The Connection Between Ethnicity, Motivation, and GPA

Paulina Wojtach

Dominican University
Abstract

There are a number of factors found to predict grade point average (GPA), including parental attachment, college self-efficacy, and ethnic background (Aguayo et al., 2011; Dennis et al., 2005; Vuong et al., 2010; Yazedijan et al., 2009). Some evidence suggests that college self-efficacy mediates the relationship between parental attachment and GPA, but that the relationship is specific to white students (Yazedijan et al. 2009). The current study examines whether the relationship is specific to all white students, including Eastern European first-generation college students, and whether it generalizes to Hispanic first-generation college students. The proposed hypothesis, that parents affect GPA indirectly by influencing college self-efficacy, and that the effect differs by ethnic background, was not supported by the results; only the correlation between college self-efficacy and GPA was significant for the student sample as a whole. The possible reasons for the null findings are discussed.

*Keywords:* self-efficacy, parental attachment, GPA, first-generation students, ethnicity
The Connection Between Ethnicity, Motivation, and GPA

College persistence and success is important for not only students, but for universities as well. Some students attribute their success to their own hard work, while others attribute their success to their parents. In 2015, seven students were accepted into all eight Ivy League schools in the United States; the one thing that they all had in common was that they were the children of immigrant parents (Warren, 2015). The ethnicities of the students were varied, with two Mexican students, one Somali student, one Bulgarian student, one Indian student, and two Nigerian students. However, all eight students attributed their motivation in school to their parents’ efforts when immigrating to the United States to give their children better opportunities for their futures (Warren, 2015). The majority of the students were first-generation college students.

According to Dominican University’s institutional data (2015), more first-generation students at Dominican University graduate in a four-year average, compared to non-first-generation students at the university. Seventy-one percent of first-generation students graduate from Dominican University in four years, compared to 60% of non-first-generation students (Dominican University, 2015). What makes first-generation students at Dominican University 11% more likely to graduate in four years than non-first-generation students? There are a number of factors found to predict college persistence, in particular, grade point average (GPA). Some of these factors include parental attachment, college self-efficacy, and ethnic background.

Parental roles and relationships between predictors and GPA is complex. Some evidence suggests that college self-efficacy mediates the relationship between parental attachment and GPA for white students. Yazedijan, Toews, and Navarro (2009) examined
whether parental factors explained college adjustment and the student’s college GPA among White and Hispanic first-year college students. Parental factors included parental attachment, parental education, and parental expectations. Yazedijan et al. (2009) found significant correlations between overall college adjustment and quality of parental relationship, parents as facilitators of independence, parental support, and parental education for White college students. White students who adjusted to college more easily tended to have higher quality parental relationships, where quality included the parents’ ability to facilitate independence, while also being supportive. Perhaps unsurprisingly, their parents tended to have past college experience. The same relationships held for GPA (Yazedijan et al., 2009). White college students with higher GPAs tended to have more overall adjustment to college and higher quality parents relationships, where quality included the parents being facilitators of independence, while being supportive. White college students, whose parents had more college experience, also had higher GPAs.

Further, this relationship may not explain GPA for all students. There is evidence that the role of both parental attachment and college self-efficacy differ for students from different ethnic groups. Yazedijan et al. (2009) examined the same relationships described above among Hispanic students and found that only quality of parental relationship and parents as facilitators of independence were significantly correlated with overall adjustment for Hispanic students (Yazedijan et al., 2009). In other words, Hispanic students who adjusted to college more easily tended to have higher quality of parental relationship, where the parents were seen as facilitators of independence. Only overall adjustment to college was significantly correlated with GPA (Yazedijan et al.,
Hispanic students who adjusted to college more easily tended to have higher GPAs.

