FACTORS AFFECTING PERSISTENCE RATES AMONG COLLEGE FRESHMEN

Darlene Rozon
CUNY City College

Recommended Citation
http://academicworks.cuny.edu/cc_etds_theses/350
FACTORS AFFECTING PERSISTENCE RATES AMONG COLLEGE FRESHMEN

A thesis presented to the Faculty of
The City College of New York

In partial fulfillment of the requirement for
the degree of
Masters in Art in Psychology

By: Darlene Rozon
Spring 2015
DEDICATION

This thesis is dedicated to my parents who have supported me since the beginning of my studies and constantly reminded me to never give up. This thesis is also dedicated to my sisters who have been my greatest source of motivation and inspiration. Finally, this thesis is dedicated to friends who continuously reminded me of my capabilities.
ACKNOWLEDGEMENTS

I would like to express my deepest appreciation to Dr. Melara who I was fortunate enough to work on this thesis with. I want to especially thank Dr. Melara for being so patient throughout this entire process and dedicated to the study. It has been a long journey and it was only through his guidance and mentorship that I was able to pull through. I also want to thank Dr. De and Sophia Barrett for providing me with guidance and feedback on the final product of thesis. Thank you all!
# TABLE OF CONTENTS

- Dedication ........................................................................................................ ii
- Acknowledgments .......................................................................................... iii
- Abstract .......................................................................................................... v

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>Introduction ........................................... 1</td>
</tr>
<tr>
<td>II.</td>
<td>Literature Review ..................................... 7</td>
</tr>
<tr>
<td>III.</td>
<td>Methods .................................................... 25</td>
</tr>
<tr>
<td>IV.</td>
<td>Results ...................................................... 30</td>
</tr>
<tr>
<td>V.</td>
<td>Discussion ................................................ 39</td>
</tr>
<tr>
<td>References</td>
<td>............................................. 45</td>
</tr>
<tr>
<td>Appendix</td>
<td></td>
</tr>
<tr>
<td>A.</td>
<td>Questionnaire ............................................ 47</td>
</tr>
</tbody>
</table>
FACTORS AFFECTING PERSISTENCE RATES AMONG COLLEGE FRESHMEN

By: Darlene Rozon

The City College of New York, 2015

Dr. Melara

ABSTRACT

This study explored new factors that may be associated with college success, including parents’ education level, annual household income, hours spent outside the classroom, and college premium. The current study provides evidence from an urban public college of predominately low socio-economic status students. Participants (N=251) were students enrolled in fall semester 2009 in an introductory psychology course. Participants were asked to fill out a questionnaire about their college experience, demographics and family background. Survival analysis and binary logistic regression was used to evaluate the effect of each factor on college retention Parents’ education level and student’s knowledge of the economic benefits of a college degree showed a significant effect on students persistence through college. Student’s annual household income had only a modest effect on students’ retention. Hours spent outside the classroom (working or studying) had no effect on students’ survival rate through college. The results from this study underscore the importance of students’ knowledge of the economic benefits of college on success in earning a college degree.
Chapter I
INTRODUCTION

A major issue confronting higher education in the United States is the discrepancy between college enrollment and college graduation rates. Between 2001 and 2011, college enrollment increased by 32 percent, from 15.9 million to 21 million. Although there was an increase in enrollment, in 2012, only 59 percent of students graduated within 6 years. The discrepancy between college enrollment and college graduation has been the subject of many studies examining why students do not achieve a college degree in four years, or at all. Astonishingly, over the past 20 years the United States has fallen from the top to now ranking 12th in the world for the percentage of young people who have earned a college degree.

Haskins (2008) found that a child from a family in the bottom income quintile, without a college degree, has a 45 percent chance of remaining in the bottom income quintile, whereas the chances of the child rising to a higher income quintile steadily decreased as the income quintile increased. Specifically, without a college degree, the chance of the child rising up to the middle-income quintile is 23 percent and rising to the top income quintile is 5 percent. With a college degree the opportunities reverse: a child born into a bottom income quintile has a 16 percent chance of remaining in the bottom income quintile and an 84 percent chance of rising into a higher income quintile. Although a child born into the top income quintile without a college degree has a 23 percent chance of remaining in the top, the likelihood of dropping to a lower income quintile is greater, specifically, a 79 percent chance of dropping. With a college degree the child has a 54 percent chance of remaining in the top, a 9 percent chance of dropping to the middle-income quintile, and a 2 percent chance of dropping to the bottom income quintile. For the middle-income quintile, the chances of moving income levels are split between the top income quintile and bottom income quintile.
For example, a child without a college degree from the middle-income quintile has a 21 percent chance of dropping to the bottom and a 13 percent chance of rising to the top. With a college degree the chances increase, a child has 40 percent chance of rising to the top and a 6 percent chance of dropping to the bottom. Thus, students from a family from the bottom income quintile are more likely to bypass poverty as adults if they earn a college degree. Students from higher income quintiles are more likely than their parents to rise to a higher income quintile if they obtain a college degree. In contrast, if a child does not obtain a college degree, the chances of rising to a higher income quintile level decrease and the chances of dropping to a lower income quintile increase.
The increased value of a college degree over a high school degree to annual income is called the college premium. Haskins (2008) showed how the value of a four-year college degree has evolved and become an important asset to increasing yearly income. During the mid-1960s a college degree earned a college graduate a yearly income of $10,000 more than
a high school level graduate; thereafter the gap increased to a $20,000. The worth of a college degree has continued to increase in value, whereas the value of a high-school degree to income has become stagnant. Currently, a college degree can earn students almost double the yearly income a high school graduate may earn.

When considering gender and race, Haskins (2008) found that although during the early 1900’s men were more likely than women to obtain a college degree, during the 1980’s men and women were equally obtaining college degrees, and thereafter women began to obtain more college degrees than men. Beginning in the 1940’s and continuing until today, more Asians and Caucasians earned more college degrees than African Americans and Hispanics. Currently, Asians earn the most number of college degrees followed by Caucasians, then African Americans, and Hispanics below, with an identical number of percentages in both.

Success in earning a college degree is influenced both by academic performance and family income. Carnevale and Strohl (2014) compared the graduation gap between bottom income quintile and top income quintile based on SAT scores. They found a student with a 1200-1600 SAT score from a low-income family has a 44 percent chance of earning a four year degree by the age of 24, whereas a student in the same score range from a high-income family has an 82 percent chance. A student with a score ranging between 1000-1099 from a low-income family has a 15 percent chance of graduating with a degree in four years, whereas a student from a high-income family has a 65 percent chance. Scoring in the lowest range on the SAT, 800-999, a student from a low-income family has only an 8 percent chance of graduating with a degree in four years, whereas the four-year graduation rate of low SAT for students from a high-income family is 52 percent. Thus, there is a statistical interaction on graduation rates between SAT scores and family income. Students from high-income
families who score in the lowest SAT range still have a greater chance of graduating college in four years than a student who scored in the highest SAT range from a low-income family. The inconsistency between being able to graduate in four years coming from a low-income household with the same SAT score as a student from a high-income household is puzzling. Investigating the reasons why obtaining a college degree has become a difficult battle for a student is the central focus of countless studies. In order to make sense of statistics such as the ones mentioned, researchers have conducted studies at various college and universities around the world. A few factors that are commonly addressed by researchers to predict college success are SAT scores, high school GPA, first semester in college GPA, and first generation college students. Although all of these factors are frequently used, the studies generally find that high school GPA, first semester college GPA, and income are the best predictors of college graduation achievement. However, each of these factors has only marginal success in predicting college retention and graduation.

