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DEMOGRAPHIC MODERATORS OF KINDERGARTEN SCHOOL ADJUSTMENT  
AND PARENT-TEACHER CONCORDANCE OF CHILD BEHAVIOR

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## ABSTRACT

Although the outcomes of children's schooling and their ability to adjust to this novel transition have many contributing factors, it can be assumed that both the parents and the teachers have significant roles in the children's level of success. However, what are the determining factors of the level of influence these adults have on the children's educational success? Do parents and teachers agree when rating the children's behavior, and does this agreement translate to school adjustment? The present study attempts to provide answers to these complex questions that are asked by parents, teachers, counselors, and other school staff members in order to guide children towards better school outcomes. The participants were 84 children enrolled in kindergarten from the Midwest United States who are part of a larger longitudinal study of emotional development. Parents and teachers completed questionnaires regarding the children's school adjustment and behavior in both the fall and spring. Parent and teacher concordance in the fall, as well as the effect of moderators on concordance, were evaluated. A school adjustment factor was calculated, and the significance of the moderators on this factor was evaluated as well. Marital status and maternal education were significant predictors of parent-teacher concordance, and paternal education predicted school adjustment. Parent-teacher concordance on reports of conduct problems was shown to predict school adjustment. These findings are beneficial to parents, teachers, and other school administration in understanding the relationships between parent-teacher concordance and school adjustment, and the means to promote better school adjustment.

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## **Chapter 1**

### **Introduction**

Researchers have indicated that there is a positive relationship between parental involvement in the child's schooling and the child's academic performance (Cooper & Crosnoe, 2007). Parental involvement would most likely indicate that the parent is spending time communicating with the teacher and keeping up-to-date with the happenings of the child's schooling, in order to be providing similar ratings as the teacher. High parental involvement in school, which involves parent-teacher communication, may influence parent-teacher concordance when reporting on the child's school adjustment. Therefore, it can be hypothesized that high parent-teacher concordance will be an important factor to consider when examining school adjustment. The overarching goal of the current study was designed to examine parent-teacher concordance and its effects on school adjustment during kindergarten.

#### *Parent-Teacher Concordance*

The American Academy of Pediatrics recommends that ratings be obtained from both parents and teachers when diagnosing children with behavioral issues (Wolraich et al., 2004) in order to have a complete report of the child's behaviors in all settings, which can then be utilized in assisting the child with these issues. Thus, ratings from both parents and teachers would provide a more well-rounded assessment of the child's school adjustment and behavior because ratings would encompass both the school and home settings. If there is concordance, what does that mean for the child's academic future? Does the concordance prove validity in both the parents' and teachers' ratings? What role do moderators play in the level of concordance? Does the concordance predict specific behavioral outcomes for the child? The present study will

examine parent-teacher concordance in order to answer these questions. The influence of demographic moderators will be assessed to better understand the predictors of both parent-teacher concordance and school adjustment. School adjustment being the final outcome of the kindergarten year, is an important variable to research in order to understand the means of achieving positive school adjustment.

By compiling ratings from both teachers and parents, the child can be assessed by parents and teachers observing the child in different contexts (Massa, Gomes, Tartter, Wolfson & Halperin, 2008) (Phillips & Lonigan, 2010) (Grietens et al., 2004). According to Gross, Fogg, Garvey & Julion (2004), multiple contexts are completely necessary to diagnose behavior problems in young children. By utilizing multiple assessments, researchers are able to find out if the reports are reliable and valid assessments (Mitsis, McKay, Schulz, Newcorn & Halperin, 2000). Due to the fact that children are not of adequate age to accurately provide evidence for their own diagnoses, parents provide the primary report for their children. Therefore, teacher reports are necessary to validate the reports given by parents to provide evidence for a clinician to then proceed with a strategic plan. Simply collecting reports from only a parent or teacher is an incomplete assessment (Murray et al., 2007). In order to reach a better understanding of the severity of the problem, multiple ratings from multiple sources are necessary. These ratings can also be used to predict future risk for the child and decrease error in diagnoses (Kerr, Lunkenheimer & Olson, 2007). Low concordance between parents and teachers is shown to predict variability in ratings of ADHD symptoms across the settings of school and home (Murray et al., 2007).

