

# What affects college students? A look at GPA, leadership skills, and overall happiness of UNCA students

## Abstract

This study looks at what variables affect a student's GPA, leadership skills, and overall happiness at UNCA. A particular variable that is examined is if a student belongs to a social fraternity or sorority on campus. This study was conducted through use of a survey, given to twelve different classes of Humanities students and to members of social fraternities and sororities that were willing to participate on campus. Regression was done on the data to find the significant variables that affected GPA, leadership skills, and overall happiness of students. The Greek students tended to fare better in many of the variables than the non-Greek students. The results of this survey show that being part of a social fraternity or sorority can have numerous positive effects on the college experience of the UNCA student.

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## Introduction

College is definitely an important time in a young adult's life. Besides academics, students pick up skills and values that will help them later in life. Many studies have been done on why college is such a big influence. I plan to look at how peer groups, specifically fraternities and sororities, affect a student's college experience. The output variables I will measure are GPA, leadership skills, and happiness in college; because I think these three variables describe a student fairly well. Alexander Astin, one of the pioneers of research on college students did a similar, but very extensive study (Astin xi). My study will be limited to the students on the University of North Carolina at Asheville campus. Astin saw in his studies that fraternities and sororities do not always fit the stereotypes given them, and I hope to show this as well. From what I have observed, many people think that fraternities and sororities have a negative influence on the college student because of what they see on movies and television. However, I hope to show that fraternities and sororities at UNCA have a positive effect on their members and disprove this common stereotype. This study interests me for a few reasons. First of all, I am a member of a sorority. I also used to be one of those students who thought fraternities and sororities were bad groups to be a part of, so I was guilty of believing the stereotype. Since many students believe this stereotype, it is very hard to recruit new members. In doing this study, I hope to find out whether fraternities and sororities have a positive, negative, or no impact on their collegiate members. I think it will provide helpful information to future UNCA students and their parents about the UNCA Greek system.

## Literature review

Alexander Astin and his book, *What Matters In College* are the inspiration for this study. He has done significant work through studies to see how college experiences affect students (Astin xi). Astin's design, using Input, Environmental, and Output variables, will be used in this study. This is a good design because it separates individual characteristics of students coming into college from the environments they are exposed to during college. Astin's research shows that being involved in a social fraternity or sorority, spending time in volunteer work, and tutoring other students produced great

increases in leadership scores. He found a negative association between being Greek and GPA, but found that self-reported growth in leadership abilities was positively associated with being Greek and hours per week spent in clubs or other organizations. He found a very strong positive relationship between being Greek and joining student organizations.<sup>1</sup> Most studies have also found that Greek members are less likely to drop out of school than independents.<sup>2</sup>

Research suggests that Greek organizations help members keep up their grades so they don't have to drop out of college for academic reasons, and that they provide emotional support for their members so that they're less likely to drop out because they are dissatisfied with college. Greeks do tend to be more satisfied with their college experience than non-Greeks, perhaps because of the support they have. In addition to these benefits, Greeks are also typically more assertive and have more self-confidence than non-Greeks.<sup>2</sup> Greeks may have more self-esteem because of their good system of social support, as "fraternities provide a strong system of social support, a 'brotherhood' that offers unconditional acceptance and encourages the social, civic, and personal development of its members". Having a good self-esteem in college is very important, as it "has been linked to personal adjustment, physical health, and academic motivation and success among college students".<sup>3</sup> One final comment on past research involving Greek organizations in the *Journal of College Student Development* is that fraternities and sororities provide their members with leadership and volunteer opportunities and that Greeks have high levels of persistence, interaction with their peers, and in the case of sorority women, do better academically than their independent counterparts.<sup>4</sup>

## Methods

This study was conducted by using a survey that measured the variables I was interested in. My study is based on Astin's, and has I, E, and O variables. The I variables determine the individual's characteristics before coming to college. The E variables are the types of environments students are exposed to during college. Membership in a fraternity or sorority will be one of the E variables. The O variables are the outcomes GPA, leadership skills, and happiness in college. To obtain a random sample of the UNCA population, the

