largely absent or done using tests with unknown or low validity. Socioeconomic status is another important factor to consider when examining academic achievement. Studies have found that children from lower SES families are more likely to perform poorly on an achievement test. However, some studies have found that these effects are attenuated when behavioral factors are considered (Mulkey, et al., 1992).

### Purpose

In response to the lack of research addressing the direct effects of parent-adolescent conflict on adolescent academic achievement, the purpose of this study is to (1) Determine whether adolescent-report is more strongly associated with academic achievement than parent-report of parent-adolescent conflict; (2) Determine the relationship between parent-adolescent conflict and academic achievement controlling for homework behaviors and cognitive ability; (3) Determine whether homework behaviors moderate the relationship between parent-adolescent conflict and academic achievement.

### Research Hypotheses

1. Hypothesis: It is predicted that adolescent-report of parent-adolescent conflict will

have a higher correlation with academic achievement than parent-report of parent-adolescent conflict.

2. Hypothesis: It is predicted that parent-adolescent conflict will have a significantly negative effect on the prediction of academic achievement once cognitive ability and homework behaviors are accounted for.
3. Hypothesis: It is predicted that homework behaviors will moderate the relationship between parent-adolescent conflict and academic achievement.

Figure 1 represents the model that will be tested in the 2<sup>nd</sup> hypothesis.

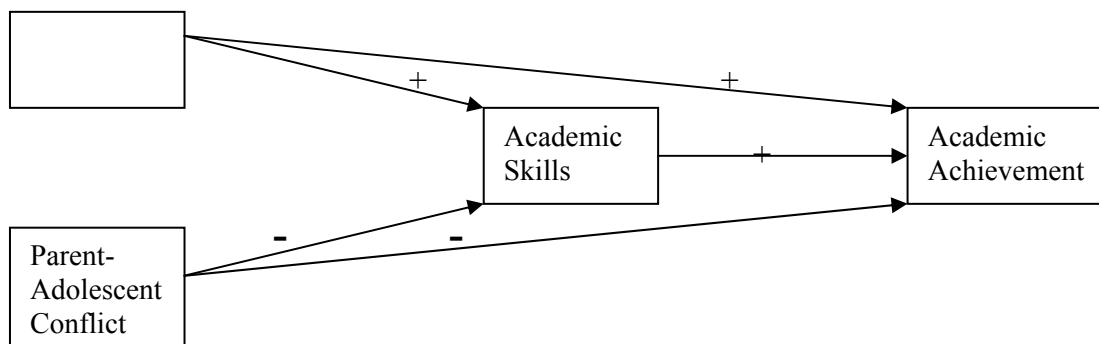


Figure 1  
Hypothesized relationship between cognitive ability, academic skills, parent-adolescent conflict and academic achievement.

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The present study will consider parent and adolescent reported levels of conflict, homework behaviors, adolescent cognitive ability, and adolescent academic achievement. The sample will be based on families from low socioeconomic status in order to control for access to resources, which has been associated with academic achievement. Limiting the sample in this way allows for a clearer examination of the variables of interest and focuses on a population not

traditionally well-represented by psychological research. It is important to note, however, that this restriction reduces the generalizability of the study.

## METHOD

### Participants

Participants were 81 middle school students and their mothers. Seven were excluded from analyses for not meeting the low-income requirement. The final sample totaled 74 participants (22 males, 52 females). Adolescents ranged in age from 10 to 16 (mean age 12.6). The mean monthly income was \$1,250 (range from \$250 to \$3,500). See Table 1 for demographic information of participants.