Aguayo, Herman, Ojeda, and Flores (2011) examined the relation between demographic variables, including gender social-economic status, and age, on academic outcomes, including college performance and college self-efficacy among Mexican-American college students. Aguayo et al. (2011) also examined cultural variables, including acculturation, enculturation, and generation status, on academic outcomes, including college performance and college self-efficacy among Mexican-American college students. Acculturation is the balance between one’s personal culture and a new host culture. Enculturation is the process of learning and accepting one’s own culture. Aguayo et al. (2011) found, among Mexican-American students, that only socioeconomic status was a positive significant predictor of GPA and college self-efficacy. First-generation status, enculturation, and acculturation were all positively related to college self-efficacy. In other words, Mexican-American students who had higher generation status, higher enculturation orientation, and higher acculturation orientation tended to have higher levels of college self-efficacy (Aguayo et al., 2011). Enculturation was positively associated with GPA for immigrant students, but not for second generation and beyond students (Aguayo et al., 2011). In other words, the acceptance of one’s Mexican culture, for Mexican-American students, tended to positively affect the GPA of immigrant students. College self-efficacy was significantly related to GPA for second generation and beyond students, but not for immigrant students (Aguayo et al., 2011). In other words, the GPA of second generation and beyond students tended to be higher for those students who believed in their college abilities.
Dennis, Phinney, and Chuateco (2005) examined the effects of personal/career motivation, expectation motivation, perceived family and peer support, and lack of needed support from family and peers on GPA, college adjustment, and college commitment among Hispanic and Asian students. Expectation motivation was operationally defined as pressure from family to attend college. Personal/career motivation was operationally defined as attending university in order to develop intellectually. Perceived family support and perceived peer support was operationally defined as how supportive the participant’s family members or peers are or would be when dealing with college-related problems. Lack of needed support from family and peers were operationally defined as the extent to which the participants were lacking needed resources. GPAs were collected from school records. College adjustment was operationally defined as the extent to which the participant felt a sense of belonging to the college environment. Dennis et al. (2005) found no significant differences between Latino and Asian students for any variables except high school GPA and college GPA; Asian students had higher GPAs in both high school and college than Latino students. The perception of family and peer resources needed was more strongly related to the outcomes than the perception of available family and peer support (Dennis et al., 2005). Students’ need for support from their families or peers was more of a motivator for college outcomes than the actual available support. Overall, students’ career/personal motivation was more strongly related to college outcomes than was family expectation motivation (Dennis et al., 2005). In other words, students’ own personal goals exceeded the goals put forth by their families for GPA. For predictor variables, no significant differences were found between the ethnic groups (Dennis et al., 2005). Career/personal
motivation predicted college adjustment with high school GPA and other variables controlled (Dennis et al., 2005). Also, a non-significant trend suggests that career/personal motivation is related to college commitment (Dennis et al., 2005). Family expectation motivation was unrelated to any outcomes (Dennis et al., 2005). Also, the perceived lack of peer support predicted college GPA and adjustment, with high school GPA and other variables controlled; however, perceived peer support was not a significant predictor (Dennis et al., 2005). Students who believed that they had a severe lack of support tended to do poorly in college, but the belief that they had support did not affect their college outcomes.

Vuong, Brown-Welty, and Tracz (2010) examined the effect of self-efficacy on GPA, the differences in mean academic success and persistence rates between first-generation and second-and-beyond-generation students, the differences between gender and ethnic groups in self-efficacy, and the effects of campus size on self-efficacy. Vuong et al. (2010) found that self-efficacy in academic course work was a significant predictor of academic success. In other words, students who believed in their ability to do well in their classes were more likely to do better in college overall. A significant difference for self-efficacy in academic course work by ethnicity was found (Vuong et al., 2010), meaning that students of different ethnicities had differences in their belief to do well in their classes. There was also a significant difference for self-efficacy in social interactions by ethnicity, meaning that students of different ethnicities had differences in their belief to be able to socialize well with others (Vuong et al., 2010).

Summary
When comparing the college outcomes of students, research is contradictory about whether or not ethnic background plays a role. Dennis et al. (2005) found no significant differences between Hispanic and Asian students, other than GPA. When ethnicity does play a role, its effects work indirectly through self-efficacy (Vuong et al., 2010) and by affecting the avenues through which parents influence children’s outcomes (Yazedijan et al., 2009). Vuong et al. (2010) found that there were significant differences in self-efficacy, which is related to GPA, between ethnicities. Yazedijan et al. (2009) found significant differences between white and Hispanic students in parental relationships, GPA, and college adjustment.

