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Psychological Control, Parental Support, Adolescent Grades and School Engagement

David B. Thompson

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of

Master of Science

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ABSTRACT

Psychological Control, Parental Support, Adolescent Grades and School Engagement

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As we examined research on the effects of parental psychological control and support on adolescents, we noted that these variables have not been widely studied in relation to academic achievement. Using Flourishing Families data, we examined a subsample of females and males who reported parental psychological control and support as well as school engagement variables from adolescents, fathers and mothers. We also used observed variables of grade point average (GPA). Structural equation modeling was used to determine whether parental psychological control and support would negatively or positively relate with academic achievement outcomes of GPA and school engagement. Psychological control and support processes significantly related with GPA and school engagement for both boys and girls. Therapists who work with parents should not only recognize the effects of psychological control on individual academic achievement, but should also recognize the importance of support from both parents and the importance of cross-gender parent-child relationships.

Keywords: psychological control, parental support, grade point average, school engagement

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TABLE OF CONTENTS

Title Page	i
Abstract	ii
Acknowledgements	iii
Table of Contents	iv
List of Figures	vii
Introduction	1
Literature Overview	3
Psychological Control	3
Psychological control and GPA	4
Psychological control and school engagement	4
Parental Support	5
Parental support and GPA	6
Parental support and school engagement	6
Adolescent Gender	7
Hypotheses	8
Method	8
Participants	9
Procedures	9
Recruitment	9
Measures	10
Parental psychological control	10
Parental support	11

Child school engagement (parental response).....	11
Child school engagement (child response).....	12
Grade point average.....	12
Analysis.....	12
Results.....	13
Measurement Model.....	13
Structural Model.....	13
Discussion.....	17
Hypothesis One: Psychological Control Negatively Related to Outcomes	17
Hypothesis Two: Parental Support Positively Related to Outcomes	18
Hypothesis Three: Gender of Parent	18
Clinical and Research Implications	20
Limitations and Future Directions	21
Conclusion	21
References.....	23
Table 1. Means, Standard Deviations, T tests and Bivariate Correlations for All Variables	33
Figure 1. Hypothesized Structural Equation Model	34
Figure 2. Standardized Coefficients from SEM models Examining Psychological Control.....	35
Figure 3. Standardized Coefficients from SEM models Examining Support.....	36

LIST OF TABLES

Table 1. Means, Standard Deviations, T tests and Bivariate Correlations for All Variables	33
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LIST OF FIGURES

Figure 1. Hypothesized Structural Equation Model	34
Figure 2. Standardized Coefficients from SEM models Examining Psychological Control.....	35
Figure 3. Standardized Coefficients from SEM models Examining Support.....	36

Introduction

Over the years, there has been considerable research examining the effects of parenting behaviors on outcomes in children and adolescents. These effects have been defined and measured in varied ways including the aggregation of parenting behaviors, examining the different parenting dimensions separately, and other typological approaches (Barber, 1996; Barber & Olsen, 1997; Baumrind, 1991; Kakihara & Tilton-Weaver, 2009; Padilla-Walker & Nelson, 2012). From among the many possible dimensions, syndromes, factors, styles, approaches or typologies put forward, the majority of studies consistently emphasize two fundamental components of parenting: support and control (Barber, Stolz, & Olsen, 2005).

Additionally, in this body of research, there are consistent findings relative to the basic associations between the parenting behaviors and child/adolescent functioning. Children fare better when parents are supportive and when they allow freedom of expression and personal autonomy (Barber, 1997). Further evidence for the value of the support and control dimensions can be found in Baumrind's (1971, 1991) typology of parenting styles and Barber's (1997) conceptualizations of the three primary dimensions of parenting behavior. In studies following these conceptual models, findings indicate that as parents are supportive and exercise positive forms of control, children do better across a broad range of internalized and externalized behaviors (Larzelere, Morris, & Harrist, 2013; Askelson, Campo, & Smith, 2012; Herman, Dornbusch, Herron, & Herting, 1997; Eccles, Early, Frasier, Belansky, & McCarthy, 1997).

Building on this consistent set of findings, this study focuses on the relationships between key parenting variables (psychological control and support) and the youth outcomes of grade point average (GPA) and school engagement. This study is important due to four main reasons.

First, it is important to better understand correlates of academic outcomes, given the rising cost of time, money, and effort spent on the achievement crisis in public schools (Coulson, 1996; Lawrence, 1999). Towards that end, it is important to examine how parenting factors directly affect school engagement. This is particularly salient given that most studies of this topic examine school engagement as an independent variable without searching for its predictors. Compensating for this oversight, this study will examine key parenting factors (psychological control and support) in relation to school engagement.

Second, psychological control has not been widely studied in relation to academic outcomes. Despite a small but growing body of literature on psychologically controlling behavior and its relationship to other youth outcomes (e.g., Kins, Soenens, & Beyers, 2012; Luyckx et al., 2007; El-Sheikh et al., 2010; Gaertner et. al., 2010; Kincaid et al., 2011; Loukas, 2009; Pettit et al., 2001; Rathert, Fite, & Gaertner, 2011), very little research has focused specifically on academic outcomes.

Third, few studies have examined the difference between maternal and paternal influences on child/adolescent functioning. While there is substantial research on parental support and academic outcomes (Supple & Small, 2006; Simons-Morton & Crump, 2003), very little comes from the perspectives of both parents. In order to better understand the impact of parental control and support on academic outcomes, it is important to understand how parenting (both maternal and paternal) affects adolescent boys and girls (Block, 1983; Demo, Small, & Savin-Williams, 1987; Lamb, 2010).