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Table 1

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#### Demographic Information

	<u>N</u>	<u>%</u>
Adolescent age ( $\bar{x}$ = 12.6 years)		
10	1	1
11	14	19
12	20	27
13	24	32
14	10	14
15	4	6
16	1	1
	<u>N</u>	<u>%</u>
Adolescent sex		
Males	22	30
Females	52	70
Race/Ethnicity		
African-American	72	97
Caucasian	2	3
Monthly Income ( $\bar{x}$ = \$1520/month)		
\$101-400	2	3
\$401-700	4	5
\$701-1,000	20	27
\$1,001-1,500	12	16
\$1,501-2,000	15	20

(Table 1 cont'd)

\$2,001-3,000	16	22
\$3,001-4,000	2	3
Number of adults in household ( $\bar{x} = 1.76$ adults)		
1	32	43
2	30	40
3	10	14
4	2	3
Number of children in household ( $\bar{x} = 2.77$ children)		
1	14	19
2	19	26
3	22	30
4	12	16
5	4	5
6	2	3
7	1	1
Mother's Marital Status		
Married	27	36
Married, but Separated	6	8
Divorced	16	22
Never Married	22	30
Widowed	2	3

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## Measures

### Conflict Behavior Questionnaire Short Form

The Conflict Behavior Questionnaire Short Form (CBQ) (Prinz, Foster, Kent, & O'Leary, 1979; Robin & Foster, 1984) is a 20-item true/false self-report that measures parent-adolescent conflict. Examples of test questions include "My mom screams a lot," "My mom doesn't understand me." The original long form (75 items) yields two scores: (1) the other's behavior

and (2) the dyadic interaction and has high internal consistency for adolescent report of parent and of the parent-child relationship, 0.94 and 0.95 respectively (Prinz, Foster, Kent, & O’Leary, 1979). The short form yields a single summary score that correlates .96 with scores from the long form. High scores on the CBQ represent high levels of conflict. Test-retest reliability ranges from 0.37 to 0.84 for adolescent-report and 0.57 to 0.82 for parent-report. Evidence of validity comes from studies showing distressed families report significantly higher scores than non-distressed families (Robin & Foster, 1989).

### Demographics

A demographic questionnaire was used to obtain descriptive information about participating families. Parents were asked questions such as their age, gender, race, occupation, education attainment, and marital status.

### Diagnostic Checklist for School Success

The Diagnostic Checklist for School Success (Robin, 1998) contains 82 items organized into 10 sections that relate to academic and school behaviors. The checklist can be completed by parents or teachers. Items are rated on a 5-point scale: (1) never, (2) a little, (3) sometimes, (4) often and (5) always. Psychometric information has not been published regarding this checklist.

### Homework Problem Checklist

The Homework Problem Checklist (HPC) (Anesko, Schoiock, Ramirez, & Levine, 1987) is a 20-item parent and teacher report about potential difficulties children may have with doing homework. Items are rated on a 4-point scale: (0) never, (1) at times, (2) often, and (3) very often. Examples of some of the items include “complains about homework” and “produces messy or sloppy homework.” Total checklist scores range from 0 to 60. Cronbach alpha was

0.91, indicating high internal consistency. The checklist differentiated among students who were high, average, and below average in their academic abilities, thus demonstrating validity (Anesko, et al., 1987).

### Issues Checklist

The Issues Checklist (Prinz, Foster, Kent, & O’Leary, 1979; Robin & Foster, 1989) is a 44-item self-report that measures potential areas of conflict between adolescents and their parents. Respondents indicate which issues have been discussed by circling yes or no. For items that have been discussed, respondents rate the frequency and the intensity of the discussion. Topics include issues of friends, attire, homework, and free time. The checklist yields three scores: (1) quantity of issues; (2) anger-intensity of issues; and (3) weighted average of frequency and anger-intensity. Anger intensity is rated on a 3-point scale. Low scores indicate less frequent and less intense conflict while high scores reflect more frequent and more intense conflict in parent-adolescent discussions. Test-retest reliability of the IC ranges from 0.63-0.81 for mothers and 0.47- 0.72 for adolescents. The IC is reported to have good discriminant/criterion-related validity, however parent-adolescent agreement on whether an issue had been discussed was low (ranging from 38%-86%). Evidence of validity is found in studies showing agreement averaging 67.5% between parent and adolescent as to whether an issue had been recently discussed (Robin & Foster, 1989).

### Wechsler Abbreviated Scale of Intelligence

The Wechsler Abbreviated Scale of Intelligence (WASI) is an individually administered brief test of intelligence for children and adults ages 6 through 89. It is closely tied to both the Wechsler Intelligence Scale for Children-III and the Wechsler Adult Intelligence Scale-III.