four different levels of humanities classes on campus were surveyed. The humanities program is a particular characteristic of the liberal arts program at UNCA. The sequence of four humanities classes that study history up to the present help students learn the writing and art of the period while classes encourage discussion and critical thinking. Since humanities is a general education requirement, surveying only humanities classes should keep the data from being skewed towards any particular major. Since the Greek population at UNCA is so small, all willing sororities and fraternities were surveyed to obtain enough Greek representation for my study. In total, 251 UNCA students were surveyed: 185 were non-Greeks and 66 were Greeks. However, because of the age restriction to capture the typical college age student (18-25), or because of incomplete surveys, 70 surveys had to be thrown out: 17 of these were Greek students and 53 were non-Greek students. The actual total number of students that were entered as data then was 181 students: 49 of these students were Greek students and 132 were non-Greek students. The gender breakdown for the data entered was 88 males and 93 females. When sorted by Greek and gender, there were 34 Greek males, 15 Greek females, 54 non-Greek males, and 78 non-Greek females. Out of the three fraternities and two sororities on campus, only one sorority declined to participate, so the data should be adequately representative of the Greek population.

## Results

In my survey, I measured many different variables. The I variables included age, gender, method of financing college, and transfer status. The E variables included membership in a fraternity or sorority, the total number of organizations involved in during college, the total number of leadership positions held during college, the number of people in one's support group, rating the support group, and the type of the support group (family, friends, etc.). Out of these independent variables, the ones I selected to use in my models were age, gender, social fraternity or sorority membership (Greek), the number of organizations a student participated in during college, and how they rated their support group. These independent variables were used to explain the outcome variables GPA, improvement in leadership skills, and overall happiness in college. I decided to use how students rated their level of improvement in leadership skills in college because that shows how much they think have grown from their collegiate experience in their leadership abilities. Table 1 gives a list of the variables and their coding in the data while Table 2 gives summary statistics about each variable. Before running regression on the data, and finding the results, I had expectations about how each independent variable would affect each of the three dependent variables. These

expected signs, along with the actual signs and regression results can be found in Table 3. I thought age would have a positive sign in the GPA model because students typically become more serious about their studies as they approach graduation. With more time in college, I expected improvement in leadership skills to go up, so age would have a positive effect again here. I did not know how age would affect rate of happiness because freshmen have easier classes but they are making a big adjustment to college, while older students have more stress, but have had more time to make friends and get settled into college. As far as gender goes, I had no idea if males or females would perform better in any of the models so I had no expectation of what this sign would be. I expected Greeks to perform better in all of the models than non-Greeks because of the opportunities and support Greeks get from their fellow members. I also thought the total number of organizations a student was involved in during college would have positive effects in all three models because being involved helps students to manage time better to make sure studies are taken care of, and they provide opportunities for leadership and making friends. The last variable, rating support, I also thought would have a positive sign in all three models because having a good support group enables people to generally be more successful and happy.

**Table 1** Variable List and Coding

### GPA: on a 4.0 scale

Rate of Improvement in Leadership Skills: (while in college) 1(stayed same)-10(very improved) Rate of Happiness: (how happy are with college experience) 1(unhappy)-10(very happy)

### Age

only included 18-25 year olds to get a sample of the traditional college age student Gender: 0=Male, 1=Female

### Greek

0=non-Greek, 1=Greek

### Number of Organizations

Total number have been involved with in college (clubs, sports teams, etc) Rating Support: how good support group is at getting you through tough times in college 1(bad) - 10 (very good)

**Table 2** Variable Summary Statistics.

Variable	Mean	Min	Max	Standard Deviation
GPA	3.089	0.250	4.000	0.601
Rate of Improvement In Leadership Skills	5.384	1.000	10.000	3.099
Rate of Happiness	8.110	2.000	10.000	1.760
Age	20.470	18.000	25.000	1.714
Gender	0.514	0.000	1.000	0.501
Greek	0.271	0.000	1.000	0.446
Number of Organizations	1.641	0.000	14.000	0.446
Rating of Support	7.994	1.000	10.000	2.040

Variable	Coefficient	Std. Error	p-value	Expected/Actual Sign	Significance
Age	0.036	0.024	0.1433	+/+	at 85%
Gender	0.309	0.085	0.0004	?/+	at 99%
Greek	-0.448	0.107	<0.0001	+/+	at 99%
Number of Orgs.	0.085	0.024	0.0006	+/+	at 99%
Rating of Support	0.008	0.021	0.6982	+/+	at 30%
Age	0.036	0.024	0.1433	+/+	at 85%

$$\text{GPA} = 2.112 + 0.036(\text{Age}) + 0.309(\text{Gender}) - 0.448(\text{Greek}) + 0.085(\text{Number of Orgs}) + 0.008(\text{Rating of Support}).$$