Finally, academic achievement variables are rarely objective measures but rely on self-report, which should be used with caution due to inaccuracy (Herman, 2003; Kuncel, Crede, & Thomas, 2005). In this study, academic achievement is measured through student GPA obtained

directly from the adolescent's school. School engagement is measured through maternal and paternal responses in addition to adolescent self-report.

Literature Overview

Where available, this literature review will reflect the findings specific to parental psychological control and support. However, with relatively little research examining psychological control in relation to school outcomes, the literature focusing on parental autonomy granting will also be reviewed as it is typically conceptualized as the inverse of psychological control (Kunz & Grych, 2013).

Psychological Control

One fundamental component of parenting research is the amount of control a parent attempts to have over an adolescent. While there are numerous measures and differing conceptualizations of parental control, Barber (2005) defined control as "a range of regulating, disciplinary behaviors" that consists of both psychological and behavioral control (p. 2). While many studies have assessed for different types of parental control on adolescent behaviors, a small but growing body of literature calls for a more focused approach to the effects of psychological control (Barber, 1996). Psychological control refers to "control attempts that intrude into the psychological and emotional development of the child" (Barber, 1996, p. 3296) through the use of such parenting practices as guilt induction, withdrawal of love, or shaming. Such behavior is a parent's disciplinary stance that seeks to manipulate the love relationship between the parent and child as a way to control child behavior (Becker, Hoffman, & Hoffman, 1964). Manipulation, exploitation of the parent-child bond, negative expressions, criticisms, and excessive possessiveness inhibits and intrudes on an adolescent's psychological development (Barber, 1996).

There is a growing body of research that has examined psychological control in relation to youth outcomes including identity, individuation and separation (Kins, Soenens, & Beyers, 2012; Luyckx et al., 2007), internalized and externalized problems (El-Sheikh et al., 2010; Gaertner et. al., 2010; Kincaid et al., 2011; Loukas, 2009; Pettit et al., 2001; Rathert, Fite, & Gaertner, 2011), mood disorders (Nanda, Kotchick, & Grover, 2012; Soenens et al., 2005; Wijsbroek et al., 2011), peer victimization (Ma & Bellmore, 2012), loneliness and self-esteem (Bean & Northrup, 2009), and adjustment (Kincaid et al., 2011; Reed et al., 2008; Sher-Censor, Parke, & Coltrane, 2011). Common findings across these studies show that parents who use guilt induction, withdrawal of love, or shaming to control behavior often end up encouraging the adolescent to react in negative ways. Psychologically controlling behavior also encourages anxiety and guilt induction, reducing adolescents' sense of competence (Barber, 1996), an important characteristic in interpersonal relationships (Cook, Buehler, & Fletcher, 2012).

Psychological control and GPA. Academic achievement can be measured in a number of ways with grade point average (GPA) chief among them. The literature indicates that less psychological control encourages academic achievement. For college students, perceptions of parental control significantly negatively predicted grade point average for both males and females (Fulton & Turner, 2008). Additionally, adolescent girls who experienced less psychological control and more family autonomy had higher grades (Barber & Olsen, 1997). Parental autonomy was also significantly associated with boys' reading and math achievement ("Mothers' and fathers'," 2008). These findings suggest that psychological control is inversely related to the academic achievement of adolescents.

Psychological control and school engagement. School engagement is typically measured by student participation in school activities. Research findings indicate that parenting

that is high on control and low on autonomy granting is negatively associated with school engagement (Padilla-Walker & Nelson, 2012). Higher levels of parental autonomy-granting can encourage greater activity participation (Miller, 2012), which may also encourage greater school engagement, perhaps through extra-curricular and other school-related activities. Additional studies indicate that autonomy in the classroom contributes to school engagement (Hafen, et al., 2012) and that mothers who interact in a more controlling manner seem to lessen their child's creativity (Grolnick et al., 2002), which may also be related to a child's interest in engaging in school activities. Moreover, adolescents with the most consistent value-congruent behaviors, or behaviors that follow what adolescents value most (e.g., school engagement), had parents who used autonomy supportive parenting activities (Padilla-Walker, Fraser, & Harper, 2012). This suggests that psychological control is also negatively related to school engagement.

Parental Support

Parental support is defined by Barber (2005) as “an assortment of affective, nurturant, or companionate types of parental behavior” (p. 2). Research has demonstrated the importance of parental support in relation to a wide range of factors including depressive symptoms in adolescents (Rueger & Malecki, 2011), and even the effectiveness of school-based health programs (Katz, 2009; Kitzman-Ulrich et al., 2010). Research has also shown that parental support is positively related to positive outcomes, either as a stand-alone parenting construct (e.g., Fine, Voydanoff, & Donnelly, 1993) or as part of a parenting style (e.g., authoritative; Baumrind, 1991; Steinberg, Elmen, & Mounts, 1989). Adolescents with supportive parents tend to have more achievement in areas such as academics, social competency, and problem solving skills, and have higher levels of self-esteem and self-reliance (Barnes & Farrell, 1992; Bean, Barber, & Crane, 2006; Beveridge & Berg, 2007; Bradford et al., 2003; Heaven & Ciarrochi,

2008; Jackson et al., 2005). Similarly, they tend to have fewer emotional and behavioral problems (e.g., delinquency, depression, anxiety, and drug use) than do children whose parents are not supportive (Barnes & Farrell, 1992; Bean, Barber, & Crane, 2006; Beveridge & Berg, 2007; Bradford et al., 2003; Heaven & Ciarrochi, 2008; Jackson et al., 2005).

