

Child's Behavioral Problems and Parental Perception of Child's Academic Performance: The Role of Child's Gender, Race and Family Structure

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Abstract

Parents who see their child as having frequent or severe behavioral issues may view these problems as obstacles to academic success, leading them to adjust their perceptions accordingly. Nonetheless, studies that examine whether parents adjust their perceptions due to child's behavioral problems similarly or differently across child's genders, racial groups and family structures are still missing. The present study aims to understand how child's behavioral problem at school predicts parent's perception of child's academic performance and how child's behavioral problem interacts with child gender, race and family structure to predict parent's perception. We used data from The National Household Education Survey (NHES:2019): Parent and Family Involvement in Education (PFI) dataset (Hanson & Pugliese, 2020) and sequential multiple regression as the main analytical method. Child's behavioral problem, child's gender, race, parent's education, parent's gender, parent's school involvement, parent's working hours, family income were statistically significant predictors of parent's perception of child's academic abilities. The interaction terms between child's behavioral problem and child's gender, child's behavioral problem and child's race, child's behavioral problem and family structure were also statistically significant.

Keywords: parents' perception, child gender, academic performance, behavioral problem, family structure, child race

1. Introduction

Externalizing behavior in children or problematic behavior that is manifested outwardly onto the external environment can have a negative impact not only on others but also to outcomes related to the child itself. Internalizing and externalizing behaviors of children have been documented to predict children's academic outcomes (Kremer et al., 2016; Riglin et al., 2014). Specifically, behavioral problems, such as aggressive behaviors, bullying, defiant behaviors, withdrawn behaviors, and non-compliance, appeared to have a negative relationship with academic performance, and externalizing behavior negatively impacted some academic test results over time (Kremer et al., 2016).

While poor conduct and subsequent poor academic performance can have obvious direct implications on the child, parents' affected perception of the child can further exacerbate these issues. Parents appear to view child behavioral problems as indicative of persistent underlying negative characteristics, and as a result, often adjust perceptions of child's academic abilities downwards (Rutchick et al., 2009). Lower perceptions prospectively reduce child academic performance above and beyond other factors that impact perceived self-competence, including past performance. If parents do shift perceptions and perceived academic potential based on child behavior, gaining greater insight on this issue could be beneficial towards helping mitigate any diminished parental views on the child, possible loss of academic support, and decreased academic achievement.

There is merit to further examining the relationship between problematic behavior among children and associated parental perceptions, particularly as negative perception can result in lowered academic expectations and even deteriorated self-concept in children. Further, with the aim of better understanding these relationships, it is important to determine whether observed patterns are consistent among varying demographic groups. Because parent-child and family dynamics can vary by race, parent-child gender, and family structure, it is important to seek to understand the present issue with full acknowledgement of the nuances it requires.

Our study provided important new insights into the drivers of parents' perception about child's school performance and how these drivers interact with child gender, race and family structure to influence parents' perception. Whether the relation between child's behavioral problems at school and parents' perception of children's academic performance was significant and/or the interaction of child's behavioral problems and child's gender, race and family structure on parents' perception was significant may provide substantial implications for school disciplinary strategies or penalty for children's misbehaviors as well as communications with parents regarding child's behavioral problems at school.

1.1 Parental Perception of Children's Academic Performance

Parental perception of children's academic performance refers to the subjective views, beliefs, and values of parents on their children's abilities and progress in educational settings (Šimunović & Babarović, 2020; McGrath & Repetti, 2000). It encompasses parental interpretations and opinions on various aspects of their children's overall school achievement,

such as children's grades, efforts, and school behaviors. These perceptions and beliefs play important roles in guiding and directing the decisions parents make (e.g., whether to sign up for remedial tutoring or not) as well as actions that reciprocally influence their children's development (McGrath & Repetti, 2000). For instance, it could affect parental involvement and their perceptions of children's academic performance, which may further impact children's academic competence and well-being (Pezdek et al., 2002). Mäntymaa et al. (2006) emphasized that parental perceptions of their children are crucial for children's development regardless of whether they diverge or converge with results from external objective sources of information.

Eccles et al. (1990) and McGrath and Repetti (2000) proffered that parental perceptions of their children's academic skills can subsequently influence children's self-perceptions of their academic performance. Eccles et al. (1990) explained this process by suggesting that gender role stereotypes may lead parents to a perceptual bias of their children's competencies. Children may internalize such perceptual bias to form their self-perceptions of academic competencies. Despite the well-documented importance of parent's perception of child's academic ability, however, only a handful of studies have examined the antecedents or predictors of parent's perception of child's academic ability.

1.2 Children's Behavioral Problems and Parental Perception of Children's Academic Performance

The relation between child's behavioral problems and parents' perception of child's academic ability is an important but underexplored area. Earlier research has shown that child behavioral problems and parenting practices, such as monitoring, are reciprocally related (e.g., Pettit et al., 2001), indicating that parental perception of child's academic ability might operate in a similar way.

A child's behavioral problems might reduce parents' appraisals of the child's ability to succeed academically (McLeod & Kaiser, 2004); even if the child has a track record of good academic performance, their negative behaviors could lead to lowered parental perception. Research on the fundamental attribution error (Ross, 1977; Jones & Harris, 1967) suggests that people often interpret others' actions as reflective of their personality, rather than as a response to external factors. As a result, parents who observe problematic behaviors in their children may attribute these actions to their children's inherent traits, leading to diminished perception and expectations for their academic success.

To this point, the two direct examinations of the relation between child's behavioral problems and adult's perception of child's academic ability of which we are aware is an experimental study by Adams and LaVoie (1974) and a longitudinal study by Rutchick et al. (2009). In the study by Adams and LaVoie (1974), students with poor behavior were rated as less likely to succeed academically, even though their academic performance was identical, and were also seen as having less involved parents. Teachers' perceptions of behavioral problems led to lowered academic perceptions, which may mirror how parents form their perceptions as well.

