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First Versus Non-First Generation Students:
Determining Variables of Academic Success
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Abstract

This study examines factors that may be related to college success, and the degree to which these factors differentiate first generation college students (i.e., neither parent completed college) from non-first generation students. Factors that have been shown to be related to college success include support factors: parental emotional support, sibling emotional support, friend emotional support, and parental financial assistance. It is likely that these support factors are less available to first generation students than non-first generation students. Participants were college students at a small liberal arts college who completed an online questionnaire asking questions about parental education and the support the students receive from parents, siblings and friends. College success was measured by GPA, and social and emotional adjustment (based on subscales from the Student Adaptation to College scale). Researchers predicted that first generation students will receive less support from their support factors than their counterpart. Researchers also predict that first generation students will score lower on the different measures of college success. Results indicated that first generation students did score lower on financial support than their counterpart; results, however, were not significant for emotional support from parents, siblings, or friends. First generation students also scored lower in terms of GPA than their counterpart. There were no significant differences in terms of social adjustment or emotional adjustment. The results of this study may contribute to the creation of intervention programs for first generation students, thereby decreasing the drop out rate of first generation college students.

1 First Versus Non-First Generation Students: Determining Variables of Academic Success

Every educational provider wants to know what factors will encourage or inhibit academic success in their students. With society changing and focusing more and more on education, it is important to realize what variables will help students be successful at college. It is also important to find what variables may hinder their ability to be successful. When the hindering variables are identified, an intervention program can be set up to help students move past those variables and be able to achieve academic success. One such hindering variable may be the effect parental education on academic success.

This study will focus on the factors that predict success of first generation students at Hanover College. Hanover College is a small, rural liberal arts college with about a thousand students located in Southern Indiana. The college is academically selective of its students, so it is a difficult school to gain admittance into. In comparison to other private colleges in Indiana, the tuition is not very expensive, but it is still more expensive than public or community colleges. Students who go to Hanover College are generally serious about their education and tend to work hard for their grades. Most students are also involved in different activities on campus, including Greek life, athletics, and different programs. According to the Registrar office of Hanover College, approximately twenty percent of Hanover's students over the past 5 years are students whose parents have not obtained a Bachelor's degree.

First generation students, defined as students whose parents have not obtained a Bachelor's degree or higher, experience more struggles in college than do students whose

parents have a college education. Deanna Martin (2007) states the first generation students “sometimes lack the rigorous academic preparation, family funding, and encouragement that others (non-first generation students) have.” It is a problem that these first generation students are experiencing these struggles of being able to perform academically, lack of financial support and lack of emotional support. Fallon (1997) also discusses struggles of first generation students and reasons for these struggles. She says that “researchers have identified differences in family support for education, academic preparation, college knowledge, career versus academic orientation, level of commitment to the role of the student, and attrition rates between first generation and second generation students” (p. 387).

The differences between first generation and non-first generation students may be related to important underlying variables that help determine whether a student is successful in college or not. Some variables that may be different between first generation and non-first generation students are sources of support. Parents, siblings, and friends can all provide emotional support for the student. Parents may also be a source of financial support. Sedlacek and colleagues also found that support may be more important to academic success than other “noncognitive variables” (Fuentes & Sedlacek, 1994 and Tracey & Sedlacek, 1985 as cited in Dennis et al., 2005). Other “noncognitive variables” may simply include resources available to each student to foster their academics.