Parental support and GPA. Parental support has been associated with higher GPA in adolescents (Supple & Small, 2006) and has also been shown to significantly predict college GPA among undergraduates (Cutrona et al., 1994). Parental support has been positively related to the academic achievement of children (Uddin, 2011) and was consistently and positively related to grades (Dornbusch et. al., 1987). This supportive parenting style also had positive effects on adolescent's school performance (Steinberg et al., 1992) including academic achievement (Hill & Tyson, 2009). Also, studies demonstrate that authoritative parenting, a key component of which is parental support, is associated with higher levels of academic performance and study skills (e.g., Abar, Carter, & Winsler, 2009). From these findings it appears that parental support helps maintain and even contributes to an increase in academic achievement.

Parental support and school engagement. Most research uses school engagement as a predictor variable, not as an outcome variable. Due to the limited number of articles that consider school engagement as an outcome variable, there are few findings relevant to this study. One study showed that parental support helped to buffer sixth grader's decline in school engagement (Simons-Morton & Crump, 2003), and a child's perception of parental support makes a unique contribution to their self-perceptions and socioemotional adjustment, which are both key factors in a child's level of school engagement (Bouffard, Roy, & Vezeau, 2005). Another study found that girls are higher in motivation and school engagement than boys and this engagement tends

to increase in later adolescence (Martin, 2012). These findings show that parental support is a contributing factor in positive youth outcomes and school engagement and the gender of the child is an important consideration. This is important as school engagement is most often used as a predictor of other outcomes and very little research looks at school engagement as an outcome.

Adolescent Gender

The findings in regards to child gender and parenting dimensions are mixed. Some studies take into account critical demographic and family factors including gender of the child or parent or are focused specifically on the gender of the parent in relation to the adolescent. Still other studies did not mention gender or only applied gender to some of their outcomes.

From these findings, gender is a contributing factor. Most research indicates that girls may be more negatively impacted by negative parental behavior than boys (Bean & Northrup, 2009; Fulton & Turner, 2008; "Mothers," 2008; Soenens et al., 2005; Loukas, 2009; Pettit et al., 2001). Girls may also be better at using other socialization experiences (e.g., family, school, neighborhood, and peers; Barber & Olsen, 1997). This indicates that girls are more sensitive to support from family and other influences while boys show less susceptibility to these same effects.

Reasons for the inclusion or dismissal of gender are varied. Some articles highlight the potential differences in mothering and fathering but fail to analyze for mother and father differences. This is due to the complexity of the sets of analyses or intentions to test constructs or functionality across cultures, not gender (Barber, Stolz, & Olsen, 2005). Other articles are measuring parenting constructs generally and do not differentiate between mothers and fathers, possibly due to insignificant results after analysis. These findings suggest that the effects of

parenting may be moderated by the child's gender and this relationship is an important direction for future research.

Hypotheses

The present study explored the relationship between the parenting dimensions of parental psychological control and support and two key youth outcomes, grade point average (GPA) and school engagement (See Figure 1). Just as increased psychological control has been shown to negatively impact adolescent behavior, it was hypothesized that (1) psychological control will be negatively related to both GPA and school engagement. It was also anticipated that (2) parental support will be positively related to GPA and school engagement. Based on the available literature (which favors maternal variables over paternal variables), it is also hypothesized that (3) maternal support will, more often, be significantly related to outcomes than paternal support. In the course of this study, the question arose as to how parents and adolescents interact based on the gender of each. There is limited research available on this topic (as it relates to academic achievement outcomes) which made it difficult to propose specific hypotheses. Nevertheless, the parent-child gendered relationships associated with school engagement and GPA will be explored and discussed.

Method

The data for this study came from wave five of the *Flourishing Families Project (FFP)*, a longitudinal study of inner-family life involving families with a child between the ages of 13 and 18 years old in the greater Seattle area. Only wave five included the necessary school reported GPA outcome. The overarching purpose of this project is to focus on how family processes affect the social development of children and adolescents through transitions of grade school into high school and young adulthood.

Participants

The participants for this study were taken from wave five of FFP. As of wave five, this study consisted of 311 (out of 337 initial) two-parent families (M age of child = 15.28, SD = 1.01). Only two-parent families were used to examine the unique nature of mother's and father's parenting. Fifty-five percent of adolescent children were female. Eighty-seven percent of fathers, 80.7% of mothers, and 77.9% of children were European American, 5.4% of fathers, 5.9% of mothers, and 5.4% of children were African American, and 8.0% of fathers, 13.5% of mothers, and 16.7% of children were from other ethnic groups or were multiethnic. Sixty-nine percent of mothers and 70.9% of fathers had a bachelor's degree or higher. Sixteen percent (13.8) made less than \$59,000 per year, 33.7% (30) made between \$60,000 and \$99,000 a year, 33.3% (37.3) made between \$100,00 and \$149,000, with the remaining 17.2% (18.8) making more than \$150,000.

Procedures

Recruitment. Participant families for the FFP were selected from a large northwestern city and were interviewed during the first eight months of 2007 for a wave 1 data sample. Subsequently, families were interviewed at yearly intervals for a second (2008), third (2009), fourth (2010), fifth (2011) and sixth time (2012). Families were primarily recruited using a purchased national telephone survey database (Polk Directories/InfoUSA). This database claimed to contain 82 million households across the United States and had detailed information about each household, including presence and age of children. Families identified using the Polk Directory were randomly selected from targeted census tracts that mirrored the socio-economic and racial stratification of reports of local school districts. All families with a child between the ages of 10 and 14 living within target census tracts were deemed eligible to participate in the

FFP. Of the 692 eligible families contacted, 423 agreed to participate, resulting in a 61% response rate. However, the Polk Directory national database was generated using telephone, magazine, and internet subscription reports; so families of lower socio-economic status were under-represented. Therefore, in an attempt to more closely mirror the demographics of the local area, a limited number of families were recruited into the study through other means (e.g., referrals, fliers; $n = 77$, 15%). By broadening the approach, the social-economic and ethnic diversity of the sample was increased.