Using longitudinal data (baseline and 5-year follow-up), Rutchick et al. (2009) found that

parents' reports of their children's behavioral problems predicted their academic expectations, even after accounting for the children's actual academic achievement. This suggests that parents do not rely solely on their child's academic performance to gauge their potential. Children with behavioral issues were perceived as less likely to complete college, regardless of their current achievement level. These findings indicate that parents who see their child as having frequent or severe behavioral issues may view these problems as obstacles to academic success, leading them to adjust their perceptions accordingly (McLeod & Kaiser, 2004). The above studies, however, have not examined whether parents adjust their perceptions due to child's behavioral problems similarly or differently across child's genders, racial groups and family structures.

1.3 Sociodemographic Factors and Parent's Perception

Child gender has been identified in multiple studies as the moderator of various relationships between parent and teacher variables and psychological outcomes. Briegel et al. (2019) alleged that parents perceive more positive and less problematic relationship behaviors in girls than in boys. Sulyok and Miklósi (2022) proffered that parents may respond differently to young children's behavioral inhibition depending on their genders. Parents of girls, Waters et al. (2022) revealed, placed more importance on learning school related skills and having many books for their children's development than parents of boys.

Regarding child race, it has been found that African American and Latino parents typically have higher expectations for their children than do Caucasian parents (e.g., Beutel & Anderson, 2008; Simon Cheng & Starks, 2002). This trend is also observed among Asian American parents (Simon Cheng & Starks, 2002). Minority families, particularly Black and Hispanic, place greater emphasis on education and hold more positive views about their children's academic abilities and future prospects (Stevenson et al., 1990).

Although the effects of family structure have not been documented in parental perception or expectation of child's academic ability literature, there is evidence that different family structures show variations in family climate dimensions such as warmth, conflict, and parenting styles (Kurdek & Fine, 1993). Further, family structure is associated with differences in family management practices (Beckmeyer & Russell, 2018) and the presence of a romantic partner can affect parental engagement in low-income families (Gibson-Davis, 2008). It is therefore appropriate to examine the relation between child's behavioral problems and parent's perception of child's academic abilities among different family structures.

Socioeconomic status has been consistently linked to parent's perceptions for children's academic abilities (e.g., Stull, 2013; Do & Mancillas, 2006; Trusty, 1998). High-SES parents have more education than low-SES parents, which is linked to higher educational perceptions for children (Hao & Bonstead-Bruns, 1998). Parents may base their perceptions for their children in part on their own educational attainment, expecting their children to equal or surpass their own education level. Moreover, high-SES families have greater financial resources, which can be vital in the pursuit of higher education.

Generally, researchers have agreed upon the varying degree of school involvement among

different family structures, with single parents, compared to partnered parents, being less involved in their children's schools (Ressler et al., 2017; Arnold et al., 2008; Kohl et al., 2000). Since low parental school involvement may lead to ignorance or a lack of understanding of child's academic performance, this factor should be controlled when examining parental perception. Thus, parental involvement, parent education, family income and other sociodemographic variables (parent gender, working hours) were included as covariates in the present study.

Given that child's behavioral problems can be influential in terms of parents' perception of children's academic abilities, it is of importance to further understand how the effects differ for boys and girls, for different racial groups and for different family structures. Nonetheless, the volume of research measuring and testing the differential effect of child's behavioral problems at school on parents' perception about child's educational achievement still falls considerably short. There is currently no research investigating the differential effect of child's behavioral problems at school on parents' perception about child's educational achievement as a function of child's gender, race and family structure.

Understanding these nuances is crucial, as they reflect how broader social and cultural contexts interact with child's behaviors to shape parental perception in ways that may either exacerbate or mitigate the effects of children's behavioral issues. There is a need for research that investigates how these factors intersect, providing a more comprehensive understanding of the relationship between child's problematic behavior and parental perception of child's academic abilities.

The present study aims to understand how child's behavioral problem at school predicts parent's perception of child's academic performance and how child's behavioral problem interacts with child gender, race and family structure to predict parent's perception. In order to achieve these objectives, we employed sequential multiple regression as the main analytical method. Parent education, parent gender, parent's working hours per week, family income, and parent's school involvement were added as covariates in the second and third models.

The following research questions were addressed in the study: (1) Is there a significant relation between child's behavioral problems at school and parent's perception about child's academic performance? (2) Does child gender moderate the relationship between child's behavioral problems at school and parent's perception about child's academic performance? (3) Does child race moderate the relationship between child's behavioral problems and parent's perception about child's academic performance? (4) Does family structure moderate the relationship between child's behavioral problems at school and parent's perception about child's academic performance?

2. Method

2.1 Data and Sample Selection

The study objectives were examined using data from The National Household Education Survey (NHES:2019): Parent and Family Involvement in Education (PFI) dataset (Hanson & Pugliese, 2020). The data was developed by the National Center for Education Statistics (NCES) within the U.S. Department of Education. It was selected for this study as it captured wide scale information on parents of students enrolled in kindergarten through grade 12. It is a nationally representative survey conducted in 2019 includes but not limited to information on the parent involvement in their children's education across America. This dataset is a publicly available dataset hosted by the National Center for Education Statistics. The 2019 National Household Education Survey (NHES:2019) used an address-based sample covering the 50 states and the District of Columbia and was conducted from January through September of 2019. Households were mailed either an invitation to respond to the web questionnaire or a short paper screener. After the screener was completed, household was selected, and the sampled child's parent was directed to the follow-up questionnaire. The total number of parents or guardians of children aged 20 or younger participating in the survey was 16,446.

To examine the relationship between child's behavioral problems and parental perception about child's academic performance, only parents or caregivers with children in fifth grade or below were included. The final sample included 4,730 parents or caregivers. About 97% of the respondents were either the father or mother of the child. The average child's age was 7.9 ($SD = 1.9$). Regarding child's gender, approximately 52% was male and 48% was female. Approximately 67% of the total parent sample was White, 31% was Black, 23% was of Hispanic origin, and 4.8% was Asian. Twenty-seven percent of the parents had education of high school or lower, 17% had bachelor's degree and 12% had graduate degrees. Approximately 38% of parents had an income of less than \$30000, roughly 22% earned \$30000 – \$50000 and 25% earned \$50000 - \$100000.