The first-generation immigrant students whose story opened this manuscript attributed their success in high school and college to their parents. Past research supports that theory, but only to a certain extent. Among white students, higher quality parental relationships, supportive parenting, the extent to which parents facilitated independence, and past parental education predicted higher GPAs and better college adjustment (Yazedijan et al., 2009). However, for Hispanic students, parental relationships played less of a role in higher education. Only the quality of the relationship and the extent to which parents facilitated independence predicted college adjustment (Yazedijan et al., 2009). Past parental education and supportive parenting did not play a role, as it did for white students. Perhaps, due to lack of opportunity, immigrant students’ parents did not have the opportunity to achieve higher education, even if they were very knowledgeable. Parents’ role and the extent to which they played a role in the students’ outcomes depended on ethnicity, but not in the direction that one might think. Hispanic students’
parents seemed to be less influential on their outcomes compared to the White non-Hispanic students’ parents (Yazedijan et al., 2009).

While parents played a lesser role for Hispanic students, different factors affected their GPAs. Socioeconomic status was shown to be a predictor of GPA and college self-efficacy for Mexican-American students (Aguayo et al., 2011). Enculturation, the acceptance of one’s Mexican culture, for Mexican-American students, tended to positively affect the GPA of immigrant students, but not for second generation and beyond students (Aguayo et al., 2011). The GPA of second generation and beyond students tended to be higher for those students who believed in their college abilities (Aguayo et al., 2011). Among Asian students, the perception of support, rather than actual support, was more related to college outcomes (Dennis et al., 2005). Asian students’ personal motivation was also more important than family expectation (Dennis et al., 2005).

If parental relationships do not play a role in affecting college outcomes equally to students of all ethnicities, what role do parents play for students? Does ethnicity play a direct role in GPA and college adjustment? If so, does it do so through an influence on college self-efficacy? College self-efficacy is seen to affect GPA for students (Aguayo et al., 2011; Dennis et al., 2005; Vuong et al., 2010). Does ethnicity modify the extent to which parents influence GPA and college adjustment? Could parents be the influencers of college self-efficacy, rather than GPA, for students?

**Current Study**

The current study examined whether the motivators of parental attachment and college self-efficacy affect the GPAs of first-generation college students of different
ethnic backgrounds. Specifically, the goal of the present study was to look at whether parental attachment directly affects GPA, and if that relationship changes when mediated by college self-efficacy. The relationship between college self-efficacy and GPA would also be looked at. These three relationships would be looked at for the entire first-generation college student sample, the Hispanic student sample, and the Eastern European sample. The proposed hypothesis was that parents affect GPA indirectly by influencing college self-efficacy, and that the effect differs by ethnic background (See Figure 1).

**Method**

**Participants**

There were 61 participants in this correlational study. All participants were first-generation college students at Dominican University who represent different ages, genders, ethnicities, and generation statuses. The average age was 19.51 (SD=1.386), ranging from 18 to 24 years old. The majority of the participants were female, which accounted for 73.8% of the participants. Male participants accounted for 24.6% of the participants, and participants who preferred not to answer accounted for 1.6% of the participants. The majority of the participants were of Hispanic descent, which accounted for 77% of the participants. The remainder of the participants were of Eastern European descent, which accounted for 23% of the participants. The majority of the participants were first-generation American, which accounted for 78.7% of the participants, followed by 14.8% immigrant and 6.6% second-generation American Participants were recruited using an online recruiting system and through word of mouth. Psychology students at the
university use an online recruiting system, Sona. Participants were compensated for this empirical study with either course credit or candy.

**Instruments**

**Parental Attachment.** Parental attachment was measured with Kenny’s (1987) 55-item Parental Attachment Questionnaire (PAQ). Sample items include “In general, my parents support my goals and interest” and “Following time spent together, I leave my parents with warm and positive feelings.” The items are measured on a five-point Likert-type scale, ranging from *Not at All (1)* to *Very Much (5)*. Yazedijan et al. (2009) found the PAQ to have a coefficient alpha of .95 for White students and .94 for Hispanic students. For the current study, the PAQ was found to have good reliability for the entire student sample ($\alpha=.77$) and the Hispanic sample ($\alpha=.81$). The PAQ was not a reliable measure for the Eastern European sample ($\alpha=.58$).