One support factor that may impact academic achievement could be parental emotional support. In looking at family support, Fallon says that family support is very important for a student in their decision to go to college and to graduate. She goes on to

say that parents who have not obtained a college education may not provide enough support to the student in their decision to attend college and to graduate. Fallon recognizes that first generation students have different needs than non-first generation students, and that these differences inhibit those students' ability to succeed in college. In another study conducted by Teahan (1963), it was suggested that students who had a grade point average of less than 2.0 did not identify with their parents as much as students who had higher grade point averages. If a student cannot identify with their parents, the student is less likely to seek support or advice from the parents. Not being able to seek the support one needs could result in the student not being able to be successful in the college setting. McCarron and Inkelas (2006) also found that many previous researchers agree that the support from parents of first generation students may be limited for various reasons (Duggan, 2001; Terenzini et al., 1996; Warburton et al., 2001 as cited in McCarron and Inkelas, 2006). On page 537, they cite some of these reasons as the following: "lower socioeconomic status, fewer resources, less parental integration into the professional workforce, and less familiarity with the college-going process (McCarron and Inkelas, 2006).

Another support factor that may impact academic achievement may be sibling emotional support. Shields (2002) found that students who had an older sibling who had obtained a college education were more likely to complete more credit hours than students whose siblings did not have a college education. Older siblings of students helped those students be more persistent in their college education; the siblings perhaps provided more support to the student. Having a sibling who has gone to college can be very beneficial to a student in that the sibling can provide emotional support and give

advice in all college aspects. Having someone who has been to college before can act as a mentor. Because parental education has an impact on a student's decision to go to college, siblings may also hold the same beliefs as the parents (McConnell, 2000; Terenzini et al., 1996; York-Anderson & Bowman, 1991 as cited in McCarron & Inkelas, 2006). If the parents have a college degree, it is reasonable to expect that the older siblings may also have a college experience and be able to provide more emotional support.

Friend emotional support is another support factor that could impact academic success. Rodriguez et al. (2005) found that peers could be more helpful than parents in terms of specific challenges and finding resources (Rodriguez et al., 2003 as cited in Dennis et al., 2005). They suggest that peers can help students more by giving advice about classes and tests. They also suggest that peers could help students form study groups, and grant access to resources the peers have used before (Rodriguez et al., 2003 as cited in Dennis et al., 2005). Thereby, friends from high school could act as personal examples of success, and would be able to help their friends through difficult times.

Bui (2002) discusses another support factor that may impact success at college, financial support. He found that students who are first generation students tend to be more concerned about financial assistance than their counterparts. He also found that first generation students reported seeking a college degree to assist their family with financial burdens. McCarron and Inkelas (2006) also support this finding by reporting that the majority of first generation students tend to fall in the lowest socioeconomic status category. Being concerned about money can cause a student to be stressed, and stress may impact the student's college success.

There is an area that is lacking in defining variables of college success. Any student can tell you that there is more to being a successful student than just receiving good grades. There are a variety of different ways of measuring academic success. The first is simply the grade point average. This is a generic way of measuring success, but the most accepted method. If a student has a grade point average less than 2.0, s/he will be considered unsuccessful because s/he could be placed on academic probation. The second variable is social adjustment. Part of going to college is a transition from one social sphere to another. This can be a difficult transition for some. If the student has made the transition, s/he will be considered successful in this area. The third variable of success is emotional adjustment. Along with the transition of college, students are leaving their families, a huge source of emotional support. Some students discover that they have a hard time dealing with their emotions without having that constant emotional support. If a student is able to handle their emotions without needing constant support from family, the student will be considered successful. If a student is displaying high levels of all three of these variables, that student is considered to be a successful student.

Since there is reason to believe that first generation students are disadvantaged in terms of parental emotional support, sibling emotional support, friend emotional support, and parental financial support, this study is designed to compare the experiences of first generation students and non-first generation students. Our study will also demonstrate how these predictive variables of college success impact academic success in terms of grade point average, social adjustment, and emotional adjustment.

We expect that various support factors, parental emotional support, sibling emotional support, friend emotional support, and parental financial support, will be lower

in first generation students than in non-first generation students. We also predict that first generation students will be less successful as measured by GPA, social adjustment, and personal emotional adjustment, than their counterpart. Finally we expect that the support factors mentioned above will at least partially predict why first generation students do not succeed as much as non-first generation students.