2.2 Measures

Child's behavioral problem at school was measured using items "Has this child ever had an out-of-school suspension?" and "Has this child ever had an in-school suspension not counting detentions?" (1 = yes, 2 = no). Behavioral problems were also measured using teacher's report of behavioral problems which was measured using item "Since the beginning of this school year, how many times have any of this child's teachers or school staff contacted your household about behavioral problems this child is having in school?". The final score is the average of all three items. This study found a reliability score of .87 for the measure.

The interaction terms between child's behavioral problems and child's gender (1 = male, 0 = female), race (1 = non-Hispanic White, 2 = non-Hispanic Black, 3 = Hispanic, 4 = Asian or Pacific Islander, 5 = other races) and family structure (1 = married, 2 = divorced, 3 = never married) were included as explanatory variables in the second and final models.

Parent's perception of children's academic abilities was measured using two items "How

would you describe his or her work at school?” and “How far do you expect this child to go in his or her education?”. Parents described their children’s schoolwork on a 5-point Likert scale from 1 (excellent) to 5 (failing) and indicated their expectation from 1 (less than a high school diploma) to 6 (graduate or professional degree). The score on the former scale was reversed coded and score on two items will be averaged for final score. This study found a reliability score of .90 for the measure.

Parents’ education ranging from 1 (8th grade or less) to 11 (professional degree), parent gender, and parents’ working hours per week and family income were added to the model as covariates. Due to single parents’ low school involvement, we also included number of times parents participate in school activities or meetings as one of the covariates. Mean and standard deviation of variables in the study were displayed in Table 1.

2.3 Analytic Strategy

We calculated descriptive statistics for all measures and checked the assumptions of normality, multicollinearity, homoscedasticity. To identify the existence and the impacts of child’s behavioral problems on parental perception of children’s academic performance and how child’s gender, race and family structure moderate the relationship, sequential multiple regression analysis was conducted in R. Child’s behavioral problems variable was centered around the means before the analyses were conducted. In case these models with significant interaction terms of child’s behavioral problems and child’s gender, race and family structure were adopted, a slope differences analysis was to be performed as a post hoc analysis.

3. Results

Table 1. Correlations of Study Variables and Mean and Standard Deviation

variables	School Involvement	Work Hours	Parent ED	Parent Gender	Child Gender	Income	Race	Family Structures	Parent Perception	Behavior Problems
School Involvement	1.000									
Work Hours	0.015	1.000								
Parent ED	0.142	0.099	1.000							
Parent Gender	-0.012	-0.298	-0.057	1.000						
Child Gender	-0.013	0.013	-0.004	-0.011	1.000					
Income	0.148	0.182	0.515	-0.204	0.013	1.000				
Race	-0.107	-0.019	-0.076	-0.011	0.013	-0.136	1.000			
Family Structures	-0.085	-0.073	-0.249	0.233	-0.017	-0.430	0.090	1.000		
Parent Perception	0.089	0.019	0.323	-0.091	0.095	0.249	0.103	-0.126	1.000	
Behavior Problems	0.018	-0.003	-0.086	0.072	-0.129	-0.118	-0.002	0.092	-0.339	1.000
Mean	6.542	39.914	6.451	1.620	1.481	7.490	2.000	1.894	4.561	1.660
SD	6.970	10.933	2.346	0.485	0.5000	2.900	1.305	1.471	0.792	0.758

Note: SD indicates standard deviation. Correlations bolded are statistically significant with $p < .05$.

A visual inspection of the histogram showed the residuals were approximately normally distributed. There were no obvious patterns in the scatterplot of the residuals indicating the data is homoscedastic. VIF motivation (ranging from 1.002 to 1.19) was less than 10, indicating that no serious collinearity was present (O'Brien, 2007). Outliers were removed. Table 1 summarized the Pearson's correlations for the study variables used in the main analyses.

To test the effect of child's behavioral problems on parent's perception of child's academic abilities, and examine the effect of child's gender, race and family structure on this association, we performed a sequential multiple regression on parents' perception of child's academic performance using R and examined biased corrected bootstrapped confidence intervals. The results for the sequential multiple regression analysis were shown in table 2.

The base model including child's behavioral problem, child's gender, race and family structure explained 14% of the variance in the outcome. The second model added with all the interaction terms (i.e., child's behavioral problem and child's gender, child's behavioral problem and child's race, child's behavioral problem and family structure) explained 18% of the variance. All the covariates (i.e., family income, parent's education, parent's gender, parent's working hours per week, parent's school involvement) were further added to the final model.

The final model explained 27% of the variance, with the medium effect size Cohen's $f^2 = .28$. Child's behavioral problem, child's gender, race, parent's education, parent's gender, parent's school involvement, parent's working hours, family income were statistically significant predictors of parent's perception of child's academic abilities. The interaction terms between child's behavioral problem and child's gender, child's behavioral problem and child's race, child's behavioral problem and family structure were also statistically significant (see table 2).