Variable	Coefficient	Std. Error	p-value	Expected/Actual Sign	Significance
Age	0.254	0.117	0.0304	+/+	at 97%
Gender	-0.768	0.405	0.0596	?/+	at 94%
Greek	2.364	0.509	<0.0001	+/+	at 99%
Number of Orgs.	0.313	0.116	0.0079	+/+	at 99%
Rating of Support	0.189	0.099	0.0594	+/+	at 94%

$$\text{Rate of Improvement in Leadership Skills} = -2.093 + 0.254(\text{Age}) - 0.768(\text{Gender}) + 2.364(\text{Greek}) + 0.313(\text{Number of Orgs}) + 0.189(\text{Rating of Support}).$$

**Table 3** Models

Variable	Coefficient	Std. Error	p-value	Expected/Actual Sign	Significance
Age	0.051	0.071	0.4668	?/+	at 63%
Gender	-0.354	0.245	0.1496	?/+	at 85%
Greek	0.420	0.309	0.1741	+/+	at 82%
Number of Orgs.	0.100	0.070	0.1567	+/+	at 84%
Rating of Support	0.340	0.060	<0.0001	+/+	at 99%

$$\text{Rate of Happiness} = 4.240 + 0.051(\text{Age}) - 0.354(\text{Gender}) + 0.420(\text{Greek}) + 0.100(\text{Number of Orgs}) + 0.340(\text{Rating of Support})$$

Number of Orgs = Number of Organizations, ? indicates uncertainty of expected sign.

When I did the regression on the models, I found my expected signs were the actual signs more often than not. Age ended up having a positive effect in all three models. Since I had no expectations about gender, the results were surprising in that females performed much better academically but that males did better in improving their leadership skills and were happier in college. I did not think the differences in the genders would be so pronounced. Greeks had lower GPAs than non-Greeks, but they did improve their leadership skills more and were happier than non-Greeks. Number of organizations and rating support had positive effects in all three of the models, just as I had expected. The equations of the models are given in Table 3, along with the descriptive statistics for the models, including the expected and actual signs of the variables and p-values. Table 3 shows that the independent variables have different importance and significance in the three models. The most outstanding variables in the GPA model are gender with a coefficient of 0.3090 and Greek with a coefficient of -0.448. Since females were coded as 1, this says that females have higher GPAs than males. Also, since Greeks were coded as 1, this means Greeks had lower GPAs than non-Greeks. In the improvement in leadership skills model, gender and Greek

are again the most outstanding variables. Gender has a coefficient of -0.768, which means that males have higher improvements in leadership skills than females do. Greek has a coefficient of 2.364, which is very large in comparison to the other coefficients in the model. This shows that Greeks have much greater improvements in leadership skills than non-Greeks do. The rate of happiness model has three outstanding variables, gender, Greek, and rating of support. The coefficient of gender, -0.354 shows that males at UNCA are happier with their college experience than females are. The Greek coefficient, 0.420, means that Greeks are happier than non-Greeks are which may be due to the social support fraternities and sororities give their members. The coefficient of rating of support is 0.340, which shows that those students who have better support groups are happier with their college experience. From looking at the correlations between variables, Greeks tended to be more involved in activities outside the classroom. They tend to be in/have been in more organizations than non-Greeks. Research shows that involvement is positively related to cognitive development.<sup>5</sup> Greek members also report more leadership positions, currently, or in the past than non-Greek members, and thus their self-ratings of leadership and improvement in leadership are

also higher than those of non-Greeks. Fraternities and sororities have been shown to provide their members with many opportunities for leadership positions and development.<sup>4</sup> Astin<sup>1</sup> also found in his study that Greeks reported more gains in leadership ability than non-Greeks, as this study at UNCA found.<sup>4</sup>

Greeks also reported larger support groups and better ratings of their support groups. Greeks also tended to report that their support group consisted mainly of fellow members of a student organization, which I am presuming to be their fraternity or sorority. Fraternities and sororities are reported to give their members a strong system of support, symbolized by the brotherhood or sisterhood of the members.<sup>3</sup> Studies also show that self-esteem has been linked to the student's social support system,<sup>3</sup> so Greek members should do better here also, since they rated their support systems better. This better rating of their support systems may be one reason why Greeks reported higher levels of satisfaction/happiness with their overall college experience. Since gender and Greek were the only variables whose signs changed in the models, means are given for the outcome variables sorted by gender and Greek participation in Table 4. Table 4 shows that female Greeks

