

ABSTRACT

Title of Document: WHO SERVES IN COLLEGE?: EXPLORING THE RELATIONSHIP BETWEEN BACKGROUND, COLLEGE ENVIRONMENTS, AND COLLEGE COMMUNITY SERVICE PARTICIPATION

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The purpose of this study was to examine demographic characteristics, background experiences and environmental influences for their ability to predict college community service participation. Additional analyses looked at college community service participation to determine in what type of service students were participating and for how long. Astin's Inputs-Environments-Outcomes (1991, 1993) conceptual model provided the framework for how the variables were entered into a logistic regression analysis. A logistic regression analysis was chosen because the outcome, college community service participation, was measured as a dichotomous variable. Data from the Multi-Institutional Study of Leadership were used to answer the research questions.

Results from the logistic regression analysis demonstrated that the proposed set of predictors significantly increased the odds of predicting community service participation in college from 53.1% to 73.2%. Each of the seven blocks was significant, but the blocks

that improved the fit most were the college involvement experiences, high school experiences and characteristics, and pre-tests. Of all significant predictors, frequency of volunteer work in high school, low college grades, participation in a Greek organization, participation in a service organization, involvement in college organizations or off campus organizations, and socially responsible leadership capacity were the strongest predictors of college community service participation.

Additional analyses described the outcome variable, college community service participation. Out of the sample of 47,230 students, 25,059 or 53.1% indicated that they regularly participated in community service. Most students were participating in community service either through a student organization or on one's own instead of through class or federal work study. Also, students were generally participating in community service for less than 20 hours each term (67.6%), and less than 1% of students were contributing more than 75 hours each term.

Overall, the findings from this study support the notion that background characteristics and pre-college experiences alone do not predict college community service participation. A student's involvement while in college as well as socially responsible leadership capacity, both areas which interventions can be designed to address, greatly increase the likelihood of participation in community service.

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BACKGROUND, COLLEGE ENVIRONMENTS, AND COLLEGE COMMUNITY
SERVICE PARTICIPATION

By

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DEDICATION

This work is dedicated to my parents, Susan and Peter Gasiorski, who sponsored and prioritized my education from its beginning.

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The process of writing a dissertation is a long journey. Everyone tells you this at the beginning, but you don't truly believe it until you round that final corner and see the finish line six years later. Many people along the way have made this journey an enjoyable and worthwhile one for me.

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CHAPTER 1: INTRODUCTION

Community service participation is an important dimension of the college experience for many students. Nationally, opportunities for community service participation on college campuses are increasing (Boyte & Kari, 2000; Colby, Ehrlich, Beaumont, & Stephens, 2003). Society has been a catalyst for this increase as the nation's communities are in need of more and more assistance and are pushing higher education to meet this need (Boyte & Kari; Colby et al.). As the societal problems of hunger, homelessness, poverty, violence, and educational inequity continue to grow, many have looked to higher education to respond in some way. In fact, colleges and universities have received a collective mandate to become more involved in the improvement of the communities in which they reside (Association of American Colleges and Universities [AAC&U], 2002; Bok, 1986; Boyer, 1990). In response to this collective mandate, an increasing number of colleges and universities are encouraging their undergraduate students to participate in community service (Boyte & Kari; Colby et al.).

This study investigates the predictors of college community service participation in order to create a profile of students who participate in community service. Such a profile will enable colleges and universities to reach out to students who are not currently being attracted to community service participation as well as to understand what it is about student background and environmental experiences that might be drawing students into community service participation.

This chapter sets the context for the study by presenting an overview of the literature on community service in colleges and high schools including key predictors of college community service participation found in previous research. This chapter also

includes an overview of the purpose of the study and research design, definitions of key terms, and will conclude with a discussion of the significance of the study.

Context for the Study

College Community Service Participation

The increase in community service participation on college campuses is occurring nationwide. Almost 1200 college presidents have committed their institutions to Campus Compact, an organization created to promote campus and community partnerships and community service programs for students (Astin, Keup, & Lindholm, 2002; Musil, 2003). College community service participation includes volunteer work performed by students through student organizations, on their own in community organizations, and through service-learning classes. A more thorough definition of college community service participation will be presented later in the chapter. Community service and service-learning programs are common on college campuses, and the discourse of civic engagement, a commonly believed outcome of community service participation (e.g., Astin & Sax, 1998; Eyler & Giles, 1999), is prevalent in universities' mission and vision statements. Community service participation has become a common aspect of the college experience for students, and colleges and universities provide an abundance of opportunities for students to get involved.

As illustrated in Table 1.1, the participation rates for college community service vary depending on the study and how community service participation is measured and defined. Measuring community service participation is problematic because different terminology (i.e., volunteering, community service, service-learning) is often used and the terms can be interpreted differently.

Table 1.1

Community Service/Volunteering Participation Rates for College Students 2005-2008

Name of Report	%	Description
2004 Cooperative Institutional Research Program (CIRP) Freshman Survey	74.6	Percentage of students who said there was “some chance” or “a very good chance” that they would participate in volunteer work/ community service while in college
2005 Your First College Year Survey, Higher Education Research Institute (HERI)	61.5	Percentage of students who engaged in volunteer work/ community service during their first year in college
Corporation for National and Community Service report, <i>College Students Helping America, 2005</i>	30.2	Percentage of students who volunteered in 2005; used Census Bureau data and defined college students as between the ages of 16 and 24 and enrolled in a postsecondary institution at the time
Current Population Survey, September 2006	26.0	Percentage of college volunteers; used Census Bureau data and defined college students as students between the ages of 19 and 25 who are currently enrolled in college
Center for Information and Research on Civic Learning and Engagement, <i>2006 Civic and Political Health of the Nation Survey</i>	36.0	Reported volunteer activity in the 12 months prior to survey; surveyed a nationally representative sample of 1,700 people between the ages of 15 and 25
National Survey of Student Engagement (NSSE) 2008 Results		769 higher education institutions participated in 2008
First Year Students	38.0	Have done community service or volunteer work
	41.0	Plan to participate in community service or volunteer work
Seniors	60.0	Have done community service or volunteer work
	15.0	Plan to participate in community service or volunteer work

Also, two studies are not comparable if one study measures students' community service participation over four years of college and another looks at just the last semester or 12 months. Similarly, studies are not comparable if some students are asked if they have ever participated in community service or volunteer work during their college years, and others are asked if they regularly participate in community service or volunteer work.

Another problem in analyzing data on college community service participation rates is that some studies look at intentions to participate in community service (e.g., CIRP Freshmen Survey), and not actual participation. Intentions are not a comparable measure to actual behavior. For example, in one study (Hurtado et al., 2007), the percentage of first year college students who reported there is some chance or a good chance that they will participate in volunteer/ community service work during their first year of college is 74.6%. However, the percentage of first year students who actually volunteer or perform community service work is 61.5% (Hurtado et al.). It is evident that some students are not carrying through with their intention to participate in community service. This gap represents an untapped pool of students who are interested in community service, planned to participate, but have not yet done so. Another possible explanation is that students knew that it was socially desirable to express interest in community service even if they had no intention of participating

Studies that used Census Bureau data showed lower community service participation rates than national higher education studies like CIRP and NSSE. Census Bureau data include all postsecondary institutions including community and technical colleges while CIRP and NSSE are primarily made up of selective four year universities. Students who attend community colleges are generally older, more likely to attend part-

time, and more likely to be working full-time while attending college (The Chronicle of Higher Education, 2008). The Corporation for National and Community Service report on college student community service participation which used Census Bureau data showed that 30.2% of the over 10.8 million students enrolled in higher education in 2005 participated in community service (Dote, Cramer, Dietz, & Grimm, 2006). This percentage is considerably lower than another recent survey of college students, the National Survey of Student Engagement (NSSE, 2008), which reported that 60% of graduating seniors at baccalaureate degree-granting colleges and universities indicated they had participated in community service during their college years.

Longitudinal data also add another dimension to the difficulties in comparing data on college community service participation. The Cooperative Institutional Research Program (CIRP) data on American freshmen show that volunteer work on college campuses has been steadily increasing in the past 35 years (Astin, Oseguera, Sax, & Korn, 2002). Because the community service participation rates are continuously changing for college students, using recent data is important in order to present an accurate picture of the college community service phenomenon.

Even though the rates of college community service participation differ depending on the study, it is clear that significant numbers of college students are participating in community service. Research on which college students participate in community service at the college level and what characteristics and experiences they have in common is sparse. Additional information is needed about the characteristics of students who participate in community service in college in order to find out more about who composes that group and who is missing.

Key Predictors of College Community Service Participation

Although the research on predictors of college community service participation is sparse, previous studies identified several key predictors that forecast community service in college.

High School Community Service Participation

Participation in high school community service is the strongest predictor of participation in college community service (Astin & Sax, 1998; Vogelgesang & Astin, 2000). Therefore, students who participate in community service in high school are more likely to continue that participation in college than students who have not participated (Astin & Sax; Vogelgesang & Astin). Interestingly, two studies determined that the rate of participation decreases between high school and college (Planty & Regnier, 2003; Vogelgesang & Astin, 2005), although whether that decrease is significant has not been proven. Other evidence suggested that whether high school community service is required or not may be a mediating factor on its influence (Marks & Jones, 2004).

Self-Rated Leadership Ability

Another important predisposing factor for college community service participation found in previous research is self-rated leadership ability. Students who see themselves as efficacious leaders are more likely to participate in community service than students who do not (Astin & Sax, 1998; Vogelgesang & Astin, 2000). Studying leadership among college students has been a challenging endeavor as leadership models have shifted from position-oriented industrial models (Rost, 1991) to more group-oriented, collaborative processes focused on change for the common good (Rost). Recently, socially responsible leadership has emerged as the preeminent leadership

model for college students supported by the naming of social responsibility as a core outcome of the college experience (AAC&U, 2007; Astin & Astin, 2000; National Association of Student Personnel Administrators – Student Affairs Administrators in Higher Education [NASPA] & American College Student Personnel – College Student Educators International [ACPA], 2004).

Other Key Predictors

Other predictors that influence college community service participation include involvement in religious activities or other college activities that encourage or require community service, demographic variables such as gender (Astin & Sax, 1998; Cruce & Moore, 2007; Marks & Jones, 2004; Vogelgesang & Astin, 2000) and levels of social and education capital (e.g., family involvement in the community and parents' education level) (Cruce & Moore; Marks & Jones).