Furthermore, ratings from parents and teachers are not interchangeable; both ratings are necessary due to the fact that they complement one another (Stanger & Lewis, 1993). Although concordance may not be as significantly high as researchers may desire, this lower concordance is necessary for school administrators and clinicians to understand fully the symptoms that the child

displays in various settings. Symptoms displayed in the formal school setting with non-familiar adults and peers may potentially vary from the symptoms displayed in the comfort of the child's home. The ratings will overlap to some extent; however, there will be instances where the teacher will be present and able to observe symptoms that the parents will not observe in the context of their home, and vice versa. Although the present study will not be making assessments in a clinical setting, clinicians will be able to consult this research when collecting assessments from adults present in the child's life, such as the parent who can provide primary ratings of the child's home behaviors, and the teacher who can provide the primary ratings of the child's behaviors at school.

Parent and teacher reports are also necessary for well-rounded behavior analysis of children due to the fact that children are not likely to display symptoms when in the presence of an administrator or clinician or in the laboratory or office setting. Children will be more likely to act in ways they think are socially acceptable and in ways they believe the clinician expects or desires. Children also are shown to underreport their symptoms for these same reasons (Mitsis, McKay, Schulz, Newcorn & Halperin, 2000). The present study suggests that clinicians and administrators can then combine parents' and teachers' reports in order to examine a better-rounded and objective analysis of the child's behavior than what would be reported by the child himself or observed by an objective third party. Reports from both parents and teachers make understanding the child's behaviors more possible than research involving reports from only one rater, which in some cases could have been the child. Although reports from parents are useful by themselves (Massa, Gomes, Tartter, Wolfson & Halperin, 2008), it is much more helpful to have another objective reporter (in this research, the teacher) to compare to the ratings given by the parent in order to compile a more thorough assessment of the child's behaviors that are exhibited in different settings. This compilation of ratings can then be utilized in assessment and/or treatment of possible behavioral issues.

Along with ADHD, parent-teacher concordance was shown to lead to a better understanding of the child's speaking, reading, and writing levels (Massa et al., 2008). Moderate concordance was also discovered when assessing the child's school adjustment (McKim & Cowen, 1987). Finally, concordance was evident when assessing the child's behavior (Phillips & Lonigan, 2010). Evidently, significant parent-teacher concordance is necessary in order to better understand and assess a child on many spectrums. Therefore, it is crucial for all influential adults in the child's life to understand how to achieve this concordance, and what demographic moderators contribute to it. Several moderators and their effects will be discussed later in the paper.

### *School Adjustment*

School adjustment across the school year is a largely researched aspect of a child's education today. Therefore, what effect do certain demographic moderators have on the degree of a child's school adjustment? Can we predict which demographic factors play the most substantial role in the child's school adjustment through the early transition years? The present research aims to address each of these questions in order to enable parents, teachers, and other school staff or clinicians to have a better understanding and assess children properly and adequately for the purpose of intervention and treatment to prevent symptoms and future difficulties that the child would otherwise experience later in the academic career. Understanding whether patterns of concordance differ depending on behavior and whether it is moderated by family and child demographic characteristics, has the potential to significantly improve our ability to identify children with school adjustment difficulties earlier and to more efficiently focus our intervention resources (Bishop & Bard, 2001). Although current research has explored some effects of these moderators on children's schooling, the impact of parental education, marital status, and SES, has not been readily assessed at the level of single components of concordance or school adjustment, however.

*Moderating Factors on Parent-Teacher Concordance and School Adjustment*

Previous research indicates the positive relationship between both parents' education and their child's educational success (Thomas, 1996). However, is there a difference in the effect of one parent's education level versus the other? What degree of parental education leads to better school adjustment for their child? This type of demographic moderator has been examined in the present study in regards to its effect on the level of parent-teacher concordance and school adjustment in order to make both parents and school administrators or clinicians more aware of what factors will positively influence the child's schooling.

Lansford et al. (2006) reported that young children experiencing their parents' divorce show problems with internalized behavior reported by the mother, externalized behavior reported by the teacher, and grades. Due to the fact that previous research has shown negative effects of parental divorce on the child's behavior, moderation of divorce on the child's school adjustment and parent-teacher concordance of behavior was assessed in the present study. If parents are divorced, do they display more or less concordance with the teacher regarding the child's behavior? To what extent does divorce impact the child's school adjustment? The present study expanded upon the current research indicating negative outcomes following parental divorce by aiming to answer these questions in order to better understand negative impacts of parental divorce.