A study conducted by DeBerard, Scott, Glen, Spielmans and Deana (2004) examined whether higher high school GPA and SAT scores would be positively correlated with freshmen GPA and college retention. The participants in the study included 204 undergraduate students from an introductory psychology and sociology classes at a private west coast university. The sample included 84.3 percent Caucasian, 7.8 percent Asian, 2 percent Hispanic, 1 percent African American, and 5.5 percent were other. The researchers found gender (.25); high school GPA (.67) and SAT score (.30) correlated positively with college GPA. The results also revealed that only high school GPA predicted retention.

The current study takes a different tack. Here we eschew the usual college predictions-SAT, high school GPA, college GPA-to explore new factors that may be associated with college success. Deviating from studies conducted at middle to high-income
universities, the current study will provide evidence from a public college of predominately low socio-economic status students. The overall objective of this research project is to identify the reasons why students at the City College of New York fail to achieve a college degree. By identifying the significant underlying factors that contribute to the college dropout rate, we hope to identify interventions that might enhance students’ success towards earning a bachelor degree. In addition, we hope to capitalize on factors that represent the economic value of a college degree.

Analyses of institutional research data at City College of New York City revealed between 2008 and 2011 the ratio of students graduating to freshmen and transfer students entering reached a high of only 41 percent. In 2008, there were a total of 5,021 freshmen and transfer students entering City College but only 1,463 graduates, thus a graduation rate of 29 percent. In 2009, the ratio was 28 percent, 38 percent in 2010, and 41 percent in 2011. The data reveal that although the number of freshmen and transfer students enrolling is high, the number of students graduating is relatively small. Roughly less than 50 percent of City College students graduate every year when compared to the number of freshmen and transfer students admitted.
Influences on College Attrition

The literature on college attrition, although incomplete, has identified several factors that help explain some reasons why students drop out of college. Prior studies have presented a combination of similar reasons; and for this purpose, the literature review will branch out into 4 smaller sections to focus on a specific influence. The first section will focus on the influence parents’ education level may have on a student’s success towards graduation. The second section will focus on whether household income influences a student’s success towards graduation. The third section will focus on whether the amount of hours spent working and hours spent studying for class influence a student’s success rate. The final section will focus on whether having knowledge about the college premium influences a student’s success towards graduation.

Although there is a general agreement that income, education and occupation together represent socioeconomic status (SES) better than any one alone, these three dimensions often seem redundant, adding no new information, yet at other times each contribute slightly different information, as indicated by modest correlations and links to other variables. Researchers thus might define SES in idiosyncratic ways, depending on the question being posed or the population being examined (Bradley & Corwyn, 2002). For this reason I have divided the literature on parental education level and household income into separate sections.

Parents Education Level

Prior research indicates parental social class has an elaborate influence on a child’s educational success. Having a higher education level has been linked to an increased chance
of attaining a college degree, while the absences of a college degree has been attributed to the failure of a child achieving a college degree (Kao & Thompson, 2003). This finding suggests that a parents’ educational status may play a crucial role in a students’ success in college.

Previous research found a parent’s education level was a significant predictor of retention when the parent possessed an education level lower than a bachelor’s degree. In a study by Alarcon and Edwards (2013), three measures were used to evaluate factors that contribute to college retention: ability, conscientiousness and affectivity. Ability was defined by the students’ ability to persist through college, and was evaluated using SAT scores and high school GPA. Conscientiousness was defined by the extent to which a student is responsible, organized and determined, and was evaluated using the Big Five Inventory. Affectivity was defined by the subjective experience of the student through varying degrees of positive or negative emotions, and was evaluated using a 20-item Positive and Negative Affect Schedule. Retention was assessed through enrollment to classes each quarter. The sample consisted of 584 Midwestern University freshmen students from an introduction to psychology course. The results of this study showed that both ability and motivation was a successful predictor of college retention. The results also showed that negative affect (NA) and positive affect (PA) were significant predictors of college retention. In addition, the researchers found a parent’s education level was not a significant predictor of retention; it was only significantly related to retention if the parent did not have a bachelor’s degree. From this result the researchers concluded a parent’s education might influence the ability to afford tutors, better schools, or other means of helping their child increase their SAT and ACT scores, as well as their GPA.

Provided that a parent’s education level was a significant predictor of retention, research has also found that first generation college students are less likely to graduate.
Specifically, if first generation students do graduate it is at a slower rate than their classmates whose parents both have a college education (Ishitani, 2006). In a study by Ishitani (2006) the focus was to measure dropout and graduation rate among first generation students. The sample included 4,427 college freshmen. The sample of first generation students was further broken down into two subgroups. One group was first generation students whose parents’ highest educational attainment was a high school degree or less. The second group was students who had at least one parent who attended college, but never graduated with a bachelor’s degree. The Kaplan Meir survivor function (depicting first generations students retention rate), as well as exponential and period specific models, was used to evaluate the results. The findings indicated that first generation students (high school degree or less) were at higher risk of college attrition than their classmates. Moreover, the same students had a lengthier stay in college before they graduated. Students from first generation families who had a parent with some college education were slightly more likely to graduate in a feasible time than first generation students whose parents never attended college.

Similarly, Hans-Vaughn (2004) found that students whose parents do not have a college degree were least likely to aim for a bachelor’s degree. Hans-Vaughn’s study examined the experiences and outcomes of students whose parents do not have a college degree and students whose parents do have a bachelor’s degree to determine if and/or where parents’ education has a definite impact on the college process. The student sample consisted of students beginning their college education. A structural equation modeling procedure was used to identify the interrelationships among several theorized constructs, including parents’ education. The results indicated that student’s entrance exam scores to college varied based on parents’ education level. Similar to Alarcon and Edwards (2013), Hans-Vaughn concluded that students whose parents did not have a college degree were less likely to be prepared
academically for college. The results also indicated that these students were less likely to receive encouragement from their family and friends to attend and graduate from college. Lastly, the results indicated that these students have lower aspirations of a college education than non-first generation college students. These results stayed consistent between two testing periods: upon entering college and again four years later.

Altschul (2012) examined the effects of family SES on the academic outcomes of Mexican-American youths. Data from the National Educational Longitudinal Study, a center opened in 1988 to study educational processes and outcomes in secondary school students, were collected in four waves of surveys administered to samples in 1990, 1992, 1994, and 2000. Academic achievement was measured through four standardized tests in reading, math, science, and history. SES was analyzed using family income, mothers’ education, fathers’ education, mothers’ occupation and fathers’ occupation. Family income was self-reported by checking one of fifteen income ranges. Maternal and paternal education level and occupations were also self-reported. Correlations were calculated using pair-wise deletion. The primary path model tested the relationships between the set of SES factors, on the one hand, and the standardized tests, on the other.