Method

Participants

There were 136 participants from Hanover College, a small liberal arts college. Three participants were excluded due to incomplete responses and one participant was excluded because one response was submitted twice by mistake. The age range was 18 to 41, with an average age of 21. There were 52 males, and 84 female participants. There were 57 first generation students and 79 non-first generation students. Ninety percent of the participants were Caucasian.

Participants were recruited by contacting all assistant deans and housing directors through an email, including the link to the online questionnaire. Assistant deans and housing directors were asked to simply forward the link to all residents. The researchers also emailed the link to those individuals living off campus in an effort to include all students. Off-campus students were found in the student directory.

Material

This study will be comprised of a 70-point online questionnaire (Appendix C). This questionnaire had three different components, including: demographics; a support factor questionnaire that was designed by the researchers, and the Student Adaptation to College Questionnaire (SACQ). The SACQ measures how well a student is adjusted to

college in five different areas. Researchers used the SACQ as a way of measuring college success by means of college adjustment.

The support factor questionnaire used a seven-point Likert scale, while the SACQ used a nine-point Likert scale. One part of the support factor questionnaire was designed to assess parental emotional support. An example question is “How supportive were your parents of your decision to go to college?” Six questions were used to assess parental emotional support, $\alpha = .83$. Another part of the support factor questionnaire was designed to assess sibling emotional support. An example question is “How often do you seek advice from your siblings?” Four questions were used to assess sibling emotional support, $\alpha = .93$. A third part was designed to assess friend emotional support. An example question is “How supportive are your friends in regard to emotional support?” Four questions were used to assess friend emotional support, $\alpha = .88$. The final part of the support factor questionnaire is determining the amount of parental financial assistance. The question used to determine the amount of financial assistance the student receives is “How much of your financial obligations (i.e. tuition, books, food, living costs, etc.) do your parents pay for?” This was the only question used. Two sections of SACQ were used, social adjustment and personal emotional adjustment. There were twenty questions used to assess social adjustment, $\alpha = .86$, and fifteen questions used to assess personal emotional adjustment, $\alpha = .87$. An example of social adjustment is “I am meeting as many people, and making as many friends as I would like at college.” An example of personal emotional adjustment is “I have been feeling tense or nervous lately.”

Procedure

Participants received an email asking students to participate in a research study. If the student chose to participate, s/he clicked a link that directed the participant to the informed consent. After agreeing to the informed consent, participants clicked a link that took them to the online questionnaires. Participants clicked another link after they completed the questionnaires that took them to the debriefing form, which informed them of the hypothesis and expected results. The researchers' names and contact information were given, so the participants could ask any questions they may have had.

Results

When comparing the means of first and non-first generation students on the support factors, the only significant difference was in terms of parental financial support. When looking at how much financial assistance students are receiving from their parents, first generation students ($M = 4.28$, $SD = 3.42$) are receiving less assistance from their parents than are non-first generation students ($M = 6.70$, $SD = 3.33$), $t(134) = -4.14$, $p < .001$. Parents of first generation students are paying between thirty and forty percent of the students financial obligations, whereas parents of non-first generation student are paying between fifty and sixty percent. Also when looking at how much money students have taken out in loans, first generation students ($M = 2.21$, $SD = 1.46$) are having to take out more money in loans than are non-first generation students ($M = 1.64$, $SD = 1.06$), $t(132) = 2.64$, $p = .009$. First generation students are having to take out about \$10,000 in loans each year while non-first generation students are taking out about \$5,000. Differences between first generation students and non-first generation students were not significant in terms of parental emotional support, sibling emotional support, and friend

emotional support.

When comparing the means of first and non-first generation students in terms of academic success, the only significant finding was in terms of GPA. When looking at GPA, first generation students ($M = 2.97$, $SD = .49$) scored significantly lower than non-first generation students ($M = 3.15$, $SD = .45$), $t(133) = 2.22$, $p = .028$. The means are representative of actual GPA. In terms of social adjustment and personal emotional adjustment, there were no statistically significant differences between the two groups.