Socioeconomic status is another factor that has been shown to have significant effects on aspects of the child's schooling. Financial strain (socioeconomic status) contributes to developmental issues (Lamb, 2012) as well as peer relations, teacher-student relationships and whether or not the child is bullied (Veland, Midthassel & Idsoe, 2009) (Witherspoon, Schotland, Way & Hughes, 2009). If SES has underlying effects on the child's relationships at school, does it have any effect on other aspects of the child's schooling, such as school adjustment or parent-teacher concordance of behavior? To what degree does high versus low SES moderate these

components of the child's schooling? Evidently, SES plays an important role in the lives of the parents and children; therefore, the present study investigated the moderation of SES on school adjustment and parent-teacher concordance of the child's behavior in order to examine further effects SES has on the child's schooling.

### *Current Study*

The present research aims to address the degree of parent-teacher concordance of the child's behavior, since high levels of concordance are shown to have positive implications for the child's school adjustment and potentially, the child's educational success in the future. The present research will analyze concordance on multiple aspects of the child's behavior, such as overanxiety, conduct problems, externalized behaviors, oppositional defiance, inattention, impulsivity, social inhibition, prosocial behavior, and school engagement. Previous research has indicated that the highest parent-teacher concordance will be among externalized behaviors (Deater-Deckard, Dodge, Bates, & Pettit, 1998). The concordance was then treated as a moderator of school adjustment to further address the educational impacts that concordance has on the child. The moderators of parental education, socioeconomic status, and marital status were predicted to have significant effects on both parent-teacher concordance of the child's behavior and school adjustment. Specifically, higher concordance between parents and teachers would be found for high SES, higher parent education and a married status as compared to low SES, a lower parent education and divorced/single-parent households. School adjustment was examined in relation to these demographic moderators. It was hypothesized that high SES, higher parent education, and a married status would contribute positively to the child's school adjustment. Finally, high parent-teacher concordance was predicted to positively influence the child's school adjustment as well.

## Chapter 2

### Method

#### Participants

84 children (36 girls,  $M_{age}$  at fall assessment = 5.78 years,  $SD_{age}$  = 0.33) enrolled in kindergarten in the Midwest United States from a longitudinal study beginning at age two were assessed. The children's families were recruited in toddlerhood and participated in multiple assessments between ages two and six. Socioeconomic status varied among the participants ( $M_{hollingshead}$  = 48.70,  $SD_{hollingshead}$  = 10.86) as well as the level of parent education ( $M_{momed}$  = 16.44,  $SD_{momed}$  = 2.42,  $M_{daded}$  = 16.41,  $SD_{daded}$  = 2.63). Race and ethnicity were reported as 96% European-American where the children mostly resided in two-parent households (94%). Parents and teachers of the children were the primary raters in regards to the present study.

#### Procedure

Families in the area with kindergarten-aged children were contacted by mail asking for participation and for contact information of the teacher. Mother/Father/Teacher questionnaires were distributed and completed, and responses were compiled. The raters received compensation for completion of these materials. Parents reported on their children's temperament in the fall and their behaviors in the spring. Teachers reported on the children's school functioning in the fall and spring of the kindergarten school year.

#### Measures

Questionnaire packets from the TIKES lab entitled "Mom/Dad/Teacher Questionnaire" were distributed and completed by the respective parties. The MacArthur Health

and Behavior Questionnaire (HBQ; Armstrong, Goldstein, & The MacArthur Working Group on Outcome Assessment, 2003) was included in the packet. Behaviors addressed include: overanxiousness, operational defiance, externalized behavior, conduct problems, impulsivity, inattention, prosocial behavior, school engagement, and global health. Examples of school engagement statements include “Likes being in school,” and, “Is interested in classroom activities.” Internal consistency was acceptable for all scales (school engagement fall  $\alpha = .77$ , spring  $\alpha = .67$ , internalized behavior  $\alpha = .67$ ).

### **Data Reduction**

School adjustment change through the kindergarten school year was examined with factors estimated with Categorical Factor Analysis (CFA) for the fall and spring using Mplus (Muthen & Muthen, 2001). This factor from teacher ratings consisted of four behaviors: school engagement, peer acceptance, prosocial behavior and academic competence (fall ( $\chi^2, df=2, = .981, p=.61$ ) and spring ( $\chi^2, df=2, = 1.97, p=.37$ )). Examples of academic competence ratings include child’s overall school performance, the child’s school performance in reading-related/spelling/math-related skills. This factor explained the level of school adjustment from fall to spring by looking at the change in each of these behaviors across the given time period.