The results showed that socioeconomic factors were predictive of Mexican American children’s academic achievement, with mothers’ occupation revealing a stronger positive effect on academic achievement than any other measure of SES. The researchers also found that the effect of mothers’ occupation exceeded the effect of income, which was found to be the second largest influence on academic achievement. Both of the parents’ education levels were related to academic achievement; however, fathers’ occupation was not directly related to academic achievement.
A meta-analysis conducted by Sirin (2005) was designed to examine the relationship between socioeconomic status and academic achievement. Specifically, the goal of the review was to determine the extent of the relationship between SES and academic achievement, to measure the extent to which the relationship is influenced by the type of SES, school location, grade level, and ethnicity. The sample of the study included 58 published journal articles. The effect size of the study was evaluated using Pearson’s correlation coefficient, and variation among the correlations was analyzed using Hedge’s Q test of homogeneity. The results of the study suggest that parents’ socioeconomic status has a strong impact on students’ academic performance. Student from a higher SES status have access to resources at home that assist them academically; in addition these students are able to attend higher caliber schools and have access to better classroom environments. Further, the researchers found that socioeconomic status was a stronger predictor of academic achievement for Caucasian students than for minority students.

Although research indicates that a parent’s education level impacts college attrition, the gender of the parent may also play a central role. Research has presented mixed ideas on whether a mother’s education level has a greater influence on a child than a father’s education level. An older study conducted by Sewell and Shah (1968) examined the degree to which a parents’ educational level served as a motivating factor for children. The data for the study came from a questionnaire of high school seniors in Wisconsin public, private and parochial schools in 1957, with a sample of 9,007 students. The first variable was mother and father’s highest level of education; the participants selected from three choices. The Henmon-Nelson Test of Mental Ability measured intelligence. Encouragement was based on the students’ response to four statements. Planning was based on the students’ response in high school regarding plans to attend a college or university. Attendance was measured for those students
who enrolled in college. Graduation was based on whether the student graduated with a Bachelors degree. The results were determined using bivariate and multivariate cross-tabular analyses. Sewell and Shah’s results indicated that males were more likely than females to report that their parents encouraged them to attend college. A father’s education level showed a stronger effect for males in encouraging students to attend college, planning to attend college, attending college, and graduating from college. However, both the father’s and the mother’s education level were equal for females. The results also indicate that the higher the parents’ education levels the more the students felt their parents encouraged them to attend college and graduate. Lastly, when both parents have high education levels, the child is more likely to have higher aspiration and achievement.

However, Sara McLanahan (2004) looked at four factors to measure trends in children’s resources: mothers' age, mothers' employment, single motherhood, and fathers' involvement. She found that children who live with single mothers receive less financial and emotional support from their biological fathers, and their families are less intact and more stressful. As a result, among other factors, they also have lower educational attainment. McLanahan found that children born to mothers from the most-advantaged backgrounds are more likely to grow up in a stable union. They are also more likely to receive resources towards their education and have greater educational attainments.

Researchers have proposed poverty as one reason why students do not make it through college. Parent’s education level often is confounded with income levels. Parents with a higher education level may be able to afford tutors, better schools, or other means of helping their children increase their SAT and ACT scores, as well as their GPA (Alarcon & Edwards, 2013). Families led by college-educated adults, for example, are more likely to be intact, stable and economically secure than those led by adults who have not attended college.
In addition, parents with a higher education level manage to keep their children busy with activities that help the child develop their cognitive and social potential (Goldrick-Rab & Sorensen, 2010). Ultimately these factors collectively contribute to precollege preparedness (Ishitani, 2006). The goal of the current study is to provide further evidence about the impact of the parent’s education level on college attrition.

**Household Income**

While many studies often examine the parents’ education level and income with educational attainments, studies that examine the difference between the two have found the two measures reveal unique findings. Parental education, a more stable attribute of SES because it is established at an early age has been linked to an increased chance of attaining a college degree (Kao & Thompson, 2003, Sirin, 2005). By contrast, research on parental income, though it has a small independent effect, has been linked to greater social and economic resources for the student, which in turn increases the student’s educational attainments (Sirin 2005, McLanahan, 2004, Carneiro & Heckman, 2002).

Riphahn and Schieferdecker (2010) investigated the role of parental background on the transition into college in German students. The authors were specifically interested in whether there was relevance in short-run effects (parental income) or long-run effects (parental education). Data were used from the German Socio-Economic Panel, a household panel survey that gathers information on a variety of topics including parental background, and allows one to follow high school graduates over time. A total of 754 students between the ages 17-25 years old were tested. Bivariate probit analysis was used. The data show that parental income is positively correlated to the probability of enrolling in college. Parental education only showed a significant affect on childhood educational outcomes when the
analysis excluded a college degree. In addition, the researchers found that parental income played a somewhat larger role for males than for females.

Jez (2014) analyzed how wealth and income affect the decision to attend college. Jez defined wealth as the reported assets of the household subtracting the reported debts of the household. Income was defined as any source of revenue, including wages, child support, and rental income. The National Longitudinal Study of Youth is a dataset that provides information about wealth, education and upbringing. The integrated postsecondary education data system, a data set containing information on all institutions and education organizations, provides information on institutional characteristics (e.g. admissions criteria, tuition and fees), degree completions and graduation rates (including students receiving athlete related assistance, number completing program, number transferring to other institutions), enrollments (full- and part-time students, racial and ethnic breakdown), financial aid, institutional prices, student finances (including revenues by source), graduation rates, faculty and salaries, and staff. For the analyses the two data sets were matched for respondents beginning college in 2003. The results were analyzed using multiple imputation and survey data analysis. The results of the study showed that wealth was a significant factor in who attends college, but not a factor in who applies to college. Hence, wealthy students are significantly more likely to attend college. The results also revealed low-income students expect to complete college at higher rates than low-wealth students, and high-income students expect to complete college at lower rates than high-wealth students. Income was found to be a significant predictor of attending a less selective 4-year college, however wealth had a greater impact than income on the attendance of a less selective 4-year college versus no college attendance. Conversely, wealth and income were both significant predictors of attending a more selective 4-year college.
Blanden and Gregg (2004) reviewed the evidence on the effect of family income on education using British data. The data sources used were the British Cohort Study (BCS) and the British Household Panel Study (BHPS). The BCS provides information on family background and child characteristics collected at ages 5, 10 and 16. It also contains two measures of family income. BHPS is a household panel that samples annual income for all households and information on educational qualifications and enrollment for all children within the household. The results were analyzed using basic models of estimation, as well as probit, and marginal effect models. The results of the study indicate that there is a relationship between family income and education. In addition, the researchers found that this relationship between income and education has been strengthening through time as the children advance through their education.

Sacerdote (2000) took a different approach to study whether parental income influences educational attainment by examining the topic using adopted children. The researcher examined the importance of biology and the environment in determining educational and labor market outcomes. The samples of adopted children were drawn from three separate datasets: the British National Child Development Survey (NCDS), the Colorado Adoption Project (CAP), and the National Longitudinal Survey of Youth (NYLSY79). The first data set, NCDS, included a range of health measures, academic test scores, teachers’ assessments and employment information. The sample included 7981 controls and 128 adopted children. The second dataset, CAP, included a sample of 183 adopted children. The data set included measures such as test scores, personality scores, teacher’s rating, and parent reported likes and dislikes. The data were assessed using the Wisconsin IQ test score, PIAT reading score, reading capability assessed by parents, and ability to do subtraction at age six. The third dataset, NYLSY79, included a sample of 170
adopted children, and a control sample of 5,614 non-adopted children. With this sample the researcher estimated the impact of environment. Regression and probit models were used to evaluate the results. The results of the study found that children adopted by a mother with a college degree have a 40% higher chance of graduating from college when compared to children adopted by a mother without a college degree. The results also indicate family environment has a massive influence on whether or not a child graduates from college. In addition, family income was also found to have large effects on children’s college attendance and marital status, but a modest effect on labor market income.