In order to determine factors other than being a first generation student that might be related to college success, a series of three regression analyses were conducted in which the factors of parental education, parental emotional support, sibling emotional support, friend emotional support, and parental financial support were used to predict each of the three measures of success separately—GPA, social adjustment, and personal emotional adjustment. (Chart A).

When looking at the predictive variables of GPA, the only significant variable was parental education.

When looking at the predictive variables of social adjustment, there were two significant and one moderately significant predictive variables of social adjustment. Friend support was the strongest, significant predictive variable of social adjustment, followed by parental education, and the moderately significant predictive variable was parental support.

When looking at the predictors of emotional adjustment, there were no significant findings.

Discussion

First generation students reported receiving significantly less financial support from their parents and are significantly taking more money out in loans than non-first generation students. Past research suggests that people who do not have a college degree make significantly less money than people who do have a college degree. McCarron and Inkelas (2006) support this finding by reporting that the majority of first generation students tend to fall in the lowest socioeconomic status category. It seems evident that parents of first generation students are less equipped to provide as much financial assistance as the parents of non-first generation students, causing the student to take out more loans. The results also indicate that parental financial assistance is a predictive variable of social adjustment. Researchers believe that students who are taking out more money in loans may have to get a job to support themselves while in college. By having a job, the student may not be spending much time with their college peers and have less time to study, resulting in lower social adjustment and lower GPA.

There were no significant differences between first generation and non-first generation students in terms of receiving emotional support from parents, siblings, or friends. This could be a result of college selection effects. Because Hanover College is a difficult college to be admitted into, parents, siblings, and friends may be supportive because they realize the student's hard work and effort put into being accepted. Also when students are deciding which college to get into, students may have put more thought and consideration into deciding to go to Hanover College. If parents, siblings, and friends saw how serious the student was about attending this college, they may be more supportive than if the student acted disinterested about attending college.

The results did not indicate that first generation students will have lower levels of social adjustment or emotional adjustment. A possible explanation for this lack of difference could be a result of the population of the participants. Participants may have chosen Hanover College because it has an environment similar to their previous environment, therefore it would not be as difficult to adjust socially or emotionally. Another possible explanation is that the students at Hanover College chose this school because they are from the surrounding area and know other current students. Being familiar with the area and already having a group of friends could make the transition easier for these students.

Researchers expected parental education, parental emotional support, sibling emotional support, and friend emotional support to be predictive of GPA, social adjustment, and personal emotional adjustment. Of these variables, the only significant predictor of GPA was parental education. A possible explanation of this could be that study habits are already formed in high school and emotional support may not be predictive of GPA. Teahan (1963) showed that students who had a grade point average of less than 2.0 did not identify with their parents as much as students who had higher grade point averages. This could be another possible explanation for GPA not being predicted by emotional support. Students who do not identify with their parents most likely feel that their parents do not understand them, thus they would not seek emotional support from their parents. Other predictive variables may be GPA while in high school or Greek affiliation.

Researchers expected these same variables to be predictive of social adjustment. Of these variables the most predictive were friend support. This suggests that receiving

support from your friends is the most useful when making the transition between social groups. This could be a result of friends from high school accepting the student's new peer group, thereby making the student experience an easier transition. Parental education was also a significant predictive variable. Having parents who have a college experience can provide important information to the student about how to be successful in college. Parental emotional support and sibling support were not significant predictors of social adjustment. This could be a result of students looking to their friends for support, more so than their family. Rodriguez et al. (2005) suggest that peers can help students more by giving advice about classes and tests. They also suggest that peers could help students form study groups, and grant access to resources the peers have used before (Rodriguez et al., 2003 as cited in Dennis et al., 2005).

Future Research

The population was limited to a small, liberal arts college, and cannot be generalized to larger, public colleges. By having a more generalized population, there may have been more differences between first and non-first generation students. The participants at this college may be inherently different for reasons unknown to the researchers.