## **Chapter 3**

### **Results**

Descriptive data of all key variables are presented in Table 1. Correlations were conducted to examine concordances between parents and teachers which are displayed in Table 1. Linear regressions were computed to determine if the significant concordances were related with school adjustment. Parent and teacher reports of conduct problems were the only concordances that were almost significant in predicting school adjustment, and this interaction is displayed in Figure 1. Table 3 shows moderation of parent-teacher concordance. Finally, a linear regression was computed to explain the moderation of paternal education on school adjustment, which is displayed in Table 4 and Figure 2. The variables were all standardized before they were used in analyses.

Table 1. Variables

		<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>St. Deviation</i>
<b>School Adjustment</b>	<b>Fall School</b>	85	-0.39	0.15	-0.01	0.11
	<b>Spring School</b>	85	-0.17	0.09	0.01	0.06
<b>Parent Reports</b>	<b>Conduct Problems</b>	85	0	0.92	0.15	0.2
	<b>Externalizing</b>	84	0.1	1.26	0.39	0.27
	<b>Oppositional Defiance</b>	84	0	1.44	0.47	0.35
	<b>Inattention</b>	84	0	2	0.67	0.45
	<b>Impulsivity</b>	84	0	2	0.73	0.4
	<b>Global Health</b>	84	0	1.6	0.25	0.31
	<b>Social Inhibition</b>	84	0	2	0.75	0.5
	<b>Prosocial Behavior</b>	84	0.5	1.95	1.3	0.35
	<b>School Engagement</b>	84	2.38	4	3.75	0.35
	<b>Overanxiousness</b>	84	0	1.17	0.4	0.26
<b>Teacher Reports</b>	<b>Conduct Problems</b>	55	0	0.73	0.1	0.17
	<b>Externalizing</b>	55	0	0.92	0.13	0.21
	<b>Oppositional Defiance</b>	55	0	1	0.19	0.28
	<b>Inattention</b>	55	0	1.67	0.36	0.46
	<b>Impulsivity</b>	55	0	1.78	0.43	0.43
	<b>Global Health</b>	55	0	0.8	0.13	0.21
	<b>Social Inhibition</b>	55	0	1.67	0.51	0.45
	<b>Prosocial Behavior</b>	55	0.2	2	1.31	0.44
	<b>School Engagement</b>	55	1	2	1.83	0.27
<b>Overanxiousness</b>	55	0	1.25	0.37	0.36	
<b>Demographic Moderators</b>	<b>Father's Education</b>	82	10	20	16.41	2.63
	<b>Mother's Education</b>	82	12	20	16.44	2.42
	<b>Hollings Head</b>	106	17	66	48.85	10.54
	<b>Marital Status</b>	84	1	2	1.06	0.24

*Concordance*

Concordance between parent and teacher ratings was calculated through bivariate Pearson correlations between parent and teacher report of the same subscale at the same point of assessment from the HBQ. These results are displayed in Table 2. The diagonal (numbers in boldface) represents the parent-teacher concordance for each construct.

*Table 2. Concordance Between Parent and Teacher Reports of Child Behaviors*

**Teacher Reports**

	<i>Overanxiousness</i>	<i>Externalizing</i>	<i>Oppositional Defiance</i>	<i>Conduct Problems</i>	<i>Inattention</i>	<i>Impulsivity</i>	<i>Social Inhibition</i>	<i>Prosocial Behavior</i>	<i>School Engagement</i>	<i>Global Health</i>
<b>Parent Reports</b>	<b>0.13</b>	-0.02	0.08	-0.08	0.04	-0.04	-0.14	-0.06	0.19	-0.177
<b>Externalizing</b>	0.34	<b>0.46*</b>	0.51	0.25	0.45	0.43	-0.11	-0.53	-0.27	0.15
<b>Oppositional Defiance</b>	0.45	0.32	<b>0.53*</b>	0.05	0.31	0.36	-0.22	-0.45	-0.3	0.31
<b>Conduct Problems</b>	0.31	0.51	0.44	<b>0.5*</b>	0.6	0.6	-0.013	-0.59	-0.3	0.11
<b>Inattention</b>	0.22	0.41	0.27	0.48	<b>0.49*</b>	0.54	0.12	-0.44	-0.3	0.07
<b>Impulsivity</b>	0.2	0.51	0.34	0.48	0.64	<b>0.62*</b>	0.11	-0.51	-0.36	0.08
<b>Social Inhibition</b>	0.16	0.01	0.21	-0.19	-0.08	-0.12	<b>0.5*</b>	-0.1	-0.08	0.31
<b>Prosocial Behavior</b>	-0.53	-0.49	-0.35	-0.51	-0.6	-0.54	-0.25	<b>0.64*</b>	0.72	-0.44
<b>School Engagement</b>	-0.3	0.02	0.09	-0.11	-0.2	-0.2	0.22	0.05	<b>0.11</b>	0.07
<b>Global Health</b>	0.56	0.3	0.3	0.16	0.33	0.17	0.21	-0.42	-0.37	<b>0.31</b>