**College Self-Efficacy.** College self-efficacy was measured with the 20-item College Self-Efficacy Inventory (CSEI; Solberg, O’Brien, Villareal, Kennel, & Davis, 1993). Sample items include questions about the students’ confidence in the ability to “make new friends at college” and “participate in class discussions.” The items are measured on a 10-point Likert-type scale from *Not at all Confident (1)* to *Extremely Confident (10)*. Aguayo et al. (2011) found the CSEI to have a coefficient alpha of .90. For the current study, the CSEI was found to have good reliability for the entire sample ($\alpha=.91$), the Eastern European sample ($\alpha=.84$), and the Hispanic sample ($\alpha=.92$).

**GPA.** Students self-reported their GPA.

**Demographics.** Demographics were measured using questions developed for this study. The five demographic variables that were measured are age, gender, generation
status, race, and ethnicity. Generation status refers to the generation the student is of being American. For example, first generation American would be someone who was the first member of his or her family to be born in the United States. If the participants’ parents were the first ones of their families to be born in the United States, the students would be second generation and so on. Ethnicity was measured asking for the participants’ parents’ country of birth. (Note that all measures can be seen in Appendix C).

**Procedure**

Participants were greeted with an online consent form (Appendix A), which allowed the participants to understand what they were voluntarily participating in and that they were able to withdraw from the study at any time. Rather than having participants sign their names, participants simply clicked an arrow to continue on with the study, keeping their information confidential by not attaching the data to a name. After giving the proper consent, the participants were directed to a screening survey (See Appendix B). The screening survey asked the participant about his or her generation status and ethnicity. If the generation status is third-generation or beyond, the participant was selected out of the study. If the ethnicity of the participant was not either from an Eastern European country, a Central American country, or a South American country, the participant was selected out of the study. If the participant was not a third-generation or beyond American and was either Eastern European or Hispanic, the participant was directed to the actual survey (See Appendix C). The participants answered the college self-efficacy questions, the parental attachment questions, the college outcomes question, and the demographic questions in a random order. After completing the multi-item
survey, they were directed to the debriefing sheet (See Appendix D). Participants were then either granted course credit through the Sona system or compensated with candy.

**Results**

**Descriptive Statistics**

**Parental Attachment.** The students’ level of attachment to their parents, including the subscales of quality of the relationship, the role of parents as facilitators of independence, and the role of parents as a source of support, was moderate overall. The means and standard deviations for the parental attachment scale and its three subscales can be seen in Table 1.

There were no statistically significant differences between Eastern European students and Hispanic students for the entire parental attachment measure and its three subscales (see Table 1).

**College Self-Efficacy.** Students were quite confident in themselves as college students ($M=7.01, SD=1.36$). The variability of this data shows that students were between moderately confident and very confident of themselves as college students.

Eastern European students and Hispanic students were similar in their means and standard deviations (see Table 1).

**GPA.** Students were found to have an overall GPA average of 3.19 ($SD=.55$). Students at the university generally ranged between an A- and a C+ average, which is a moderate to large standard deviation. There were two outliers of 1.40 and 1.50 in overall student GPA, which significantly skewed the data ($Skewness=-1.054$).
Eastern European students and Hispanic students were similar in their means and standard deviations (see Table 1). There was one outlier of 1.40 in the GPA of Hispanic students, which significantly skewed the data \((\text{Skewness}=-1.67)\).

**Hypothesis Testing**

The proposed hypothesis, that parents affect GPA indirectly by influencing college self-efficacy, and that the effect differs by ethnic background, was not supported.

**Entire Student Sample Without Outliers.** Recall that there were two outliers found in the data for the overall GPA of the entire sample, which caused the results to be skewed. These outliers were removed from the data to better represent the typical first-generation college student. For the entire student sample, only one statistically significant correlation was found, while the other correlations were not statistically significant between the parental attachment measures, college self-efficacy, and GPA (see Table 2). The correlation between college self-efficacy and GPA was found to be moderate, positive, and significant \((r=.353, p<.05; \text{see Figure 2})\). This means that the higher the college self-efficacy is of first-generation college students’ in their college education, the higher their GPA is, and vice versa.