All families were contacted directly using a multi-stage recruitment protocol. First, a letter of introduction was sent to potentially eligible families (this step was skipped for the 15 families who responded to fliers). Second, interviewers made home visits and phone calls to confirm eligibility and willingness to participate in the study. Once eligibility and consent were established, interviewers made an appointment to come to the family's home to conduct an assessment interview that included video-taped interactions, as well as questionnaires that were completed in the home. The most frequent reasons cited by families for not wanting to participate in the study were lack of time and concerns about privacy. It is important to note that there were very little missing data. As interviewers collected each segment of the in-home interview, questionnaires were screened for missing answers and double marking.

Measures

Parental psychological control. The latent variable of psychological control was assessed using the eight items from the Psychological Control Scale-Youth Self Report (Barber, 1996). Respondents answered how often each behavior happened with each parent. Sample items included: "my parent interrupts me" and "my parent will avoid looking at me when I have disappointed her/him." Responses ranged from 1 (*never*) to 5 (*very often*) with higher scores

indicating a greater degree of parental psychological control. Cronbach's alpha reliability coefficients for this measure have been found to be high in past studies (.83 for mothers and fathers; Barber, 1996) and were found to be .88 for this sample. Factor loadings ranged from -.114 to -.396.

Parental support. The latent variable for parenting behaviors related to support were measured using the warmth/support dimension from the Parenting Styles and Dimensions Questionnaire-Short Version (PSDQ; Robinson, Mandleco, Olsen, & Hart, 2001) totaling five items. Children were asked how often their parents did the following behaviors relating to support, including "My parent gives comfort and understanding when I am upset" and "My parent gives praise when I am good." Responses range on a five point Likert-type scale from 1 (*never*) to 5 (*always*), with higher scores indicating higher levels of the respective dimensions of parenting behavior. Reliability coefficients (Cronbach's Alphas) for this research sample were found to be .79 for mothers and .76 for fathers. Factor loadings ranged from .137 to .560.

Child school engagement (parental response). The latent variable for the child's level of engagement at school, as perceived by parents, was measured using a modified version of a survey developed by Fredericks, Blumenfeld, and Paris (2005) totaling eight items. Respondents were asked the extent to which they agreed/disagreed with items such as "My child follows the rules at school" and "My child feels bored in school." Responses ranged from 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores reflecting greater capacity to engage in prosocial conduct and concentrate at school. Previous reliability estimates are unavailable, given that the measure was adapted for this study, however, the Cronbach's Alpha coefficient was found to be .90 for mothers and .90 for fathers. Factor loadings ranged from .665 to .823.

Child school engagement (child response). The latent variable for the child's level of behavioral functioning at school, including his/her ability to get homework done and behave properly, was measured using a 9-item modified version of a school engagement scale (Fredericks, Blumenfeld, & Paris, 2004). Respondents were asked how much they agreed or disagreed with items such as "I pay attention in class" and "I am interested in the work at school." Responses ranged from 1 (strongly disagree) to 5 (strongly agree). Higher scores reflect greater ability to focus and engage in prosocial behavior and get homework done. Cronbach's Alpha coefficients have previously been found to range from .72 to .77 in terms of behavioral engagement and .83 to .86 for emotional engagement. In this research sample, Cronbach's Alpha coefficients were found to be .75 (behavioral) and .81 (emotional). Factor loadings ranged from .766 to .825.

Grade point average. For academic achievement, the child's grade point average (GPA) was used, based on the calculated average of the letter grades earned in school following a 0 to 4.0 scale. Adolescent GPA was obtained from the institution of student enrollment.

Analysis

Structural equation modeling (SEM; AMOS 7.0; Arbuckle, 2006) was utilized to explore the relationships between psychological control and parental support variables with outcome variables of GPA and school engagement (Figure 1). As a statistical analysis procedure, SEM was chosen for the ability to model multiple outcomes simultaneously, account for measurement error, and combine multiple reports while still allowing for variability in factor loadings and group comparisons. The independent variables being assessed included psychological control and support. The dependent variables to represent academic achievement were adolescent GPA and school engagement. The analyses controlled for SES and child age, considered the roles of

maternal and paternal parenting on youth outcomes, and attended to child gender via a series of group comparison analyses.

Results

Table 1 shows the means, standard deviations, t tests, and bivariate correlations for all measured variables in the sample. Means for boys and girls were similar in every category except in relation to the three measures of school engagement where mean scores for girls were found to be significantly higher. All bivariate correlations were found to be significant and in the expected direction except that child age and family socio-economic status (SES) were not found to be correlated with other variables.

Measurement Model

A measurement model was estimated to look at scale properties and latent variable correlations. The chi-square fit index for the model was significant ($X^2 = 549.8$, $df = 350$, $p < .001$), which is not surprising given the associated sample size. However, the CMIN/DF ratio was found to be 1.57, below the recommended standard of 3.0. The other fit indices all indicated that the hypothesized model appropriately fit the data (CFI = .946, RMSEA = .043). Factor loadings for the indicators of each latent variable were as follows: .65 or higher for psychological control, .66 or higher for support and .68 or higher for school engagement.

Structural Model

In preliminary analyses of the model, relationships changed in strength and in direction, and bivariate correlation values of 0.56 and above prompted concerns about multi-collinearity between maternal and paternal psychological control for boys ($r = .66$] and girls ($r = .67$) and between maternal and paternal support for boys ($r = .82$) and girls ($r = .60$). To avoid this issue in analyses, yet still consider possibly differential effects for mothers and fathers, the

relationships between parenting and youth outcomes were examined separately in four different models (see figures 2 and 3): (1) maternal psychological control and outcomes (adolescent school engagement and GPA), (2) paternal psychological control and outcomes, (3) maternal support and outcomes, and (4) paternal support and outcomes.