Table 2. Hierarchical Multiple Regression Analysis

Predictor measure and step	β [95% CI]	SE	AdjR ²	F
Step 1				
Behavior problem	-.333 [-.361; -.305]	.014		
Child gender	.086 [.044; .128]	.021	.145	101.1****
Child race	-.273 [-.384; -.162]	.056		
Family structure	-.057 [-.073; -.043]	.007		

Step 2

Behavior problem	.131	.043		
	[.045; -.217]			
Child gender	.058	.021		
	[.016; .099]			
Child race	-.108	.021	.181	96.1***
	[-.150; -.066]			
Family structure	-.056	.007		
	[-.071; -.041]			
Behavior prob*gender	-.409	.034		
	[-.476; -.342]			
Behavior prob*race	.068	.010		
	[.049; .088]			
Behavior prob*fam structure	.025	.008		
	[.011; .043]			

Step 3

Behavior problem	.105	.041		
	[.024; .187]			
Child gender	.067	.019		
	[.027; .106]			
Child race	-.059	.020		
	[-.099; -.019]			
Family structure	-.005	.007		
	[-.020; .009]			
Behavior prob*gender	-.365	.032	.269	110.2***
	[-.429; -.302]			
Behavior prob*race	.061	.009		
	[.043; .080]			
Behavior prob*fam structure	.026	.008		
	[.009; .042]			
Covariates	-.002	.001		
Work hour	[-.004; -.001]			
	.007	.001		
School involvement	[.004; .009]			
	.028	.004		
Income	[-.107; -.021]			
	-.064	.022		
Parent gender	[-.107; -.021]			
	.085	.005		
Parent ED	[.075; .094]			

Note: *** $p < .0001$. CI indicates confidence interval; SE indicates standard error, and $\text{adj}R^2$ indicates adjusted R squared.

The slope difference analysis showed that child gender moderated the relation between child’s behavioral problem and parent’s perception. For boys, behavioral problem was significantly negatively related to parent’s perception, $\beta = -4.59$, $SE = .029$, $p < .001$. For girls, behavioral problem was significantly negatively related to parent’s perception, $\beta = -4.65$, $SE = .030$, $p < .001$. The relationship was stronger for girls. In other words, parental perception of child’s academic performance was lower for girls than for boys when children experienced behavioral problems at school (see figure 1).

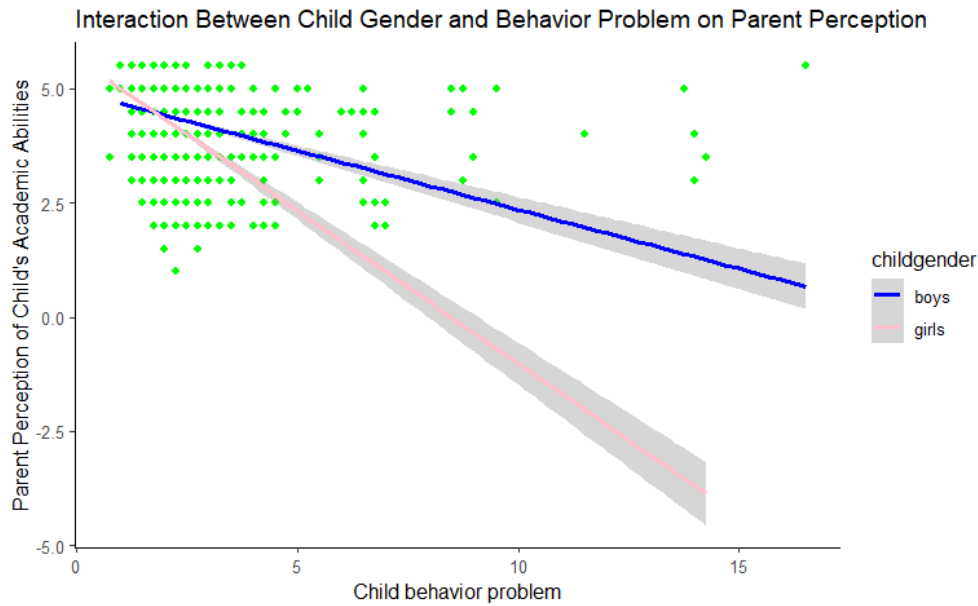


Figure 1. Moderation Effect of Child’s Gender on Child’s Behavior Problem and Parents’ Perception Relation

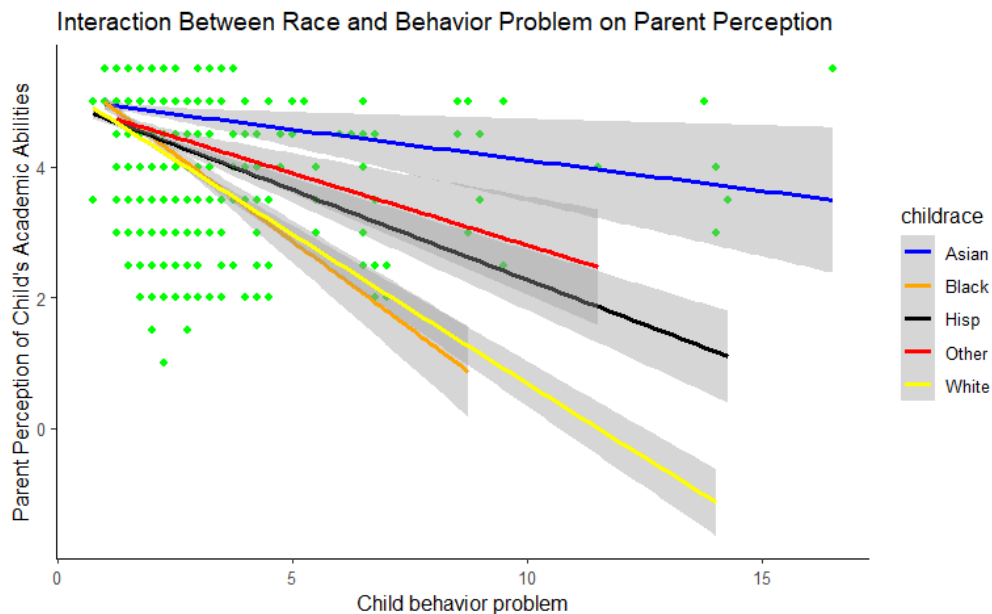


Figure 2. Moderation Effect of Child’s Race on Child’s Behavior Problem and Parents’ Perception Relation

The slope difference analysis showed that child race moderated the relation between child’s behavioral problem and parent’s perception. For Black children, behavioral problem was significantly negatively related to parental perceptions, indicating that higher levels of behavioral issues were associated with more negative views of the child’s academic abilities ($\beta = -4.71, SE = .040, p < .001$). This pattern was also observed for Asian ($\beta = -4.40, SE = .028, p < .001$), Hispanic ($\beta = -4.67, SE = .034, p < .001$), White ($\beta = -4.72, SE = .045, p < .001$), and other races ($\beta = -4.60, SE = .043, p < .001$). The relationship was stronger for Black, White, Hispanic and other race children than for Asian children. In other words, parental perception of child’s academic performance was lower for Black, White, Hispanic and other race children than for Asian children when children experienced behavioral problems at school (see figure 2).