Reliability coefficients for children range from .81 to .97; for adults, the coefficients range from .84 to .98. It was normed on a sample of 2,245 children and adults. The test is well standardized and has adequate reliability and validity (Keith, 2000; Stano, 2004).

### Wechsler Individual Achievement Test II-Abbreviated

The Wechsler Individual Achievement Test II Abbreviated (WIAT-II-A) is an abbreviated form of the Wechsler Individual Achievement Test II and is for children and adults ages 6-85. The WIAT-II-A has good psychometric properties, is well-normed, can be administered in 15-25 minutes, and yields scores in Reading, Numerical Operations, Spelling, and a Composite Score (Michalki & Saklofske, 1996).

### Procedures

Recruitment took place over part of the spring semester and the summer. Subjects were recruited from local middle schools with a high percentage (80% or more) of students receiving free lunch and from summer programs that were either no-cost or very low-cost to participants. Subjects were *not* recruited from any summer program that was mainly academic in nature (such as remedial summer school or gifted academic programs).

All interested participants were given written and verbal explanations about the study and the opportunity to ask questions. Parents and adolescents were given forms to complete and an appointment was made to conduct the cognitive and achievement testing with the adolescent. Each participating family was offered \$5 except where not permitted (one school preferred a pizza party incentive be used rather than paying students \$5). Parents were given the opportunity to receive feedback regarding their child's academic achievement scores.

## RESULTS

### Outliers and Missing Data

The data were examined for outliers and missing values. Bivariate outliers were not evident. Twenty-five per cent of the participants had either missing or inadequate information on the occupation item of the Demographic Questionnaire. Due to the large number of missing occupation data, low-income was used as a proxy for low socioeconomic status. A household was defined as being low-income if it met criteria for the state child healthcare coverage program (LaChip). LaChip determines eligibility based on income and household density. Of the 81 participants, 7 did not meet criteria and were subsequently dropped from analyses. There was a large portion of missing data on the Diagnostic Checklist for School Success (DCSS). More than 40% of the sample did not complete 5 or more per cent of the DCSS. Due to the large number of missing data, the DCSS is not presently analyzed. The Homework Problems Checklist is used as the sole indicator of the adolescent's academic skill.

### Research Hypothesis 1: Parent and Adolescent Report of Conflict

Correlations were analyzed to determine whether mother or adolescent ratings were more highly associated with academic achievement. Mothers ratings, adolescents ratings, and an average combined rating score of the Conflict Behavior Questionnaire and the Issues Checklist were not significantly correlated with academic achievement at the  $p < .01$  or  $p < .05$  level. Without statistically significant results to support the choice of mother-only or adolescent-only ratings, the average computed scores were selected to be used in the regression analyses. The correlation matrix is presented in Table 2

Table 2 Correlation Coefficients, Means, Standard Deviations, Minimum and Maximum values for all Study Variables

	1	2	3	4	5	6	7	8	9	10	11	M	SD	Min	Max	
1 Homework Problems Checklist												12.91	12.96	0	50	
2 Mother's Issues Checklist	.377**											1.82	0.92	0	4.97	
3 Adolescent's Issues Checklist	.264*	.116										2.26	0.93	1	4.46	
4 Average Issues Checklist (mother and adolescent)	.429**	.744**	.750**									2.04	0.69	0.73	4.04	
5 Mother's Conflict Behavior Questionnaire	.220*	.407**	.200*	.406**								4.88	4.38	0	19	
6 Adolescent's Conflict Behavior Questionnaire	.254*	.021	.582**	.406**	.347**							3.93	4.33	0	20	
7 Average Conflict Behavior Questionnaire (mother and adolescent)	.289**	.262*	.476**	.495**	.823**	.818**						4.41	3.58	0	13	
8 WASI Full Scale IQ	-.176	-.053	-.074	-.085	-.004	.063	.036					91.93	10.4	65	116	
9 WIAT Reading	-.175	.008	-.093	-.057	-.046	-.036	-.050	.517**				93.84	11.26	63	120	
10 WIAT Arithmetic	-.463**	.104	-.168	-.182	-.179	-.0177	.217*	.379**	.336**			93.34	11.26	68	121	
11 WIAT Spelling	-.213*	-.092	-.219*	-.209*	-.080	-.080	-.097	.314**	.749**	.452**		101.05	11.86	71	135	
12 WIAT Composite Score	-.342**	-.066	-.190	-.172	-.129	-.119	-.151	.505**	.847**	.718**	.891**	94.42	10.65	71	120	
	**	Correlation is significant at the 0.01 level														
	*	Correlation is significant at the 0.05 level														

