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ABSTRACT

Do Parents Expect Too Much or Is It All about Grades? The Discrepancy between Parents' Aspirations and Child's Academic Performance, and Parental Satisfaction with the School

Schooling is related to health and future labor market outcomes. The school parents choose for their children often depends on feedback received from other parents. Therefore it is important to understand whether parental satisfaction with the school depends only on objective measures of the quality of the school. We examine the association between children's academic performance, parents' aspirations, the mismatch between the two, and parents' satisfaction with different aspects of children's schooling. The findings suggest that excellent academic performance of the child is associated with higher parental satisfaction, regardless of parents' aspirations. High expectations accompanied by low performance are negatively related to parental satisfaction with all aspects of children's schooling. The results have implications related to school rankings and the significance of parental school reviews.

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1. Introduction

Schooling is associated with higher future earnings (Belfield and Bailey 2017), better health (Blanchflower and Oswald 2004, Chevalier and Feinstein 2006, Grossman 2006, Groot and Maassen van den Brink 2007, Cutler and Lleras-Muney 2010), healthy behaviors (Lawrence 2017), labor market (Heckman 2000) and social outcomes (Ma and Welch 2016). As such, it is important for parents to feel confident about the quality of the school their children attend.

Prior literature finds that predictors of parental satisfaction with their children's school include school performance (Charbonneau and Van Ryzin 2012), test-based progress of the child (Gibbons and Silva 2011), parents' involvement, adequate school communication with the parents, academic success, teachers' involvement and quality, school resources, budget management, safety and environment (Friedman et al. 2007, Hausman and Goldring 2000, Bond and King 2003, Ham et al. 2003). Teacher likeability, educational performance, social and academic climate in the classroom are also positively related to satisfaction with the school (Verkuyten and Thijs 2002).

However, it is possible that parental satisfaction with the school might not be solely dependent on the school characteristics that are expected to similarly influence the opinion of all parents whose children attend a given school. We therefore contribute to the literature by testing the hypothesis that parental satisfaction also depends on the child's academic performance, parents' aspirations, and the discrepancy between the two. Specifically, we explore the effect of parents' expectations for the child's future education and child's grades on parental satisfaction with the school, teachers, academic standards, discipline and order, and staff – parent interaction. We also examine whether high parental expectations about the child's future education accompanied by low grades of the child make parents more dissatisfied with the forementioned measures of the quality of the school. To the best of our knowledge, previous literature has not explored the impact of the discrepancy between parental aspirations and child academic performance on parents' satisfaction with such an extensive list of aspects of schooling.

We find that parents whose children earn primarily A's are more likely to be satisfied with all measures of parental satisfaction with children's schooling than parents whose children earn mainly lower grades, regardless of parents' expectations about the future education of the child. However, earning mainly C's and lower grades while the parents expect that the child would obtain a Bachelor's or higher degree is negatively associated with parental satisfaction with all aspects of children's schooling. The result is mainly driven by families in the lower end of the income distribution but the differences in the effects are negligible based on parental education.

This study raises concerns about the significance of parental reviews about schools that might not be providing academic preparation of adequate quality to the students despite the excellent grades children earn. Our findings also have implications for school rankings based on factors different from standardized tests and alumni's post-graduation performance.

The remainder of this paper is structured as follows. Section 2 specifies the model. We discuss the data and present summary statistics in Section 3. Section 4 provides the results. In Section 5, we discuss the policy implications of the study and conclude the paper.

2. Empirical strategy

Because the dependent variables used in this analysis are categorical, we estimate ordered Logit models as follows:

$$\Pr(Satisfaction_i = j|X_i) = \Pr(\rho_{j-1} < Satisfaction_i^* \leq \rho_j) = \Lambda(\rho_j - \textbf{\textit{Interactions}}_i'\boldsymbol{\alpha} + X'\beta) - \Lambda(\rho_{j-1} - \textbf{\textit{Interactions}}_i'\boldsymbol{\alpha} + X'\beta) \tag{1}$$

In this specification, the outcomes $Satisfaction$ include parental satisfaction with the school, teachers, academic standards, discipline and staff interaction with the parents. Each outcome can take one of four ordered values j: vary satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied. The model assumes proportional odds. The set of explanatory variables $\textbf{\textit{Interactions}}$ includes interaction terms of dummies capturing parental aspirations regarding child's educational attainment (i.e., expect at most a high school diploma, some college, a Bachelors' degree, or a graduate degree) and indicators of the academic performance of the child (i.e., earning mostly A's, mostly B's, or mostly C's and lower grades). To prevent perfect multicollinearity, we omit the highest expectations (i.e., expect the child to obtain a graduate degree) – highest grades (i.e., mostly A's) interaction. In equation (1), X is a vector of conditioning variables for individual i that includes an indicator for a female child, a dummy variable for attending a private school, age of the child, number of children in the family, an indicator denoting whether the respondent is the mother, indicators capturing whether the mother is currently employed, whether the father is currently employed, whether the parents are married, and dummy variables for Hispanic, Black and child at bad health. The vector of regression parameters of interest that we estimate is $\boldsymbol{\alpha}$. The function Λ is a cumulative standard logistic distribution function (cdf), and ρ_{j-1} and ρ_j are threshold parameters from a latent variable model $Satisfaction_i^* = \textbf{\textit{Interactions}}_i'\alpha + X'\beta + \varepsilon_i$, i.e., $Satisfaction_i = j$ if $\rho_{j-1} < Satisfaction_i^* \leq \rho_j$. Here, ε_i is an error term depicting measurement errors and transitory shocks that can influence the outcome. Marginal effects are also estimated.