Importance of College Community Service Participation

The importance of community service participation for college students can be demonstrated by the positive outcomes for college students that are associated with participation. Community service participation in college has a significant and substantial positive impact on a variety of outcomes (Astin & Sax, 1998; Eyler & Giles, 1999; Pascarella & Terenzini, 2005). College students' participation in community service is correlated with positive gains on citizenship (e.g., citizenship confidence and civic responsibility) (Astin & Sax; Myers-Lipton, 1998; Perry & Katula, 2001), cognitive (e.g., improved grades, retention rates, and cognitive complexity) (Astin & Sax; Litke, 2002; Vogelgesang & Astin, 2000), and affective (e.g., self-knowledge and self-efficacy) (Eyler & Giles) outcomes. Although the outcomes often vary with the type and frequency of

community service involvement, studies have shown that, in general, college community service participation is related to positive outcomes (e.g., Astin & Sax; Vogelgesang & Astin). Participating in community service in college is a worthwhile activity that can lead to many positive outcomes, but planting the seeds for community service participation often begins in high school or before.

Community Service Participation in High School

A recent study of high school students found that young people are increasingly indifferent, distrustful, and politically disengaged (Niemi, Hepburn, & Chapman, 2000). Other studies found that high school students had relatively low scores on measures of civic knowledge and that youth voting rates had declined (Levine & Lopez, 2002; The Civic Mission of Schools, 2003; Torney-Purta, 2002). The evidence of high school students' disengagement led to high schools beginning a reinvigorated effort to involve students and young adults in community service (Niemi et al.). Researchers have suggested that if students participate in community service in high school, they will continue to participate in college and beyond (e.g., Niemi et al.; Raskoff & Sundeen, 1999). As previously mentioned, high school community service participation is the strongest predictor of college community service participation (Astin & Sax, 1998; Vogelgesang & Astin, 2000). As a result of the efforts to engage high school students in their own communities, high school students' participation in community service is on the rise (Putnam, 2000).

The majority of college students receive some exposure to community service during their high school years whether through school-sponsored or required community service experiences (Scales & Roehlkepartain, 2004). According to one national study,

81% of public high schools had students participating in community service activities recognized by and/or arranged through the school (Scales & Roehlkepartain). Private schools, particularly religious schools, promote community service participation as a part of their mission (Raskoff & Sundeen, 1999), and are estimated to have the same if not higher percentages of community service participation with over 80% implementing community service programs (Pritchard, 2002). Sundeen and Raskoff (1994) found that while families and churches also played important roles in shaping volunteer behavior, the strongest predictive variable for participating in high school community service was attending a school that encouraged or required community service participation.

Although a high percentage of high school students participate in community service, the participation rate tends to differ depending on the study. In a study using data from the National Education Longitudinal Study of 1988 (NELS 1988), 44% of all high school students performed some kind of community service while in high school (Planty & Regnier, 2003). Another study using data from the 1996 National Household Education Survey found that about half (49%) of students in grades six through twelve said they had participated in community service at some time during the 1995-96 school year (Nolin, Chaney & Chapman, 1997). Nearly ten years later, the Census Bureau's Current Population Survey showed the high school volunteering rate as relatively stable from 2003-2005 at around 33-34% (Barrios Marcelo, 2007). The Civic and Political Health of the Nation Survey found the volunteering rate of 16-18 year old high school students to be 53% (Barrios Marcelo), and the Monitoring the Future survey at the University of Michigan showed the 2005 high school volunteering rate of twelfth graders to be 75.9% and tenth graders to be 70.6% (Barrios Marcelo). Finally, in a national

survey of college students looking retrospectively at their high school experience, Vogelgesang and Astin (2005) found that 80.3% of college students participated in community service during their senior year of high school.

It is apparent that the same problems arise when trying to measure high school community service participation that do when measuring college community service participation. The reported community service participation rates in high school range from 33% to 80%. Again, these studies are not consistently measuring the same concept. Some of the studies surveyed 16-18 year olds only, some 12th graders, some 10th graders, and some asked all high school students. It is not clear for some of the studies whether they asked students if they had ever participated in volunteer work, whether they regularly participate, or whether they had participated in the last 12 months. The results from Vogelgesang and Astin's (2005) study are most likely higher than a national sample of all high school students because not all high school students go to college, and high school students who enroll in college participate in community service more than high school students who do not continue on to college (Barrios Marcelo).

Although the reported participation rates are inconsistent, it is evident that a large percentage of high school students participate in community service each year. Two national studies have shown a decline in volunteer participation between high school and college - from 44% to 38% (Planty & Regnier, 2003), and from 80.3% to 74.4% (Vogelgesang & Astin, 2005). Although the reported declines are small, these studies raise questions about why students might be more likely to participate in community service in high school than college.

High School Community Service Requirements

In an effort to increase community service participation for high school students, many high schools have implemented mandatory community service requirements (Niemi et al., 2000; Raskoff & Sundeen, 1999). The hope is that requiring students to participate in community service at the high school level will prepare them for responsible citizenship and lead to future community service participation in college and beyond. The assumption that required community service has the same influence on future community service as voluntary community service is underresearched and far from proven. Metz and Youniss (2003, 2005) conducted studies in which the findings supported the influence of high school community service requirements on future service although they focused on one high school in an affluent suburb of Boston. Other studies (e.g., Jones & Hill, 2003; Jones, Segar, & Gasiorski, 2008; Marks & Jones, 2004; Planty & Regnier, 2003) found that requiring community service in high school is not an effective way to recruit and retain volunteers especially as they transition to college.

Several convincing, yet unproven, rationales support high school community service requirements (Raskoff & Sundeen, 1999). The support for school-based required community service came from proponents of the educational and character-building benefits of community service as well as from those in the local, state, and federal government who supported national community service initiatives (Raskoff & Sundeen). The first rationale is based on the idea that community service is a part of civic duty and develops citizenship (Barber, 1992; Battistoni, 1997; Eyler & Giles, 1999; Moely, McFarland, Miron, Mercer, & Ilustre, 2002; Perry & Katula, 2001). Barber theorized that in a democracy, community service should be a mandated part of curricula, so that all

students have the opportunity to see the connection between community, civic involvement, and each person's responsibility as a citizen. He feared that if community service was left to the individual, those who would benefit most from community service participation might miss an important part of their education (Barber). The supporters of this rationale argue that education is about more than subject matter, and includes learning about diversity, developing understanding, acquiring communication skills, and learning the basics of civic participation (AAC&U, 2002; Raskoff & Sundeen, 1999). Student participation in school-based community service creates a more engaged populace and in turn benefits the rest of society.

A second rationale is that community service can be a useful component of academic development and a viable pedagogical tool (Eyler & Giles, 1999). This rationale supports the idea of service-learning over simply requiring service hours. Service-learning can be either extracurricular, for example as a one day service-learning program in the community, or integrated seamlessly into the curriculum through courses. Integrating critical reflection and an academic component with the community service activity increases positive academic outcomes for high school students (Billig, 2002; Melchior, 1999; Melchior & Bailis, 2002).

A third rationale for required community service is based on the ability of community service participation to accelerate personal development of students in the social and career development areas (Raskoff & Sundeen, 1999). Students develop networking skills and social capital if they participate in community service programs. This rationale is supported by an increase in personal and social development outcomes

related to high school community service participation (Billig, 2002; Furco, 2002; Melchior & Bailis, 2002).

Statement of Problem

Although studying outcomes of community service in college is a popular research topic, few studies look at predictors of community service participation at the college level (Cruce & Moore, 2007). The research that does exist contains gaps in information about which variables predict community service participation. Predictors are important to identify in order to design community service opportunities that appeal to all students and improve the understanding of the dynamics of social participation and involvement among college students. According to previous research, community service participation is associated with significant increases in citizenship, cognitive, and affective outcomes (Astin & Sax, 1998; Eyler & Giles, 1999; Pascarella & Terenzini, 2005; Vogelgesang & Astin, 2000). Colleges and universities should be aware of the predictors of college community service participation in order to design interventions that encourage more students to participate in community service. Today's college students are asked to do more community service and are recognized and commended for their participation because of the many positive outcomes associated with community service participation. However, which variables accurately predict participation in community service for college students is unknown.

Purpose of the Study and Research Design

This study adds to the limited research on the predictors of community service participation for college students. Using an adapted version of Astin's input-environment-outcome college impact model (1991, 1993) as a conceptual framework,

this study seeks to increase understanding about which students participate in community service in college. The study also explores the relationship between high school community service and community service participation in college with a particular focus on high school community service requirements. Therefore, the purpose of this study is to examine the relationship between demographic variables, high school characteristics and experiences, institutional characteristics, current college involvement experiences, and socially responsible leadership capacity and college community service participation. Descriptive analyses and a blocked entry logistic regression analysis were used to answer the following research questions.

Research Questions

RQ1: How are college students who participate in community service different from college students who do not participate in community service?

RQ2: Using (a) background characteristics, (b) high school experiences, (c) pre-tests, (d) college student characteristics, (e) institutional characteristics, (f) college involvement experiences, and (g) scores on the Socially Responsible Leadership scale, what is the likelihood of predicting college community service participation?

RQ3: Which variables significantly predict community service participation in college? Which variables are the strongest predictors? Which variables are weaker predictors?

A combination of descriptive analyses and a blocked entry logistic regression analysis were used to address the research questions for this study. Chi-square analyses and *t* tests helped to determine if students who participate in college community service

are significantly different from those who do not on a number of key variables. These variables were then entered into a logistic regression analysis to predict college community service participation.

A logistic regression analysis allows the researcher to predict which of two categories a person will belong to, and in this case the categories were participators and non-participators in college community service. In logistic regression, the goal is to fit a model to the data that estimates the outcome variable from known values of the predictor variables (Field, 2005). For this study, the variables were entered into the model according to an adapted version of Astin's (1991, 1993) input-environment-outcome college impact model. Astin's model is based on the theory that background characteristics and other input variables must be controlled for in order to discover the influence of an environmental characteristic on an outcome. The predictive model in this study was entered in seven blocks that include demographic characteristics, high school characteristics, pretests, college characteristics, institutional characteristics, on campus and off campus college involvement experiences, and socially responsible leadership capacity.