The slope difference analysis showed that family structure moderated the relation between child’s behavioral problem and parent’s perception. For divorced families, child behavioral problem was significantly negatively related to parental perceptions, indicating that higher levels of behavioral problem were associated with more negative views of the child’s academic abilities ($\beta = -4.57, SE = .015, p < .001$). This negative relationship was similarly observed for never married ($\beta = -4.57, SE = .029, p > .05$), separated ($\beta = -4.67, SE = .056, p < .001$), married ($\beta = -4.62, SE = .107, p < .01$), and widowed families ($\beta = -4.66, SE = .031, p < .05$). The relationship was stronger for separated, married and widowed families than divorced families. In other words, parental perception of child’s academic performance was lower for separated, married and widowed families than for divorced families when children experienced behavioral problems at school (see figure 3).

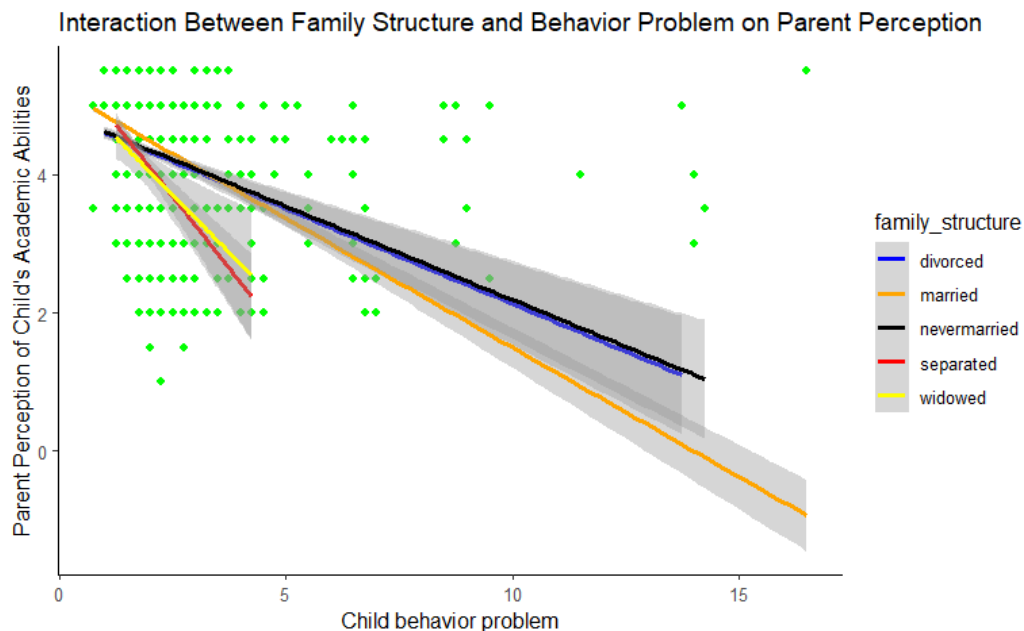


Figure 3. Moderation Effect of Family Structure on Child’s Behavior Problem and Parents’ Perception Relation

4. Discussion

Empirical studies have found that children's behavioral problems can affect parental perception of children's academic abilities. However, research on how individual characteristics and broader sociocultural contexts may interact with a child's behaviors to shape parental perception still falls considerably short. By far, there is no research investigating the differential effect of child's behavioral problems at school on parental perception of child's educational achievement as a function of child's gender, race, and family structure. Examining these nuances is much needed as it may either exacerbate or mitigate the effects of children's behavioral issues and may have long-lasting effects on child development across household and school settings. The present study aims to examine how child's behavioral problem at school predicts parent's perception of child's academic performance and explore how child's behavioral problem interacts with child gender, race and family structure to predict parental perception.

Our first research question investigated the relationship between child's behavioral problems and parental perception of child's academic performance. Findings revealed that child's behavioral problems at school play a significant role in shaping parental perceptions of their academic abilities. Consistent with earlier studies, when children exhibit behavioral problems at school, parents are more likely to view their academic potential negatively (Li et al., 2023). This could further influence how parents support and engage in their child's educational journey and overall developmental process. Therefore, the behavioral problems of children may overshadow their actual academic capabilities in parents' perspectives, potentially causing parents to underestimate their children's abilities (Rutchick et al., 2009). These beliefs and perceptions have been found to negatively affect parent-child relationships and parental involvement (Li et al., 2023; Šimunović & Babarović, 2020). Moreover, it could also affect children's self-fulfilling process. Specifically, parents' lowered perceptions can contribute to child's decreased academic motivation, where child does not feel the need to reach their full potential (Wang et al., 2021). Understanding these dynamics is important for developing interventions that help parents differentiate between children's behavioral problems and their academic potential. Efforts should be made to support the children and provide the resources that they need to succeed in both academic grades and development.

The findings also pose that shaped by child behavioral problems, parental perceptions of children's academic abilities depend on the gender of the child. Specifically, parents less likely connect negative school behavior to negative beliefs pertaining to the male child's academic abilities. Meanwhile, when the child is female, the misbehaviors at school could lead single parents to form less positive opinions on their academic performance. Therefore, girls might have a harsher education environment across school and household settings compared to their male counterparts (Belinskaya et al., 2018).