Consistent with the first hypothesis (psychological control will be negatively correlated to GPA and school engagement) and previous research (Padilla-Walker & Nelson, 2012; Miller, 2012; Grolnick et al., 2002), psychological control was not significantly related to boys' GPA but it was found to be negatively related to boys' school engagement (maternal/school engagement $\beta = -.28, p < .01$; paternal/school engagement $\beta = -.30, p < .01$). For girls, GPA was similarly not significantly related but psychological control was related to girls' school engagement (maternal/school engagement $\beta = -.37, p < .001$; paternal/school engagement $\beta = -.40, p < .001$). Fit indices for these models were as follows: maternal psychological control ($X^2 = 128.6, df = 72, p < .000, CFI = .944, RMSEA = .051$); paternal psychological control ($X^2 = 110.8, df = 72, p < .01, CFI = .958, RMSEA = .042$).

Consistent with the second hypothesis (parental support will be positively related to GPA and school engagement), support was positively correlated for both boy's and girl's school engagement (paternal support/boys school engagement $\beta = .37, p < .001$; paternal support/girls school engagement $\beta = .34, p < .05$; maternal support/boys school engagement $\beta = .56, p < .001$; maternal support/girls school engagement $\beta = .33, p < .05$), maternal support and boy's GPA ($\beta = .22, p < .05$) and paternal support and girl's GPA ($\beta = .24, p < .05$). Fit indices for these models were as follows: maternal support ($X^2 = 57.92, df = 38, p = .020, CFI = .974, RMSEA = .041$); paternal support ($X^2 = 60.05, df = 38, p = .013, CFI = .970, RMSEA = .044$). These findings follow those noted by others (e.g., Simons-Morton & Crump, 2003; Bouffard, Roy, &

Vezeau, 2005) who similarly found warm and supportive parenting to be related to school engagement.

Group comparison in AMOS was utilized to answer the third hypothesis, “How do the relationships between age, SES, father and mother support, father and mother psychological control, and school engagement and GPA differ by whether the child is female or male?” First, invariance testing was performed with all four models to determine if factor loadings were equal for boys and girls. Next, intercepts, and then error terms were constrained to be equal, and the resulting X^2 difference tests were examined. Finally, a model with all structural paths constrained to be equal for both boys and girls was compared against an unconstrained model, and X^2 difference tests were calculated.

For the model shown in Figure 2 related to maternal psychological control as the predictor, X^2 difference tests showed that the factor loadings, intercepts, and error terms were all invariant. The X^2 difference test comparing the model with the paths between variables constrained for boys and girls was significantly different from the unconstrained model (39.62, $df=21$, $p<.001$). Consequently, models were tested where we released the constraint on each path one at a time. The best model fit was where all paths were allowed to vary. In summary, the path from SES to GPA was stronger for males (.30 vs. .08), the path from age to GPA was stronger for females (-.21 vs. -.08), and the relationship between maternal psychological control and school engagement was stronger for girls than for boys (-.37 vs. -.28).

For the model shown in Figure 2 related to paternal psychological control as the predictor, X^2 difference tests showed that the factor loadings, intercepts, and error terms were all invariant. The X^2 difference test comparing the model with the paths between variables constrained for boys and girls was significantly different from the unconstrained model (31.56,

df=21, $p < .05$). Consequently, models were tested where we released the constraint on each path one at a time. The best model fit was where all paths were allowed to vary. The results of these tests showed that the path from SES to GPA was stronger for males (.31 vs. .09), the path from age to GPA was stronger for females (-.22 vs. -.09), and the relationship between paternal psychological control and school engagement was stronger for girls than for boys (-.40 vs. -.30).

For the model shown in Figure 3 related to maternal support as the predictor, X^2 difference tests showed that the factor loadings, intercepts, and error terms varied between boys and girls. The X^2 difference test comparing the model with the paths between variables constrained for boys and girls was significantly different from the unconstrained model (25.55, df=17, $p < .05$). Consequently, models were tested where we released the constraint on each path one at a time. The best model fit was where all paths were allowed to vary. The results of these tests showed that the path from SES to GPA was stronger for males (.27 vs. .09), the path from age to GPA was stronger for females (-.20 vs. -.08), and the relationship between maternal support and school engagement was stronger for boys than for girls and from maternal support to GPA was stronger for boys than for girls (.56 vs. .33).

For the model shown in Figure 3 related to paternal support as the predictor, X^2 difference tests showed that the factor loadings, intercepts, and error terms varied between boys and girls. The X^2 difference test comparing the model with the paths between variables constrained for boys and girls was significantly different from the unconstrained model (27.21, df=17, $p < .01$). Consequently, models were tested where we released the constraint on each path one at a time. The best model fit was where only the path from SES to GPA was unconstrained and all the other were constrained to be equal for boys and girls. In conclusion, the relationship between paternal support and school engagement and GPA was not significantly different for boys and

girls; however, the association between SES and GPA was significantly higher for boys than it was for girls (.30 vs. .12).

In terms of the control variables of age and SES, age was negatively correlated with GPA for girls in three of the four models (maternal/paternal psychological control and maternal support) and income was positively related to GPA for boys in all four models (maternal/paternal psychological control and maternal/paternal support). This suggests that as girls age, they may become less academically-minded or they may become more sensitive to factors that reduce the value of high scholastic performance (as measured by GPA). For boys (but not for girls), income is an important consideration in predicting GPA, suggesting the possibility that academic difficulties in boys may be directly related to family-level socioeconomics.