Definitions of Key Terms

College Community Service Participation

As noted earlier in the chapter, one of the concerns with measuring college community service participation is that different terms are used to refer to the same concept. One term often used is volunteering. Volunteering is a broad definition and includes any activities where one performs community service of his or her own free will, does charitable work without pay, and contributes to a common good (Safrit & Merrill,

1996). Another commonly used term, especially with college community service, is service-learning. Service-learning is the integration of academic learning and service in the community tied together by a reflective component and with a goal of reciprocity between the server and the person or group being served (Eyler & Giles, 1999; Jacoby & Associates, 1996; Sigmon, 1994). Community service is considered a broad construct and includes both volunteering and service-learning. College community service participation encompasses all kinds of service involvement in which college students engage activities that benefit the community. It serves as an umbrella concept. College community service participation is similar to volunteering or generic community service. Both of these terms (i.e., volunteering and generic community service) have been used in national studies like the Cooperative Institutional Research Program (CIRP) and the National Study of Student Engagement (NSSE) (Astin & Sax, 1998; Cruce & Moore, 2007; Vogelgesang & Astin, 2000). For the purposes of this study, the term college community service participation is defined as any community service, volunteering, charitable work, or service-learning performed by college students while they are in college, but not necessarily on the college campus or through campus-sponsored programs.

High School Community Service Participation

High school community service participation is similarly defined to college community service participation in that it is a broad concept that encompasses all types of community service experiences for high school students. These activities could take place at school, on their own, or through faith-based or community-based organizations. The United States Department of Education used the same definition when collecting data on high school students who volunteered in 1988.

High School Community Service Requirements

The term high school community service requirement is defined as a condition to be met that mandates community service (e.g., number of hours one has to perform community service, course involving community service) in order to graduate from high school (Sobus, 1995). For example, in Maryland, high school students must perform 75 hours of service-learning in order to receive a high school diploma. Mandatory community service and required community service are used interchangeably in the literature (Niemi et al., 2000; Planty & Regnier, 2003; Raskoff & Sundeen, 1999; Sobus).

Socially Responsible Leadership

Socially responsible leadership is defined as leadership for college students that encompasses personal, group, and societal values and promotes change for the common good (Higher Education Research Institute [HERI], 1996). Socially responsible leadership is the most prominent definition of leadership for college students evidenced by the fact that social responsibility is considered a core outcome for college students (AAC&U, 2007; Astin & Astin, 2000; NASPA & ACPA, 2004). Socially responsible leadership is measured by the Socially Responsible Leadership scale (Tyree, 1998) and provides a measure of students' self-rated leadership capacity (one of the strongest predictors of college community service participation) (Astin & Sax, 1998).

Significance of Study

An abundance of research exists to support the relationship between community service participation in college and positive outcomes (e.g., Astin & Sax, 1998; Astin, Sax, & Avalos, 1999; Eyler & Giles, 1999; Vogelgesang & Astin, 2000). However, little evidence exists that suggests which students participate in community service (e.g., Cruce

& Moore, 2007; Marks & Jones, 2004). This study aimed to explore the relationships between background characteristics, high school community service and high school community service requirements, college involvement experiences, and scores on the Socially Responsible Leadership scale and college community service participation. The findings offer the potential to be useful to both student affairs and academic affairs departments that are interested in increasing community service participation for their students.

The results of this study will also add to the findings about the influence of required high school community service on future participation in community service. Community service is increasingly mandatory at the secondary level with little to no research to support its delivery of stated learning outcomes. In fact, several studies found that community service requirements actually have a negative influence on students' motivation to serve in the future (Jones & Hill, 2003; Jones et al., 2008; Marks & Jones, 2004; Stukas, Snyder, & Clary, 1999). If required community service decreases the likelihood of participation in future community service, potential policy implications emerge for the secondary education level. The impact of these requirements has to this point been understudied. This study has the potential to add to the literature on requiring community service and contribute to the dialogue regarding the efficacy of high school community service requirements.

The role that this specific study can play is that it introduces an entire set of predictor variables that include background characteristics, environmental experiences, and socially responsible leadership capacity while also controlling for institutional characteristics in an effort to create a predictive model for college community service

participation. This study will build on previous findings in several ways. First, the data used in this study to explore predictors of college community service participation are current. Second, this study will include college involvement variables like fraternity and sorority membership, other student group involvement, and a measure of leadership capacity, the Socially Responsible Leadership scale. This study will answer the question, “Who participates in college community service?” Establishing a connection between a set of predictor variables and the broad construct of college community service participation then lays the groundwork for future studies on more specific types of community service, frequency of community service, and quality of community service in order to better understand the phenomenon of college community service participation.

Summary

Community service opportunities for college students develop citizenship as well as produce cognitive and affective outcomes (e.g., Astin & Sax, 1998; Eyler & Giles, 1999). Colleges and universities see the benefit to both their students and their surrounding communities and are therefore developing programs and opportunities in which students can be involved in community service. It is unknown who is participating in community service at the college level and whether a community service requirement in high school has an impact on the decision to participate at the college level. The following chapter will outline the literature on this topic and highlight the gaps that this study attempts to fill.

CHAPTER 2: REVIEW OF THE LITERATURE

Increasing community service participation for college students is a desired goal for many colleges and universities (Boyte & Kari, 2000; Colby et al., 2003). This goal emerged from a larger societal push for encouraging civic engagement and civic participation as an integral part of a college education (AAC&U, 2002; Boyer, 1990; NASPA & ACPA, 2004). Research has supported the connection between college service participation and positive outcomes in academic and cognitive development, political efficacy, civic responsibility, citizenship, and personal and social development for college students (e.g., Astin & Sax, 1998; Astin, Vogelgesang, Ikeda, & Yee, 2000; Eyster & Giles, 1999; Vogelgesang & Astin, 2000). As a result of this evidence of positive outcomes, recruiting more college students into community service activities is a desirable objective. Therefore, it is important to know who is already serving in college and how more students can be attracted into community service activities. Do demographic variables largely determine who serves in college or are there environmental variables that interventions can be designed to address? Examining predictors of college community service participation from previous research informs the decision about which predictors to include in this study.

Introducing students to community service in high school is often thought of as the pathway to college community service. Some high schools require students to participate in community service as a condition of graduation in the hopes that this will lead to future community service participation and active citizenship. How high school community service participation and high school community service requirements compare with other predictors like demographic characteristics, institutional

characteristics, college involvement experiences, and socially responsible leadership capacity in their ability to predict college community service participation is a question in need of further research.

This chapter begins with a description of the background context of college community service as well as an overview of previous research on college community service participation. Since the relationship between high school and college community service is one element of this study, the next section of the chapter will present a synopsis of the literature on high school based community service and high school community service requirements including research either supporting or opposing their effectiveness. Finally, an in depth analysis of previous research on predictors of college community service participation will conclude the chapter.

Community Service Participation

The following section provides background context for college community service participation and high school community service participation. College community service participation, as the conceptual outcome for this study, will be situated by describing its importance as part of the larger college experience. High school community service participation is being studied for its relationship with the decision to participate in community service in college, particularly with regards to high school community service requirements. Therefore, it is important to provide contextual information to situate the high school community service experience as well.

Community Service and College Students

The purposes of higher education have always included citizenship, civic involvement, and a commitment to service (Jacoby & Associates, 1996). Barber (1994)

put the issue in historical context by explaining that service was consistently a mandatory part of education and that the two were separated only recently. The academic roots of educating for citizenship come from the work of John Dewey. Dewey (1916/1944) was one of the first scholars to acknowledge the unavoidable connection between education and the community and the link between education and a democratic society. Dewey stressed the importance of an experiential education. He wrote, “I have taken for granted the soundness of the principle that education in order to accomplish its ends both for the individual learner and for society must be based on experience—which is always the actual life-experience of some individual” (Dewey, 1938/1963, p. 89). Community service is one method in which students gain life-experience as part of their education.

Society has charged colleges and universities with improving the quality of their surrounding neighborhoods (Musil, 2003). Due to the increasing democratization of higher education, a more diverse student population has a greater interest in community involvement (Musil). College students are volunteering in record numbers in response to natural disasters (i.e., Hurricanes Katrina, Rita, and Ike) as well as the increasing devastation of communities brought on by economic difficulties (Dote et al., 2006). Colleges and universities find themselves being pushed from many sides including students, the surrounding communities, and society at large to put students to work in the community doing good work.

One way that colleges and universities have found to address this burgeoning interest in community work is to offer community service opportunities for students within local communities. The increase in service programs on college campuses is occurring nationwide (Musil, 2003). The proportion of students participating in volunteer

work on college campuses has been steadily increasing in the past 35 years (Astin et al., 2002). In a national study reported in *The American Freshman: National Norms for Fall 2006*, researchers found that two thirds of all college freshmen claim “helping others in difficulty” as a “very important” or “essential” personal goal (Pryor et al., 2006).

Similarly, a recent study of first year college students at baccalaureate granting colleges showed that approximately 61.5% participated in a service activity during their first year of college (Hurtado et al., 2007). A potentially more realistic picture of college community service emerged from the Census Bureau data reported by the Corporation for National and Community Service (CNCS). This CNCS national study reported that opportunities for community service participation at colleges and universities are growing, and 30.2% of the over 10.8 million college students currently participate in community service (Dote et al., 2006).

However, it is important to acknowledge that several scholars question whether community service or volunteerism alone will have a lasting impact on either college students or the community. Vogelgesang and Astin (2000) found that outcomes increased for college students if the service was paired with a course instead of conducted independently by students. Also, Westheimer and Kahne (2000) posited that charity and philanthropic types of service risk being interpreted by the recipient as a “private act of kindness performed by the privileged that simply reinforces the status quo” (p. 52). They further speculated:

What do students learn through their community service? If students serve the homeless and enjoy the rewards of volunteering but do not study the various causes of homelessness, what lessons are they learning? If they ladle soup for

those who are hungry but do not explore the conditions that brought individuals and families to their counter, is there a risk? We think so. Volunteerism will always be an important support for our society and for our humanity. It will also always be insufficient. (p. 52)

Although community service participation in college can be a rewarding experience for students and often benefits the community, it is only one component of a comprehensive strategy for educating for citizenship. Acknowledging the limitations is also important to examine.