Future researchers should consider, when designing a questionnaire, to try to keep the Likert scale values consistent between sections. They should also take the age of the sibling and how many years the sibling has been in college into consideration. Future researchers should also consider focusing on only one predictive variable of academic success. By having so many variables to analyze, the researchers could not obtain a full understanding of the effects of parental education on the different variables of academic

success.

Conclusion

While the hypotheses were not completely supported, results do indicate that there are differences between first generation and non-first generation students in terms of GPA and parental financial assistance. Researchers have identified only a few predictive variables of academic success, but there are several variables that have yet to be identified. There are a number of implications for this study. Because results indicate that first generation students are scoring lower in terms of GPA, more academic assistance is needed for this group of individuals. Results also indicate that first generation students are not receiving as much financial assistance from their parents as non-first generation students. A program set up to encourage first generation students to have a job on campus could be beneficial for these students. Because there are inherent differences between these two groups of students, colleges should try to create programs designed to help first generation students, and all students in general, to be more successful in college.

References

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Chart A

Predictors of Social Adjustment		
	Beta	Sig
Parental Education	0.240	0.002
Parental Support	0.162	0.052
Sibling Support	-0.097	0.227
Friend Support	0.415	<.001
Parental Financial Support	-0.154	0.063
Adjusted $R^2 = 0.262$		

Predictors of Emotional Adjustment		
	Beta	Sig
Parental Education	-0.023	0.796
Parental Support	-0.004	0.970
Sibling Support	-0.135	0.151
Friend Support	-0.016	0.861
Parental Financial Support	0.026	0.778
Adjusted $R^2 = -0.010$		

Predictors of GPA		
	Beta	Sig
Parental Education	0.207	0.018
Parental Support	0.119	0.214
Sibling Support	-0.035	0.708
Friend Support	0.085	0.357
Parental Financial Support	0.071	0.437
Adjusted $R^2 = 0.025$		

Appendix A

Hi students,

We are Heather Osterman and Michelle Coffman, senior psychology majors. We are working on our independent study, which focuses on the college experience. We are asking you to please participate. Since it is about your college experience, you might find it interesting; it won't take long to complete.

Please go to WEBSITE and fill out the questionnaire.

<http://psych.hanover.edu/research/seniorprojects/2008/coffmanosterman/>

We are limiting our study to only Hanover College students and need as many participants as we can get. Your participation would be very helpful!

Thank you for your time, and please don't hesitate to contact either of us if you have any questions.

Thank you,
Heather Osterman & Michelle Coffman
ostermanh@hanover.edu
coffmanm@hanover.edu

Appendix B

Informed Consent Form

This research is being conducted by Michelle Coffman and Heather Osterman, senior psychology majors at Hanover College. The following question asks questions about your college experience. After you are finished answering all the questions, you will receive a more complete description of the project.

The entire survey will not take more than 30 minutes. There are no known risks involved in being in this study, beyond those of everyday life. The information you provide during the experiment is completely anonymous; at no time will your name be associated with the responses you give.

If you have any questions about the questionnaire or this study, please contact Michelle Coffman at coffmanm@hanover.edu, Heather Osterman at ostermanh@hanover.edu, or Dr. Stephen Dine Young, supervising faculty, at youngst@hanover.edu.

By clicking the link below, you are giving your consent to participate in this study.

[Proceed to the study.](#)

Appendix C

Support Factor Questionnaire

Please answer the following questions about yourself.

1. Age: years
2. Gender: Male Female
3. Year in College:
4. Ethnicity:
5. Residence: On Campus Off Campus
6. Estimated GPA:
7. Who did you live with during high school?
Both Parents
Mother
Father
Relative
Adoptive
Other
8. Do you have any siblings? (biological, adopted, or family members considered siblings)
Yes No
8a. If so, how many siblings do you have:

"Parents" in the next set of questions refer to your legal guardians when you were in high school.

