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An Examination of the Importance of Gender and Sibling Characteristics on Academic Perceptions

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Abstract The present study attempted to investigate whether age, socioeconomic status (SES), gender, and sibling size were associated with the academic perceptions of children. A total of 735 children aged 10 to 13 were included. The study sample was drawn from The National Longitudinal Study of Children and Youth, Statistics Canada Public Use File, which purports to be a representative sample of Canadian children. Academic perceptions were based on responses to four questions about how they feel about school, their academic goals, and how well they are doing in school. Age, SES, and sibling size and composition were not associated with academic perceptions ($p>.05$). Gender was associated with academic perceptions with females feeling more positively about school and having higher academic goals ($p<.01$). Females also reported higher overall academic perceptions compared to males ($p<.05$). The results of the study suggest that age, SES, and sibling composition are not important factors in understanding academic perceptions of early adolescents.

Keywords Education, Sibling Characteristics, Gender, Academic Perceptions, Socioeconomic Status

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1. Background and Significance of the Research Problem

The goal of this study was to examine the relationship between academic perceptions and familial and environmental factors. The relationship between these factors has not been sufficiently investigated to date. However, this information could be valuable to educators who are attempting to understand and assist children who have a negative outlook on school.

2. Literature Review

There has been widespread interest shown by researchers and educators in understanding the role of external factors in a child's academic functioning. Studies have been designed to attempt to explain how family environment variables impact academic outcomes. Family size, gender, and familial resources have all been linked to academic achievement. The purpose of this study was to investigate family environment factors in relation to the value and perception that children place on education.

Self-evaluation of academic success may be an important factor to understanding educational experiences. Self-evaluations can be attained by comparing how respondents rate themselves in relation to a generalized other (Gramzow et al., 2002). According to some researchers, this measure of self-evaluation is often over inflated with respondents often rated themselves as superior to others (Campbell, 1986). Others have noted that this method of attaining self-evaluations does not permit distinction between those who are accurately describing themselves from those who are not (Colvin & Block, 1994). A second method to attaining self-evaluation is to contrast respondents' and observers' ratings of the respondent, known as social consensus (Robins & John, 1997). Although this method may assist in identifying those who may provide inaccurate self-evaluations, there are also several limitations to this method. Social consensus may rely on interpersonal outcomes and ratings. Thus, the way a subject is rated may be influenced by the relationship they have established with the rater. Moreover, this method may no longer be accurate because the subject being rated has access to unique information about oneself that the observer is not privy to (Gramzow et al., 2002). Regardless of the method used to establish self-evaluations, there are likely to be several factors that contribute to how ratings are made. The age and the family environment of the student may influence their academic self-perceptions and self-evaluations. Therefore, to gain a better understanding of how a child experiences their educational experiences, it is important to determine which factors contribute to this experience. Once these influential factors are uncovered, educators may be able to assist the student to have a more positive educational experience or to view themselves with respect to their academics more positively.

The most probable unmeasured variable in a child's intellectual growth is the orientation of parents toward learning and acquiring knowledge (Phillips, 1999). The Confluence Model (Zajonc & Markus, 1975) has been used by several researchers to understand how the home environment can impact a child's academic achievement. Home environment includes parents reading to children, discussing important issues and school- related topics and the nurturance of a child's intellectual development by soliciting their thoughts and opinions. The Confluence Model was developed to explain not only the relationship between home environment and a child's intellectual development, but also how sibship size and birth order affect a child's intellectual growth. (Guo & VanWey, 1999; Zajonc & Markus, 1975). According to proponents of the Confluence Model, child-to-child teaching benefits the intellectual development of the sibling who is doing the teaching and therefore, the youngest child, having no one to teach, is at a disadvantage (Guo & VanWey, 1999; Zajonc & Markus, 1975). The child-to-child teaching benefit includes older children tutoring younger siblings, monitoring and assisting siblings with their homework, and the sharing of educational resources. Last-born children are at a distinct disadvantage because they have no younger children to teach or guide (Guo & VanWey, 1999). Although The Confluence Model seems to be a logical hypothesis of how siblings benefit one another, there is little empirical support for its basis (Galbraith, 1982; Rodgers, 1984).