Discussion

The purpose of this study was to examine the relationship between psychological control and support and two outcomes in adolescents - grade point average (GPA) and school engagement. Parental gender was examined more specifically in regards to outcomes. Findings are discussed in reference to each of the hypothesized relationships.

Hypothesis One: Psychological Control Negatively Related to Outcomes

Previous studies have documented the negative relationship between psychological control and measures of positive wellbeing in children or adolescents (e.g., Conger, Conger, & Scaramella, 1997; Garber, Robinson, & Valentiner, 1997; Litovsky & Dusek, 1985). Consistent with this hypothesis, both maternal and paternal psychological control were negatively related with school engagement and GPA. This suggests that academic achievement among adolescent boys and girls is negatively affected by a parent's psychological control, although the relationship was significant only in the case of school engagement. The findings from this study

offer support for the strong relationship between parental control/manipulation of the psychological environment and the deleterious effects of this type of control on adolescents. Conversely, on a more positive note, these results also indicated that mothers and fathers who parent without psychological controlling behaviors can have a dramatic positive influence on boys' and girls' academic achievement which may affect their lives in a number of positive ways.

Hypothesis Two: Parental Support Positively Related to Outcomes

There is substantial research that demonstrates the importance of parental support on a variety of positive outcomes in children/adolescents (e. g., Barnes & Farrell, 1992; Bean, Barber, & Crane, 2006; Beveridge & Berg, 2007; Bradford et al., 2003; Fine, Voydanoff, & Donnelly, 1993; Heaven & Ciarrochi, 2008; Jackson et al., 2005; Katz, 2009; Kitzman-Ulrich, 2010; Rueger & Malecki, 2011). In this study, it was hypothesized that parental support would be positively correlated to the academic achievement outcomes of school engagement and GPA. Consistent with this second hypothesis, parental support was found to be significantly related in different ways depending on the gender of the child (discussed in more detail below).

Hypothesis Three: Gender of Parent

Additional findings were somewhat consistent with the third hypothesis that maternal support will, more often, be significantly related to outcomes than paternal support. Maternal support was found to be significantly related to school engagement, although paternal support was also noted as being significant. Maternal support was also significantly related to GPA for boys, while for girls, paternal support was found to be significantly related. The finding that paternal support is significant (in addition to maternal support) is consistent with findings that fathers do matter (Lamb, 2010; Biller & Solomon, 1986; Bisnaire, Firestone, & Rynard, 1990).

Nevertheless, relatively little research has been done to determine how, and for which outcome variables, fathers have an impact. This suggests the need to continue to look at the differential and important role that fathers play in the lives of boys and girls.

The importance of opposite-gender parent-child relationships has been demonstrated in relation to a wide range of outcomes (e.g., relationship quality, attachment, eating disorders; Byrd-Craven et. al., 2007; Squire, Limke, & Jones, 2013; Hooper & Dallos, 2012). Not surprisingly, the cross-gendered relationships between parents and children also seem to be an important consideration when examining the relationship between parenting and academic outcomes.

These group comparison findings demonstrate the separate and important roles that moms and dads play in the lives of boys and girls, and how these gendered relationships matter in complex ways. Mixed findings make it difficult to find clear gendered patterns as both mothers and fathers have significant relationships in similar and dissimilar ways to their sons and daughters. For example, maternal support is important, as is paternal support, but the gender of the child will increase or decrease the significance, as will the outcome. Age and SES will also play a role.

The lack of research available on the importance of cross-gendered relationships, with even less considering academic outcomes, makes comparisons to previous findings difficult. It appears that mother/son and father/daughter relationships are uniquely different and this study provides additional directions for future research and offers more questions than it answers, opening the door to the importance of cross-gendered relationships as they relate to adolescent academics.

By demonstrating the negative relationship of psychological control and the positive relationship of support for adolescent boys and girls, this study supplements Baumrind's and Barber's conceptualizations and encourages a closer look at specific gender relationships.

Clinical and Research Implications

These findings suggest the importance of considering gender for both the parent and the adolescent when looking at parenting behaviors and academic outcomes in youth. Clinical implications may, therefore, focus on the specific relationships fathers and mothers have with sons and daughters. When it comes to psychological control, clinicians should educate parents about the significant negative impact that controlling or manipulating behaviors can have on adolescent school engagement. Clinicians can also better inform parents about the impact of autonomy-granting (the opposite of psychological control) in regards to academic outcomes and teach them how to incorporate this into their academic achievement and/or treatment plans.

These findings also suggest the importance of parental support when it comes to school engagement, with a focus on mothers (stronger significant relationship to boy's school engagement). Clinicians can teach the importance of opposite-gender relationships and the impact these have on the GPA of boys and girls. Wherever possible, clinicians should focus on activities and interventions that strengthen this vital bond. The most successful interventions are family-centered, have a clearly described conceptual framework, and use techniques with demonstrated effectiveness such as cognitive-behavioral and social learning techniques (Thomlison, 2003). Even short-term interventions that encourage parental sensitivity and understanding of child development and engaging mothers in guided self-observation to enhance parental sensitivity have proven effective (Guthrie, Gaziano, & Gaziano, 2009).

Future research should continue to determine psychologically controlling behaviors parents use that may contribute to an adolescent's academic achievement using other variables not examined in this study. Future research should also ascertain how the use of therapy contributes to strengthening adolescent academic achievement by strengthening parent-child relationships, with particular emphasis on the gender of the parent and child. In addition, it would be valuable to identify what the long-term consequences are by using longitudinal data that tracks adolescent development and gender relationships over time.