College Community Service Participation

Previous studies set a precedent for measuring college community service participation as a broad concept and have provided examples of how this can be done. Cruce and Moore (2007) measured college community service participation by using a single item from the National Survey of Student Engagement (NSSE) instrument that asked, “Which of the following have you done or do you plan to do before you graduate?” Community service or volunteer work was one of the options, and the students’ response options were: “done,” “plan to do,” “do not plan to do,” or “have not decided.” Several other studies (e.g., Astin & Sax, 1998; Astin et al., 2000; Astin et al., 1999; Vogelgesang & Astin, 2000) used data from the Cooperative Institutional Research Program (CIRP) that collects national data every year by surveying first year students with the Student Information Form (SIF). Studies using these data looked at the concept of generic community service or service participation (Astin & Sax, Astin et al., 2000; Astin et al., 1999; Vogelgesang & Astin). In order to measure frequency of generic community service, students were asked, “Please indicate how often you performed

volunteer work during the past year,” and students could mark frequently, occasionally, or not at all (Vogelgesang & Astin). Although specialized information often provides a clearer picture, the aforementioned studies showed that college community service participation could be successfully and consistently measured as an umbrella or generic concept.

College Community Service Requirements

Although the presence of college community service requirements is not a component in this study, acknowledging the previous research in this area provides context for how requirements might influence community service participation at the college level. College-wide service requirements for graduation, so named, are currently rare, but a recent Google search turned up college-wide graduation requirements at Tulane University and Wittenberg University. In addition, the governor of California called for a statewide community service requirement for all college graduates in 1999. However, California State University resisted this mandate and has continued to encourage and sponsor community service opportunities rather than require them (California State University, 1999). Many more colleges and universities have community service requirements embedded in the curriculum as service-learning courses or key components of the academic program, but are not necessarily named college-wide community service graduation requirements (Antonio, Astin, & Cress, 2000).

Many college faculty are resistant to the idea of community service graduation requirements. In a study designed to examine characteristics of faculty who support community service, 32% of faculty indicated that it is a good idea to require community service in order to graduate from college (Antonio et al.). Eyler and Giles (1999)

interviewed 1100 service-learning college students and found their views on required community service differed in that 61% thought it was appropriate to require service while only 17% were opposed to the idea. This difference between faculty and students could be the result of many college students' exposure to community service requirements during high school. Scales and Roehlkepartain reported that 46% of public high schools require students to participate in service-learning. However, this suggestion is offered with hesitation because previous research has reported a negative association between mandated high school community service and future community service participation (e.g., Jones et al., 2008; Marks & Jones, 2004).

Stukas et al. (1999) studied college students enrolled in a service-learning class and found that in the context of a mandatory volunteerism program, behavioral intentions to engage in volunteer work in the future were positively related to past histories of volunteerism—but only for students who did not feel that the program had too much control over their own actions. In other words, students who had a past history of volunteering (e.g., high school community service) were more likely to participate in college unless they resented the requirement to serve in college and felt that they had no control over the decision to participate. College community service requirements are not as common as high school community service requirements; however, if colleges are headed toward requiring community service in the future, then the impact of college community service requirements is an area that needs to be studied.

Outcomes of Community Service for College Students

Community service participation in college is associated with significant positive outcomes in many categories (Astin & Sax, 1998; Eyler & Giles, 1999; Pascarella &

Terenzini, 2005; Vogelgesang & Astin, 2000). The following sections detail cognitive, affective, and citizenship outcomes related to community service participation.

Academic and cognitive development. Looking at academic outcomes, community service participation is related to significant positive influences on grades, retention rates, and aspirations for advanced degrees (Astin & Sax, 1998). One of the most common objections to students participating in community service is that it takes away from their ability to fully focus on their academic studies and the true academic mission of the institution (Antonio et al., 2000). However, Astin and Sax found that community service participation positively influenced 10 different academic and cognitive outcomes: college grade point average, persistence in college, aspirations for educational degrees, increase in general knowledge, increase in field or discipline knowledge, preparation for graduate or professional school, academic self-concept, time devoted to studying or homework, extra work done for courses, and amount of contact with faculty. Additionally, Eyler and Giles (1999) demonstrated that students who participated in community service as part of a course reported that they learned more, worked harder, and had a deeper understanding of subject matter and the ability to apply subject matter. Students who participate in community service in college appear to receive both academic and cognitive benefits.

Personal and social development. Community service influences how students perceive their own abilities. Participating in community service is associated with gains in self-knowledge, spiritual growth, and self-efficacy (Eyler & Giles, 1999). Interpersonal outcomes such as increases in finding a reward in helping others (Eyler & Giles) and the ability to work cooperatively (Astin & Sax, 1998; Eyler & Giles) are also the result of

community service participation. Overall, community service participation has a significant relationship with “other-oriented” attitudes (Pascarella & Terenzini, 2005). It increases one’s ability to get along with and gain knowledge from people of different races and cultures (Astin & Sax). Astin and Sax found that students who participated in community service developed life skills and became committed to promoting racial understanding, social values, and community-action programs.

Political efficacy, civic responsibility, and citizenship. Community service participation is correlated with gains in citizenship-related outcomes (Eyler, Giles, & Braxton, 1997; Eyler, Giles, Root, & Price, 1997; Myers-Lipton, 1998). Results demonstrated that student participation in community service was the strongest predictor of social activism (Astin, 1993; Astin et al., 2000; Sax, 2000; Vogelgesang & Astin, 2000). Astin and Sax (1998) reported that community service participation led to increased civic responsibility outcomes such as a commitment to participate in a community action program and influencing the political structure. Similarly, Astin and Sax, and Gray et al. (1999) demonstrated positive changes in sense of civic responsibility and attitudes about the importance of service to the community after participation in a community service experience. Perry and Katula (2001) attempted to summarize the data that supported the impact of community service participation on developing citizenship skills, and found that community service appears to favorably influence citizenship-related cognitive understanding and later giving and volunteering.

Community Service and High School Students

Several studies found that high school community service participation was the strongest predictor of college community service participation (e.g., Astin & Sax, 1998;

Vogelgesang & Astin, 2000). Therefore, studying college community service without providing contextual information about high school community service does not paint the entire picture. Community service is often required for high school students as a mandatory part of the high school experience and a necessary step on the way to graduation. However, evidence suggests that students who are required to volunteer often lose motivation to continue volunteering once the requirement has been completed (Deci & Ryan, 1987; Marks & Jones, 2004; Sobus, 1995; Stukas et al., 1999). As Sobus noted, “A coercive policy should be expected to undermine positive attributions, stifle feelings of self-determination, and ultimately make self-generated acts of community service more scarce” (p. 182).

Despite evidence undermining their effectiveness, community service requirements are becoming increasingly common for high school students (Raskoff & Sundeen, 1999). Some private schools, especially those with religious affiliations, have required service for years, but service requirements are becoming increasingly popular in public schools as well (Raskoff & Sundeen). In a national study of public school principals, 46% of high schools reported having a community service requirement for their students (Scales & Roehlkepartain, 2004). At the secondary level, the state of Maryland became the first state to implement a statewide high school community service requirement in 1997, and Chicago, Miami, Atlanta, and Washington, DC all have citywide high school community service requirements for graduation (Westheimer & Kahne, 2000). Although statewide and citywide service requirements exist, few research studies look at the outcomes related to a community service requirement in high school. Almost half of public high schools have a community service requirement (Scales &

Roehlkepartain), and now state and city-wide requirements are emerging without consistent evidence to support their efficacy on any specific outcomes.

Mixed evidence exists regarding the effectiveness of requiring service. In a small study based on one high school in an affluent Boston suburb, Metz and Youniss (2003) found that a service requirement of 40 hours led to higher rates of volunteerism and increased students' intentions to volunteer in the future. Another study using the same sample of students discovered that students who were less inclined to serve were positively affected by a service requirement and more inclined to volunteer in the future after fulfilling the requirement (Metz & Youniss, 2005). As men were typically less inclined to serve, community service requirements had a positive influence on their intention to continue service participation in the future (Metz & Youniss, 2005). For students who were already inclined to participate in service, a requirement was neither advantageous nor harmful (Metz & Youniss, 2005). McLellan and Youniss (2003) demonstrated that it was the quality and structure of the service activity that influenced the students' experience most and that even though students who were required often chose functionary types of community service (e.g., money raising, charity events) over social service (e.g., tutoring, visiting the elderly), if a school developed a well-structured, high quality required community service program the experience could be the same for students as a voluntary program.

One critique of the previous research studies (i.e., McLellan & Youniss, 2003; Metz & Youniss, 2003, 2005) is that all of the studies were conducted using schools in affluent areas. Metz and Youniss (2003, 2005) studied a public high school in a suburb of Boston, and McLellan and Youniss (2003) studied two Catholic high schools in suburban

Washington, DC. The samples do not appear to fully represent the United States high school population; and therefore it would be difficult to generalize the results of these studies to other populations. Another consideration regarding the McLellan and Youniss (2003) study is that the students studied attended Catholic high schools. Community service is often seen as an integral part of living the Catholic faith, and therefore the students attending Catholic schools may be more inclined to participate in community service. Although these findings do support the use of community service requirements for high school students, the remaining evidence regarding high school community service requirements tells a different story.

Negative results emerged from other studies that examined the influence of required community service participation in high school on future service and other involvement. Hart, Donnelly, Youniss, and Atkins (2007) used the National Education Longitudinal Study (NELS) database from 1988, which is based on a biennial general purpose survey of U.S. youth. Initial data collection began in 1988 and was followed up until 2000. They found that frequency of service participation in high school was a stronger predictor of college community service participation than whether it was required or voluntary service. Hart et al. also found that students who participated in service voluntarily in high school were significantly more likely to participate eight years later than those who had not participated in community service in high school. Students who were required to participate in community service in high school were not significantly different in terms of likelihood to participate eight years later from those students who had not participated in community service at all. Planty and Regnier (2003) also used the NELS database and uncovered that students who volunteered solely because

it was required were more likely to volunteer two years later than those who did no volunteering in high school (37% vs. 27%, respectively). However, both students who were required to volunteer and students who did not volunteer were less likely to volunteer six years later than students who volunteered because they were strongly encouraged or for strictly voluntary reasons (56%).