There is a dearth of research supporting The Confluence Model with respect to intellectual development. Therefore, it would be advantageous to investigate the Confluence Model when examining self-reported academic perceptions. Having younger siblings to teach may increase a child's positive outlook on their own intellectual abilities.

3. Sibling Characteristics

Sibship size has consistently been linked to academic achievement (Guo & VanWey, 1999; Hunter, Nuttal, Nuttal, & Polit, 1976). The negative relationship consistently found between these factors indicates that children in larger families have lower intelligence (Guo & VanWey, 1999).

The study provided evidence against the widely accepted causal interpretation (Guo & VanWey, 1999). According to the authors, once additional family, environmental, and genetic effects as well as the interactions between the child and family effects were accounted for, sibship size no longer had a negative effect on a child's intellectual development (Guo & VanWey, 1999).

4. Socioeconomic Status

As the number of children in a family increases, so will the financial demand. The financial strain faced by some families may contribute to the academic environment of a child. Wagner and colleagues examined the impact of family size and Socioeconomic Status (SES) on intelligence. The authors concluded that there was a significant relationship between family size, SES, and intelligence (Wagner, Schubert, & Schubert, 1983).

5. Gender

Along with family size, the gender of a child may contribute to academic outcomes. Researchers have investigated the relationship between gender and academic achievement.

Cicirelli (1977) studied 160 six grade children from two child families were investigated in relation to birth order, sex of child, and sex of sibling.

Hunter et al., (1976) found that, after controlling for IQ, small family males tended to have better grades than did large family males and that first born girls had higher academic achievement than later born girls.

There is conflicting evidence regarding the relationship between familial and environmental factors and academic achievement; however, a stronger relationship may exist between academic perceptions and family and environmental factors.

6. Statement of Research Problem

Researchers have theorized that child and familial variables are important to a child's academic achievement.

Research Questions

1. Girls have been shown to attain higher academic achievement when compared to boys. Therefore, it is hypothesized that girls will report more positive academic perceptions when compared to boys.

2. There has been little empirical investigation into the relationship between age and academic perceptions. Therefore, the present study will investigate the association between age and academic perceptions; however, a directional hypothesis will not be made.

3. Children from more affluent households have a greater resource base to draw from for school supplies. It is predicted that children from higher SES households will have a more favorable outlook on their education and future successes while in the educational system.

4. The literature has shown that children from larger families have lower academic achievement compared to children from smaller families. Therefore, it is predicted that children from larger families will report a more negative outlook on their education compared to children from smaller families.

5. A review of the literature has indicated that children with younger siblings have higher academic achievement compared to children without younger siblings. Therefore, it is predicted that children with younger siblings will have higher academic perceptions compared to children without a younger sibling.

7. Methodology

i) Sample

The study sample was drawn from The National Longitudinal Study of Children and Youth, Statistics Canada. The NLSCY was a national study undertaken by Statistics Canada commencing in 1999.

i) Measures

8. Dependent Variables

Feelings About School: The child was asked to choose a category that best represented their feelings about school. The categories included: 1=I like school very much; 2=I like school quite a bit; 3=I like school a bit; 4=I don't like school very much; and 5=I hate school.

Perceived Success in School: The child was asked to choose a category that best represented how they perceived how well they are doing in school. The categories included: 1=Very well; 2=Well; 3=Average; 4=Poorly; and 5=Very Poorly.

How Important is it to do Well in School: The child was asked to choose a category that best represented how important they feel it is to do well in school. The categories included: 1=Very important; 2=Somewhat important; 3=Not very important; 4=Not important at all.

How Far do you Hope to go in School: The child was asked to choose a category that best described the level of education they hoped to attain. The categories included: 1=Middle/Junior High school; 2=High school; 3=College/Certificate; 4=University Degree; and 5=More than one university degree.

Overall Perceptions of School: To estimate the child's overall perceptions of school, a composite score was determined by adding the individual school perceptions.