Although in our main specification, we use an ordered logistic regression analysis, we verify the marginal effects using ordered Probit. To further examine specifically the relationship between the discrepancy between expectations and current performance, we also investigate a specification in which instead of all interaction terms, we create a dichotomous variable equal to 1 if the responding parent expects that the child will obtain a BA or a graduate degree whereas the child earns mostly C's and lower grades.

We also explore whether the effects vary depending on parental education. This is likely if parents with different educational attainment are intrinsically more or less satisfied with children's school, teachers, and so on.

To check the sensitivity of the findings to household income and household type (i.e., single parent versus traditional family), we estimate the major regressions in subsamples of families within different household income brackets and separately, in a subsample of single parents. As a final robustness experiment, we distinguish between birth/adoptive and step/foster parents.

3. Data

Repeated cross-sectional data for this study are extracted from three waves of the Parent and Family Involvement in Education (PFI) survey, collected in 2012, 2016 and 2019. PFI is part of the National Household Education Survey (NHES). The U.S. Census Bureau conducts the survey on behalf of the National Center for Education Research (NCES) within the US Department of Education. They ask a nationally representative sample of randomly selected parents of children in kindergarten through grade 12 (17,563 observations in 2012, 14,075 in 2016, and 16,446 in 2019), about school choice, educational experiences, parental involvement in child's education, homework and activities. Prior to 2012, the survey was administered over the phone. Starting in 2012, NCES transitioned to mail surveys. Due to the data collection method, we chose to utilize data from 2012 onward (NCES 2021).

Data are presented at child level. PFI contains variables eliciting information about the respondents' satisfaction with the school, teachers, academic standards, discipline, and school staff – parent interaction. Specifically, respondents were asked the following survey question: "How satisfied or dissatisfied are you with each of the following," and the categories include "the school the child attends this year," "the teacher this child has this year," "the academic standards of the school," "the order and discipline at the school," and "the way that school staff interacts with parents." The values these satisfaction variables can take are very satisfied, somewhat satisfied, somewhat dissatisfied, and very dissatisfied. These variables serve as outcomes in this research.

Because parental satisfaction is of interest in this study, we use only observations where the respondent is a birth, adoptive, step or foster mother or father. We also exclude observations where both parents are listed as mothers, or both are listed as fathers. This leaves a sample of 42,304 observations, out of which 15,306, 12,565 and 14,433 individuals are interviewed in 2012, 2016 and 2019, respectively.

The variables of interest provide information about parents' expectations about the future educational attainment of the child and the current grades of the child as an indication of the child's current performance. Parents' expectations are extracted from the survey question "How far do you expect this child to go in his/her education?". Child's current educational performance is elicited from the question "Please tell us about this child's grades during this school year. Overall, across all subjects, what grades does this child get?" We distinguish between four categories of parental aspirations about child's (highest) future education: high school or lower education (exp1), vocational/technical school (after high school) or some college (exp2), completed Bachelor's (BA) degree (exp3), and graduate or professional degree (exp4). In our study, child's grades belong to one of the following categories: mostly A's, mostly B's, or mostly C's or lower grades. We additionally drop observations where the question about child's grades has been skipped or the school does not give these grades. The remaining number of observations is 36,119 (13,236 in 2012, 10,629 in 2016, and 12,256 in 2019).

Other information necessary for our analysis that PFI provides includes the type of school (private versus public) the child attends, child's health status, gender, age, race and ethnicity, parent's employment status, highest educational attainment, marital status, gender of the respondent, number of children in the family, and household income bracket. A complete list of the variables used in this research and their descriptions are available in Appendix A1.

Table 1 provides summary statistics (dependent variables in Panel A, main explanatory variables in Panel B, and controls and other variables used in the analysis in Panel C). Parental satisfaction with different aspects of children's schooling is primarily high, i.e., between 50.6% and 59.7% of the parents report that they are very satisfied with each aspect of schooling. Satisfaction with the school the child attends and satisfaction with the interaction of the school staff with the parents rank, respectively, the highest and the lowest in terms of percentage of very satisfied parents. Fewer parents are somewhat satisfied, followed by somewhat dissatisfied. Between 1.5% and 3.4% of the respondents are very dissatisfied with each of the considered satisfaction measures.

The statistics of parents' expectations show that 42.6% of the parents expect that their child will obtain a graduate or professional degree, followed by 32.3% hoping for a Bachelor's (BA) degree, and 19.2% and 5.9% expecting some college/ vocational/ technical school, and high school or lower education, respectively. More than half of the children in the analysis (54.4%) earn mostly A's, 33.1% earn mostly B's, and 12.5% have primarily C's or lower grades.

Table 1. Summary statistics

Variable	Mean/Frequency	Std. deviation
Panel A. Dependent variables		
Satisfaction with the school the child attends this year		
Very satisfied	0.597	
Somewhat satisfied	0.325	
Somewhat dissatisfied	0.057	
Very dissatisfied	0.021	
Satisfaction with the teacher this child has this year		
Very satisfied	0.569	
Somewhat satisfied	0.355	
Somewhat dissatisfied	0.061	
Very dissatisfied	0.015	
Satisfaction with the academic standards of the school		
Very satisfied	0.590	
Somewhat satisfied	0.334	
Somewhat dissatisfied	0.057	
Very dissatisfied	0.019	
Satisfaction with the order and discipline at the school		
Very satisfied	0.578	
Somewhat satisfied	0.319	
Somewhat dissatisfied	0.072	
Very dissatisfied	0.031	
Satisfaction with the way that school staff interacts with parents		
Very satisfied	0.506	
Somewhat satisfied	0.365	
Somewhat dissatisfied	0.095	
Very dissatisfied	0.034	
Panel B. Main variables of interest		
Parents' expectations about child's future education		