## Research Hypothesis 2: Conflict and Academic Achievement

The second research question hypothesized that parent-adolescent conflict would be a significant predictor of academic achievement after accounting for cognitive ability and homework skills. To analyze this prediction, a hierarchical multiple regression was conducted. Cognitive ability was entered on the first step, followed by homework problems on the second step, and finally the average scores of the Issues Checklist and the Conflict Behavior Questionnaire on the third step. Results indicate that parent-adolescent conflict does not explain significantly more variance of academic achievement and therefore does not add to the model. Results from this regression are presented in Table 3.

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Table 3

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### Heirarchical Multiple Regression for variables predicting academic achievement

Variable	B	SE B	$\beta$
Step 1			
Cognitive Ability	.52	.10	.51***
Step 2			
Cognitive Ability	.47	.10	.46***
Homework Problems	-.22	.08	-.26**
Step 3			
Cognitive Ability	.48	.10	.47***
Homework Problems	-.20	.09	-.24*
Conflict Behavior Questionnaire	-.33	.34	-.11
Issues Checklist	.39	1.86	.03

Note.  $R^2_{adj} = .24$  for Step 1 ( $p < .001$ );  $\Delta R^2_{adj} = .30$  for Step 2 ( $p < .05$ );  $\Delta R^2_{adj} = .30$  for Step 3 (n.s.).  
\*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$

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## Research Hypothesis 3: Test for Moderation

The final research question predicted that parent-adolescent conflict would moderate the relationship between homework problems and academic achievement. To test this hypothesis,

the two conflict questionnaires were analyzed separately. For each regression, cognitive ability was entered on the first step and the Homework Problems Checklist was entered on the second step. On the third step the average parent-adolescent conflict score was entered on two separate analyses. The second analysis included the interaction term of the Homework Problems Checklist and the average Conflict Behavior Questionnaire term. When considering the Conflict Behavior Questionnaire, the interaction term is not significant at the  $p < .01$  or  $p < .05$  levels ( $p = .08$ ). The Conflict Behavior Questionnaire, when the interaction term is included (see Table 5, Step 3), it explains significantly more variance ( $p < .05$ ). The Homework Problems Checklist remained a significant predictor when the interaction term was included in the model ( $p < .01$ ). Tables 4 and 5 show the results for the Conflict Behavior Questionnaire and Tables 6 and 7 show results for the Issues Checklist.

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Table 4

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Heirarchical Multiple Regression: Cognitive ability, homework problems, and the Conflict Behavior Questionnaire

Variable	B	SE B	$\beta$
Step 1			
Cognitive Ability	.52	.10	.51***
Step 2			
Cognitive Ability	.47	.10	.46***
Homework Problems	-.22	.08	-.26**
Step 3			
Cognitive Ability	.48	.10	.46***
Homework Problems	-.19	.09	-.23*
Conflict Behavior Questionnaire	-.33	.34	-.12

Note.  $R^2_{adj} = .24$  for Step 1 ( $p < .001$ );  $\Delta R^2_{adj} = .30$  for Step 2 ( $p < .05$ );  $\Delta R^2_{adj} = .30$  for Step 3 (n.s.).  
 \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$

---

Table 5

Heirarchical Multiple Regression: Cognitive abilities, homework problems, and the interaction between homework problems and the Conflict Behavior Questionnaire

Variable	B	SE B	$\beta$
Step 1			
Cognitive Ability	.52	.10	.51***
Step 2			
Cognitive Ability	.47	.10	.46***
Homework Problems	-.22	.08	-.26**
Step 3			
Cognitive Ability	.47	.10	.46***
Homework Problems	-.38	.14	-.46**
Conflict Behavior Questionnaire	-.89	.45	-.36*
Conflict Beh. X Hmwrk	.04	.02	.39