Marks and Jones (2004) used the same database (NELS) and found that students who performed community service as a requirement in high school were more likely to stop serving in college. This trend held true for students who were mandated to perform community service as 10th graders or were mandated to perform community service as seniors. Students who were encouraged, instead of mandated, to volunteer as 12th graders were more likely to continue volunteering in college (Marks & Jones). These results support the findings of earlier research demonstrating that if an individual already has an intrinsic desire to participate in service, a requirement can have a detrimental effect (Stukas et al., 1999; Thomas, Batson, & Coke, 1981). One unintended outcome of requiring service was that students learned to provide service only when it was required (Marks & Jones; Stukas et al.), and therefore the service tended to be short-lived, segmental, and unrelated to personal values and enduring commitments (Marks & Jones). Although the previous studies that raise questions about the effectiveness of high school community service requirements all use the NELS database, the sample is from a nationally representative study that includes more than 20,000 students.

In a qualitative study of the transition from high school to college and its relationship with student community service involvement, Jones and Hill (2003) found that students who participated in community service in high school tended to continue in

college if their motivation to serve came from a more internal commitment and family and school encouragement. Those who participated more sporadically because of a requirement or in order to build up their résumé were not likely to continue serving once they entered college. After interviewing college students, Jones and Hill found that required service becomes “just another homework assignment” (p. 524) and can deter any continued involvement or civic and social responsibility.

Another qualitative study detailed the narrative stories of current college students who had fulfilled the state of Maryland’s high school service-learning requirement. Many students described the requirement as a “double-edged sword” (Jones et al., 2008). Participating in the requirement was perceived as a positive experience because the students started volunteering when they otherwise might not have. However, the required component of the service was perceived as negative since the students resented being forced to participate in community service (Jones et al.). Overall, students shared that their high school service-learning experience had little to no relationship with their decision to either continue or discontinue that participation in college.

Jennings and Stoker (2004) conducted a longitudinal study on civic engagement and found that students’ high school involvement patterns in community service do not immediately show up in college involvement. They wrote:

The seeds planted during the high school years germinate and only gradually bear fruit. As people move into the life situations of middle age that evoke or require civic engagement, they draw on the predispositions and skills set in place at an earlier time. Pre-adult experiences do eventually matter. (p. 363)

Jennings and Stoker argued that the influence of high school community service involvement cannot truly be known until many years after students finish high school. Their argument supports the idea that the influence of high school community service on future service may not show up until long after students have finished college; therefore, it is not possible to completely know or predict the influence that a high school community service requirement has on future intentions to serve. It is clear that the relationship between requiring service and its impact on future service is still in question.

Community service participation has become a part of the high school experience for many students. The research is mixed, however, on the relationship between required high school community service and the decision to participate in college community service. High school community service participation is one of several other possible predictors of community service participation in college including background characteristics, other high school experiences, on campus and off campus college involvement, and socially responsible leadership capacity. The following section provides a thorough overview of previous research on predictors of college community service participation.

Predictors of College Community Service Participation

As a result of the research on positive outcomes associated with college community service participation (e.g., Astin & Sax, 1998; Astin et al., 2000; Vogelgesang & Astin, 2000), the question of who participates in community service in college is asked with renewed vigor. Are there differences in demographic characteristics, prior community service experiences, other high school experiences, institutional characteristics, college involvement choices, or scores on the Socially

Responsible Leadership scale that make a student more likely to participate in community service in college? Prior research indicates that certain characteristics are correlated with college community service (e.g., Astin & Sax; Cruce & Moore, 2007; Marks & Jones, 2004; Vogelgesang & Astin), but gaps remain particularly when looking at all of these predictors together. The previous research on these predictors in relation to college community service participation is detailed in the following section.

Although the research on predictors of community service is presented in this section as individual predictors, it is important to consider that interactions between the variables very likely exist. For example, race and socioeconomic status are likely connected; and therefore both of the characteristics, as well as the interaction between them, could have a relationship with the decision to participate in college community service. Much of the research on community service participation presents these variables as discrete units of analysis, and getting at the interplay between these different predictors is difficult. However, it is important to note that these intersections most likely exist and contribute to community service participation.

Gender

In previous studies, women are consistently more likely to participate in community service in college than men (Astin & Sax, 1998; Astin et al., 2000; Bonnet, 2008; Cruce & Moore, 2007; Fitch, 1991; Marks & Jones, 2004; Sax, Astin, & Astin, 1996; Serow & Dreyden, 1990; Vogelgesang & Astin, 2000). The same held true for one study of high school students as women participated in service at a higher rate than men (Nolin et al., 1997; Planty & Regnier, 2003). Planty and Regnier also examined consistent volunteers, individuals who volunteered on a regular basis throughout a 12

year period beginning in high school, and over this longer period women were still more likely to be volunteer than men. Oesterle, Johnson, and Mortimer (2004) found that volunteering rates did not differ for men and women when the participants were in high school, but as the same sample grew older, the men became less likely to participate in service. They posited that helping and caring for others became more of an adult woman's role than an adult man's. Rhoads (1997) suggested that women are more attracted to community service opportunities because they operate from an ethic of care which influences them to value community service more than men. Men have a strong sense of individualism, and therefore service to the community may be less important and secondary to other, more individually-motivated, activities.

Race/Ethnicity

No conclusive evidence exists supporting race and ethnicity and their relationship with college community service participation. Several studies suggest that White students participate more than other racial groups in high school (Nolin et al., 1997; Planty & Regnier, 2003), but another study found that race and ethnicity were not significant predictors of whether someone continues with community service in college (Marks & Jones, 2004). In a study of first year college students' likelihood to participate in community service, African Americans, Latinos, and Asian Americans were all more likely to participate in community service during their first year of college than their White peers (Cruce & Moore, 2007). Bonnet (2008) found similar results using data from the Multi-Institutional Study of Leadership indicating that African American/Black and Multiracial students participate more in college service than their White peers. The Civic and Political Health of the Nation Survey, a survey of 1700 young people and 550 adults,

conducted in 2006 reported that Asian American students were the most likely to have volunteered in the last 12 months (54.4%) followed by White students (38.2%), Black students (35.6%), and Latino students (29.5%) (Barrios Marcelo, Lopez, & Kirby, 2007).

The relationship between race/ethnicity and community service participation is probably more complicated than participation rates can explain. Cultural background most likely influences how community service is defined and undertaken. Stevens (2003) explained that the Black community has an enduring history of connecting community service with the academy, long before the term service-learning was coined. It is possible that White students are more familiar with the terms community service and service-learning as community service participation has traditionally been a White, middle-class activity for college students (O'Grady, 2000). Jones and Hill (2003) found that students of color were engaged in their communities but did not perceive that participation as connected to their university experience and thus were seen as non-participants by university staff. The evidence regarding the relationship between race and ethnicity and college community service participation is still emerging and in need of further research.

Age

Typically, the age of a traditional college student is considered between 18 and 24 years and therefore because most students fall in this narrow age range, the influence of age on college service participation is not usually a strong predictor. However, the importance of age is more complex when a student does not fall within the traditional range and is considered a non-traditional age student (i.e., 25 or older). A meta-analysis of college student research identified 25 years or older as a benchmark of non-traditional age for college students (Pascarella & Terenzini, 2005). Cruce and Moore (2007) found

that non-traditional age students were significantly more likely to volunteer during their first year of college than traditional-aged students. This is congruent with another study which found that among different age groups, those between ages 35-44 were most likely to volunteer (31.3%), while people in their early twenties were the least likely to volunteer (18.6%) (Bureau of Labor Statistics, 2008); however, the Bureau of Labor Statistics study did not differentiate between college students and others. Older college students might have already established patterns of community work that they continue even while attending college. They also might have well developed time management skills because they are already juggling different aspects of their lives while trying to go to school. Cruce and Moore's study only looked at first-year students, so the question of whether non-traditional age college students are more likely to participate in college community service than their traditional age peers is in need of further study.

Socioeconomic Status

According to previous research, a connection exists between socioeconomic status (SES) and college community service participation. Socioeconomic status for college students is measured in many ways but two of the most common are parents' income and parents' education. Marks and Jones (2004) found that students with higher socioeconomic status (measured with a composite variable that included parents' income, parents' education, and household effects) were more likely to participate in college community service. Similarly, Cruce and Moore (2007) found that students who had at least one parent with a bachelor's degree or a parent with some college education were more likely to volunteer than students whose parents earned a high school diploma or less.

Socioeconomic status has a relationship with high school community service participation as well. Students from high SES households were more likely to volunteer in high school than students from low and middle socioeconomic households (Planty & Regnier, 2003). When these same students were surveyed eight years later, high SES individuals were still more likely to volunteer than low and middle SES individuals (Planty & Regnier). Marks and Jones also discovered that college students whose parents said that they were very involved in their neighborhoods or who encouraged their kids to participate in scouts or other youth groups when they were young also were more likely to participate in community service. In general, college students who come from affluent families have greater opportunities to become involved in community activities when they are younger (Oesterle et al., 2004; Scales & Roehlkepartain, 2004; Wilson, 2000). The community service participation of students from high SES backgrounds puts them at an advantage in terms of likelihood to continue community service participation in college. Even if a direct relationship does not exist between socioeconomic status and college community service participation, it is likely that an indirect relationship exists with other activities like participation in high school community service, youth groups, or scouts.

The relationship between socioeconomic status and volunteering is complex and multi-faceted. Oesterle et al. (2004) suggested that people of higher social status were more likely to be invited to volunteer in community organizations because of their greater civic skills. People of higher socioeconomic status may also be more invested in helping their community because they have a greater stake and do not feel disenfranchised as some people of lower socioeconomic status do. Wilson (2000) also postulated that people

of greater occupational status are more likely to volunteer, but cautioned that “the net effect of income on volunteering varies by how income is measured, how volunteering is measured, and which other variables are included in the model” (p. 222). The relationship between privilege, status, and volunteering is not as easy to track with college students who often do not possess much of their own wealth. The influence is often more about the privilege and social status of their family than personal income.

Interestingly, college students who named “to make more money” as an important reason to attend college were less likely to participate in college community service (Astin et al., 2000). Although this is not synonymous with socioeconomic status, it represents the value that a student places on socioeconomic status and its relationship with college community service participation. Several reasons could be behind this relationship. Students who are interested in earning a lot of money might be working very hard at their studies and not have time for community service participation. They also might feel that community service participation is not worthwhile because it is an activity where one does not receive payment for services. Also, students who value materialism might not see the benefit to themselves in connecting with their own communities and giving back. Socioeconomic status has complicated implications for community service participation in college.