Both child, parents, and teachers could be subject to stereotyped gender roles. Social role theory can be used to understand these findings, as it posits that societal expectations for male and female roles differ by gender (Eagly & Wood, 2012). Additionally, studies have found that parenting perceptions are influenced by these gendered beliefs about children (Moon &

Hoffman, 2008; Yaremko & Lawson, 2007). While it is possible that parents are subject to stereotyped gender roles, disparities in parental perception by child gender merits further discussion since it could be attributed to various factors. Parents may be more likely to expect a male child to misbehave and therefore may not believe that unruly behavior negatively affects academic abilities. In contrast, parents appear to make an inherent connection between behavior and academic abilities with female children that lead to diminished perception. Parents may expect female children to exhibit model behavior in the classroom and parents may interpret evidence suggesting otherwise as an indication of underlying issues, in this case, lack of academic abilities.

The relationship between behavioral problems and parental perception shows differential effects among different racial groups. Specifically, the relationship was stronger for Black, White, Hispanic and other race children compared to Asian children. This suggests that parents of Black, White, Hispanic and other race children are more likely to view their child's academic performance negatively when behavioral problems are present than Asian parents. These differences reflect underlying cultural, social, or contextual factors that influence how parents of different racial groups interpret and respond to behavioral issues in their children (Yamamoto & Holloway, 2010). The stronger relationship observed for Black children could be influenced by the pervasive impact of racial stereotypes and biases in education, where Black children, particularly boys, are often subject to harsher judgments and lower perceptions from both teachers and parents (Reynolds, 2010). Similarly, for White children, the pronounced negative perception in the presence of behavioral problems could be influenced by the broader societal perceptions of academic success within this group, which may lead to a more critical parental response to behavioral challenges.

Among all racial groups, Asian parents' perceptions of academic abilities are least affected by child's behavioral problems at school. This could be due to generally high educational expectation and authoritative parenting practices of Asian parents, as well as Asian children's actual academic performance resulted from multiple sociocultural factors (e.g., parenting practices, individual efforts, perceived pressures, societal stereotypes and expectations) (Naumann et al., 2012). Yamamoto and Holloway (2010) conducted a systematic review and concluded that Asian parents have highest educational expectation among all racial groups. They also noted that the findings presented mixed results for Hispanic parents' educational perceptions, with some found they have lowest perceptions compared to other racial groups, while some indicated they have higher perceptions than European American and African American parents (Yamamoto & Holloway, 2010). Based on these findings, we suggest both educators and parents consider racial and cultural contexts and be mindful of teaching/parenting behaviors when addressing children's problem behaviors. Tailored interventions and parenting practices need to acknowledge these diverse influences on parental perceptions.

The current study further confirmed that the negative association between behavioral problems and parental perceptions being more pronounced for separated, married and widowed families than divorced families. It indicates that parents in these family structures may be particularly sensitive to their child's behavioral problems at school, leading to more substantial declines in

their perceptions of the child's academic abilities. For widowed families, the compounded effects of grief, emotional strain, and possible economic hardships may intensify the perception of academic difficulties when children exhibit behavioral problems (Biblarz & Gottainer, 2020; Tillman, 2007). Similarly, for separated families, ongoing conflicts or instability may contribute to heightened concerns about the child's behavior and its impact on academic performance (Tillman, 2007).

Interestingly, even in married families, where two-parent households are often seen as providing more stability, parental perceptions of academic performance were lower than in divorced families when children exhibited behavioral problems. This finding suggests that behavioral problems may exert a strong influence on parental perceptions regardless of the presence of two parents in the household. In married families, perceptions for academic success may be higher, and behavioral problems could be perceived as a more serious threat to academic achievement, leading to harsher judgments. In contrast, the relationship, while still significant, was less pronounced in divorced families. This might be explained by the possibility that divorced parents may receive external support, such as cooperative co-parenting arrangements (Lamela et al., 2016) or the use of technology for coparenting communication (Dworkin et al., 2016), that could buffer the negative effects of child's behavioral problems. Future research may further this topic to have a better understanding of the underlying mechanism of child's behavioral problems on parent perception among different family structures.

These findings underscore the importance of considering child gender, race and family structures as moderating factors in the relationship between child behavior at school and parental perceptions. Family dynamics, emotional stress, and available support systems may all play roles in shaping how parents interpret and react to behavioral issues in their children. Future research should explore the specific mechanisms behind the stronger relationships observed in widowed and separated families, such as stress levels, social support, and family cohesion. Additionally, interventions aimed at reducing negative parental perceptions and improving parent-child communication could be particularly beneficial for families with children experiencing behavioral problems, especially in groups where the relationship between behavior and academic perception is strongest.

There are a few limitations to the current study that need to be acknowledged. First, single father families and single mother families were not examined separately. This might limit further insights into the effects of single parent's gender on child's outcomes as well as the interaction effect of single parent's gender and child's gender on child's outcomes. Single fathers, as Bronte-Tinkew et al. (2010) notes, have very different socioeconomic characteristics and parenting styles from single mothers. Second, while the reliabilities of items used in the current study are good, the number of items is relatively limited. Future studies adopting different scales and measurement may have a deeper understanding on teacher's communication of child's problem behaviors and parental perceptions of child academic performance.

The findings of the present investigation contribute to the literature on children's behavioral

problems and parent's perception. Since the relation between child's behavioral problems and parental perception about child's academic performance has not been comprehensively explored, more studies, particularly those that focus on cultural differences are needed so that efficient interventions can be established for specific population or groups of children. Future research might include a wider range of children's characteristics as predictors and other moderators to see if the model holds still or if more interaction effects can be found. Such findings will help raise parents' awareness of the importance of accurate perception about children's academic achievement for the sake of children's education.

Findings implicated child's behavioral problems at school are critical for parents to perceive children's academic abilities. Therefore, schools or school districts should be mindful about the penalty for children's misbehaviors or school reports of child's behavioral problems to parents which may significantly reduce parents' perception of children's academic performance. During the process of teacher-parent communication, parents will gradually form their understanding and perception towards their children's ability and progress in educational settings. Consequently, it is crucial for communications with parents when discussing critical issues about children's behaviors at school to be clear, informative, accurate and thoughtful.