High school or lower education	0.059	
Vocational/technical school (after high school) or some college	0.192	
Bachelor's (BA) degree	0.323	
Graduate or professional degree	0.426	
Child's grades		
Mostly A's	0.544	
Mostly B's	0.331	
Mostly C's or lower	0.125	

Panel C. Control variables and variables used in subsample analyses

Private school (private = 1, public = 0)	0.115	0.319
Female child (girl = 1, boy = 0)	0.487	0.500
Female respondent (mother = 1, father = 0)	0.697	0.460
Single parent	0.259	0.438
Child's age	12.667	3.535
Number of children	2.069	0.959
Mother's employment status (employed = 1, not = 0)	0.746	0.435
Father's employment status (employed = 1, not = 0)	0.909	0.287
Parents' marital status (married = 1, not = 0)	0.702	0.457
Black child	0.095	0.293
Hispanic child	0.212	0.408
Child's health below very good (below very good = 1, very good or excellent = 0)	0.111	0.314
Mother's highest education		
High school or lower education	0.217	
Vocational/technical school (after high school) or some college	0.323	
Bachelor's (BA) degree	0.272	
Graduate or professional degree	0.188	
Father's highest education		
High school or lower education	0.257	
Vocational/technical school (after high school) or some college	0.294	
Bachelor's (BA) degree	0.249	
Graduate or professional degree	0.200	
Household income bracket		
Up to $20,000	0.115	
$20,001 – 50,000	0.227	
$50,001 – 75,000	0.158	
$75,001 – 100,000	0.146	
$100,001 – 150,000	0.171	
Above $150,000	0.183	

Notes: The source of the data are the 2012, 2016 and 2019 waves of the Parent and Family Involvement in Education (PFI) survey.

In the sample, 11.5% of the children attend private schools, 48.7% of the students are girls, and children's mean age is 12.7. About 9.5% of the children are Black, and 21.2% of them are Hispanic. More than 90% of the children enjoy excellent of very good health. The average number of children in the participating families is 2.07. Most of the responding parents are mothers (69.7%), and 25.9% are single parents. About 70% of the parents are married. Employed mothers and fathers represent 74.6% and 90.9% of the sample, respectively.

The summary statistics for parental education indicate that 32.3%, 27.2%, 21.7% and 18.8% of the mothers have some college, BA degree, high school or lower education, and a graduate degree, correspondingly. Similarly, 29.4%, 25.7%, 24.9% and 20% of the fathers have some college, high school or lower education, a BA degree, and a graduate degree, respectively. Finally, the families belonging to each of the household income brackets considered in this study are as follows: 11.5% have below $20,000; 22.7% between $20,001 and $50,000; 15.8% between $50,001 and $75,000; 14.6% between $75,001 and $100,000; 17.1% between $100,001 and $150,000; and 18.3% above $150,000.

4. Results

We report the results from the first set of main regressions in Table 2. Each column contains the results from a regression on one of the measures of parental satisfaction with child's schooling. Marginal effects on the likelihood of being very satisfied with the school, teachers, academic standards, discipline and staff-parent interaction, after ordered logit regressions are reported in square parentheses. The results are indicative of the importance of children's grades for parental satisfaction. Specifically, all interaction terms of an indicator denoting that the child earns mostly A's with any indicator of parental expectations about child's future educational attainment are statistically insignificant determinants of parental satisfaction. In contrast, interactions of dummies denoting that the child earns mostly B's or C's or lower grades with any parental expectation are highly statistically significant and adversely affect parental satisfaction. Moreover, the lower the grades, the lower the level of parental satisfaction, while given similar grades, differences in expectations change the adverse effect only slightly. For example, earning mostly B's while expecting the child to obtain at most a high school diploma, some college, a BA degree, and a graduate degree is associated with a reduction in the likelihood of being satisfied with the school by 12.1%, 12.3%, 10.6%, and 11%, respectively. The same effects when the child earns mostly C's or lower scores become 36.6%, 27.2%, 23.7% and 33.7%. The trends are similar for other parental satisfaction outcomes. For satisfaction with the teachers, having mostly B's and mostly C's or lower grades while having low expectations about the child's future educational attainment predicts a reduction in the likelihood of being very satisfied with the child's teachers by 14% and 31.6%, respectively. These effects are only slightly different for higher expectations but again, statistically significant at any significance level. The probabilities that the parents are satisfied with the academic standards of the child's school, discipline and staff-parent interaction are affected similarly. All results are available in Table 2.

Other findings presented in the table indicate that attending a private school is associated with higher likelihood of being very satisfied with any of the school features of interest. Mothers, parents of younger children, parents of girls, and those whose child's health is less than very good are less likely to be very satisfied with any school feature, but the effects are economically small although they are highly

statistically significant. Marital status, mother's employment status, and ethnicity (i.e., Hispanic or not) do not have a statistically significant impact on parental satisfaction outcomes.