Similarly, Plug and Vijverberg’s (2005) study wanted to prove that high-income parents not only generate more income, but they also produce high ability children as well. The researchers did this by examining adopted children who are genetically unrelated to the family. The researchers used the Wisconsin Longitudinal Survey, a unique data set with information on people born in 1939. Three waves of questionnaires were administered to the participants; the first questionnaire was administered in 1957, which asked students' social background (parents' education and occupation), intelligence (measured as a standardized IQ test score) and aspirations. The second questionnaire administered in 1964 and 1975 asked students about their schooling and careers. In 1992 the third sample of questionnaire was administered to collect new information about their career experiences between their 30s and 50s. The sample included 574 adopted children. The results were analyzed using censored regression models and probit models. The results indicate that the effect of parental income and educational attainments for own birth children and the data from adopted children are statistically identical. The results strongly suggest that there is a causal relation between family income and school success for adopted children. Thus, having access to financial resources improves the educational achievement of adopted children.
**Hours spent outside the classroom**

There has been an increase in the proportion of college students who are employed while in college. The question researchers struggle with is whether there is a positive or negative association between hours spent working (vs. studying) and academic achievement. Some researchers have found that those students who spend less time studying and more time working are more likely to dropout (Gleason, 1993). On the contrary, other researchers have found the opposite: students who spend more time working have a significantly higher GPA than those with more free time (Ackerman & Gross, 2003).

Gleason (1993) conducted a longitudinal study on the effects of employment on college students. The data were sampled from a High School and Beyond survey (HSB), which included a total of 4,068 students who attended four-year colleges. Regression estimates were used to analyze the data. Variables such as GPA, number of semesters, employment status were used for the analysis. The results indicate that the grades of students who worked were negatively correlated to the number of hours per week they worked. Students who worked 1-10 hours had an average GPA of 2.94, in contrast to students who worked 31-40 hours per week who had an average GPA of 2.63. Hence, employment only affected students’ grades when the student worked a lot of hours. Although working 30 hours per week had a negative effect on grades, the effect was minor. A student working 30 hours per week could only expect their GPA to drop by .05. On the contrary, the researcher found employment was positively correlated to dropping out. Students who were always working had a higher dropout rate than students who did not work. Students who worked every semester had a 7.3% dropout rate, compared to 5.7% for students never worked.
Nonis and Hudson (2006) wanted to determine if there was a relationship among business students between time spent on schoolwork and academic performance, and similarly a relationship between times spent working and academic performance. The sample included 264 undergraduate students from a mid-south public university. The researchers used a six-item Likert scale to measure students’ achievement. Student self-reported journal data were used to determine the time spent outside of class on academic activities such as reading, taking lecture notes, studying for exams and homework. Students were asked to self-report the times they spent working and commuting each day. The results were analyzed using a bivariate analysis, multiple regression analysis, and Pearson’s correlation. The findings indicated that time spent working did not have an influence on semester GPA. Likewise, times spent doing schoolwork also did not have an influence on academic performance.

Similarly, Ackerman and Gross (2003) examined whether having less free time affects university students negatively. Several surveys were administered to an undergraduate marketing class. The sample included 176 students. The students were asked about their available free time, how much pressure they felt when it came to time, and the effects this may have on their experience in college. In addition, the students were asked how they were in doing in school, and their perception of the school. The results were analyzed using multivariate analysis of variance (MANOVA). The results indicated that having less free time did not harm the students’ academic performance or their perception of the university. Interestingly, students who perceived having less free time performed better academically and indicated more positive expectations for their future career than the students who reported having a lot of free time. However, students with less free time were found to feel more time pressure and time deprivation, which translated to negative emotions. Further, the
results indicated that students who reported less free time had higher GPAs than those who reported having more free time. These results were also applicable to students who worked long hours. Student’s who reported having less free time had more positive expectations for career success than did those with more free time. Ultimately, Ackerman and Gross (2003) indicated that time pressure and time deprivation may be caused by emotional reactions rather than actual free time, since time pressure was found to be associated with negative emotions such as anxiety and frustration.

Mounsey, Vandehey, and Diekhoff (2013) examined the experiences of college students who were employed versus unemployed. The researchers were interested in if there was a difference among the students’ mental health, GPA, and attitudes and opinions about working while in school. The sample included 110 students from a midsized university in the southwest. The participants were from lower and upper level psychology and sociology courses. The researchers used the Beck Depression Inventory-II (BDI) to measure depression, The Beck Anxiety Inventory (BAI) to measure anxiety level, and a job questionnaire that asked students about benefits or problems of working. The results were calculated using basic descriptive statistics such as, mean and standard deviations, as well as correlations. Eighty-percent of the sample were full-time students, and 18% were part-time (1% was missing). Seventy-one percent of the sample was employed and 27% were unemployed. Fifty-eight percent of the population worked more than 20 hours, and 42% worked less than 20 hours. Ninety-three percent studied up 20 hours and 7% studied more than 20 hours. The results of the study showed no difference between the GPA of students who were employed versus unemployed. Further, the researchers found both hours spent working and year of study did not have an influence on the students’ GPA. However, the researchers did find that as the
number of hours of work increased, time spent studying decreased. In addition, students who were employed experienced more anxiety than students who were unemployed.

Robotham (2009) examined the effects of part-time employment in university students. The sample included 270 business students from a large university in the UK. The sample included 63% females. An online survey was e-mailed to a sample of participants. The survey asked questions about the type of work students engaged in, their motivation for working, students’ stress level, and the impact of having a job and dealing with academic demands. The results indicated 68 percent of the students had a part-time job while in school during the study. Ten percent of the students who did work held more than one job. Among students who worked, 35 percent of students worked between 11 and 15 hours a week, and 12 percent worked more than 20 hours a week. Six percent stated their part-time job was related to their future goals. When the students were asked how much time they devoted to their studies the average of the group was 13 hours. Thus, indicating students were spending more time working than doing schoolwork. Part-time employment was found to have a negative affect on academic achievement, but the effects were minor when compared to the effect of a student’s social life on academic achievement. However, when comparing stress and part-time work, the researchers found 43 percent of students reported that having a part-time job increased their stress level; in contrast to 33 percent of students who reported combining employment and school increased their ability to handle stress.