9. Independent Variables

Child Gender: The gender of the child was reported in the parental file by the parent and was dummy coded in this project as 0=girl and 1=boy.

Child Age: The age in years for the children was provided in the file. The children in the study ranged from 10 to 13.

Number of siblings in the household: The total number of siblings was provided in the parent file and was utilized as the total number.

Any older Siblings: Whether the child had any older siblings was reported by the parent. This information was provided as dummy codes as 0=no older siblings and 1=at least one older sibling

Any younger siblings: Parents reported on whether the child had any younger siblings. Any younger siblings were dummy coded as 0=no younger siblings and 1=at least one younger sibling.

Socioeconomic Status: SES was provided by parents and categorized in the file. Income levels were grouped into 5 categories: 1=less than 15,000; 2=15,000 to 19,999; 3=20,000 to 29,999; 4=30,000 to 39,999; and 5=40,000 or more.

All variables coded as "not applicable", "don't know", "refusal", and "not stated" were coded as missing.

10. Data Analyses

Chi-square analyses was used to explore categorical data. An aggregation of the outcome variables was conducted to investigate overall academic perceptions. T-tests were used to investigate mean differences in academic perceptions when there were two groups (e.g., gender, younger sibling, older sibling). One-way Analyses of Variance was utilized to explore differences in overall academic perceptions based on the independent variables (e.g. income level, number of children in family).

11. Results

The full sample of children in the NLSCY included approximately 22800. A total of 735 (3.2%) completed at least one of the outcome measures for this study and were, thus, included. The study sample contained 378 (51.4) females, and 357 (48.6%) males aged 10-13 (M=11.40, SD=1.12). The frequency of age groups is presented in Table 1.

12. Age of Child

To investigate whether age impacted the respondents' opinions about school, χ^2analyses were employed. The number of children falling into each age group is presented in Table 1.

Table 2 presents the possible responses to feelings about school and the percentage of youth in each age group who responded to each feeling. The results of the chi-square analyses are presented in Table 2.

Results of the analysis indicate that there was no significant relationship between age of respondents and their feelings about school, χ^2 (12, n=717) =12.37, p>.05 and age was not significantly related to school performance, χ^2 (6, n=707) =10.17, p>.05. As can be seen in table 3, most of the students reported performing well or very well across all age groups.

13. Socioeconomic Status

The socioeconomic status (SES) of the respondents and academic perceptions was investigated within the sample. Chi-square analyses were conducted to determine whether academic perceptions were a function of SES. Table 3 presents the results of the analysis.

14. How children feel about school by income level

How the child felt about school was not significantly related to their familial income level, χ^2 (8, n=717) =10.98, p>.05. As can be seen in table 6, a similar percentage of youth across all income levels reported not feeling overly positive about school.

15. Gender

The gender of the responding child was used to investigate gender differences in academic perceptions. Chi-square analyses using gender by academic perceptions were conducted and the results are presented below. Table 4 presents the number and percentage of children in each gender and how they feel about school.

In Table 4, feelings about school were a function of the respondents' gender with females being more likely to like school and males being more likely to not like school. Perceived academic success was not a function of gender, χ^2 (4, n=707) =3.07, p>.05. Therefore, males and females did not differ in their perceived academic success. Analysis indicated that the level of importance placed on school is not a function of gender, χ^2 (3, n=714) =2.34, p<. 05. re more likely to report on a desire to attend college or high school.

16. Number in Household

The number of siblings living in the child's household was investigated to determine whether sibling size impacted academic perceptions. The number of children in the home aged 0 to 17 ranged from 1 (122, 16.6%), 2 (387, 52.7%), and 3 (225, 30.7%).

As can be seen in table 5, feelings about school were not a function of the number of children in the household, χ^2 (8, n=717) =4.88, p.>.05.

A total of 371 (50.5%) had an older sibling and 364 (49.5%) did not have an older sibling. Having an older sibling was investigated to determine whether this was related to academic perceptions. The results are presented in Table 7.