1. What is your mother's highest level of education?
Junior High
High School
Some College
Associates Degree
Bachelors
Higher

2. What is your father's highest level of education?

- Junior High
- High School
- Some College
- Associates Degree
- Bachelors
- Higher

3. How often do you talk to your parents?

- Not Often
- Very Often

4. How likely are you to seek advice from your parents about life stressors?

- Not Likely
- Very Likely

5. How supportive were your parents of your decision to go to college?

- Not Supportive
- Very Supportive

6. How supportive are your parents of your post- graduation plans (i.e. grad school, career, etc.)?

- Not Supportive
- Very Supportive

7. How supportive are your parents in regard to finances?

- Not Supportive
- Very Supportive

8. How supportive are your parents in regard to emotional support?

- Not Supportive
- Very Supportive

"Siblings" in the next set set of questions refer to who you consider your sibling, biological, adoptive, etc.

1. Have you had any siblings attend college?

- None
- Some
- Most
- All
- Not Applicable

2. Have you had any siblings graduate college?

- None
- Some
- Most
- All
- Not Applicable

3. How often do you seek advice from your siblings?
Not Often Not Applicable

4. How supportive were your siblings of your decision to go to college?
Not Supportive Not Applicable

5. How supportive are your siblings of your post-graduation plans (i.e. grad school, career, etc.)?
Not Supportive Not Applicable

6. How supportive are your siblings in regard to emotional support?
Not Supportive Not Applicable

"Friends" in the next set of questions refer to your high school friends not college friends.

1. Have you had any friends attend college?
None
Some
Most
All
Not Applicable

2. Have you had any friends graduate college?
None
Some
Most
All
Not Applicable

3. How often do you seek advice from your friends?
Not Often Very Often

4. How supportive were your friends of your decision to go to college?
Not Supportive Very Supportive

5. How supportive are your friends of your post- graduation plans (i.e. grad school, career, etc.)?
Not Supportive Very Supportive

6. How supportive are your friends in regard to emotional support?
Not Supportive Very Supportive

Please answer the next questions to the best of your ability.

1. How much of your financial obligations (i.e. tuition, books, food, living costs, etc.) do your parents pay for?

- 0%
- 10%
- 20%
- 30%
- 40%
- 50%
- 60%
- 70%
- 80%
- 90%
- 100%

2. How comfortable do you feel asking your parents for money?

Not Comfortable Very Comfortable

3. Are you employed? Yes No

4. If yes, where do you work?

- On Campus
- Off Campus
- Both

5. If yes, how many hours do you work?

6. Approximately how much will you personally have taken out in loans by the end of the current academic year?

- \$0 - \$5,000
- \$5,001 - \$10,000
- \$10,001 - \$20,000
- \$20,001 - \$30,000
- \$30,001+

7. How much money have you received in scholarships and loans (per year)?

- \$0 - \$5,000
- \$5,001 - \$10,000
- \$10,001 - \$20,000
- \$20,001 - \$30,000
- \$30,001+

Appendix D

Debriefing Form

The questionnaire that you just completed is studying the academic success of Hanover college students' based upon whether or not their parents attended college. The researchers are predicting that students whose parents have obtained a college degree will have greater levels of academic success, in terms of GPA, social adjustment, and emotional adjustment. Our hypotheses are based on the assumptions that student's whose parents have college degrees have several advantages over those who do not: 1) greater emotional support from parents; 2) greater financial support from parents; and 3) more personal examples of college success. We hope the results of our study can assist colleges and universities in improving services for first generation students. Once the study is completed, you may view the results at <http://psych.hanover.edu/research/seniorprojects/2008/coffmanosterman/results.html>. If you have any questions, you may contact Heather Osterman (ostermanh@hanover.edu), Michelle Coffman (coffmanm@hanover.edu), or faculty supervisor, Dr. Stephen Dine-Young (youngst@hanover.edu).