Miller, Danner, and Staten (2008) wanted to determine if there was a relationship between hours worked, binge drinking, sleep habits, and academic performance among college students. The sample of students was randomly chosen by the registrar’s office at a southeastern US university. A survey was sent out to 1,700 undergraduate students who were enrolled for the spring semester. After two waves of mailing the surveys, 903 were completed
and returned. The survey asked about binge drinking, sleep hours, and overall GPA. Students were categorized into three categories for work hour’s low (< 10 hours), medium (10–19 hours), and high (> 20 hours). Five or more drinks in the past 30 days was noted as binge drinking; sleeping less than seven hours per night was noted as getting little sleep; and having a GPA of 3.0 or better was noted as being in academically good shape. The three factors were then compared to the amount of hours students worked using logistic regression models. The results indicated that binge drinking and lower academic performance were significantly associated with working 20 or more hours per week. However, the researchers did not find a significant association between the variables for students who worked less than 20 hours per week.

Lang (2012) wanted to test the relationship between student employment and students grades, race, year of study and gender. The National Survey of Student Engagement (NSSE) was randomly administered to 794 full-time freshmen and seniors attending the university. The survey included 28 items that asked students about their leisure time, study habits, employment history, and other questions pertaining to college life. Lang used logistic regression to analyze the independent and dependent variables in four different models. The results showed that both employment and number of hours working did not lower grades when the researcher controlled for race, sex, year of study, and gender. However, Lang found that although males and females work at similar rates, males were more likely to work more hours per week off-campus than females. Interestingly, Lang found that students who work many hours per week (more than 20) were able to maintain the same grades, participate in academic activities, and have time to prepare for class as students who work fewer hours per week. However, as the number of hours worked per week increased students spent less time socializing with their peers.
College Premium

College premium refers to the gap in salary between workers with a bachelor’s degree and workers with a high school degree (Rampell, 2013). In 2011, male workers with a college degree earned 1.95 times as much as workers with a high school degree. Similarly, female workers with a college degree earned 2.03 times more than workers with a high school degree (Rampell, 2013).

Menon (1997) examined whether there was a perceived difference in salary rate between students who were entering college after completing high school and students who were going to work after completing high school. The sample included 811 students who were completing their senior year of high school in 1993-1994 at eight different public high schools in Cyprus. The students were asked to report their future educational and/or employment plans after high school and provide an estimate of expected monthly earnings with and without a college degree. They were also asked to estimate their earnings at the onset of fulltime work, after four years of fulltime work, and at age 46 years old. Regression analysis was used to analyze the results. The results indicated that students who decided to work and not attend college after high school graduation expected to earn less than if they would have completed the degree. These graduates were asked what their salary would have been had they actually gone to college. Their average estimate was the same as that of students who actually planned to pursue a college degree. However, students who decided to work upon graduation did not anticipate a major salary cut as a result of not going to college, whereas students who did go to college did anticipate lower salary earnings had they not gone to college. In addition, students who worked upon graduation did not perceive college as a
valuable asset, whereas students who planned to pursue a college degree associated the degree with higher earnings.

Perna (2003) used data from a study of high school sophomores in 1980; the follow-up study was done in 1992. The researcher examined the observed difference of salary between students who only completed a high school diploma and students who completed a bachelor’s degree. She also examined the variance in salary based on gender, race/ethnicity, and SES. The High School and Beyond (HS&B) longitudinal study of 1980 was used to gather the data. HS&B contained data from the students when they were high school sophomores, seniors, two years after graduating high school, four years after graduating high school, and ten years after graduating high school. Analysis of variance was used to evaluate the results. Perna found that students who had a bachelor’s degree had a 36 percent higher average salary than students without a bachelor’s degree. In addition, she discovered a higher salary for students who earned an associates degree, bachelor’s degree, or advanced degree than for those students with just a high school degree. Further, Perna found that while the average earnings were higher for students with a bachelor’s degree, women still earned less than men when both had a bachelor’s degree. Students from lower SES still earned less than students from higher SES, both having a bachelor’s degree. Perna also found the average annual salary was lowest for American Indians, followed by African Americans, with Asian Americans having the highest average salary. However, students who had a bachelor’s degree still earned more overall than students with only a high school diploma.

Torche (2011) assessed the meritocratic power of a college degree using five longitudinal datasets. Torche analyzed intergenerational mobility in relation to class, occupational status, earnings, and household income for men and women. The data for the study were obtained from the General Social Survey (GSS), the National Longitudinal
Survey of Youth (NLSY79)(N=12,686), the Panel Study of Income Dynamics (PSID)(N=4,800), the National Longitudinal Surveys Original Cohorts (NLS)(N=20,487), and the Baccalaureate and Beyond Longitudinal Study (B&B)(N=11,000). Torche used a log multiplicative layer effect model to analyze class mobility through levels of schooling. A regression formulation was used to analyze occupational status, earnings, and income mobility. To evaluate variation through educational levels, a mathematical model was formulated to capture the regression effects of each educational level. The results were consistent across the four domains. The findings showed that having a college degree can serve a significant meritocratic function, meaning that having a college degree equalizes economic success despite a student’s social background. However, this association was weak for those with less than a college degree and those with advanced degrees.

The present study aims to contribute to the existing literature on the possible influences that preclude students from graduating college. This study hopes to contribute novel findings about the influence of these factors on students in a public college of predominately low socioeconomic status. This study also hopes to provide new insight about student’s knowledge on the economic benefits of a college degree.

**Research Hypotheses:**

This study examined four hypotheses $H_1$.
1. Are students who spend less time doing school work more inclined to college attrition? $H_1$ (2) Are students with parents’ with low education level more inclined to college attrition? $H_1$ (3) Are students who come from low household income more inclined to college attrition? $H_1$ (4) Are students who are unfamiliar of the benefits of college more inclined to college attrition?
Chapter III

METHODS

Participants:

Participants in the study were students from an introductory psychology course in fall 2009. The sample comprised 512 students from various years in college. Participation in the survey was voluntary and students who completed the survey were given credit in the department subject pool. Participants gave consent to use their answers in the study, as well as to perform a follow up years later. Stratified samples of only freshmen were drawn from the larger population. Responses from 251 freshmen males and females, of multiple ethnic backgrounds were used for the study. The participant’s answers were saved in a data file, and stored away.

Materials:

The methodological instrument used for this study was a questionnaire. A questionnaire was particularly favored because it allowed the researchers to ask the respondents questions in relation to the topic of interest. The questionnaire was handed out to an introductory psychology course in fall 2009 and was completed using clickers. The questionnaire was comprised of 21 multiple-choice questions that included 2 sections: (1) college experience and (2) self-reported demographics and family background. The questionnaire included a mix of closed ended questions such as, “This semester are you working for pay,” as well as, matrix questions, such as, “Over the last week, about how many hours did you spend working for pay? Or over the last week, about how many hours did you spend studying.” Student’s response to the questionnaire was obtained from the stored data file.
After obtaining the Institutional Review Board approval the student’s enrollment status, gender, major and other applicable information was obtained through City College’s Student Information Managing System (SIMS), a system that allows one to view information about students enrolled in City College and students that were previously enrolled.