As can be seen in Table 7, feelings towards school ((χ^2 (4, n=717) =3.99, p.>.05)) and perceived success ((χ^2 (4, n=707) =1. 05, p.>.05)) were not a function of whether the respondent had older siblings. Moreover, the important placed on school ((χ^2 (3, n=714) =2.78, p.>.05) and desired academic levels of education ((χ^2 (4, n=717) =3.99, p.>.05)) did not differ based on whether the respondent had older siblings or not. Therefore, having an older sibling or not did not impact academic perceptions.

The results of the analyses indicated that academic perceptions were not associated with the presence of a younger sibling in the household.

17. Overall Academic Perceptions

A total of 352 children (47.8%) did not complete all the questions utilized in the composite score of Overall Academic Perceptions. Therefore, these children were not included in the following analyses.

18. Gender and Overall Perceptions

Child gender was used to investigate whether overall perceptions of academia were a function of gender. Table 8 presents the results from the t-test used to investigate this hypothesis.

As can be seen in Table 8, overall academic perceptions were a function of the gender of the respondent (t (392) =-3.44, p<.001). Females reported significantly higher overall perceptions compared to male respondents.

19. Age and Overall Perceptions

The age of the child was investigated with respect to the children's overall academic perceptions. The results of the ANOVA are presented in Table 10.

The results of the one-way ANOVA were not significant (F (3,383) =.81, $p>.05$) indicating that overall academic perceptions did not differ based on the age of the respondents.

20. Income and Overall Perceptions

A one-way ANOVA was conducted to determine whether children's overall perception of academia differed based on their SES group. The results of the analysis are presented in Table 10

As can be seen in Table 12, the mean overall perception of academia did not differ between the SES groups, F (4,383) =1.42, $p>.05$.

21. Sibling's and Overall Perceptions

To investigate whether children's overall perception of academia was related to the number of siblings they had, a one-way ANOVAs was conducted. The results of the analysis are presented in Table 11.

As can be seen in table 11, the mean overall perception of academia did not differ between children with none, one, or two siblings, F (2,392) =6.78, p>.05

A t-test was conducted to determine whether having an older sibling was important to academic perceptions. The results of the analysis are presented in Table 12.

The mean overall perception of academia did not differ based on whether the respondent had an older sibling or not, t (392) =-951, p>.05.

The final area of investigation regarding siblings was to determine whether those with younger siblings viewed their academic experiences any more positively than those children without a younger sibling. The results of the t-test are presented in Table 14.

Overall academic perceptions did not differ based on whether the child had a younger sibling or not, t(392)=-.736, p>.05.

22. Discussion

The goal of the study was to investigate child and family factors that affect academic perceptions of children aged 10 to 13 years of age. The results indicate that the number of children in the households, having older siblings and having younger siblings did not impact how the children felt about school. How the child felt about school and how far they hoped to go in school and overall academic perceptions were associated with the child's gender. The lack of anticipated results led the researcher to further explore SES and age. These factors that were controlled in previous studies may have been important to understanding academic perceptions. However, academic perceptions were not a function of the child's age or income level.

The first research question, which investigated whether girls would have a more positive academic outlook, compared to boys. The results showed significant gender differences for some of the questions assessing academic perceptions. Females were more likely to like school quite a bit and they were least likely to hate school. Moreover, females reported significantly higher overall perceptions of academia when compared to males. This may be a result of the climate in the classroom. Generally, the classroom teacher and school administration look upon students who are less likely to challenge authority and are somewhat passive in the classroom more favorably. Studies have shown that boys exhibit significantly more adjustment problems compared to girls during elementary school years (Crick & Zahn-Waxler, 2003). The fact that boys and girls adjust differently, it may lead to an educator treating each gender differently. Girls may pick up on the verbal and non-verbal messages relayed by teachers that reinforce docility in the classroom, which is likely interpreted by the girl to be an indicator of success in the classroom; therefore, girls may have a more positive experience when in school and wish to pursue higher education. Conversely, males and females

did not differ in how well they thought they were doing in school and in how important it was to do well in school. Regardless of gender, both boys and girls have a clear understanding about how well they are performing in the classroom. This could be attributed to continuous feedback families receive from the educational system itself (grade reports, mandatory familial conferencing etc.). The lack of a significant association between gender and the importance of academic success could be attributed to the message children receive early on in their schooling about how educational attainment lends itself vocational success. This information is shared with all children, regardless of their gender.