Table 2. Effect of expectations and performance on satisfaction: Coefficients and marginal effects

Variable	Parental satisfaction outcomes				
	School	Teacher	Academic standards	Order and discipline	Interaction
Expect high school or less * Grade A	-0.126	-0.162	0.088	0.132	-0.090
	(0.181)	(0.209)	(0.186)	(0.208)	(0.205)
	[0.027]	[0.035]	[0.020]	[-0.030]	[0.021]
Expect high school or less * Grade B	0.565***	0.649***	0.456***	0.485***	0.252*
	(0.157)	(0.146)	(0.159)	(0.157)	(0.148)
	[-0.121***]	[-0.140***]	[-0.102***]	[-0.109***]	[-0.058*]
Expect high school or less * Grade C or lower	1.172***	1.464***	1.359***	1.259***	1.119***
	(0.157)	(0.161)	(0.149)	(0.163)	(0.151)
	[-0.366***]	[-0.316***]	[-0.303***]	[-0.282***]	[-0.259***]
Expect some college * Grade A	0.033	-0.078	0.016	0.231***	0.166**
	(0.085)	(0.083)	(0.084)	(0.082)	(0.082)
	[-0.007]	[0.017]	[-0.004]	[-0.052***]	[-0.038**]
Expect some college * Grade B	0.575***	0.566***	0.550***	0.511***	0.387***
	(0.072)	(0.081)	(0.074)	(0.077)	(0.068)
	[-0.123***]	[-0.122***]	[-0.123***]	[-0.115***]	[-0.089***]
Expect some college * Grade C or lower	1.274***	1.142***	0.981***	0.849***	0.824***
	(0.104)	(0.097)	(0.101)	(0.098)	(0.104)
	[-0.272***]	[-0.246***]	[-0.219***]	[-0.190***]	[-0.190***]
Expect BA * Grade A	-0.023	0.044	0.040	0.094*	0.031
	(0.054)	(0.051)	(0.052)	(0.051)	(0.048)
	[0.005]	[-0.009]	[-0.009]	[-0.021*]	[-0.007]
Expect BA * Grade B	0.497***	0.584***	0.379***	0.379***	0.328***
	(0.060)	(0.060)	(0.061)	(0.058)	(0.058)
	[-0.106***]	[-0.126***]	[-0.084***]	[-0.085***]	[-0.076***]
Expect BA * Grade C or lower	1.108***	1.059***	0.934***	0.664***	0.696***
	(0.143)	(0.122)	(0.122)	(0.114)	(0.117)
	[-0.237***]	[-0.228***]	[-0.208***]	[-0.149***]	[-0.161***]
Expect a graduate degree * Grade B	0.517***	0.577***	0.424***	0.320***	0.386***
	(0.069)	(0.067)	(0.068)	(0.068)	(0.065)
	[-0.110***]	[-0.124***]	[-0.095***]	[-0.072***]	[-0.089***]
Expect a graduate degree * Grade C or lower	1.576***	1.568***	1.207***	1.253***	1.001***
	(0.181)	(0.150)	(0.137)	(0.127)	(0.144)
	[-0.337***]	[-0.338***]	[-0.269***]	[-0.281***]	[-0.231***]
Private school	-0.926***	-0.665***	-0.960***	-1.038***	-0.881***
	(0.065)	(0.057)	(0.065)	(0.066)	(0.058)
	[0.179***]	[0.135***]	[0.194***]	[0.210***]	[0.195***]
Female child	0.093**	0.137***	0.019	0.077**	0.050
	(0.038)	(0.037)	(0.037)	(0.037)	(0.035)

	[-0.020**]	[-0.029***]	[-0.004]	[-0.017**]	[-0.012]
Child's age	0.044***	0.097***	0.034***	0.060***	0.086***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.005)
	[-0.009***]	[-0.021***]	[-0.007***]	[-0.013***]	[-0.020***]
Number of children	-0.021	-0.059***	0.0003	0.003	-0.036*
	(0.021)	(0.020)	(0.021)	(0.039)	(0.020)
	[0.004]	[0.013***]	[-0.0001]	[-0.001]	[0.008*]
Female respondent	0.142***	0.062	0.077**	0.120***	0.100***
	(0.040)	(0.038)	(0.039)	(0.039)	(0.037)
	[-0.030***]	[-0.013]	[-0.017**]	[-0.027***]	[-0.023***]
Employed mother	-0.045	0.021	-0.046	0.023	0.024
	(0.045)	(0.044)	(0.043)	(0.043)	(0.042)
	[0.010]	[-0.004]	[0.010]	[-0.005]	[-0.006]
Employed father	-0.142**	0.027	-0.128*	-0.173**	-0.082
	(0.071)	(0.072)	(0.069)	(0.073)	(0.068)
	[0.031**]	[-0.006]	[0.029*]	[0.039**]	[0.019]
Married parents	-0.020	0.012	-0.078	-0.017	-0.052
	(0.088)	(0.088)	(0.079)	(0.085)	(0.083)
	[0.004]	[-0.003]	[0.018]	[0.004]	[0.012]
Black child	0.319***	0.201***	0.103	0.125	0.054
	(0.077)	(0.076)	(0.078)	(0.078)	(0.072)
	[-0.070***]	[-0.044***]	[-0.023]	[-0.028]	[-0.013]
Hispanic child	-0.066	-0.058	-0.024	-0.079	-0.024
	(0.050	(0.051)	(0.049)	(0.049)	(0.046)
	[0.014]	[0.012]	[0.005]	[0.018]	[0.006]
Child's health below very good	0.505***	0.373***	0.372***	0.355***	0.321***
	(0.065)	(0.062)	(0.061)	(0.062)	(0.060)
	[-0.113***]	[-0.083***]	[-0.085***]	[-0.082***]	[-0.075***]
Observations	26,725	26,725	26,725	26,725	26,725
R-squared	0.0554	0.0582	0.0389	0.0393	0.0405

Notes: Estimates are obtained from ordered Logit regressions of different measures of satisfaction with child schooling on parental aspirations and child's current academic performance and a set of controls. Robust standard errors are provided in parentheses. Marginal effects on the likelihood of being very satisfied with each measure of parental satisfaction with child schooling are presented in square brackets. *** Significant at 1% level. ** Significant at 5% level. * Significant at 10% level.