Note.  $R^2_{adj} = .24$  for Step 1 ( $p < .001$ );  $\Delta R^2_{adj} = .30$  for Step 2 ( $p < .05$ );  $\Delta R^2_{adj} = .32$  for Step 3 (n.s.)  
 \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$

Table 5 illustrates the effect of the Conflict Behavior Questionnaire (CBQ) on the Homework Problems Checklist (HPC). If the CBQ increases by 1 point, there is a direct effect of -.89 points on the WIAT. However, there is a moderating effect of CBQ on the HPC. When the CBQ score increases by one point, the WIAT score will increase by .04 points.

Figure 2 shows the graphical representation of the interaction between homework problems and the Conflict Behavior Questionnaire as they relate to academic achievement (after accounting for cognitive abilities).

The Issues Checklist was entered alone (Table 6) and with the Homework Problems Checklist interaction term (Table 7). When the interaction term is added to the model, it significantly predicts academic achievement ( $p < .05$ ), whereas the Issues Checklist alone remains non-significant.

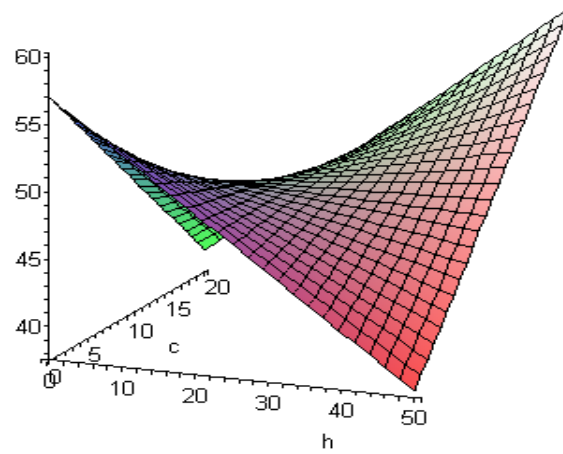


Figure 2 Graphical depiction of moderation model with homework problems and the Conflict Behavior Questionnaire. The axis labeled “h” represents homework problems (high scores mean there are more difficulties). The axis labeled “c” is the Conflict Behavior Questionnaire (high scores mean there is more conflict). The vertical axis (range 0-60) is the composite academic achievement score intercept.

Table 6

Heirarchical Multiple Regression: Cognitive ability, homework problems, and the Issues Checklist

Variable	B	SE B	$\beta$
Step 1			
Cognitive Ability	.52	.10	.51***
Step 2			
Cognitive Ability	.47	.10	.46***
Homework Problems	-.22	.08	-.26**
Step 3			
Cognitive Ability	.47	.10	.46***
Homework Problems	-.21	.09	-.23*
Issues Checklist	-.39	1.67	-1.34

Note.  $R^2_{adj} = .24$  for Step 1 ( $p < .001$ );  $\Delta R^2_{adj} = .30$  for Step 2 ( $p < .05$ );  $\Delta R^2_{adj} = .30$  for Step 3 (n.s.)  
 \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$

Table 7

Heirarchical Multiple Regression with the interaction term of Homework Problem Checklist and the Issues Checklist

Variable	B	SE B	$\beta$
Step 1			
Cognitive Ability	.52	.10	.51***
Step 2			
Cognitive Ability	.47	.10	.46***
Homework Problems	-.22	.08	-.26**
Step 3			
Cognitive Ability	.53	.10	.52***
Homework Problems	-.73	.26	-.89**
Issues Checklist	-3.32	2.13	-.22
Issues Chcklst X Hmwrk	.23	.11	.79*

Note.  $R^2_{adj} = .24$  for Step 1 ( $p < .001$ );  $\Delta R^2_{adj} = .29$  for Step 2 ( $p < .05$ );  $\Delta R^2_{adj} = .33$  for Step 3 ( $p < .05$ ).  
 \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$

The adjusted  $R^2$  is 29% without the Issues Checklist (step 2), but with the interacted conflict term (step 3),  $R^2$  increases to 33% (a 4% gain). Including the interaction term in the model with the Issues Checklist explained statistically significantly more variance than when it was excluded. The results indicate that parent-adolescent conflict (as measured by the average parent-adolescent score of the Issues Checklist) moderates the relationship between homework problems and academic achievement.