Limitations and Future Directions

There are a few limitations in this study, given that it utilizes a non-national sample with a reliance on survey data, outside of the GPA information. Also, its reliance on cross-sectional data limits its application to discussions of correlation. For example, from the literature it appears that increasing amounts of psychological control contribute negatively to youth outcomes which, reciprocally, may also increase the amount of control exerted by parents. Using a longitudinal study of these same variables would better assess the developmental nature between parenting dimensions and adolescent functioning. Also, future research is needed that looks specifically at a father's role, as a socializing influence in terms of academic outcomes, with children where he is the non-custodial parent. Finally, one should also be cautious in generalizing the results from this sample to the general population. The relatively high level of education and middle to high average income level indicates that this sample is generally from a higher socioeconomic background than other populations.

Conclusion

The present study examined the roles of psychological control and support on school engagement and GPA in adolescents. Findings suggest that psychological control and support are

indeed important factors in encouraging school engagement and the disaggregation of parenting dimensions to study specific outcomes is beneficial. From this study, psychological control affects academic outcomes of boys and girls differently, based on both the gender of the parent and the child. Fathers have a more important role in adolescent academic achievement than previously determined. More research is necessary to investigate the specific nature of how parenting behaviors encourage positive outcomes and protect adolescents from problem behaviors with researchers sensitive to gender implications.

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Table 1

Means, Standard Deviations, T tests and Bivariate Correlations for All Variables

	MC	PC	MS	PS	GPA	YSE	MSE	PSE	AGE	SES
Maternal Control (MC)		.66**	-.42**	-.34**	-.21*	-.25**	-.19*	-.78*	-.03	-.06
Paternal Control (PC)	.67**		-.38**	-.42**	-.16	-.28**	-.15	-.19*	-.01	-.00
Maternal Support (MS)	-.56**	-.38**		.82**	.22*	.49**	.22**	.16	-.08	.04
Paternal Support (PS)	-.27**	-.47**	.60**		.21*	.41**	.161	.10	-.06	-.00
Grade Point Average (GPA)	.15	-.10	.15	.14		.44**	.59**	.51**	-.03	.11
School Engagement youth (YSE)	-.34**	-.35**	.27**	.28**	.30**		.63**	.57**	-.02	.12
Mat. School Engagement (MSE)	-.19*	-.23**	.21**	.21**	.40**	.64**		.78**	.012	.09
Pat. School Engagement (PSE)	-.13	-.23**	.14	.16	.43**	.53**	.72**		-.04	.05
Youth Age	.06	.05	-.13	-.11	-.21	-.00	.00	-.03		.08
SES	.01	.08	-.02	-.09	.07	-.07	.02	-.05	.10	
Girls Means (SD)	2.06 (.88)	1.89 (.76)	3.98 (.84)	3.74 (.88)	3.31 (.83)	3.69 (.62)	3.92 (.71)	3.81 (.71)	15.23 (.99)	6784 (4071)
Boys Means (SD)	1.90 (.70)	1.85 (.67)	3.87 (.76)	3.64 (.83)	3.13 (.79)	3.53 (.61)	3.62 (.68)	3.60 (.70)	15.29 (1.0)	6873 (6193)
T-test	-1.86	-.49	-1.2	-1.0	-1.53	-2.23*	-3.83*	-2.57*	.56	.149

NOTE: Correlations above the diagonal are for males (n = 150) and correlations below the diagonal are for females (n = 157). * $p < .05$, ** $p < .01$, *** $p < .00$

