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## Intro

I want to find the correlation between parent involvement, education levels in comparison to students' academic success and progression in higher education.

## Lit Review

I found a study titled: College Seniors' Plans for Graduate School: Do Deep Approaches Learning and Holland Academic Environments Matter? The researchers who did the article discovered that students who use deep approach learning are more likely to attend graduate school and that depends on the major the students are in. My hypothesis is, the higher the parent education levels and financial support towards the students' higher education are, the higher the students' academic aspirations will be towards getting a graduate degree.

## Data & Methods

I conducted an online survey with other researchers, and we sent out the survey to multiple people. A total of 78 people took the survey, 54% of the people who took the essay are women and 46% are men. The ethnic breakdown is between five groups Black, White, Hispanic, Asian, and Other. In comparison to Collegeboard.com, the gender percentages are a complete opposite their percentages are 56% men and 44% women. However, the racial breakdown is identical to ours, Collegeboard.com has the four categories (Black 28%, White 10%, Hispanic35%, and Asian20%) but they included two or more races 1% and Non-Resident Aliens 5%.

## Measures:

### Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Aspire	74	1	5	3.04	1.199
Gender	78	1	2	1.54	.502
Parent Education Levels (Mom)	78	1	9	4.33	2.142
Parent Education Levels (Dad)	78	1	9	4.05	2.125
Parental Financial Aid	76	1	5	3.39	1.479

Ethnicity	78	1	5	2.63	1.349
Age	70	19	50	27.26	6.349

Our independent variables are parent education (ParEdu) and parental financial support (ParAid). Parent education refers to the levels of education that the parents reached. We measure the response on an ordinal scale from unknown education levels to graduate degree and higher (1-9). Parental support refers to the financial contributions provided to the students from the parent. The question posed to the students is if they believe their parents support them financially as much as they need them to, to reach their academic goals. We also measure this response on an ordinal scale between completely disagree to completely agree (1-5). We also ask what the students' plans after each semester, to drop out/take a break, finish their degree, and go to work, or finish their degree and go to graduate school to measure our dependent variable called aspire to see where each students level of academic aspirations are. Ethnicity is our control variable because we think our survey will reach a diverse student body.

I had to add three new dummy variables (Minorities, AspireCat and ParDadCat) by using a recode with other variables such as ethnicity, parent education. For the first two independent variables, they examine the education levels of each parent. The first mean was at 4.33, which means the distribution was just under the expected mean of five but that means most mothers had an education level around that of a high school graduate. The same stands true for the father education level being around a high school graduate despite the mean being a little lower at 4.05. Our third independent variable is about parental financial aid towards students' education. Out of 76 responses on an ordinal scale (1-5). The mean is 3.39 just over the expected mean value of three but fits right in the normal distribution. This means many students think their parents are contributing financially as much as they need, for them to reach their academic goals. The dependent variable, (Aspire) which test the students' academic aspirations towards pursuing a graduate degree had 74 responses on the ordinal scale 1-5 and the mean was 3.04.

**Analysis:**

**Correlations**

		Gender	Ethnicity	Age	Parent Education Levels (Mom)	Parent Education Levels (Dad)
Gender	Pearson Correlation	1	.012	.210	-.072	-.111
Ethnicity	Pearson Correlation	.012	1	-.043	.066	.238*
Age	Pearson Correlation	.210	-.043	1	-.222	-.044
Parent Education Levels (Mom)	Pearson Correlation	-.072	.066	-.222	1	.418**

Parent Education Levels (Dad)	Pearson Correlation		-.111	.238*	-.044	.418**	1
Parental Financial Aid	Pearson Correlation		-.050	-.061	-.074	-.008	.021
Aspire	Pearson Correlation		.237*	-.049	.107	-.036	.000

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The first noticeable correlation is under the parent education levels for the dad in the ethnicity row (.238), it is at the lowest p-value and significant at the 0.05 level ( $p < 0.05$ ). This means that the relationship between ethnicity and the dad education level is not linear because ethnicity is a nominal variable and the values in the variables can increase or decrease among each other making the change not significantly related between the two variables. This may have to do with the majority ethnic demographic that responded to the survey. The second noticeable correlation is in parent education level for dad column and in the parent education level mom row (.418). It is at 0.01 ( $p < 0.01$ ) level. That means there is a positive correlation of 41.8%, and the increase or decrease in the education level for dad will take place in the mom's education level as well and the changes are significantly related to each other. The last high correlation is in the gender column and Aspire row (.237), it is a correlation at the 0.05 level, and it is positive at 23.7%. The relationship between the variables (Gender and Aspire) is linear and the values in the variables can increase and decrease among each other. Once again, this may have to do with responses from the survey and the various education levels of the parents.