## DISCUSSION

### Adolescent and Parent Report of Conflict

Support for the hypothesis that adolescent report of parent-adolescent conflict would be more highly correlated with academic achievement than parent report was not found. In the absence of empirical evidence to determine which rater to use (parent or adolescent), the average scores of parent and adolescent report were used for analyses.

### Conflict as a Predictor of Academic Achievement

Parent-adolescent conflict, as measured by the Conflict Behavior Questionnaire and the Issues Checklist did not significantly predict more variance once cognitive abilities and homework problems were accounted for. Thus, this study found no support for the role of a linear function of parent-adolescent conflict in understanding factors that influence adolescent's academic achievement.

### Moderating Effects of Conflict on Homework Problems

The final hypothesis predicted that parent-adolescent conflict would moderate the relationship between homework skills and academic achievement. This hypothesis was statistically significant for the Issues Checklist measure of conflict, however, the direction of the relationship was unexpected. Rather than a cumulative negative effect when children have both homework problems and high parent-adolescent conflict, the results of this study suggest that adolescents in this situation perform better on an academic achievement test as compared to adolescents who either have homework problems without conflict, or conflict without homework problems.

There are two possible alternatives: either the results are spurious due to peculiarities of the sample, or the sample is an adequate representation of middle school-aged adolescents from low-income households. If the latter is true, it is possible that when children are struggling with homework, it may be constructive for parents to be involved, even if it leads to conflict.

According to these results, children with low levels of homework problems but high levels of conflict perform more poorly on an academic achievement test than children with high levels of homework problems and high levels of conflict. It is possible that the nature of conflict varies significantly in these two situations. In the former situation, rather than being directed toward a practical problem, such as homework difficulties, conflict may be more diffuse, less constructive and possibly more detrimental than in the latter situation. More research is certainly needed to determine whether the nature of conflict (that is, the presence or absence of a practical problem where parents are more likely to take an active role) is an important distinction when considering its impact on adolescents' academic achievement.

#### Post Hoc Analyses

Post hoc analyses were conducted to determine whether the moderation model was significant when considering subscales of achievement (reading, arithmetic, and spelling). Results reveal that the parent-adolescent conflict moderated the relationship between homework problems and reading, but did not significantly moderate the relationship between homework problems and arithmetic or spelling.

#### Strengths and Limitations of the Study

Strengths of this study are its use of well-standardized cognitive and achievement measures. Limitations are its small sample size, its restriction to low-income households (which

limits its generalizability) and its reliance on parent and adolescent self-report of parent-adolescent conflict. Although statistically significant results were obtained with the moderation model, it is important to consider the clinical significance of the findings. Academic skills, as presently measured by the Homework Problems Checklist, are seen as an important contributor to academic achievement. In the present study, this variable explained an additional 5% of the variance after accounting for cognitive ability, whereas parent-adolescent conflict (as measured by the Issues Checklist) explained an additional 4% of the variance (the reader is referred to Table 7). These figures may be too small to conclude that the results were clinically significant.

Replicability of findings is an important tool to determine whether results from one study generalize to other populations or if they are spurious. Improvements to future study about parent-adolescent conflict and academic achievement would be to increase the number of participants, recruit participants from a more heterogeneous sample, and include an observational method of measuring parent-adolescent conflict. (Although, it can be argued that one's perceptions of conflict are more salient and relevant to adjustment than observational data, the use of third party observation in addition to parent and adolescent report is more likely to yield a more robust measure of conflict.) With respect to the findings, it would be helpful for future studies to include more direct measures of parental involvement per se in order to determine whether these results are in fact related to involvement, conflict, both, or some other mechanism. Previous research has found high levels of intensity to be associated with hostility and the limited potential for future positive interactions (Patterson, 1986; Montemayor, 1986; Laursen, 1995). Yet it is not well understood what is meant by "high levels" of conflict intensity. Further

study is needed to clarify and define levels of intensity among adolescents that are adaptive and maladaptive, respectively.

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