**Entire Student Sample With Outliers.** If the two outliers for GPA had not been removed from the data, then none of the correlations would have been statistically significant. The following correlations are the result of keeping the outliers in the data. The correlation between overall parental attachment and GPA was found to be non-existent and insignificant \((r=.001, p>.05)\). The correlation between quality of relationship and GPA was found to be non-existent and insignificant \((r=-.020, p>.05)\). The correlation between parents as facilitators of independence and GPA was found to be non-existent
and insignificant ($r = -0.081, p > .05$). The correlation between parents as a source of support and GPA was found to be non-existent and insignificant ($r = 0.097, p > .05$). The correlation between college self-efficacy and GPA was found to be weak, positive, and insignificant ($r = 0.251, p > .05$).

**Eastern European Student Sample.** Running the analyses separately by ethnicity provided no new information. For the Eastern European student sample, no significant correlations were found between the parental attachment measures, college self-efficacy, and GPA (see Table 3).

**Hispanic Student Sample Without Outliers.** Recall that there was an outlier found in the data for the GPA of Hispanic students, which caused the results to be significantly skewed. This outlier was removed from the data to better represent the typical Hispanic student. No significant correlations were found between parental attachment measures, college self-efficacy, and GPA (see Table 4).

**Hispanic Student Sample With Outliers.** If the outlier for GPA had not been removed from the data, then there would have been one statistically significant correlation, which was between college self-efficacy and GPA. The correlation between overall parental attachment and GPA was found to be non-existent and insignificant ($r = -0.074, p > .05$). The correlation between quality of relationship and GPA was found to be weak, negative, and insignificant ($r = -0.153, p > .05$). The correlation between parents as facilitators of independence and GPA was found to be weak, negative and insignificant ($r = -0.154, p > .05$). The correlation between parents as a source of support and GPA was found to be weak, positive, and insignificant ($r = 0.135, p > .05$). The correlation between college self-efficacy and GPA was found to be positive, moderate, and significant.
(r=.300, p<.05; see Figure 3). This means that when Hispanic students have a stronger feeling of self-efficacy regarding their college education, they have a higher GPA, and vice versa.

Because the correlations between parental attachment and college self-efficacy, parental attachment and GPA, and college self-efficacy and GPA were not statistically significant, the process of testing for mediation for each of the ethnic groups, Eastern European students and Hispanic students was halted. The results of that testing would have determined whether the hypothesis that parents affect GPA indirectly by influencing college self-efficacy, and that the effect differs by ethnic background would be supported.

**Discussion**

There were some commonalities in the results of the current research compared to the results of the past reviewed research. Like in past research, a statistically significant correlation between college self-efficacy and GPA for the entire sample of first-generation college students was found (Vuong et al., 2010). Like Yazedijan et al. (2009), there was no statistically significant correlation found between parental attachment and GPA for Hispanic students. Also like in past research, the correlation between college self-efficacy and GPA was also found to be statistically significant for Hispanic students (Aguayo et al., 2011), but this correlation was only significant when all of the data was analyzed, including the outlier. The outliers were removed from the current study to provide a normalized sample, which helps to support the research behind the typical first-generation college student. As outliers are seen as atypical scores, these outliers were removed from the data. The relationship was only significant for second-generation and beyond students in the Aguayo et al. (2011) study, while the current study did not
distinguish participants by generation status for the analyses. No other statistically significant correlations were found in the current study, which is different compared to past research. Unlike Yazedijan et al. (2009), in the current study, the White population, in this case, Eastern European students, did not have any statistically significant correlations between parental attachment and GPA as was found in the previous study.

When looking at the correlations for the Hispanic student sample and for the Eastern European sample, there was a noticeable difference in the correlations between the parental attachment measures and GPA. For Hispanic students, the correlations between the parental attachment measures and GPA were negative and non-existent; while for the Eastern European sample, the correlations between parental attachment measures and GPA, though not statistically significant, were positive and weak to moderate in strength. These results suggest that perhaps parental attachment either has little to no effect on Hispanic students, and when it does have an effect, the effect can be detrimental to the students’ GPAs. An example of how strong parental attachment could affect a GPA negatively would be if a student has to constantly help the family to the point in which he or she does not have time for his or her schoolwork. In this case, the student’s strong parental attachment could negatively effect his or her GPA.