**Hypothesis:**

The present study investigated 4 hypotheses. Specific questions from the questionnaire were used to serve as the predicting factor for each hypothesis proposed (See Appendix for full questionnaire). To investigate hypothesis 1, 3 survey questions were examined:

1. This semester, are you working for pay? (Q4)
2. Over the last week (7 full days), about how many hours did you spend working for pay? (Q5)
3. Over the last week (7 full days), about how many hours did you spend studying? (Q6)

To investigate hypothesis 2, 2 survey questions were examined:

1. What is the highest level of education attained by your father? Post-graduate or professional degree (Q17)
2. What is the highest level of education attained by your mother? Post-graduate or professional degree (Q18)

To investigate hypothesis 3, one survey question was examined:

1. What is your best estimate of the total income in your household last year? (Consider income from all sources before taxes) (Q21)

For hypothesis 4, one survey question was also examined:

1. How much more do you think college graduates earn in the United States than high school graduates and college dropouts? (Q1)
Once each participant’s answer to the specific question was separated from the non-freshmen population, the raw data was converted to an SPPS data sheet.

**Data Analysis:**

When the complete data set of enrollment status, major, gender, and first semester information for freshmen, was inputted into a spreadsheet. Kaplan-Meier survival analysis through SPSS is the statistical analysis that was used to interpret the data. Kaplan-Meier survival function is a method of estimating time-to-event models in the presence of censored cases. Censored cases are those participants who were still enrolled after 11 semesters, and hence did not drop out. This survival analysis examined the distribution of dropouts across the 11 semesters since each participant enrolled in college. The survival graphs display how long the students survived in college taking into account their answers to the questionnaire, as well as demographic and background information.

Once the data were properly converted to the SPSS format, the data were then coded. Under variable view on the header of the program the option transform was selected followed by recode into same variables. The variable was named according to the focus of the question, for example Father’s Education, Mother’s Education, Work Hours, and Study Hours etc. When the name was properly converted the researcher selected old and new values to change the coding of the answers, for example if the student answered A then that was coded as 1, B was coded as 2 etc. This was repeated for all of the factors. Following the completion of coding, the researcher then selected analyze at the top of the header of the program, selected survival then Kaplan-Meier, after which the Kaplan-Meier life table appeared. On the left was a list of the variable and to the right the table included time, status and factor. For the purpose of this study time was defined as the number of semesters students remained in college before dropping out or graduating. Status was defined as
whether the student was still enrolled or not enrolled in college. Factor was defined as the questionnaire item used to test a specific hypothesis (#1-#4). For example, question 4 asked this semester, are you working for pay? The students’ answer to this question was used as the factor that influenced how long the student survived in college. The same process was repeated for all 7 questions. Under option in the same life table, the researcher selected plot to create the survival plot graphs.

After the Kaplan-Meier survival plots were created a binary logistic regression was calculated, separately for each of the four hypotheses. Binary logistic regressions are used to predict a dual response based on one or more predictor variables according to the following equation:

\[ \ln\left(\frac{P}{1-P}\right) = a + bX \]

where P is the probability of the dependent variable, x is the binary value of the independent variable, and y intercept (constant) and b is the regression coefficient. The binary response (dependent variable) in our study was whether the student was still enrolled at the City College of New York as of Spring 2013. The predictor values (independent variables) are the student’s responses to questionnaire items. The number of independent variables included in a regression depended on the hypothesis under test: (1) Parents’ education: 2 independent variables, Father’s Education and Mother’s Education; (2) Hours Outside Classroom: 3 independent variables, Outside Employment, Hours of Outside Employment, Hours Studying; (3) College Premium: 1 independent variable, College Premium; and (4) Household Income: 1 independent variable, Total Household Income. Thus, a total of 7 independent variables were used to test four hypotheses. Each of the 7 variables was collapsed into binary responses. For example, the variable Outside Employment was recoded into yes (1) or no (0), Hours of Outside Employment was recoded into 0-10 hours (0) or 11+
hours (1). For hypotheses involving multiple dependent variables, a hierarchical logistic regression was performed using the Forward Likelihood Ratio method. We examined Hosmer-Lemeshow goodness-of-fit (used to assess how well the chosen model fits the data), and CI for exp(B) (odds ratio).
Chapter IV

RESULTS

Table 1 provides a summary of demographic variables for the participants in the current study, including responses on questionnaire items used later in Kaplan-Meier survival plots and Binary Logistic Regression. Several generalizations worthy of mentioning are that the sample was predominantly female. Most students were not working at the time of testing; for the students who were working, 9% worked both on and off campus. Most students’ household income was less than $40K, with 10% having a total household income of less than $20K. The data for this study suggest that most participants fell into the low socioeconomic status, which is consistent with most City College students.

**TABLE 1**
Descriptive statistics of the study sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>Label</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort</td>
<td>2009</td>
<td>251</td>
</tr>
<tr>
<td>Gender</td>
<td>Female</td>
<td>153</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>98</td>
</tr>
<tr>
<td>Enrolled (as of Sp’13)</td>
<td>No</td>
<td>107</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>144</td>
</tr>
<tr>
<td>Working</td>
<td>No</td>
<td>135</td>
</tr>
<tr>
<td></td>
<td>Yes, on campus</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Yes, off campus</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td>Yes, both</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>N/A</td>
<td>3</td>
</tr>
<tr>
<td>Hours spent working (per week)</td>
<td>0 hours</td>
<td>136</td>
</tr>
<tr>
<td>Father’s Education</td>
<td>1-10 hours</td>
<td>25</td>
</tr>
<tr>
<td>--------------------</td>
<td>------------</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td>11-20 hours</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>21-34 hours</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>35+</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>N/A</td>
<td>2</td>
</tr>
<tr>
<td>8 th or less</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Some HS</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>HS Graduate</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Some College</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>College Graduate</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>Don’t Know</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Mother’s Education</td>
<td>8 th or less</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Some HS</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>HS Graduate</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>Some College</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>College Graduate</td>
<td>74</td>
</tr>
<tr>
<td></td>
<td>Don’t Know</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>N/A</td>
<td>12</td>
</tr>
<tr>
<td>Household Income (2009)</td>
<td>Less than 20k</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>21K-30K</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>31K-40K</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>41K-50K</td>
<td>12</td>
</tr>
</tbody>
</table>
Kaplan-Meier statistics were used to estimate the percentage of students enrolled each semester after the initial survey in 2009 relative to those students who dropped out. The survival time was accounted for by whether or not the student re-enrolled the following semester. Although different types of attrition can occur -- such as transfer, or a pause in education -- this study focused on re-enrollment to City College the following semester. Separate Kaplan-Meier statistics and corresponding survival plot graphs were derived for students’ response separately to each of the seven questions used to address the specific study hypotheses. Binary logistic regression was then used to predict a binary response of the student’s status as of Spring 2013 from one or more predictor variables corresponding to the hypothesis under test. Table 2 presents the findings of the likelihood ratio for each hypothesis.