In Table 3, we investigate the effect of high parental expectations (i.e., expecting that the child would earn a BA or higher degree) combined with low performance of the child at school (i.e., earning mostly C's and lower grades) on the previously considered parental satisfaction outcomes. Marginal effects on the likelihood of reporting high satisfaction are presented in square parentheses again. All effects are consistent with our previous results, are highly statistically and quantitatively significant. High expectations combined with low performance are associated with 20.5%, 19.8%, 16.9%, 14% and 13.3% reduction in the likelihood of being very satisfied with the school, teachers, academic standards, discipline and staff-parent interaction, correspondingly. This implies that a discrepancy between aspirations and actual performance

has an adverse impact on parental satisfaction. Provided the previous results presented in Table 2, low grades are likely to be the main driver of this negative effect.

This adverse effect is consistent with the findings of previous studies that show that shared expectations between children and parents improve children's academic performance, while larger differences are associated with worse performance (Hao and Bonstead-Bruns 1998), even though parents' expectations themselves do not influence children's performance (Goldenberg et al. 2001).

Table 3. Effect of high expectations and low performance on satisfaction: Coefficients and marginal effects

Variable	Parental satisfaction outcomes				
	School	Teacher	Academic standards	Order and discipline	Interaction
Expect BA or a graduate degree whereas grades are mostly C's or lower	0.929***	0.891***	0.741***	0.614***	0.570***
	(0.112)	(0.096)	(0.092)	(0.087)	(0.092)
	[-0.205***]	[-0.198***]	[-0.169***]	[-0.140***]	[-0.133***]
Private school	-1.007***	-0.739***	-1.025***	-1.101***	-0.941***
	(0.064)	(0.056)	(0.065)	(0.066)	(0.058)
	[0.198***]	[0.153***]	[0.208***]	[0.224***]	[0.210***]
Female child	-0.026	0.023	-0.073**	-0.006	-0.021
	(0.038)	(0.037)	(0.037)	(0.037)	(0.035)
	[0.006]	[-0.005]	[0.017**]	[0.001]	[0.005]
Child's age	0.059***	0.110***	0.046***	0.070***	0.095***
	(0.006)	(0.006)	(0.005)	(0.005)	(0.005)
	[-0.013***]	[-0.025***]	[0.011***]	[-0.016***]	[-0.023***]
Number of children	-0.006	-0.048**	0.013	0.014	-0.027
	(0.021)	(0.020)	(0.021)	(0.021)	(0.020)
	[0.001]	[0.011**]	[0.003]	[-0.003]	[0.006]
Female respondent	0.179***	-0.095**	0.109***	0.152***	0.126***
	(0.040)	(0.038)	(0.039)	(0.039)	(0.037)
	[-0.039***]	[-0.021**]	[-0.025***]	[-0.035***]	[-0.029***]
Employed mother	-0.063	0.009	-0.059	0.010	0.014
	(0.044)	(0.043)	(0.043)	(0.043)	(0.042)
	[0.014]	[-0.002]	[0.013]	[-0.002]	[-0.003]
Employed father	-0.240***	-0.067	-0.209***	-0.242***	-0.143**
	(0.068)	(0.068)	(0.067)	(0.071)	(0.067)
	[0.054***]	[0.015]	[0.048***]	[0.056***]	[0.034**]
Married parents	-0.140*	-0.092	-0.171**	-0.100	-0.121
	(0.084)	(0.085)	(0.079)	(0.084)	(0.082)
	[0.031*]	[0.021]	[0.040**]	[0.023]	[0.028]
Black child	0.418***	0.299***	0.176**	0.174**	0.124*
	(0.075)	(0.074)	(0.077)	(0.077)	(0.071)
	[-0.096***]	[-0.068***]	[-0.041**]	[-0.040**]	[-0.029*]
Hispanic child	-0.004	0.008	0.019	-0.055	0.014
	(0.049)	(0.050)	(0.048)	(0.048)	(0.046)

	[0.001]	[-0.002]	[-0.004]	[0.013]	[-0.003]
Child's health below very good	0.683***	0.533***	0.519***	0.493***	0.445***
	(0.062)	(0.060)	(0.058)	(0.059)	(0.058)
	[-0.159***]	[0.123***]	[-0.123***]	[-0.116***]	[-0.105***]
Observations	26,725	26,725	26,725	26,725	26,725
R-squared	0.0350	0.0402	0.0264	0.0300	0.0328

Notes: Estimates are obtained from ordered Logit regressions of different measures of satisfaction with child schooling on an indicator of high parental aspirations (i.e., expect a BA or a graduate degree) whereas child's current grades are mostly C's or lower, and a set of controls. The following are the conditioning variables: an indicator for a female child, a dummy variable for attending a private school, age of the child, number of children in the family, an indicator denoting whether the respondent is the mother, indicators capturing whether the mother is currently employed, whether the father is currently employed, whether the parents are married, and dummy variables for Hispanic, Black and child at bad health. Robust standard errors are provided in parentheses. Marginal effects on the likelihood of being very satisfied with each measure of parental satisfaction with child schooling are presented in square brackets. *** Significant at 1% level. ** Significant at 5% level. * Significant at 10% level.