\*p<.05

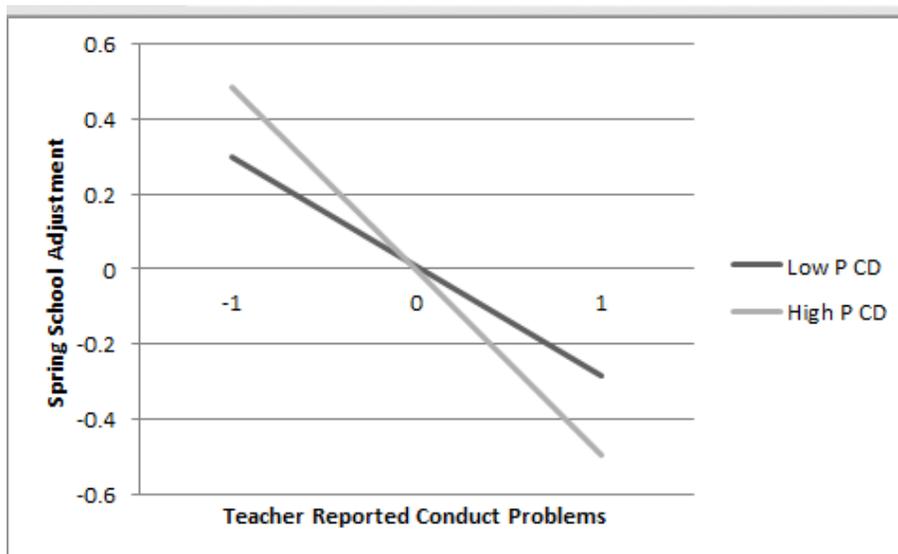
Significant concordance findings occurred in the majority of behavior ratings from parents and teachers, specifically externalizing, oppositional defiance, conduct problems, inattention, impulsivity, social inhibition, and prosocial behavior. Parental and teacher report of overanxiousness, school engagement, and global health were not significantly correlated.

#### *Concordance Predicting School Adjustment*

Linear regressions were computed in order to examine the effects of significant concordances between parents and teachers on the child's behaviors in the fall on spring school adjustment. Ratings of overanxiousness and social inhibition were not significant in predicting school adjustment and will not be discussed further. The model for externalizing was significant ( $F(3) = 4.89, p = 0.01$ ). Both parent ( $\beta = -0.2, t = -1.5, p = 0.14$ ) and teacher ( $\beta = -0.26, t = -1.7, p = 0.1$ ) report of externalizing was associated with lower school adjustment, but the interaction was not significant. The model for oppositional defiance was also significant ( $F(3) = 3.78, p = 0.02$ ). Both parent ( $\beta = -0.28, t = -2.15, p = 0.04$ ) and teacher ( $\beta = -0.22, t = -1.59, p = 0.12$ ) report of oppositional defiance was associated with lower school adjustment, and the interaction was not significant. The model for inattention was significant also ( $F(3) = 8.46, p = 0.01$ ). Both parent ( $\beta = 0.16, t = 1.24, p = 0.22$ ) and teacher ( $\beta = -0.66, t = -4.57, p = 0.01$ ) report of inattention was associated with lower school adjustment, but the interaction was insignificant. The model for impulsivity was also significant ( $F(3) = 2.75, p = 0.05$ ). Both parent ( $\beta = -0.2, t = -1.33, p = 0.19$ ) and teacher ( $\beta = -0.17, t = -1.05, p = 0.3$ ) report of impulsivity was associated with lower school adjustment, but the interaction was insignificant. The model for prosocial was significant as well ( $F(3) = 11.46, p = 0.01$ ). Both parent ( $\beta = 0.13, t = 1.00, p = 0.32$ ) and teacher ( $\beta = 0.5, t = 3.64, p = 0.01$ ) report of prosocial was associated with higher school adjustment, but the interaction was insignificant. Finally, the model for conduct problems was significant ( $F(3) = 6.23, p = 0.01$ ). Both parent ( $\beta = -0.09, t = -0.65, p = 0.52$ ) and teacher ( $\beta = -0.77, t = -3.49, p =$