When further looking at the correlations for the Hispanic student sample and for the Eastern European sample, there is a noticeable difference in the correlations between the parental attachment measures themselves. For the Hispanic student sample, the parental attachments measures were all significantly correlated with one another, which suggests that parental attachment means having parents as a source of support, having parents as facilitators of independence, and maintaining the quality of the relationship. In
contrast, the only statistically significant correlations for the Eastern European student sample are between total parental attachment and the quality of the relationship and between total parental attachment and the role of parents as facilitators of independence. The role of parents as a source of support was not a variable in any of the statistically significant correlations regarding the parental attachment measures. This difference suggests that parental attachment may have a different meaning for Eastern European students. Perhaps having parents as a source of support is not important to the parental attachment for Eastern European students.

While past studies have focused on the differences between Hispanic students and generalized White students (Dennis et al., 2005; Vuong et al., 2010; Yazedijan et al., 2009), the current study focused on Eastern European students specifically, rather than the vague description of “White.” White students are a collection of various ethnic backgrounds that are grouped together by the color of their skin. However, there are many cultural differences between the ethnic backgrounds that are under the term “White.” Therefore, by focusing on one specific ethnic group, the current research is more specific. In the past studies, there were significant differences between White students and Hispanic students. However, when distinguishing a specific ethnic group from the White population and comparing that group to Hispanic students, no significant differences were found between the two groups, which could be seen in t-tests. These results suggest that there is variability within the White race category of research and open up more questions about how these differences within the White category may affect other research findings.
Also when comparing the Eastern European students and the Hispanic students, the correlation between college self-efficacy and GPA was statistically significant for only the Hispanic students. Perhaps college self-efficacy is not related to the GPA of Eastern European students at all, but is limited to affecting the GPAs of only some ethnicities, not including students of Eastern European descent. Perhaps another variable that was not considered for this study has a larger effect on the GPA of Eastern European students. These results further show that not all previously studied variables are all encompassing of all students of different ethnic backgrounds, but that students of different ethnic backgrounds may have different GPAs due to the effects other potential variables.

Unfortunately, there were a few limitations to the study. Compared to the reviewed past studies, the current study had a small sample size of participants, which resulted in little statistical power. Past studies had a range of 100 to 1,291 participants (Aguayo et al., 2011; Dennis et al., 2005; Vuong et al., 2010; Yazedijan et al., 2009). A larger sample size would have provided more data to work with, and therefore, the correlations may have been easier to see and/or understand. The cells were not balanced with regard to gender and ethnicity in this study as well. With more Eastern European students, the PAQ might have been a reliable measure for that sample.

Students who participated in the study may have also self-selected into the study, because of various reasons, such as self-report of GPA, time of recruitment, and general interest. When recruiting, the students were informed that they would self-report their current GPAs for the study. Though this study was completely confidential, with no names being recorded on any of the forms, some students may have opted out from
participating. Also, students who had higher GPAs may have been more likely to participate, as they may be proud of their grades. Also, the majority of the students were recruited at the beginning of the semester. Classes that require participation in a psychology study for credit often take the credit until the last week of class. By recruiting at the beginning of the semester, higher achieving students were more likely to participate in the study, because these students would prefer to earn the credit sooner than later in the semester. Also, the general interest of the study may have caused certain students to participate in the study rather than others. When recruiting, students were given detailed information about the study’s purpose, which could have had an effect on which students chose to participate. Therefore, the study may have had a restriction of range, especially in GPA, due to those reasons.

More research is still needed on which variables affect GPA and whether those relationships differ based on ethnicity. Therefore, more research can be done not only on relationships between parental attachment, college self-efficacy, and GPA, but the relationship between other variables and GPA as well. Other possible variables include generation status, socioeconomic status, enculturation, and acculturation. More research is also needed on Eastern European populations, as there is not much research on that distinct population regarding college outcomes. With this possible future research, we could better understand the psychology behind the college outcomes of students from different ethnic backgrounds. What can be done based on the results of past, current, and future research is to educate others on how the background of a student may be affecting his or her grades. This information could create types of individual interventions for students based on their background to raise their GPA not only through education.