Tables 4 and 5 are devoted to subsample analyses by parental educational attainment and household income bracket, respectively. Table 4 suggests that regardless of the education of the parents, the discrepancy between expectations and children's performance has a highly statistically significant adverse effect on parental satisfaction with child's schooling. The largest negative effects of the aspirations – performance mismatch on satisfaction with the school, the teachers, the academic standards, and the interaction of the school staff with the parents, are observed in the subsample of mothers with a graduate degree. The largest impact of the discrepancy on satisfaction with the discipline in the school is extracted from the subsample of mothers with BA degrees, followed by fathers with some college and mothers with graduate degrees (but the differences between these subsamples are less than 1%).

Table 4. Subsample analysis by parental education: Marginal effects of high expectations and low performance on the likelihood of being very satisfied with child schooling

	Parental satisfaction outcomes				
	School	Teacher	Academic standards	Order and discipline	Interaction
Panel A. Mother's education: High school or lower					
Expect BA or a graduate degree whereas grades are mostly C's or lower	0.652***	0.625***	0.574***	0.532***	0.419**
	(0.242)	(0.174)	(0.167)	(0.167)	(0.169)
	[-0.147***]	[-0.141***]	[-0.134***]	[-0.124***]	[-0.099**]
	5,408	5,408	5,408	5,408	5,408
Panel B. Mother's education: Technical or vocational degree after high school or some college					
Expect BA or a graduate degree whereas grades are mostly C's or lower	0.955***	0.918***	0.897***	0.526***	0.536***
	(0.168)	(0.151)	(0.150)	(0.134)	(0.141)
	[-0.220***]	[-0.109***]	[-0.209***]	[-0.124***]	[-0.126***]
	8,164	8,164	8,164	8,164	8,164
Panel C. Mother's education: Bachelor's degree					

Expect BA or a graduate degree whereas grades are mostly C's or lower	1.161*** (0.193) [-0.241***]	1.151*** (0.216) [-0.145***]	0.738*** (0.190) [-0.159***]	0.816*** (0.185) [-0.178***]	0.731*** (0.206) [-0.168***]
	7,810	7,810	7,810	7,810	7,810

Panel D. Mother's education: Graduate degree

Expect BA or a graduate degree whereas grades are mostly C's or lower	1.380*** (0.218) [-0.286***]	1.248*** (0.231) [-0.269***]	1.006*** (0.215) [-0.218***]	0.823*** (0.224) [-0.174***]	0.999*** (0.222) [-0.231***]
	5,343	5,343	5,343	5,343	5,343

Panel E. Father's education: High school or lower

Expect BA or a graduate degree whereas grades are mostly C's or lower	0.809*** (0.209) [-0.184***]	0.756*** (0.159) [-0.171***]	0.729*** (0.159) [-0.171***]	0.533*** (0.148) [-0.125***]	0.498*** (0.154) [-0.117***]
	6,840	6,840	6,840	6,840	6,840

Panel F. Father's education: Technical or vocational degree after high school or some college

Expect BA or a graduate degree whereas grades are mostly C's or lower	1.067*** (0.157) [-0.243***]	1.039*** (0.168) [-0.234***]	0.872*** (0.146) [-0.199***]	0.755*** (0.131) [-0.175***]	0.728*** (0.141) [-0.171]
	7,762	7,762	7,762	7,762	7,762

Panel G. Father's education: Bachelor's degree

Expect BA or a graduate degree whereas grades are mostly C's or lower	0.979*** (0.180) [-0.205***]	0.952*** (0.184) [-0.205***]	0.599*** (0.175) [-0.132***]	0.488*** (0.174) [-0.107***]	0.432** (0.204) [-0.099**]
	6,712	6,712	6,712	6,712	6,712

Panel H. Father's education: Graduate degree

Expect BA or a graduate degree whereas grades are mostly C's or lower	0.921*** (0.267) [-0.189***]	0.865*** (0.241) [-0.186***]	0.567** (0.240) [-0.122**]	0.719*** (0.256) [-0.151***]	0.632** (0.258) [-0.146**]
	5,411	5,411	5,411	5,411	5,411

Notes: Estimates are obtained from ordered Logit regressions of different measures of satisfaction with child schooling on an indicator of high parental aspirations (i.e., expect a BA or a graduate degree) whereas child's current grades are mostly C's or lower, and a set of controls, conditional on different levels of education of the parents. The following are the conditioning variables: an indicator for a female child, a dummy variable for attending a private school, age of the child, number of children in the family, an indicator denoting whether the respondent is the mother, indicators capturing whether the mother is currently employed, whether the father is currently employed, whether the parents are married, and dummy variables for Hispanic, Black and child at bad health. Robust standard errors are provided in parentheses. Marginal effects on the likelihood of being very satisfied with each measure of parental satisfaction with child schooling are presented in square brackets. *** Significant at 1% level. ** Significant at 5% level. * Significant at 10% level.

We also estimate the effects of all interaction terms of various expectations and current grades (as in the first main specification) but conditional on different highest education of the mother and separately the father of the child. The significance, signs and ranking of the effects are consistent with our previous

findings. Because of the sizes of the tables showing these effects, these results are available upon request. One difference is worth mentioning. Specifically, for mothers with a BA degree, having low expectations while the child earns mostly A's is associated with an increase in the likelihood of being very satisfied with the school by 27.68% although other effects are similar to before.