Despite the multicollinearity, I found a way to deal with seeing how the independent and control variables truly interact with my dependent variable and hypothesis. I had to run a linear regression test to find the r-square values and unstandardized coefficients and their significant p-level numbers to determine how true is the relationship. I had to put my control variable (ethnicity) with my sample (students) into a dummy variable called Minorities (Black and Hispanic students) to see if they had any correlation at both 0.05 and 0.01 levels.

## Findings:

### Model Summary

Model	R	R Square
1	.107 <sup>a</sup>	.011
2	.138 <sup>b</sup>	.019

a. Predictors: (Constant), Minorities

b. Predictors: (Constant), Minorities, Parental Aid, Parental Education Levels (Mom), Parental Education Levels (Dad)

## Coefficients

Model		Unstandardized Coefficients		
		B	Std. Error	Sig.
1	(Constant)	3.182	.212	.000
	Minorities	-.259	.288	.372
2	(Constant)	3.122	.570	.000
	Minorities	-.259	.304	.396
	Parent Education Level (Mom)	-.027	.076	.727
	Parent Education Level (Dad)	-.005	.079	.946
	Parent Financial Aid	.058	.100	.564

The first table recorded the R-square value (The probability of how close my independent variable came to predict the dependent variable) under one of my dummy variables, minorities. The second table is the Regression of Parental Education and Parental Aid on student aspirations. The R-square value, in this case, is 0.19 which is respectable and signals to a slight prediction from Parent Education Levels and Parental Financial Aid towards the minority academic aspirations. This may play a role in why there are high significant values in the second chart. The unstandardized coefficients, most of the independent variables make the students' aspiration go down on average or barely up. This relationship is most likely true since most the independent variables have high significant p-levels (.727, .946, and .564) there for the relationship between my independent variables (Parent Education Level and financial aid towards the student), my dependent variable (aspire) and more specifically minorities (Black people and Hispanics) is not significant in the changes. Both of my hypothesis is wrong in this case.

## Aspire \* ParDadCat Crosstabulation

Count

		ParDadCat		Total
		.00	1.00	
Aspire	1	6	5	11
	2	6	1	7
	3	22	13	35

4	6	4	10
5	7	4	11
Total	47	27	74

I created some variables to create new ones. AspireCat (Students aspirations based on the questions asked on the ordinal scale 1-5 with two ranges 1-3=0 4-5=1) and ParDadCat (Education level of the dad based on the ordinal scale of 1-9, with two ranges being 1-4=0 and 5-9 =1). Based on the frequency table, it seems like most dads did not make it pass the “some college” rank (ordinal rank 5). In fact, 80.8 did not go past that education level. The most alarming factor, however, is when I performed the cross-tabulation study to come up with a chart to see how both my hypothesis were not true at all. The Aspire #3 row shows students who wanted to get their B.A. degree and just go to work came from dads who had a higher-level education vs. students who wanted to do the same thing, but their dads had lower education. Many of them wanted to stop after getting their B.A. which means students that have dads with educational levels did want to pursue higher education levels past a B.A. degree. That is the opposite of my hypothesis and proves that the dad education level does not have a strong effect on student aspiration. In return, that could mean that students who took the survey may feel that they get enough money from their parents to get by.

#### Conclusion:

These findings were not the ones I expected to end up with at the end of the study. I feel like both of my hypothesis would be right if I conducted the survey with private college students. When I look back at the people that responded to the survey, I realized I made a lot of assumptions that may have not fit the demographic of most people who filled the survey out. Since I used data from a CUNY where the students are older than the average student at 27.26 years old and many people in our survey fit the minority demographic of the survey (Black people and Hispanics). Most people must be first-generation college students who were probably just trying to get their B.A. degrees and get into the workforce but some of them might want to get a graduate degree if they are confident in the academic abilities or actually need it for their field. In conjunction with my data coming from a CUNY, many students must have got enough money from their parents to get through the semesters and even earn money from a job, so they felt like their parents supported them enough because they might have qualified for financial aid to pay for classes. Three questions I would ask if I redid the study is: What other expenses do you have to pay for outside of school that your parents can help you with? If you qualified for it, what is the range of financial aid payment did you receive for the semester? How many classes did you take on average in a semester? I would also try to see which gender had higher student aspirations. These questions and data would give me insight on how dedicated they are to their academic aspirations, how do they balance the funds they receive, and can they keep up other parts of their lives throughout their higher education experience.

**References:**

Rocconi, L., Ribera, A., & Nelson Laird, T. (2015). College Seniors' Plans for Graduate School: Do Deep Approaches Learning and Holland Academic Environments Matter? *Research in Higher Education*, 56(2), 178–201. <https://doi-org.citytech.ezproxy.cuny.edu/10.1007/s11162-014-9358-3>