The current study helps teachers and counsellors to be aware of the important role of their communication and constant and quality reports of students' progress to parents to keep them accurately informed of their children's learning. Teachers, practitioners, and counselors should be aware that the impact of child's behavioral problems at school on parental perception differs depending on child's gender, race, and family structure to tailor appropriate and thoughtful communication for different groups of children.

References

- Adams, G. R., & LaVoie, J. C. (1974). The effect of student's sex, conduct, and facial attractiveness on teacher expectancy. *Education, 95*(1).
- Arnold, D. H., Zeljo, A., Doctoroff, G. L., & Ortiz, C. (2008). Parent involvement in preschool: Predictors and the relation of involvement to preliteracy development. *School Psychology Review, 37*(1), 74-90. <https://doi.org/10.1080/02796015.2008.12087910>
- Beckmeyer, J. J., & Russell, L. T. (2018). Family structure and family management practices: Associations with positive aspects of youth well-being. *Journal of Family Issues, 39*(7), 2131-2154. <https://doi.org/10.1177/0192513X17741921>
- Belinskaya, E., Dubovskaya, E., & Tikhomandritskaya, O. (2018). Single-Parent Family As An Institution Of Gender Socialization At Adolescent Age. In S. Sheridan, & N. Veraksa (Eds.), *Early Childhood Care and Education*, vol 43. European Proceedings of Social and Behavioural Sciences (pp. 140-146). Future Academy. <https://doi.org/10.15405/epsbs.2018.07.20>
- Beutel, A. M., & Anderson, K. G. (2008). Race and the educational expectations of parents

- and children: The case of South Africa. *The Sociological Quarterly*, 49(2), 335-361. <https://doi.org/10.1111/j.1533-8525.2008.00118.x>
- Biblarz, T. J., & Gottainer, G. (2000). Family structure and children's success: A comparison of widowed and divorced single - mother families. *Journal of Marriage and Family*, 62(2), 533-548. <https://doi.org/10.1111/j.1741-3737.2000.00533.x>
- Briegel, W., Greuel, J., Stroth, S., & Heinrichs, N. (2019). Parents' perception of their 2–10-year-old children's contribution to the dyadic parent-child relationship in terms of positive and negative behaviors. *International Journal of Environmental Research and Public Health*, 16(7), 1123. <https://doi.org/10.3390/ijerph16071123>
- Bronte-Tinkew, J., & Horowitz, A. (2010). Factors associated with unmarried, nonresident fathers' perceptions of their coparenting. *Journal of Family Issues*, 31(1), 31-65. <https://doi.org/10.1177/0192513X09342866>
- Cheng, S., & Starks, B. (2002). Racial differences in the effects of significant others on students' educational expectations. *Sociology of Education*, 306-327. <https://doi.org/10.2307/3090281>
- Do, T., & Mancillas, A. (2006). Examining the educational expectations of Latino children and their parents as predictors of academic achievement. *Journal of Hispanic Higher Education*, 5(4), 366-377. <https://doi.org/10.1177/1538192706291144>
- Dworkin, J., McCann, E., & McGuire, J. K. (2016). Coparenting in the digital era: Exploring divorced parents' use of technology. In *Divorce, separation, and remarriage: The transformation of family* (Vol. 10, pp. 279-298). Emerald Group Publishing Limited.
- Eagly, A. H., & Wood, W. (2012). Social role theory. In P. A. M. Van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), *Handbook of Theories of Social Psychology* (pp. 458–476). Sage Publications Ltd. <https://doi.org/10.4135/9781446249222.n49>
- Eccles, J. S., Jacobs, J. E., & Harold, R. D. (1990). Gender role stereotypes, expectancy effects, and parents' socialization of gender differences. *Journal of Social Issues*, 46(2), 183-201. <https://doi.org/10.1111/j.1540-4560.1990.tb01929.x>
- Gibson - Davis, C. M. (2008). Family structure effects on maternal and paternal parenting in low - income families. *Journal of Marriage and Family*, 70(2), 452-465. <https://doi.org/10.1111/j.1741-3737.2008.00493.x>
- Hanson, R., and Pugliese, C. (2020). *Parent and Family Involvement in Education: 2019 (NCES 2020-076)*. U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2020076>
- Hao, L., & Bonstead-Bruns, M. (1998). Parent-child differences in educational expectations and the academic achievement of immigrant and native students. *Sociology of Education*, 175-198. <https://doi.org/10.2307/2673201>