An identical analysis in a subsample of families in which both parents are birth or adoptive parents of the child of interest produces results identical in signs, significance and magnitude. More precisely, none of the effects differs from the previous effects of interest reported in Table 4 by more than 3%. The previous results presented in Table 4 seem to be driven by this subsample of parents as the subsample of families in which both parents are step or foster parents consists of only 41 observations, making the results unreliable. Estimations in a subsample of families in which one of the parents is a birth or an adoptive parent while the other one is a step or a foster parent leads to slightly different findings. Using the latter sample, having high expectations while the child has low grades has an insignificant effect on parental satisfaction with the school, the academic standards, the discipline, and the interaction of the staff with the parents, and makes it less likely to be very satisfied with the teachers (but the effect is smaller than that in the entire sample). The results from the subsample analyses by type of parents are available upon request.

Next, the results from subsample analysis by household income level presented in Table 5 confirm the previous results. They are quite robust to the choice of household income bracket in that the effects of the mismatch between aspirations and performance on parental satisfaction vary only slightly when we consider different subsamples based on income. An exception that stands out is that the effect of the fore-mentioned discrepancy on parental satisfaction with the academic standards at the school is mainly driven by families in the lowest end of the income distribution. A potential explanation of this result is the possibility that low-income parents might be able to afford only lower-quality schools they are not satisfied with.

Table 5. Subsample analysis by household income: Marginal effects of high expectations and low performance on the likelihood of being very satisfied with child schooling

	Parental satisfaction outcomes				
	School	Teacher	Academic standards	Order and discipline	Interaction
Panel A. Up to $20,000					
Expect BA or a graduate degree whereas grades are mostly C's or lower	0.794** (0.398) [-0.175**]	1.156*** (0.348) [-0.240***]	1.237*** (0.322) [-0.276***]	0.808*** (0.307) [-0.182***]	0.965*** (0.260) [-0.220***]
	1,490	1,490	1,490	1,490	1,490
Panel B. Between $20,001 and $50,000					
Expect BA or a graduate degree whereas grades are mostly C's or lower	1.018*** (0.216) [-0.228***]	0.931*** (0.163) [-0.206***]	0.727*** (0.152) [-0.168***]	0.613*** (0.152) [-0.141***]	0.659*** (0.180) [-0.154***]
	4,816	4,816	4,816	4,816	4,816
Panel C. Between $50,001 and $75,000					

Expect BA or a graduate degree whereas grades are mostly C's or lower	1.074*** (0.305) [-0.249***]	0.730*** (0.241) [-0.167***]	0.707*** (0.248) [-0.166***]	0.610*** (0.196) [-0.145***]	0.364 (0.241) [-0.086]
	4,218	4,218	4,218	4,218	4,218
Panel D. Between $75,001 and $100,000					
Expect BA or a graduate degree whereas grades are mostly C's or lower	0.787*** (0.235) [-0.176***]	0.693*** (0.216) [-0.154***]	0.696*** (0.228) [-0.160***]	0.546** (0.239) [-0.124**]	0.424* (0.223) [-0.098*]
	4,448	4,448	4,448	4,448	4,448
Panel E. Between $100,001 and $150,000					
Expect BA or a graduate degree whereas grades are mostly C's or lower	1.036*** (0.224) [-0.224***]	1.072*** (0.251) [-0.236***]	0.780*** (0.211) [-0.176***]	0.603*** (0.208) [-0.138***]	0.624*** (0.202) [-0.146***]
	5,562	5,562	5,562	5,562	5,562
Panel F. Above $150,000					
Expect BA or a graduate degree whereas grades are mostly C's or lower	0.888*** (0.231) [-0.182***]	0.931*** (0.195) [-0.202***]	0.589*** (0.224) [-0.126***]	0.650*** (0.209) [-0.136***]	0.698*** (0.244) [-0.159***]
	6,191	6,191	6,191	6,191	6,191

Notes: Estimates are obtained from ordered Logit regressions of different measures of satisfaction with child schooling on an indicator of high parental aspirations (i.e., expect a BA or a graduate degree) whereas child's current grades are mostly C's or lower, and a set of controls, conditional on different household income brackets. The following are the conditioning variables: an indicator for a female child, a dummy variable for attending a private school, age of the child, number of children in the family, an indicator denoting whether the respondent is the mother, indicators capturing whether the mother is currently employed, whether the father is currently employed, whether the parents are married, and dummy variables for Hispanic, Black and child at bad health. Robust standard errors are provided in parentheses. Marginal effects on the likelihood of being very satisfied with each measure of parental satisfaction with child schooling are presented in square brackets. *** Significant at 1% level. ** Significant at 5% level. * Significant at 10% level.

5. Discussion and conclusion

This study finds that children's grades are a significant determinant of parental satisfaction. We observe negligible differences in parental satisfaction between parents who have different aspirations regarding their children's future educational attainment, but significant differences in satisfaction based on children's grades, regardless of parents' expectations about the future education of the child. The lower the grades of the child, the less satisfied parents are with the school, the teachers, the academic standards, the order and discipline, and the staff's interaction with the parents. Additionally, the combination of low grades while the parents have high expectations about the future education of the child is adversely related to parental satisfaction with the child's school. The association between this discrepancy and parental satisfaction is irrespective of parental education, but primarily driven by low-income families.

This study has limitations. Specifically, grades are self-reported in the survey, so they are subject to misreporting. In addition, grades are reported on the basis of whether the child earns mostly As, Bs, etc. More precise measure of children's academic performance, such as actual GPA, would provide better understanding of the effect of grades and aspirations on parents' satisfaction with the school. Further, parents can choose whether they are very satisfied, somewhat satisfied, somewhat dissatisfied or very dissatisfied with different characteristics of the school. However, it is unclear how respondents interpret these possible ordered responses. Also, parents whose children attend schools in given areas or neighborhoods might report higher or lower satisfaction, regardless of the controls we account for. Parents' responses might also be influenced by the opinion of their friends, relatives and other parents about the school.