Required or Voluntary High School Service

As discussed earlier in the chapter, much research exists to support the claim that high school community service has a strong influence on college community service participation (e.g., Astin & Sax, 1998; Astin et al., 2000; Hart et al., 2007; Sax et al., 1996). This appears to be undisputed in all previous research. However, this predictor is

tempered by whether students participated in high school community service as the result of a requirement or not (Bonnet, 2008; Marks & Jones, 2004). Some evidence suggests that students who were required to do community service in high school were less likely to continue to serve in college than those who participated in community service without a requirement (Bonnet; Marks & Jones). Required and voluntary community service are of particular interest in this study as no conclusive evidence exists regarding how the presence of a requirement mediates the influence of high school community service on college community service.

Academic Characteristics

Educational capital is the accumulation of knowledge and skills that students gather throughout their education (Callan & Finney, 2002) such as reading and writing ability. Several studies have looked at the relationship between different forms of educational capital and college community service participation. Cruce and Moore (2007) used ACT composite scores to measure students' educational capital and discovered that students who began college with higher ACT composite scores were more likely to participate in community service during their first year of college. No studies have looked at high school grades as a predictor of college community service participation, but this is an area in need of further study. Studies have looked at college grades to examine their relationship with college community service participation. Serow and Dreyden (1990) found that higher college grades were a predictor of college community service participation. The inverse relationship also existed in that participation in community service had an association with a higher college GPA (Vogelgesang & Astin, 2000). Students with high GPAs are often involved with honors or scholars programs that build

community service into the curriculum. National Honor Society programs also often require students to complete community service as a condition for membership. This is one explanation for why a correlation exists between GPA and college community service participation.

Additionally, students who aspire to graduate degrees are also more likely to participate in community service than students who do not have the inclination to pursue graduate work (Marks & Jones, 2004). This finding could be connected to the previous discussion about socioeconomic status and community service participation. Students who come from affluent families probably have more exposure to and are more likely to pursue graduate work. The link between high socioeconomic status and community service participation was presented in the previous section. Therefore, indirectly, this is further evidence of a relationship between coming from a family with high socioeconomic status and community service participation in college. The connection between socioeconomic status and community service participation further complicates the ability of academic characteristics, like GPA, to predict community service participation. Prior research has shown that some evidence of a relationship between different measures of educational capital and college community service participation does exist, but further research is needed to see which measures are reliable predictors of college community service participation.

Several other academically-related predictors are associated with college community service participation. Academic major, tutoring another student, and being a guest in a teacher's home all had positive predictive relationships with college community service participation (Astin & Sax, 1998; Cruce & Moore, 2007). Students

who major in education had the greatest odds of participating in college community service (Cruce & Moore). Other academic majors with an increased likelihood of community service participation were biological sciences and social sciences majors, professional occupations and business majors, and engineering and physical sciences majors. Arts and humanities majors and undecided majors were the least likely to participate in college community service (Cruce & Moore). Regarding tutoring and spending time in a teacher's home, it is possible that tutoring another peer helps to develop other-oriented attitudes that encourage other community service participation. Also, students who have developed relationships with teachers outside of the classroom might feel more engaged with the college community and more likely to participate in community service.

Class Standing

A student's class standing designates how many years the student has been enrolled in college (i.e., first year, sophomore, junior, senior). Although not much research on this variable as a predictor of college community service participation exists, one study on predictors of service leadership at a single institution did find that a higher class standing had a positive relationship with participation in college service leadership (Arnold & Welch, 2007). Community service leadership is not entirely congruent with community service participation, but the positive results provide a rationale for exploring the relationship between class standing and college community service participation. The influence of high school community service participation could have an impact on the decision of first year students to participate in college community service, since school-based community service is very prevalent at the secondary level. On the other end of the

spectrum, seniors might be ready to graduate and move on to the next phase of their lives and no longer interested in community service. These statements make logical sense, but no research is available to support them. Therefore, the relationship between class standing and college community service participation is in need of further study.

Enrollment Status

Enrollment status is an important factor to consider in relationship with college community service participation especially with greater numbers of students attending school part-time (The Chronicle of Higher Education, 2008). Cruce and Moore (2007) examined enrollment status as a predictor of college community service participation and found that students who were enrolled part-time were less likely to participate in community service than students who were enrolled full-time. Students who are enrolled part-time most likely have other commitments to work or family which might make additional time commitments of community service participation difficult. The finding regarding part-time students challenges the research that demonstrated non-traditional age students were more likely to participate in college community service than traditional age students (Cruce & Moore). This is contradictory because part-time students are more likely to be non-traditional age than full-time students (The Chronicle of Higher Education, 2008). More research needs to be done to clarify this discrepancy.

Political Views

Research on the relationships between college community service participation and political views is limited and in need of future study. The Civic and Political Health of the Nation Survey (Lopez et al., 2006) found that young people ages 18 to 25 who report that they have volunteered in the last year are more likely to identify with a

political party than youth who did not volunteer. Secondly, among those who volunteered, 50% identified as Democrat, 34% identified as Republican, and 16% identified as Independents. Arnold and Welch (2007) found no connection between political affiliation and leadership in student service organizations. The connection between political affiliation and college community service participation is difficult to discern and could be predicated on how students define community service. Kahne and Westheimer (1999) offered an explanation for how community service and service-learning are conceptualized in the political domain. They demonstrated that some people believe community service should focus on philanthropy and charity while others are focused on an agenda of social change. These discrepancies could relate to how students conceptualize and define community service and volunteer work.

Institutional Characteristics

When looking at student-level predictors of college community service participation, it is important to also examine institutional characteristics so that a student's decision to participate is not confused with the environmental influence of attending a given college (Vogelgesang & Astin, 2000).

Public, Private, Religious, Secular

Previous research found that students who attend religiously affiliated colleges and universities versus secular institutions are more likely to participate in college community service (Cruce & Moore, 2007; Serow & Dreyden, 1990). Religiously affiliated colleges often build community service into the very threads of their institution infusing both the curriculum and the co-curriculum with community service opportunities and tying into the mission of the institution. Kuh and Umbach (2004) found that

religiously affiliated colleges contributed to character development in general, including the desire to contribute to one's community, more than secular institutions. The seamless integration that religious institutions have between community service and the rest of the institution tends to increase their rates of community service participation (Cruce & Moore; Serow & Dreyden).

Whether an institution is public or private is another institutional characteristic that may impact the type and variety of community service opportunities that are available for students. This variable is also related to religious affiliation because all religiously affiliated colleges are private, but not all private colleges are religiously affiliated. Some private institutions are considered secular and are not affiliated with any particular religion or faith. Kuh and Umbach (2004) looked at private institutions and the relationship with character development. They found that students at private institutions had higher levels of character development and civic responsibility than students at public institutions. Several studies have controlled for whether an institution is public or private when predicting college community service participation (Cruce & Moore, 2007; Serow & Dreyden, 1990; Vogelgesang & Astin, 2000). Students who attend private secular and private religious institutions are more likely to participate in community service than students who attend public institutions (Cruce & Moore).

Other Institutional Characteristics

In other studies of community service participation, researchers controlled for the type, size, selectivity, and geographic location of an institution in order to account for the influence of the institution on the students' likelihood of participation in community service (Astin & Sax, 1998; Cruce & Moore, 2007; Vogelgesang & Astin, 2000).

Institutional type is most often determined by the Carnegie classification system. The Carnegie system of classification is based on what is taught at the institution, which students primarily attend that institution, and the setting of the institution (Carnegie Foundation, n.d.). Astin and Sax controlled for type, size, and setting in their hierarchical regression of community service participation but the findings for these variables were not included in the presentation of results. Cruce and Moore looked at the size and geographic location of an institution in order to determine the relationship with first-year community service participation. They found that students at smaller institutions were more likely to participate in community service than students at larger institutions. Also, students who attended institutions in large urban areas were less likely to participate in community service than students who attended institutions in mid-sized cities, large towns, and rural areas. Smaller institutions and institutions in small towns and rural areas could facilitate easier opportunities for students to participate in community service than their counterparts in large institutions and urban areas. It is important to control for these differences in institutional type and characteristics when examining student level predictors of college community service participation.

College Involvement and Community Service Participation

Political/Advocacy Involvement

Student involvement in political and advocacy work is not always considered community service participation. Some define community service as charity or philanthropy and others insist that it includes promoting an agenda of social change, which is more closely aligned with political/advocacy work (Kahne & Westheimer, 1999). Although both philosophies of community service participation have the end goal

of helping the community, the methods and how the work is undertaken are very different. In a study of the impact of community service participation on college students, Astin and Sax (1998) included political and advocacy work in their definition of service participation and found that 5.6% of community service activities in which college students participated were through a political organization. Therefore, students who belonged to political/advocacy groups were also defining that participation as community service. However, it was unclear how many students in the study participated in political and advocacy work but did not include that as a community service activity. Furthermore, participation in a community action program was one of the leading predictors of community service participation for college students (Astin & Sax; Vogelgesang & Astin, 2000). Again, the definitions are murky and it is unclear how participation in a community action program differs from community service participation or involvement with a political organization. Studies in this area would benefit from clearer definitions and delineations between these types of activities. One gap in the research includes how frequently college students are participating in political and advocacy work and whether that participation predicts college community service participation.

Religious Involvement

Several studies demonstrated a relationship between religious involvement and college community service participation (Astin & Sax, 1998; Astin et al., 2000; Fitch, 1991; Lopez, Pratap, & Conner, 2007; Marks & Jones, 2004; Serow & Dreyden, 1990). Since churches and other types of religious institutions typically provide outlets for community service involvement and encourage their members to get involved, a student who is involved with his or her religious community has more opportunities to participate

in community service than a student who is not religiously involved. This is similar to the opportunities that are available to a student at a religiously affiliated institution. Most secular institutions have student groups based on religion so students can gather with other students of the same faith and participate in activities including community outreach. Students who consider themselves more religious or who participate in religious activities are more likely to participate in community service in college (Astin & Sax; Astin et al.; Fitch; Lopez et al.; Marks & Jones; Serow & Dreyden). In addition, one of the predictors mentioned previously could also be related to religious involvement. Students who do not consider amassing personal wealth an important goal (an important tenet of many religious faiths) are more likely to participate in college community service (Astin & Sax; Vogelgesang & Astin).