- Jones, E. E., & Harris, V. A. (1967). The attribution of attitudes. *Journal of Experimental social psychology*, 3(1), 1-24. [https://doi.org/10.1016/0022-1031\(67\)90034-0](https://doi.org/10.1016/0022-1031(67)90034-0)
- Kohl, G. O., Lengua, L. J., & McMahon, R. J. (2000). Parent involvement in school conceptualizing multiple dimensions and their relations with family and demographic risk factors. *Journal of School Psychology*, 38(6), 501-523. [https://doi.org/10.1016/S0022-4405\(00\)00050-9](https://doi.org/10.1016/S0022-4405(00)00050-9)
- Kremer, K. P., Flower, A., Huang, J., & Vaughn, M. G. (2016). Behavior problems and children's academic achievement: A test of growth-curve models with gender and racial differences. *Children and Youth Services Review*, 67, 95-104. <https://doi.org/10.1016/j.chilyouth.2016.06.003>
- Kurdek, L. A., & Fine, M. A. (1993). The relation between family structure and young adolescents' appraisals of family climate and parenting behavior. *Journal of Family Issues*, 14(2), 279-290. <https://doi.org/10.1177/019251393014002007>
- Lamela, D., Figueiredo, B., Bastos, A., & Feinberg, M. (2016). Typologies of post-divorce coparenting and parental well-being, parenting quality and children's psychological adjustment. *Child Psychiatry & Human Development*, 47, 716-728. <https://doi.org/10.1007/s10578-015-0604-5>
- Li, G., Li, B., Wang, L., Liu, C., & Lu, L. (2023). A longitudinal study on the impact of parental academic support and expectations on students' academic achievement: The mediating role of happiness. *European Journal of Psychology of Education*, 38(2), 801-818. <https://doi.org/10.1007/s10212-022-00608-x>
- Mäntymaa, M., Puura, K., Luoma, I., Salmelin, R. K., & Tamminen, T. (2006). Mother's early perception of her infant's difficult temperament, parenting stress and early mother–infant interaction. *Nordic Journal of Psychiatry*, 60(5), 379-386. <https://doi.org/10.1080/08039480600937280>
- McGrath, E. P., & Repetti, R. L. (2000). Mothers' and fathers' attitudes toward their children's academic performance and children's perceptions of their academic competence. *Journal of Youth and Adolescence*, 29(6), 713-723. <https://doi.org/10.1023/A:1026460007421>
- McLeod, J. D., & Kaiser, K. (2004). Childhood emotional and behavioral problems and educational attainment. *American Sociological Review*, 69(5), 636-658. <https://doi.org/10.1177/000312240406900502>
- Moon, M., & Hoffman, C. D. (2008). Mothers' and Fathers' Differential Expectancies and Behaviors: Parent X Child Gender Effects. *The Journal of Genetic Psychology*, 169(3), 261-280. <https://doi.org/10.3200/gntp.169.3.261-280>
- Naumann, L. P., Guillaume, E. M., & Funder, D. C. (2012). The correlates of high parental academic expectations: An Asian-Latino comparison. *Journal of Cross-Cultural Psychology*, 43(4), 515-520. <https://doi.org/10.1177/0022022112438398>
- O'Brien, R. M. (2007). A caution regarding rules of thumb for variance inflation factors.

Quality & Quantity, 41(5), 673-690. <https://doi.org/10.1007/s11135-006-9018-6>

- Pettit, G. S., Laird, R. D., Dodge, K. A., Bates, J. E., & Criss, M. M. (2001). Antecedents and behavior - problem outcomes of parental monitoring and psychological control in early adolescence. *Child Development*, 72(2), 583-598. <https://doi.org/10.1111/1467-8624.00298>
- Pezdek, K., Berry, T., & Renno, P. A. (2002). Children's mathematics achievement: The role of parents' perceptions and their involvement in homework. *Journal of Educational Psychology*, 94(4), 771-777. <https://doi.org/10.1037/0022-0663.94.4.771>
- Ressler, R. W., Smith, C., Cavanagh, S., & Crosnoe, R. (2017). Mothers' union statuses and their involvement in young children's schooling. *Journal of Marriage and Family*, 79(1), 94-109. <https://doi.org/10.1111/jomf.12374>
- Reynolds, R. (2010). "They think you're lazy," and other messages Black parents send their Black sons: An exploration of critical race theory in the examination of educational outcomes for Black males. *Journal of African American Males in Education (JAAME)*, 1(2), 144-163.
- Riglin, L., Petrides, K. V., Frederickson, N., & Rice, F. (2014). The relationship between emotional problems and subsequent school attainment: a meta-analysis. *Journal of Adolescence*, 37(4), 335-346. <https://doi.org/10.1016/j.adolescence.2014.02.010>
- Ross, L. (1977). The intuitive psychologist and his shortcomings: Distortions in the attribution process. In *Advances in Experimental Social Psychology* (Vol. 10, pp. 173-220). Academic Press. [https://doi.org/10.1016/S0065-2601\(08\)60357-3](https://doi.org/10.1016/S0065-2601(08)60357-3)
- Rutchick, A. M., Smyth, J. M., Lopoo, L. M., & Dusek, J. B. (2009). Great expectations: The biasing effects of reported child behavior problems on educational expectancies and subsequent academic achievement. *Journal of Social and Clinical Psychology*, 28(3), 392-413. <https://doi.org/10.1521/jscp.2009.28.3.392>
- Šimunović, M., & Babarović, T. (2020). The role of parents' beliefs in students' motivation, achievement, and choices in the STEM domain: a review and directions for future research. *Social Psychology of Education*, 23(3), 701-719. <https://doi.org/10.1007/s11218-020-09555-1>
- Stevenson, H. W., Chen, C., & Uttal, D. H. (1990). Beliefs and achievement: A study of Black, White, and Hispanic children. *Child Development*, 61(2), 508-523. <https://doi.org/10.1111/j.1467-8624.1990.tb02796.x>
- Stull, J. C. (2013). Family socioeconomic status, parent expectations, and a child's achievement. *Research in Education*, 90(1), 53-67. <https://doi.org/10.7227/RIE.90.1.4>
- Sulyok, R. S., & Miklósi, M. (2022). The Moderator Role of Gender In The Relationship Between Behavioral Inhibition And Parental Behaviour In Preschool Children. *European Psychiatry*, 65(S1), S853-S854. <https://doi.org/10.1192/j.eurpsy.2022.2211>

- Tillman, K. H. (2007). Family structure pathways and academic disadvantage among adolescents in stepfamilies. *Sociological Inquiry*, 77(3), 383-424. <https://doi.org/10.1111/j.1475-682X.2007.00198.x>
- Trusty, J. (1998). Family influences on educational expectations of late adolescents. *The Journal of Educational Research*, 91(5), 260-271. <https://doi.org/10.1080/00220679809597553>
- Wang, G., Zhang, S., & Cai, J. (2021). How are parental expectations related to students' beliefs and their perceived achievement?. *Educational Studies in Mathematics*, 108(3), 429-450. <https://doi.org/10.1007/s10649-021-10073-w>
- Yamamoto, Y., & Holloway, S. D. (2010). Parental expectations and children's academic performance in sociocultural context. *Educational Psychology Review*, 22, 189-214. <https://doi.org/10.1007/s10648-010-9121-z>
- Yaremko, S. K., & Lawson, K. L. (2007). Gender, Internalization of Expressive Traits, and Expectations of Parenting. *Sex Roles*, 57(9-10), 675-687. <https://doi.org/10.1007/s11199-007-9301-6>

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