0.01) report of conduct problems was associated with lower school adjustment, but the interaction was insignificant. Through examining these regressions of the interactions specifically, none were significant at the  $p < .05$  significance level. However, conduct problems was very close at .07. Therefore, this regression was probed by splitting parent reported conduct problems into high and low reports groups and regressing teacher reported conduct problems on school adjustment at high and low parent reported conduct problems. The results of this regression are displayed in Figure 2. At high parent reported levels of conduct problems, teacher report was associated with school adjustment ( $\beta = -0.5$ ,  $t = -3.34$ ,  $p = 0.01$ ). Specifically, when both teachers and parents report conduct problems, school adjustment is negatively associated. The regression line for low parent report of conduct problems was not significant.

*Figure 1. School Adjustment Predicted by Parent and Teacher Reports of Conduct Problems*



#### *Moderation of Concordance*

The demographic moderators of interest consisted of parent education, marital status, and socioeconomic status. These moderators were calculated through the same bivariate Pearson

correlations on median splits of the data by the moderator in question. Partial correlations were computed to determine the effect certain demographic moderators had on the concordance.

Results for the moderation of the concordance by child and environmental factors can be found in Table 3. Some of the original behaviors are omitted from this table because the demographic moderators did not significantly affect the concordance for those behaviors.

*Table 3. Moderation of Parent-Teacher Concordance*

		<i>Prosocial Behavior</i>	<i>Oppositional Defiance</i>	<i>Conduct Problems</i>	<i>Impulsivity</i>
<b>Father's Education</b>	<b>High</b>	0.54*	0.25	0.35	0.46
	<b>Low</b>	0.04	0.25	-0.13	0.27
<b>Mother's Education</b>	<b>High</b>	0.4	0.13	0.34	0.33
	<b>Low</b>	0.64*	0.53*	0.5	0.62*
<b>SES</b>	<b>High</b>	0.37	-0.15	-0.11	0.25
	<b>Low</b>	0.52*	0.37	0.51*	0.6*
<b>Marital Status</b>	<b>Married</b>	0.45	0.22	0.29	0.39
	<b>Divorced</b>	0.88*	0.8*	0.8*	0.89*

\* $p < .05$

Degree of moderation varied amongst different moderators and behaviors.

Parental divorce conveyed the most significant amount of moderation on parent-teacher concordance on child behavior ratings. Low mother education levels had the next most significant amount of moderation on concordance. Finally, low SES had the third most moderation.

#### *School Adjustment Change*

The school adjustment factor for the fall ( $\chi^2$ ,  $df=2$ , = .981,  $p=.61$ ) and spring ( $\chi^2$ ,  $df=2$ , = 1.97,  $p=.37$ ) fit the data well. The factor consisted of school engagement, peer acceptance, prosocial behavior, and academic competence. The correlation between fall school adjustment and spring school adjustment was substantial ( $r = .52$ ) suggesting fall school adjustment was predictive of spring school adjustment.

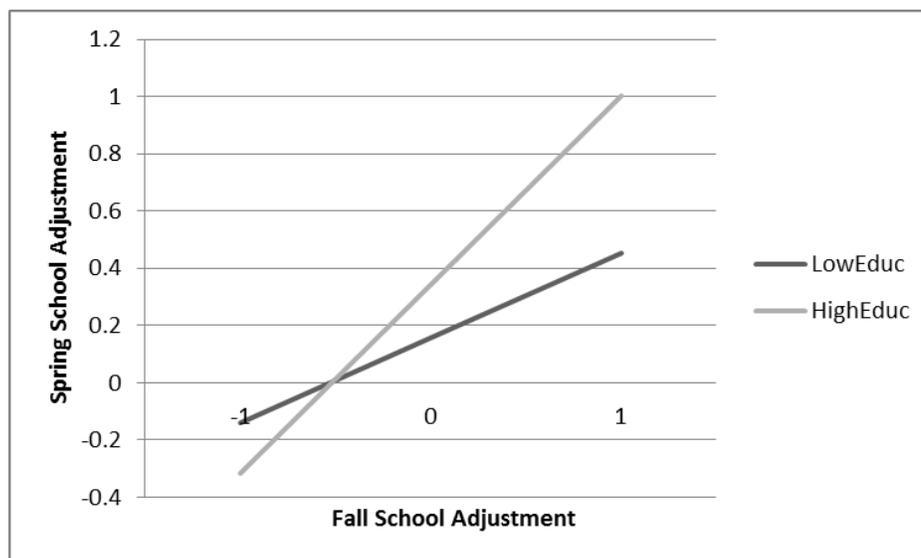
Moderation of the change in school adjustment over the school year was also addressed with traditional linear regression models. Each moderator was entered into a regression predicting spring adjustment from fall adjustment and the interaction between fall adjustment and the moderator. Father education was the only significant regression.