Figure 1

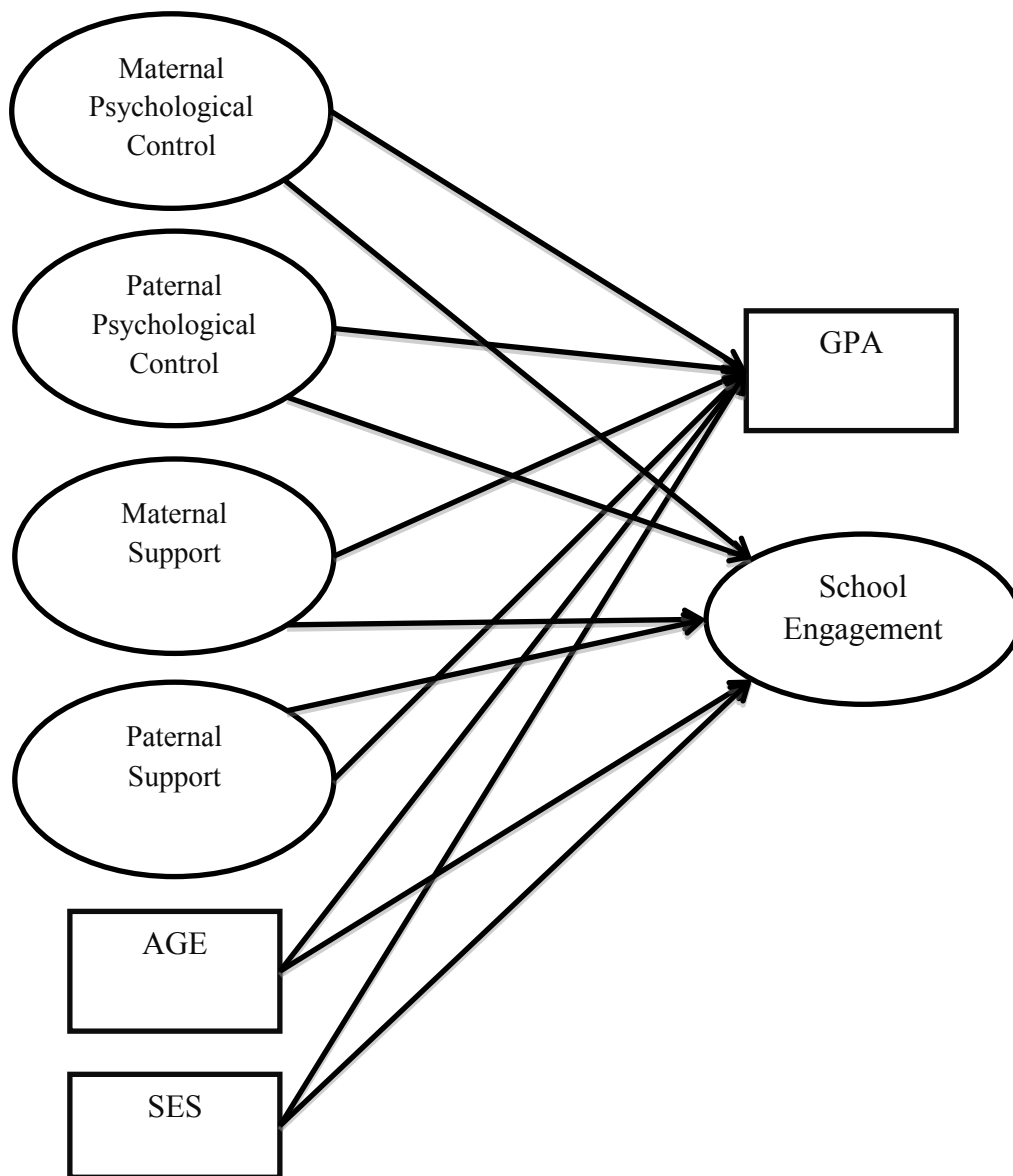
Hypothesized Structural Equation Model

Figure 2

Standardized Coefficients from SEM Models Examining Psychological Control

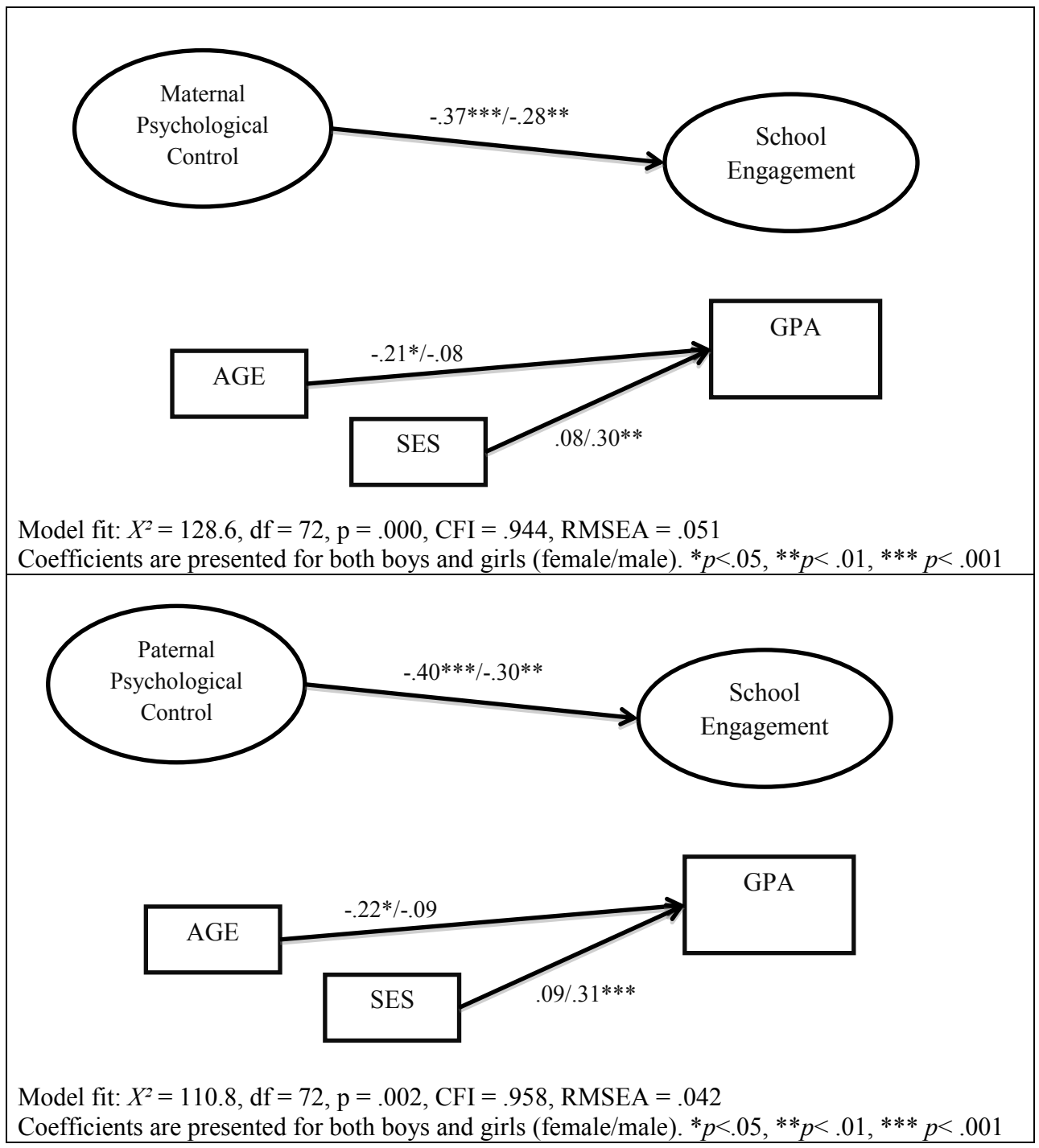


Figure 3

Standardized coefficients from SEM Models Examining Support