have the highest mean GPA (3.322) of all UNCA students, as previous research has often found, with male Greeks having the lowest mean GPA (2.161). One explanation of this GPA difference is that certain fraternities and sororities emphasize academics more than others do. Since the male Greek data is composed of three different fraternities, it includes data from fraternities who may emphasize academics more and other fraternities that may emphasize academics less. Females on the whole, generally have higher GPAs also. Female and male Greeks have significantly higher rates of improvement in leadership skills, averaging three to four points higher than non-Greek students (7.933 compared with 4.103 for females and 7.882 compared with 4.954 for males). Previous research also supports this result. Males on the whole have higher rates of improvement in leadership skills. Female and male Greeks also have higher rates of happiness in college, averaging about 1 point higher than non-Greek students (9.000 compared with 7.744 for females and 8.735 compared with 8.000 for males). Again, research has found that Greeks are typically more satisfied with their college experience, so these findings are consistent with many previous studies.

**Table 4** Outcome Means Sorted by Gender and Greek

	Variable Male	Female	Male	Female	Males	Females	Non-Greeks Greeks	Variable Male
GPA	3.064	3.267	2.161	3.322	2.890	3.276	3.184	2.831
Rate of improvement in Leadership skills (1-10)	4.954	4.103	7.882	7.933	6.085	4.720	4.451	7.898
Rate of Happiness with college (1-10)	8.000	7.744	8.735	9.000	8.284	7.946	7.848	8.816

## Discussion

There are a few limitations to this study. One is that all Greek groups were not surveyed because one sorority declined to participate, so the data doesn't accurately measure the entire Greek population. One source of error is that many did not complete the survey reducing the possible number of data points. In addition, some students may not have cared to fill out the survey as accurately as possible or perhaps they didn't know their exact GPA. Also, I asked students to put all the organizations and leadership positions they had had during their time at UNCA. Some students may not have paid attention to this, and only put the organizations and leadership positions they are currently in. I wanted the students to list the total numbers of organizations and leadership positions because a big part of development in college is being exposed to different things. Even if a student didn't stay in an organization their whole time during college, they did have the opportunity to experience it and grow from it. Research shows that being involved in a broad range of curricular and co-curricular activities had positive effects on gains in general abilities, which is one of the types of cognitive development. My study shows that Greeks are more involved in organizations and leadership positions and this should increase their development in college. Just as in my study, research has shown that fraternity and sorority members are more involved, and since involvement is positively correlated with

cognitive development (such as communication skills, interpersonal skills, and critical thinking), Greeks should experience higher levels of cognitive development than independents.<sup>5</sup> Another source of error is that the variables for GPA and Rate of Happiness were not normally distributed. They both tended to be negatively skewed, but one would expect more GPAs to be closer to 4.0 than 0, and that more people would be happy than unhappy or else they would have left UNCA. Rate of Improvement of Leadership Skills was normally distributed. All three models displayed fairly consistent variance though, so no transforms were made to the models. This was a fairly large population sample so I believe the data is accurate for the non-Greek students and the four Greek organizations that were surveyed. The majority of the members of the Greek organizations were surveyed, so good representation was obtained there. Surveying twelve humanities classes gave a fair representation of the non-Greek UNCA population also. Therefore, I believe the findings are consistent with the reality of the Greeks and non-Greeks on the UNCA campus.

## Conclusion & Summary

Although Greek life is not pervasive at UNCA and thus some limitation should be taken in generalizing these results to universities with a larger Greek population, it would be interesting to see if these results hold across campuses. Nevertheless, these results show that Greek affiliation and gender are the most telling variables for the

outcomes GPA, improvement in leadership skills, and happiness in college at UNCA. In terms of Greek affiliation, it appears that the Greek organizations on campus have a positive influence on their members. Members of a sorority display more positive effects than members of a fraternity though. The effect of being in a Greek organization on GPA is very different for men and women. Sorority women actually have the highest GPA of any group on campus. However, fraternity men have the lowest GPA on campus. Greeks are more involved on campus, in different organizations and leadership positions. The Greek system provides many opportunities for leadership positions and development for their members. Greek members are also encouraged to be part of other organizations on campus. Since Greek groups contain many different members, there are also opportunities to participate in organizations other Greek members are affiliated with. Greeks also appear to be happier in college, which may be because of their close support group with their brothers or sisters. In terms of gender, females have higher GPAs while males do better in improving their leadership skills and are happier in college. Overall, this study shows that social fraternities and sororities at UNCA provide their members with many positive benefits. This study shows that not only does Greek participation not have a negative effect on students, in fact it has a positive effect on improvement in leadership skills, and happiness, and for females, GPA as well.

## Acknowledgement

None.

## Conflict of interest

None.

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