**TABLE 2**
Likelihood ratio for each hypothesis

<table>
<thead>
<tr>
<th>Hypothesis 1</th>
<th>Score</th>
<th>Df</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours working</td>
<td>.367</td>
<td>1</td>
<td>.545</td>
</tr>
<tr>
<td>Hours studying</td>
<td>.010</td>
<td>1</td>
<td>.921</td>
</tr>
</tbody>
</table>
The first hypothesis examined whether students who spend less time doing schoolwork are more inclined to college attrition. Three questions were used to address this hypothesis: (1) whether or not a student is working, (2) how many hours’ the student works, and (3) how many hours’ the student spends studying. Binary logistic regression of the three variables showed no overall effect on college attrition, $\chi^2(3)=.711$, ns. Thus, including these variables into the model made no significant contribution to its predictive power compared with a baseline model. Based on the results, the null hypothesis was accepted; hours spent outside the classroom (working or studying) appear to have no discernible effect on the survival rate of students.
The second hypothesis addressed whether students whose parents have a low education level are more inclined to college attrition. The students’ responses to items querying their mothers’ and fathers’ reported education level was used to analyze this hypothesis. Kaplan-Meier statistics were derived for each of three responses: less than college, college degree, and don’t know. Figure 1 shows the Kaplan-Meier estimator for the student’s mothers’ education level. The figure shows a quick decline in the survival rates among students who do not know their mothers’ highest level of education (n=17) and students whose mother did not have a college degree. Students who reported their mother had a college degree had a higher survival rate than their peers. The gap between survival rates drastically widens as students progress through college. In contrast, depiction of Kaplan-Meier statistics for father’s education (Figure 2) shows little effect on survival rate. The visual depictions were borne out in statistical analyses. Logistic regression of college status revealed a significant effect of parental education, \( \chi^2(2)=5.75, p=.056 \). However, further analyses revealed that only mother’s education had a reliable effect on college status, \( \chi^2(1)=5.45, p<.05 \). There was no effect of father’s education on college status, \( \chi^2(1)=.313, \text{ns} \). Thus, the inclusion of these variables into the model makes a significant contribution to its predictive power compared with a baseline model. Based on the results, the null hypothesis is rejected; parents’ education level, at least mother’s education level, appears to have a significant effect student’s college status.
The third hypothesis addressed whether students who come from homes with low household income are more inclined to college attrition. Kaplan-Meier statistics were derived for five separate responses to the survey item on household income. Figure 3 shows a
continuous decline in survival rates among those students whose household income was less than $30,000 a year. The gap between the differences in household income widens during the later semesters in college. Students whose parents make less than $20,000 have the lowest survival rate among their peers, whereas students whose parents make above $50,000 have a consistently higher survival rate. Logistic regression of student’s college status revealed a marginal effect on household income, $c^2(1) = 3.21, p < .10$. Thus, the inclusion of this variable into the model makes a marginal contribution to its predictive power compared with a baseline model. Based on the results, the null hypothesis is tentatively rejected; total household income level has a slight effect on student’s college status.

Figure 3. Kaplan-Meier survival function by total household income.
The last hypothesis examined whether students who are unfamiliar with the benefits of college are more inclined to college attrition. Kaplan-Meier statistics were computed for each of the four responses to the survey item on college benefit, with the correct response that having a college degree could earn the student 80-100 percent more than students with only a high school degree. Perusal of Figure 4 suggests that students who answered correctly had persistently higher survival rates than their peers. The gap between students who believe that a college graduates can earn 80-100 percent radically widens during the later semesters. Logistic regression of student’s status revealed a significant effect for college premium, c2(1)=5.81, p<.05. Thus, students who answered the college premium question correctly were more likely to continue their college education than their peers who answered incorrectly. Based on the results the null hypothesis is rejected. There is a significant difference between the survival rates of students who are aware of the economic benefits of a college degree versus students who are not.
Figure 4. Kaplan-Meier survival function by college premium knowledge.
Chapter V

DISCUSSION

The purpose of the current study was to investigate psychosocial influences that affect college dropout in students attending a nonresidential public college. The study examined four research questions. First, we found that hours spent outside the classroom (working or studying) had no discernible effect on the survival rate of students in college. Second, students whose parents received a college education were more likely to persist through college than their peers whose parents did not attain a college degree. Third, students whose annual household income exceeded $30,000 were slightly more likely to persist through college than those whose annual income fell below $30,000. Lastly, students who correctly answered a question about the economic benefits of a college degree were more likely to continue than those who answered the question incorrectly.

*Hours spent outside the classroom*

In many ways, finding that hours spent outside the classroom have no bearing on college retention is counterintuitive. Much anecdotal evidence, and common sense, suggests that the more hours a student is away from classwork the greater the toll on progress through college. However, our null findings of the effects of outside work are consistent with the many previous studies (Nonis & Hudson, 2006; Ackerman & Gross, 2003; Mounsey, Vandehey & Diekhoff, 2013; Robotham, 2009; but see Gleason, 1993). One possibility is hours spend in outside activities change significantly over the course of the college career. Our sample reported their time allocation during their freshmen year in college. We found that relatively few students were working outside jobs as they entered college. It is possible, however, that students took on more outside activities as they
progressed through college, information that was not captured in our 2009 (freshman) survey. It would be interesting to find out which students began working after their freshmen year and which students persisted through college despite working. To obtain this information, future research should survey student work status at several time points during their college years.

*Parental education*

When examining the educational level of both parents in the family, we found that the students of parents who have had no college were significantly more likely to drop out than the students of parents with a college degree or at least some college. These findings were consistent with those of Ishitani (2006), Hans-Vaughn (2004), and Altschul (2012). Parental education level sets a standard for academic achievement. Parents with a college education are more likely than those without to prioritize higher education and to provide encouragement toward academic success. Further analysis of our data suggests, however, that the effects of parental education on dropout are not equal between parents, at least in our sample. Separate analyses of parents revealed that only mother’s educational level was predictive of retention. Father’s education was uncorrelated with dropout, even in male students. This finding contrasts with previous research showing that father’s education is predictive of student success, especially in boys, perhaps suggesting the influence of role model (Sewell & Shah, 1968). The discrepancy between our results and previous results may relate to the particular makeup of our student sample, predominantly racial and ethnic minority (REM) students from low SES immigrant backgrounds. Many of these students are from matriarchal cultures in which the mother’s (or grandmother’s) influence on children is especially strong. Indeed, in
many such families the father is distant or absent. Thus, it may not be surprising that in our sample father’s education had such a minor influence on college success.

Nevertheless, to substantiate these conclusions it would be important to replicate our findings in another REM sample while comparing the results with a majority sample.

*Household income*

A substantial literature has supported the importance of household income to college success. Students whose parents have a high household income are significantly more likely to persist through college than their peers (Riphahn & Schieferdecker, 2010; Jez, 2014; Blanden & Gregg, 2004; Sacerdote, 2000; Plug & Vijverberg, 2005). The success rates in these studies often is attributed to the fact that parents of higher social class are able to provide for their children financially in ways that students parents of low socioeconomic status cannot (Plug & Vijverberg, 2005; Jez, 2014). Our study was consistent in showing that students from households with incomes below $30K had slightly higher dropout rates than those from households with incomes above $30K. However, the effect was weak, suggesting that there are mitigating factors. One of these may involve financial aid considerations at public institutions. In private colleges students with lower income often face severe challenges in meeting the financial obligations of education: tuition, housing, books, and so forth. In nonresidential public colleges students with low income normally live with their parents and receive substantial financial aid, which often covers the entire cost of a college education. Thus, the role of household income on retention and graduation may be less significant in students from these institutions. Nevertheless, income still had a measurable influence on dropout. One reason may be outside activities not covered in our survey: many students from low
SES families are responsible for duties within the household – including cleaning, shopping, day care – which may affect the hours spent studying and attending class. Another reason may be difficulty in paying for resources needed to attend school. A student from a household with low income may have more difficulty with transportation (e.g., purchasing a monthly subway pass) than a student from a household with a higher income.