*Table 4. Regression Predicting Spring School Adjustment from Father's Education*

	$\beta$	$t$	Sig.
<b>Fall School Adjustment</b>	0.52	5.95	0
<b>Father's Education</b>	-0.01	-0.05	0.96
<b>Fall School Adjustment X Father's Education</b>	0.19	1.97	0.05

The interaction between father education and school adjustment was significant. In order to probe this interaction, father's education was split into high and low education level. High education level consisted of a college degree and above, while low education level consisted of a high school diploma and lower. The results of this regression are displayed in Figure 1. When the father had achieved an education level of a college degree or above, fall school adjustment was associated with spring school adjustment.

*Figure 2. School Adjustment Predicted by Father's Education Level*



## Chapter 4

### Discussion

The goals of the present study were to examine concordance between parents and teachers in reporting child behavior, to examine how this may be related to school adjustment, and to examine potential demographic moderators of these associations as well as of the concordance. Through correlating parent and teacher ratings of child behavior, parent-teacher concordance was found to be a key component in the child's education. This concordance was analyzed providing evidence that it is beneficial to the child's school adjustment from fall to spring. Moderation of this concordance was also addressed to better understand the contributing factors necessary to obtain concordance, where several demographic moderators predict concordance. Finally, moderation of the child's school adjustment from fall to spring was examined and evidence was found showing that some demographic variables contribute to better educational outcomes for the child.

#### *Concordance between Parents and Teachers*

The following were behaviors with significant concordance between parents and teachers: externalized behavior, oppositional defiance, conduct problems, inattention, impulsivity, social inhibition, and prosocial behavior. School engagement was found to have low concordance, and in turn may not be a behavior readily available for parent reporting. It seems clear that the teacher would provide the most valid rating of school engagement, where the parent may not be aware of this behavior unless actively present in the classroom with the child. Over-anxiousness, having low concordance, is also a behavior that could mainly be found in the classroom regarding test-taking or social interactions. In the home with the parent, situations

inducing anxiety may not be as prevalent as in the classroom. Finally, global health reports displayed low concordance, indicating that teachers may not be able to provide as accurate of an assessment of the child's health as the parent could.

Contrary to previous research which finds that parent-teacher concordance was the highest regarding externalized behavior (Deater-Deckard, Dodge, Bates, & Pettit, 1998) internalizing behavior was shown to have the most significant level of concordance between parents and teachers. Previous research concluded the exact opposite of our findings (Ackerman, Brown, & Izard, 2003). The high concordance regarding internalized behavior could be defended by the age of the sample where the children are at the very beginning of their educational career. Since kindergarten would be the first structured classroom setting for many of the children, their internalized behaviors could be more prominent than their externalized behaviors, and therefore more likely to be rated by both parent and teacher. Again, this issue is also worth exploring further in future research.

#### *Concordance Predicting School Adjustment*

In regards to the level of parent-teacher concordance relating to the child's school adjustment, reports of high levels of conduct problems displayed the only close to significant relationship with the child's school adjustment from fall to spring, indicating that parent-teacher concordance on reports of conduct problems may be an important factor for school adjustment. Furthermore, the study cannot determine direction of these effects due to the discrepancy between conduct problems leading to poor school adjustment or poor adjustment leading to conduct problems. Interactions between parent and teacher reports of externalizing, oppositional defiance, inattention, impulsivity, and prosocial were all associated with school adjustment. This finding regarding conduct problems leads to many other research questions which are worth investigating in future research. When the child displays more conduct problems, they must be prevalent behaviors in all settings if both parents and teachers are reporting it. Since it is readily

predominant to the parent and teacher, it has a significant effect on the child's schooling. Although parental involvement was shown to predict better school adjustment (Cooper & Crosnoe, 2007), parent-teacher concordance did not have the same effects. Since concordance only had a significant relationship with school adjustment when conduct problems were reported, there was not enough evidence to show that concordance has the same extensive effects as parental involvement. Perhaps only the physical actions displayed, conduct problems in the present study, are observable for both parents and teachers, therefore making concordance less of a predictor for school adjustment since there are many more important behaviors in addition to the physical aspects. Conduct problems and the concordance associated are worth divulging into deeper in future experiments in order to assess how often conduct problems occur and how the parents' and teachers' understanding of these problems relates to school performance.