Involvement in Fraternities or Sororities

Involvement with a fraternity or sorority has a strong relationship with college community service participation (Cruce & Moore, 2007; Marks & Jones, 2004; Serow & Dreyden, 1990). Cruce and Moore found that first year college students who were fraternity or sorority members were 179% more likely to participate in community service than their non-Greek peers. Greek students are often required to participate in community service or philanthropy as a condition of membership and serve together as a group activity (Hayek, Carini, O'Day, & Kuh, 2002). Some have argued that the community participation that Greek students are encouraged to do centers on charity and philanthropy and might not have the same influence on students or the community as direct service in the community (Scheuermann, 1996). Charity and philanthropy work runs the risk of creating a greater divide between the college students and the people to

whom they are providing a service by encouraging service imposed on the community as opposed to a collaborative view of service with the community (Nieto, 2000). Some community service participation is typically a requirement of being in a fraternity or sorority, and students who become members of Greek organizations are very likely to receive exposure to this type of community service participation.

Involvement in Living/Learning Community

One previous study found that participation in a living/learning community in college was a strong predictor of community service participation during the first-year (Cruce & Moore, 2007). With all else being equal, students who were members of a living/learning community were 183% more likely to participate in community service than their non-member peers. This finding is very similar to the relationship between Greek organizations and service. Overall, living/learning communities often provide opportunities for students to serve as a group, and some living/learning communities have a specific focus on civic engagement and participation in the community as the theme that ties the community together. Rowan-Kenyon, Soldner, and Inkelas (2007) found that students who participated in general living/learning communities had lower means on civic engagement than those students in living/learning communities focused on civic engagement, but higher means than those students who did not participate in any form of living/learning community.

General Involvement in College

Findings indicate that students' general involvement in college (i.e., a student's overall membership in college organizations or groups) also has a relationship with community service participation. However, the evidence regarding general involvement

is not as overwhelming as that regarding the relationship between involvement in specific campus groups (e.g., Greek organizations, religious groups) and college community service. One study based on a single institution found that involvement in campus groups was a predictor of student service leadership (Arnold & Welch, 2007). Involvement in the campus community can indicate engagement, and engaged students are more likely to increase their academic and personal development (Kuh, 2003), both goals of a college education. Investigating further the relationship between general involvement and community service participation could illuminate strategies for helping students meet those goals.

Involvement can also take place outside the boundaries of the college campus. For example, participation in a community action program is one of the strongest predictors of community service participation (Astin & Sax, 1998; Vogelgesang & Astin, 2000). Community action programs are often located off campus in local communities and students must make an effort to locate these opportunities. No research currently exists on general off campus involvement and its ability to predict community service participation, but Weidman's (1989) theory of socialization for college students indicates that what happens off campus should not be ignored as a part of the whole college experience and as a possible influence on college community service participation.

Number of Hours Worked

Previous research found that students who worked fewer hours were more likely to participate in community service in college (Fitch, 1991; Marks & Jones, 2004). However, Cruce and Moore (2007) uncovered a seemingly contradictory finding in that students who worked at moderate levels were actually more likely to participate in

community service during their first year of college. Rago and Moore (2004) hypothesized that students who work part time develop time management skills and are better able to incorporate community service activities into their busy schedules. If a student is working full time and going to school, it is unlikely that she or he will be able to also participate in community service. However, if a student is working a moderate number of hours per week and going to school, that student may be able to manage community service participation, school work, and additional employment.

Living on Campus

Existing studies show that living on campus is a positive predictor of community service participation (Cruce & Moore, 2007; Fitch, 1991). Living on campus provides better access for students to participate in on-campus community service opportunities, and most likely increases the sense of community that they feel with their fellow students and their surroundings. However, only a small percentage of college students nationally (15%) actually live in campus housing (The Chronicle of Higher Education, 2008). Since this number is low and continues to decrease, build a sense of community among students is important even if they do not live in campus housing, so that they will continue their engagement in community service on campus. Although research indicated that place of residence has a relationship with college community service participation, this is an area in need of further study.

Diversity Related Activities

Several studies supported the influence of college community service participation on outcomes related to diversity (i.e., Eyler & Giles, 1999; Jones & Hill, 2001; Root, Callahan, & Sepanski, 2002). Jones and Hill conducted a study showing that

students come to a more complex understanding of diversity through service-learning experiences. Eyler and Giles' comprehensive study included diversity related findings such as service-learning students developed a more positive view of the community members with whom they worked during the semester as well as a growing appreciation for other cultures. Participating in service-learning was a predictor of tolerance and acceptance of other cultures (Eyler & Giles). Astin and Sax's (1998) national study also demonstrated that community service participation increased one's ability to gain knowledge of and get along with people of different races and cultures. Root et al. conducted a study with preservice teachers at several institutions who participated in service-learning in their teacher education courses. These preservice teachers showed gains in their beliefs in the importance of teachers' ability to bring about social change and their acceptance of diversity. The evidence clearly points to a relationship between participating in community service and increasing an appreciation for diversity.

It is unclear whether students who discuss issues of diversity, including multiculturalism, politics, religion, and lifestyles, with their peers will also be more likely to participate in community service in college. No previous studies examined how frequently students discuss issues of multiculturalism and diversity with peers as a predictor of college community service participation. Logic would suggest that students who are interested in discussing political and social issues might have a greater propensity to participate in community service than their peers. This deduction, however, is in need of supporting empirical evidence.

Socially Responsible Leadership

One of the most well known college student leadership models is the social change model of leadership (SCM) (Kezar, Carducci, & Contreras-McGavin, 2006). The SCM focuses on students' capacities to use leadership to create social change (Astin, 1996). Several key assumptions framing the SCM are that leadership is collaborative, process-based, change-oriented, and open to all students (HERI, 1996). The social change model of leadership is a non-hierarchical approach to leadership made up of eight constructs including consciousness of self, congruence, commitment, collaboration, common purpose, controversy with civility, citizenship, and change (HERI). The first seven constructs work together to produce the eighth, change. The capacity to create change develops through mastering the other seven elements of the model (HERI).

Tyree (1998) developed a scale that assesses each of the eight constructs of the social change model of leadership. This scale is known as the Socially Responsible Leadership scale and measures socially responsible leadership capacity. The scale allows students to rate their own abilities along each of the eight constructs (Dugan 2006a). Social responsibility was also recently named an important core college outcome (AAC&U, 2007; Astin & Astin, 2000; NASPA & ACPA, 2004). Using the Socially Responsible Leadership scale as a way to measure self-rated leadership capacity for college students is consistent with the literature on intended outcomes for college students (AAC&U; Kezar et al., 2006; NASPA & ACPA).

Previous studies found a connection between leadership and community service participation. Self-rated leadership ability is one of the most significant predictors of college community service participation (Astin & Sax, 1998; Sax et al., 1996;

Vogelgesang & Astin, 2000). Astin and Sax (1998) discovered that students who ranked themselves highly in terms of leadership ability were much more likely to participate in community service in college. An inverse relationship also exists in that community service participation is associated with growth in leadership ability (Astin, Keup, & Lindholm, 2002; Astin & Sax; Berger & Milem, 2002; Dugan, 2006a; Dugan & Komives, 2007; Eyler & Giles, 1999; Vogelgesang & Astin). Since Astin and Sax (1998) found that leadership ability was a predictor of community service participation, they controlled for it in their study of outcomes related to community service participation. Even after controlling for differences in leadership ability at the onset of their study, community service participation led to significant growth in students' self-rated leadership ability (Astin & Sax).

Summary

Participation in community service is a widespread activity for college students. Many college students are continuing a pattern of participation begun in high school, where school-based community service is even more prevalent. The evidence of positive outcomes related to community service participation for college students is significant (e.g., Astin & Sax, 1998; Eyler & Giles, 1999); however, research on the predictors of community service participation is less abundant (Cruce & Moore, 2007). Efforts to increase participation in community service in college are informed by looking at previous research and determining who is currently serving and what types of interventions can be designed to increase participation for students who are not currently involved in community service. Previous research demonstrated the influence of gender, high school community service participation, religious involvement, Greek involvement,

and self-rated leadership ability on community service participation in college. This chapter provided background context for college and high school community service as well as a discussion of previous research on the predictors of college community service participation. The next chapter outlines the methods used to examine the predictors of college community service participation.

CHAPTER 3: METHODS

This chapter describes the research methods used in this study to examine the predictors of community service participation for college students. The chapter begins with a review of the purpose of the study. A description of the research design including the national data set used follows. The next section outlines the research questions and hypotheses. The specifics of data collection such as sampling techniques and the instrument are then explained. The chapter concludes with a detailed description of the statistical procedures utilized to answer the research questions and test the hypotheses.

Purpose of Study

The purpose of this study was to determine the predictors of college community service participation. Using an adapted version of Astin's (1991) input-environment-output model as a conceptual framework, this study examined demographic characteristics, high school experiences, pre-tests, college student characteristics, institutional characteristics, involvement during college, and scores on the Socially Responsible Leadership scale as possible predictors of college community service participation.

This study adds to the limited research on the predictors of community service participation for college students. Many studies have looked at the positive outcomes associated with community service participation for college students (e.g., Astin & Sax, 1998; Eyler & Giles, 1999; Vogelgesang & Astin, 2000), but little research exists that addresses what makes a college student more likely to participate in college community service (Cruce & Moore, 2007). In previous studies about college community service participation, community service has typically been used as a predictor variable to show

relationships with positive outcomes like cognitive and civic development, but in this study college community service participation was the outcome variable in order to determine the characteristics of students who participate.

Research Design

The following section outlines the research design used for this study on predictors of college community service participation. The research design includes the conceptual framework, background, sample, data collection, and instrumentation.

Conceptual Framework

The conceptual framework for this study on predictors of community service participation was an adapted version of Astin's (1991, 1993) input-environment-outcome (I-E-O) college impact model. Astin's college impact model is based on the idea that students arrive at college not as blank slates, but with their own personal backgrounds and characteristics that influence the way that they experience college. Astin's I-E-O model gives the researcher the ability to "assess the impact of various environmental experiences by determining whether students grow or change differently under varying environmental conditions" (Astin, 1991, p. 7) while still valuing precollege experiences.