College premium

We found that students more knowledgeable about the economic payoff from holding a college degree were relatively significantly less likely drop out of college. This result suggests that a student’s motivation for college study or his or her knowledge of the benefits of college are an essential element of college success. The results suggest a possible shift in the attraction of a college education, from one in which the goal is to expand knowledge to one in which the goal is to enhance the probability of gainful employment. In fact, Menon (1997) found that students who worked after graduation from high school did not perceive college as a valuable asset, whereas students who attend college associated the degree with higher earnings. The implications from the college premium suggest that higher educational institutions should place more emphasis on the economic benefits of a college degree. The institutions may want to promote their programs by emphasizing the benefits of a college degree, including their employment options. Orienting students to these benefits at an early stage in their career could improve student’s success rates in college. Educating student’s early about career options besides the mundane medicine, law, or engineering path can also improve college success rates. To the best of our knowledge, ours is the first report of a relationship between
retention and knowledge of the college premium. It is important to note, however, that the finding was obtained with a low SES sample. Thus, it is conceivable that the link between college benefit and college completion is more salient in this population than in students from higher SES backgrounds. For low SES students, a college degree represents an equalizer, boosting their opportunities for employment and social mobility (Torche, 2011). Yet, one sobering statistic is that students with a college degree from low SES are more likely than those from SES to accept jobs unconnected with the degree.

**Limitations**

The findings from this study were consistent with the literature, the study found which factors influence students success rate, and which factors had minimal influence. Although the data supports to a greater extent the proposed basis of this study, two major limitations were apparent. First, a student was considered a drop out regardless of their next step. For example, a student who was believed to have “dropped out” could’ve transferred to a private college. These types of considerations were not accounted for. Second, the item on the questionnaire, which asked about college premium, could present some biases since the question was a multiple choice and guided students to the correct answer. Future studies may want to replicate this study using an open-ended question asking about the college premium to test whether students will still write the correct answer and also track students to see if they actually dropped out or transferred.

**Conclusion**

The results from this study present unique findings to the literature in this field in three major ways. First, the population studied in this sample was not the typical population of students that is targeted by researchers for this kind of investigation. The
findings come from students of low socioeconomic status who are inevitably faced with different challenges than those experienced by students from a private or more prestigious school. The second major findings show that students who were aware of the benefits of a college degree are more likely to persist through college than their peers who are not aware. The findings suggest that the motivation for going to college has shifted from the attraction of an education and attaining knowledge, to the attraction of the economic benefits bought to students by having a degree. The third major finding was the significant effect a mother’s education level on student’s success rates. Students whose mother had a college degree were relatively more likely to persist through college. The implication from this finding suggests that mothers have become an integral part of students success rate towards a college degree, with fathers having less of an influence.

Overall, the findings point to a couple of solutions that may increase students success rate in college, especially students from a lower economic status. First, colleges should put more emphasis on the economic benefits of a college degree. Colleges should educate students early on career options and career paths that may be pursued with specific majors. Public colleges should make an effort to get mothers involved in their students’ college life, to provide students with support and motivation to want to pursue a degree.
REFERENCES


Appendix A

College Experience

1. How much more do you think college graduates earn in the United States than high school graduates and college dropouts?
   (1) 20%-39%
   (2) 40%-59%
   (3) 60%-79%
   (4) 80%-100%

2. Which personal sources of financial support do you use to help pay your college expenses (tuition, fees, books, other costs directly related to attending college)?
   a) Income from a current job
   b) My personal savings
   c) Income or savings from a parent/spouse/partner
   d) More than one of the above
   e) None

3. What other sources have you used?
   a) Employer contribution
   b) Grants or scholarships (Such as Pell, TAP, Vallone scholarship or other scholarship)
   c) Student loan
   d) Other type of loan
   e) Public assistance
   f) More than one of the above
   g) None

4. This semester, are you working for pay?
   a) No
   b) Yes, on campus
   c) Yes, off campus
   d) Yes, Both

5. Over the last week (7 full days), about how many hours did you spend working for pay? (Total for all paying jobs)
   a) 0
   b) 1-10
   c) 11-20
   d) 21-34
   e) 35 or more

6. Over the last week (7 full days), about how many hours did you spend studying? (Select only one answer)
   a) 0 hrs
   b) 1-5 hrs
   c) 6-10 hrs
   d) 11-20 hrs
   e) Over 20 hrs
7. How long is your commute to college?
   a) I live in dormitories
   b) 15 - 30 minutes
   c) 31-60 minutes
   d) 1.5 hours
   e) More than 1.5 hours

8. Indicate your level of satisfaction with academic advising and tutoring services. If you have not used the service, select the last option.
   a) Very Satisfied  b) Satisfied  c) Neutral  d) Dissatisfied  e) Very Dissatisfied  f) Not Applicable

9. Indicate your level of satisfaction with Computer lab services. If you have not used the service, select the last option.
   a) Very Satisfied  b) Satisfied  c) Neutral  d) Dissatisfied  e) Very Dissatisfied  f) Not Applicable

10. Indicate your level of satisfaction with library services. If you have not used the service, select the last option.
    a) Very Satisfied  b) Satisfied  c) Neutral  d) Dissatisfied  e) Very Dissatisfied  f) Not Applicable

11. Indicate your level of satisfaction with the teaching at the College.
    a) Very Satisfied  b) Satisfied  c) Neutral  d) Dissatisfied  e) Very Dissatisfied  f) Not Applicable

12. How do you find College compared to your High School?
    a) Less stressful
    b) Equally stressful
    c) More stressful

**Self-reported Demographics and Family Background**

13. Were you born in the United States?
    a) Yes
    b) No

14. What is the ethnic background you most closely associate yourself with?
    a) White
    b) Black or African-American
    c) Latino/a
    d) East Asian
    e) South Asian
    f) Other Asian
    g) American Indian or Alaska Native
    h) Other

15. What is the main ethnic group in your neighborhood?
    a) White
    b) Black or African-American
    c) Latino/a
    d) East Asian
    e) South Asian
    f) Other Asian
    g) American Indian or Alaska Native
    h) Other
16. What is the main ethnic group you spend time with?
   a) White
   b) Black or African-American
   c) Latino/a
   d) East Asian
   e) South Asian
   f) Other Asian
   g) American Indian or Alaska Native
   h) Other

17. What is the highest level of education attained by your father?
   Post-graduate or professional degree
   a) 8th grade or less
   b) Some high school
   c) High school graduate
   d) Some college
   e) College graduate
   f) Don't know

18. What is the highest level of education attained by your mother?
   a) 8th grade or less
   b) Some high school
   c) High school graduate
   d) Some college
   e) College graduate
   f) Don't know

19. Do you have any brothers or sisters who are currently attending or have attended college?
   a) No
   b) Yes

20. Do you have any brothers or sisters who have graduated from college?
   a) No
   b) Yes

21. What is your best estimate of the total income in your household last year? (Consider income from all sources before taxes).
   a) Less than 20,000
   b) 21,000-30,000
   c) 31,000-40,000
   d) 41,000-50,000
   e) Above 50,000