Academic perceptions were not found to be a function on SES. This again may be attributed to the overriding message children are inundated with from very early in their socialization. Both more and less affluent students may view school as an important means to an end. Less affluent children may see school as a stepping-stone to a better lifestyle than they currently find themselves in. Whereas more affluent students may view the educational process as a way of maintaining the lifestyle they currently enjoy. Teachers may also consciously or unconsciously encourage less affluent children with more praise and positive reinforcement, which may in turn promote a more positive academic outlook from these children. It was interesting that their level of educational expectations was not associated with SES. This may be because children understand that will have the opportunity to pursue higher education and that there are programs available to assist them with financial assistance. However, the findings may be attributed to the lack of variability in the categorization of SES. SES was grouped into five categories, less than 15,000; 15,000 to 19,999; 20,000 to 29,999; 30,000 to 39,999; and 40,000 or more. Significant findings may have resulted if the income level was more precise and the most affluent were distinguished from the average income group.

The number of children in the household ranged from one to three. Having siblings was not associated with academic perceptions. Having an older sibling was not related to academic perceptions and having a younger sibling was also not associated with academic perceptions. These findings do not support the proposed hypotheses and are contrary to much of the current literature regarding academic achievement. Interestingly, research has shown that having siblings influences academic achievement. However, this study has shown that siblings are not important factors in explaining academic perceptions. Therefore, it is possible that actual academic achievement is not highly related to academic perceptions, and this would be an issue worthy of further investigation. These findings may be seen as encouraging to educators because student perceptions may reflect both effective academic programming and an overall positive outlook from students on the school environment itself.

Previous research has shown that children with younger siblings benefit academically, and this result has been attributed to the opportunity of the older child to teach the younger sibling. However, results from this study show that children with younger siblings do not have more positive academic perceptions than without younger siblings. Therefore, academic perceptions are not likely a function of having a younger sibling to instruct. Perhaps the classroom is a more influential environment to encourage perceptions of academic success. Having a younger sibling to teach may reinforce what has already learned thus promoting academic success. However, having a younger child to teach does not reinforce how the child feels about school. This is more likely reinforced and encouraged through positive school experiences.

Considering that the current data included households with one to three children may be of some significance. It may be that households with more than three children may view school more negatively because of the inability of parents to allocate their time to each child equitably. Perhaps with more variability in the number of children in the household the association between siblings and academic perceptions may have been significant. Moreover, an investigation considering the number of younger siblings and older siblings and not simply whether the child had older or younger siblings may yield different results.

A total of 343 (46.6%) of the sample did not respond or did not have an opinion about how far they hoped to go in school (i.e., High School, College, University). This is a staggering number of children who did not respond to the question itself. It is important to note that less than 3.8% of the total study sample did not respond to the other questions measuring school perceptions; therefore, a highly disproportionate number of children did not respond to their desired academic level. There are several possible reasons for this lack of response. It is possible that children of this age are not able to conceptualize themselves as young adults. They may also feel that decisions of this magnitude are better left open and undetermined at this stage in their lives. Children at this age may not understand the differences between a High School, College, and University and may be reluctant to respond due to their uncertainty. This is worthy of further investigation to attempt to understand why there is such a exceptional lack of

student response to this question. It is important to consider that this lack of response may not be detrimental but may in fact represent a group of children who are unwilling to commit to any one direction in their young lives.

23. Limitations

The lack of support for the research questions may be due to several limitations of the research. First and foremost, the study included only youth aged 10 to 13. With a wider age group, it may be possible to detect more variable academic perceptions.

A major limitation of the study is the statistical models that were utilized. The primary analysis included measures of association (Chi-square). Studies have shown that age, gender, and SES may act as moderators to academic outcomes. These same variables may act also moderate associations with academic perceptions.