Despite the shortcomings, the results have several implications. First, the findings raise concerns about the significance of the reviews parents write about schools. This feedback can be influenced by children's grades and might not reflect the actual quality of the school. If this is the case, choosing a school based on biased feedback might mislead parents and have adverse effects on their children's future educational attainment. Similarly, if parents' satisfaction with the school is influenced to a large extent by children's grades and this reported satisfaction is used for developing school rankings rather than solely basing rankings on student's performance on standardized tests, then school rankings might be a deceptive measure of schools' true quality. Finally, from a policy perspective, if school funding depends on school "quality" according to reported parents' satisfaction, or the number of students in a school which might depend on biased feedback, then funds for schools might be inefficiently allocated, especially if schools manipulate distribution by artificially increasing students' grades to affect parents' opinion about the school.

More research is necessary to explore the connection between school rankings and parents' satisfaction. Controlling for students' performance on standardized exams would allow researchers to compare the effect of children's grades and parents' aspirations on parents' satisfaction relative to the impact of the level of preparation the school provides on parents' happiness with the school. Exploring these effects using data from other countries can test the external validity of the findings and is another area of future research.

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Appendix A1

A complete set of the variables used in the analysis:

- Satisfaction with the school the child attends this year (SatisfSchool): a variable that takes one of 4 ordered values (very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied)
- Satisfaction with the teacher this child has this year (SatisfTeacher): a variable that takes one of 4 ordered values (very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied)
- Satisfaction with the academic standards of the school (SatisfAcadStandards): a variable that takes one of 4 ordered values (very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied)
- Satisfaction with the order and discipline at the school (SatisfDiscipline): a variable that takes one of 4 ordered values (very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied)
- Satisfaction with the way that school staff interacts with parents (SatisfInteract): a variable that takes one of 4 ordered values (very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied)
- A dummy variable which takes a value of 1 if the parents expect that the highest education the child would attain would be a high school diploma or lower education, and 0 otherwise (ExpectChildEducHSorLess)
- A dummy variable which takes a value of 1 if the parents expect that the highest education the child would attain is attending a vocational/ technical school (after high school) or some college, and 0 otherwise (ExpectChildEducSomeColl)
- A dummy variable which takes a value of 1 if the parents expect that the highest degree the child would obtain is a Bachelor's degree, and 0 otherwise (ExpectChildEducBA)
- A dummy variable which takes a value of 1 if the parents expect that the highest degree the child would obtain is a graduate or professional degree, and 0 otherwise (ExpectChildEducGradDegr)
- A dummy variable which takes a value of 1 if the child earns mostly A's, and 0 otherwise (ChildGradeA)
- A dummy variable which takes a value of 1 if the child earns mostly B's, and 0 otherwise (ChildGradeB)
- A dummy variable which takes a value of 1 if the child earns mostly C's and lower grades, and 0 otherwise (ChildGradeCorLower)
- A dummy variable equal to 1 if the child attends a private school, and 0 if (s)he attends a public school (PrivateSchool)
- An indicator equal to 1 if the child is a girl, and 0 if the child is a boy (ChildGirl)
- Age of the child (AgeChild)
- Number of children in the family (NumChildren)

- An indicator that takes a value of 1 if the respondent is the mother, and 0 if the respondent is the father (RespondentMother)
- An indicator equal to 1 if the mother is currently employed, and 0 otherwise (MotherEmployed)
- An indicator equal to 1 if the father is currently employed, and 0 otherwise (FatherEmployed)
- An indicator equal to 1 if the parents are married, and 0 otherwise (MarriedParents)
- A dummy variable equal to 1 if the child is Hispanic, and 0 otherwise (HispanicChild)
- A dummy variable equal to 1 if the child is Black, and 0 otherwise (BlackChild)
- A dummy variable equal to 1 if the child's health is below very good, and 0 if it is very good or excellent (ChildHealthGoodOrWorse)
- An interaction term of a dummy variable indicating that the parents expect the child to obtain a Bachelor's or a graduate degree and a dummy variable denoting that the child earns mostly C's or lower grades (HighExp3or4LowGrade)
- An interaction term of ExpectChildEducHSorLess and ChildGradeA (IntExp1xGradeA)
- An interaction term of ExpectChildEducHSorLess and ChildGradeB (IntExp1xGradeB)
- An interaction term of ExpectChildEducHSorLess and ChildGradeCorLower (IntExp1xGradeC)
- An interaction term of ExpectChildEducSomeColl and ChildGradeA (IntExp2xGradeA)
- An interaction term of ExpectChildEducSomeColl and ChildGradeB (IntExp2xGradeB)
- An interaction term of ExpectChildEducSomeColl and ChildGradeCorLower (IntExp2xGradeC)
- An interaction term of ExpectChildEducBA and ChildGradeA (IntExp3xGradeA)
- An interaction term of ExpectChildEducBA and ChildGradeB (IntExp3xGradeB)
- An interaction term of ExpectChildEducBA and ChildGradeCorLower (IntExp3xGradeC)
- An interaction term of ExpectChildEducGradDegr and ChildGradeB (IntExp4xGradeB)
- An interaction term of ExpectChildEducGradDegr and ChildGradeCorLower (IntExp4xGradeC)