#### *Moderation of Parent-Teacher Concordance*

In terms of the relationship between the demographic moderators and the parent-teacher concordance ratings of child behavior, there were significant findings similar to previous research (Thomas, 1996) (Veland, Midthassel & Idsoe, 2009) (Lamb, 2012) amongst many of the moderators, in particular, mother's education and SES. The same moderators were significant in regards to moderation of school adjustment.

Therefore, the mother seems to have the most significant effect on the child's outcomes of schooling, whereas Thomas (1996) indicated both parents having significant effects on the child's education. This emphasis on the mother's education could stem from the high divorce rates, leaving mothers as heads of the household in many scenarios, where they are seen as the primary role model for their children.

In continuation of previous research (Lamb, 2012), SES continues to be a significant factor in school outcomes for young children. Families with lower SES have fewer resources available to them, such as school supplies or tutoring if necessary, which can negatively affect the

child's schooling. SES also connects back to parental education, where low education can indicate lower SES, and vice versa. Again, parents with low education or low SES are primary role models for the children in the household.

Having parents who are divorced was also a large contributor to the concordance. Contrary to Lansford et al. (2006) who indicated divorce having negative effects on other aspects of the child's behavior and schooling, the results of the present study conveyed that divorce has a positive influence on parent-teacher concordance. Although a relationship between divorce and concordance may seem somewhat obvious, it is unusual that divorce has influenced a higher concordance than marriage, as was originally predicted. This could be due to the fact that single mothers and fathers find it their sole responsibility to become involved with their child's schooling, which would therefore predict a higher concordance with the teacher. These results could also be the effect of the small sample size of children with divorced parent, so they should be interpreted with caution.

#### *Moderation of School Adjustment*

Father's education having the only significant relationship with school adjustment is a very interesting finding. The majority of the present research which studies parental effects on child education focuses more on the mother's effects than the father's. This finding leads to speculation of the common thought of mother's having the main effect on children. Perhaps this finding is due to the rising number of mothers returning to work sooner after childbirth, or the rising number of "stay-at-home" fathers. It is possible that the traditional family model is still prevalent, where the child benefits from having a father with a high level of education as a model. This component of the present research would be particularly beneficial to further investigate, by means of studying both mother and father working characteristics.

### *Limitations*

There are a few limitations of the study that should be discussed. First, this was a low-risk sample, so the prevalence of behavior problems (e.g., externalizing symptoms) was low. Due to the majority of the participants being raised in two parent households that lack divorce and other family structures, this moderator was not as thoroughly represented in the present study. Complying with previous research (Lansford et al., 2006), divorce was shown to have a largely significant effect on parent-teacher concordance of the child's behavior. The child could be displaying more of these maladjustive behaviors; therefore, they are observable for both the parent and the teacher. Although significant moderation of parent-teacher concordance was found, a more diverse sample would enable further research to be conducted in order to inspect the impacts moderators such as divorce or absence of one or both parents on parent-teacher concordance, and ultimately, school adjustment. There are many other types of diversities that could be addressed as moderators that could be available in alternate populations.

### *Conclusion*

The present research provides parents, teachers, and other school staff with the means of understanding which factors (moderators) play a role in a child's school adjustment, whether it be a fixed moderator or not. The parents can then strive towards the goal of achieving the factors which they have control over in order to increase the level of concordance between parent and teacher, since this concordance was shown to have beneficial effects on the child's school adjustment. This would enable parents to understand the negative effects that divorce and low socioeconomic status could have on their children's school adjustment. School adjustment is a very plastic component of child development that continues through all years of education (Witherspoon, Schotland, Way & Hughes, 2009). It is crucial for all parties involved in a child's school adjustment to be well-informed on the factors to contribute to school adjustment, as well

as how to obtain these factors and understand the negative effects, in order to ensure a more stable and successful educational career for children.

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