The final limitation of this study is the method in which academic perceptions were measured. The children who participated were asked to respond to four questions that attempted to elicit their perceptions of school. It is not clear, however, how these questions interrelate or how accurately they tap the true experience of the child. 23.

Tables

Table 1: Number in age groups

Age group	Frequency	Percentage
10	222	30.2
11	152	20.7
12	209	28.4
13	152	20.7

Table 2: Academic perceptions by age group

Perception	Age of Respondent							
	10		11		12		13	
	n	%	*n*	%	*n*	%	*n*	%
Feelings about School								
I like school very much	41	19.0	33	22.9	52	25.1	24	16.0
I like school quite a bit	80	37.0	45	31.3	71	34.3	51	34.0
I like school a bit	63	29.2	40	27.8	55	26.6	45	30.0
I don't like school very much	21	9.7	12	8.3	21	10.1	19	12.7
I hate school	11	5.1	14	9.7	8	3.9	11	7.3
How well doing in school								
Very well	56	23.6	49	34.3	61	29.9	42	28.6
Well	98	46.0	45	34.5	88	43.1	54	36.7
Average, poor, very poorly	59	27.6	49	22.9	55	25.7	51	23.8
Very well	56	23.6	49	34.3	61	29.9	42	28.6
How important to do well in school								
Very important	155	30	105	20.3	153	29.6	104	20.1
Not very important	61	31	39	19.8	53	26.9	44	22.3
Desired level of education								
University	49	38.6	31	24.4	22	17.3	25	19.7

Less than university	80	30.2	56	21.1	75	38.3	54	20.4

Table 3 School Perceptions

	Income Level									
	<15,999		15,000-19,999		20,000-29,999		30,000-39,999		40,000+	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
How do you feel about school										
Like very much	5	12.8	6	22.2	9	12	29	26.6	101	21.6
Like quite a bit	13	33.3	8	29.6	30	40	42	38.5	154	33
Don't like school	21	53.8	13	48.4	36	48	38	34.9	212	45.4
How well are you doing in school										
Very well	9	23.1	8	29.6	23	31.5	42	38.9	126	27.4
Well	17	43.6	11	40.7	29	39.7	38	35.2	190	41.3
Very Poor/ Average	13	33.3	8	29.6	21	28.8	28	25.9	144	31.3
Important to do well in school										
Very important	29	74.4	18	66.7	54	73	85	78	331	71.2
Not very important	10	25.6	9	33.3	20	27	24	22	134	28.8
Desired academic level										
University	9	60	8	53.3	23	59	51	72.9	174	68.8
Not university	6	40	7	46.7	16	41	19	27.1	79	31.2

Table 4 Gender responses to feelings about school

	Male		Female	
	n	%	*n*	%
Feeling about school*				
I like school very much	62	16.5	88	25.7
I like school quite a bit	122	32.5	125	36.5
I like school a bit	117	31.2	86	25.1
I don't like school very much	41	10.9	32	9.4
I hate school	33	8.8	11	3.2
How well doing in school				
Very well	100	27.1	108	32
Well	149	40.4	136	40.2
Average	106	28.7	83	24.6

Poorly/Very Poorly	14	3.8	11	3.3
How important is school				
Very important	265	71.2	252	73.7
Somewhat important	96	25.8	81	23.7
Not important	11	2.9	9	2.6
Very important	265	71.2	252	73.7
Expected level of education**				
High school or less	32	16	15	7.9
College	51	25.5	29	15.1
One university degree	59	29.5	75	39.1
Multiple University degrees	58	29	73	38

*p<.001 *p<.01

Table 5 Academic perceptions by sibling size

	Children in household					
	1		2		3	
	n	%	*n*	%	*n*	%
Feelings about School						
I like school very much	25	20.5	74	19.8	51	23
I like school quite a bit	38	31.1	132	35.4	77	34.7
I like school a bit	36	29.5	113	30.3	54	24.3
I don't like school very much	14	11.5	35	9.4	24	10.8
I hate school	9	7.4	19	5.1	16	7.2
How well performing in school						
Very well	31	25.8	106	28.8	71	32.4
Well	53	44.2	138	37.5	94	42.9
Average	32	26.7	109	29.6	48	21.9
Poorly/Very poorly	4	3.3	15	4.1	6	2.8
How important it is to do well in school						
Very important	84	69.4	272	73.3	161	72.5
Somewhat important	33	27.3	90	24.3	54	24.3
Not very important	4	3.3	9	2.5	7	3.2
How far hope to go in school						
Middle or high school	8	13.6	23	11.2	16	12.6
College	11	18.6	41	19.9	28	22
One university degree	22	37.3	65	31.6	47	37
Multiple university degrees	18	30.5	77	37.4	36	28.3

Table 6 Academic perceptions and having an older sibling

	No older siblings		Older Sibling	
	n	%	*n*	%
Feeling about school				
I like school very much	82	22.9	68	18.9
I like school quite a bit	126	35.2	121	33.7
I like school a bit	94	26.3	109	30.4
I don't like school very much	32	8.9	41	11.4
I hate school	24	6.7	20	5.6
How well doing in school				
Very well	104	29.6	104	29.2
Well	148	42.2	137	38.5
Average	89	25.4	100	28.1
Poorly/Very Poorly	10	2.9	15	4.2
How important is school				
Very important	265	74.4	252	70.4
Somewhat important	84	23.6	93	26
Not important	7	2.0	13	3.7
Expected level of education				
High school or less	26	12.1	21	10.9
College	39	19.6	41	21.2
One university degree	71	35.7	63	32.6
Multiple University degrees	63	31.7	68	35.2

Table 7 Academic perceptions and having a younger sibling

	No younger siblings		Younger Siblings	
	n	%	*n*	%
Feeling about school				
I like school very much	75	19.1	75	23.1
I like school quite a bit	135	34.4	112	34.6
I like school a bit	120	30.5	83	25.6
I don't like school very much	41	10.4	32	9.9
I hate school	22	5.6	22	6.8
How well doing in school				
Very well	110	28.3	98	30.8
Well	156	40.1	129	40.6

Average	109	28	80	25.2
Poorly/Very Poorly	14	3.6	11	3.4
How important is school				
Very important	277	70.8	240	74.3
Somewhat important	103	26.3	74	22.9
Not important	11	2.9	9	2.8
Expected level of education				
High school or less	27	12.9	20	10.1
College	42	20.1	38	20.8
One university degree	69	33	65	35.5
Multiple University degrees	71	34	60	32.8

Table 8 Gender and overall academic perceptions

Variable	Female *n*=192		Male *n*=200	
	M	*SD*	*M*	*SD*
Overall Academic Perceptions*	15.40	2.12	14.57	2.64

p<.01

Table 9 Mean overall academic perceptions by age group

Variable	10 *n*=126		11 *n*=86		12 *n*=		13 *n*=	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Overall Academic Perceptions	14.86	2.39	15.02	2.44	15.33	2.18	15.20	2.27

Table 10 Mean overall academic perceptions score by income level

	<15,000 *n*=15		15,000-19,000 *n*=15		20,000-29,000 *n*=38		30,000-39,000 *n*=69		40,000 + *n*=246	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Overall Academic Perceptions	14.13	2.64	14.87	2.13	14.84	2.86	15.54	2.37	15.07	2.21

Table 11 Mean overall academic perceptions score and sibling size

Variable	0 *n*=59		1 *n*=206		2 *n*=127	
	M	*SD*	*M*	*SD*	*M*	*SD*
Overall Academic Perceptions	14.67	2.39	15.00	2.48	15.08	2.37

Table 12 Mean overall academic perceptions by whether had younger sibling

Variable	No Younger Sib *n*=209		Younger Sib *n*=183	
	M	*SD*	*M*	*SD*
Overall Academic Perceptions	14.89	2.49	15.07	2.36

Table 13 Mean overall academic perceptions by whether had older sibling

Variable	No Older Sib *n*=199		Older Sib *n*=193	
	M	*SD*	*M*	*SD*
Overall Academic Perceptions	14.86	2.40	15.09	2.46

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