Astin's (1991, 1993) input-environment-outcome model (I-E-O) emerged from the college impact literature and focuses on the relationships between a delineated outcome and participating in certain environments while in college. College impact theories assume that students will be involved in different environments while attending college and that participation in these environments will have some influence on their experience. What the I-E-O model does differently from other college impact theories is it allows the researcher to account for input differences in order to get a less biased

estimate of the comparative influences of different environments on outputs (Astin, 1991). This adapted I-E-O model was an effective way to quantitatively measure the ability of different variables to predict college community service participation.

Inputs

The first segment of Astin's (1991, 1993) I-E-O model is inputs. Inputs refer to characteristics of students at the time they enter a college or university (Astin, 1993). Inputs include demographic characteristics, high school experiences, and pre-test scores. In the absence of a true pre-test, students can be asked about their predictions or expectations at the beginning of college and these self-expectations or predictions carry significant predictive weight over time (Astin, 1977). Inputs are included in the model because there is always a possibility that any observed correlation between an environment and outcome will reflect the influence of an input characteristic such as gender or high school grades rather than only the influence of the environmental variable (Astin, 1993). Using input characteristics in a conceptual model also allows the researcher to show growth or change over a period of time (Astin, 1993).

Environments

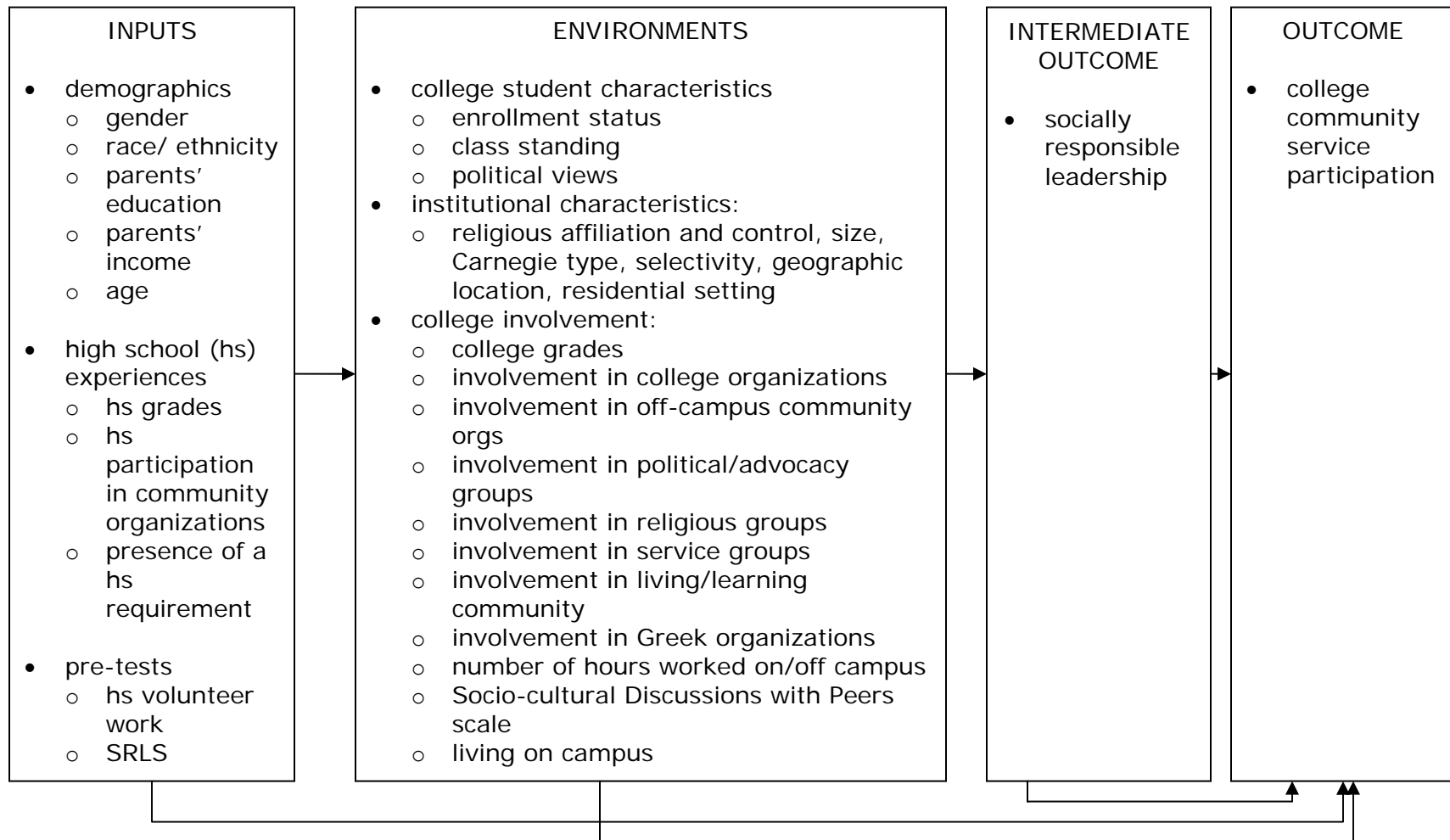
Environmental assessment is the most difficult aspect of the model to consider because the environment encompasses everything with which the student comes in contact during his or her college career (Astin, 1991). Environmental characteristics include two types of measures including institutional characteristics like size and religious affiliation and particular educational experiences like living in a residence hall or being a member of a student organization. A traditional I-E-O model only includes environmental experiences that take place on campus, but other college impact models

(e.g., Weidman's (1989) undergraduate socialization model) include experiences that take place during college outside of the confines of the campus. Environmental influences provide the best opportunity for determining how a particular educational experience influences student development (Astin, 1991).

Outcomes

The outcomes section of the I-E-O model is often the most important to educators and researchers (Astin, 1991). "Student outcomes refer to those aspects of the student's development that the institution either does influence or attempts to influence through its educational programs and practices" (Astin, 1991, p. 38). Outcomes refer to a student's performance on an outcome measure at a particular point in time and do not imply any causal factors that may account for that performance (Astin). In this study the conceptual outcome was college community service participation. This outcome and its measurement are discussed later in this chapter. Figure 3.1 provides a representative diagram of the conceptualization of the I-E-O model for this study.

Figure 3.1. Framework for conceptualizing predictors of community service participation for college students.



Adaptations to the I-E-O Model for this Study

For this study on predictors of college community service participation, I made three adaptations to a traditional I-E-O model. The first adaptation of Astin's I-E-O model was a concept borrowed from Weidman's (1989) model of undergraduate socialization. Weidman included environmental influences outside of the college campus (e.g., employers, community organizations) in his model. He acknowledged that students do not go to college in a vacuum and that students are influenced by experiences that they undertake outside of the college campus. This is particularly relevant for the 85% of students who do not live in campus housing (The Chronicle of Higher Education, 2008). I included variables in this model that account for some of the experiences that students have off campus that could influence their decision to participate in college community service such as off campus involvement in community organizations and working off campus.

The second adaptation was a response to a critique of college impact research, of which Astin's I-E-O (1991, 1993) model is part. College impact research typically looks at students at the macro or sociological level, ignores the micro, psychological level, and does not generally acknowledge that students at varying levels of development will respond differently to campus environmental influences (Stage, 1989). Several researchers have started to incorporate both college impact research and student development research. For example, Inkelas (2003) used the personal beliefs and racial/ethnic identity of students as an intermediate outcome that predicted racial attitudes concerning affirmative action. Similarly, in this study on college community service participation, I used students' scores on the Socially Responsible Leadership scale as an

intermediate outcome that was tested for its efficacy in predicting college community service participation. Intermediate outcomes are measures that are influenced by college environments, but also have a relationship with the outcome variable (Astin, 1993). In this study, I added the intermediate outcome to account for students' differences in capacity on the construct of socially responsible leadership and to examine how this influenced the likelihood of students participating in community service in college.

The final adaptation was the use of a cross-sectional design. Students answered retrospective questions about their pre-college experiences in quasi-pre-tests instead of using a time-elapsd pre-test and post-test (Dugan & Komives, 2007). Although this is a different method of capturing data than a traditional I-E-O model, other researchers have found that the single point of collection method is also an accurate way of measuring change, and it reduces the amount of response shift bias (Howard, 1980; Howard & Dailey, 1979; Rohs, 1999, 2002; Rohs & Langone, 1997).

Background for Study

This study used the national data set from the 2006 Multi-Institutional Study of Leadership (MSL). Given that this study was a secondary analysis, it is important to note the context in which the MSL researchers collected the data in order to provide an informed perspective on both the benefits and limitations of using this data set. A team of researchers designed the MSL to explore how college students develop leadership capacities and to learn more about college student leadership in general (Dugan & Komives, 2007).

The MSL employed a causal comparative design (Dugan & Komives, 2007). Causal comparative research determines the causes for or consequences of existing

differences between groups of individuals (Krathwol, 1998). It is also referred to as ex post facto or retrospective research. A causal-comparative study is not an experimental study because the cause and effect have already occurred and now the researcher is trying to draw conclusions about what caused the effect (Krathwol). The MSL data set was an appropriate choice for this study on college community service participation because it is a large, representative national data set of college students and the instrument includes questions about whether participants had a high school community service requirement, how frequently they volunteered in high school, and whether they participate in community service in college.

The team of researchers drew two separate samples for the MSL study. The first was the selection of participating institutions and the second was the selection of a student sample from within those institutions. The researchers chose a purposeful sample composed of 55 schools based on their Carnegie type, geographic location, and varied degrees of use of the social change model of leadership (Dugan, Komives, & Segar, 2006). The sample represents the diversity of colleges and universities that exist in the United States, especially with regards to leadership programs. Two schools withdrew from the study prior to data collection, and another school was not included in the final data set due to the failure to comply with data collection protocol, so the final data set for the Multi-Institutional Study of Leadership consisted of 52 schools.

For the student sample, the MSL researchers used a standardized sampling process across all institutions in order to ensure a reliable data set. Schools with a total enrollment of over 4,000 students provided a simple random sample from the total undergraduate population. In order to generate an initial number for the simple random

sample, a 95% confidence level and a +3 margin of error were used. The decision to oversample was made to ensure the 30% response rate that is typically acceptable for Internet survey research (Couper, 2000; Crawford, Couper, & Lamais, 2001). Therefore, the original sampling number was increased by 70% to identify the total number of cases (Dugan & Komives, 2007). Institutions with a total enrollment of less than 4,000 students surveyed the entire population. The total sample size was 155,716 participants of which 56,854 respondents submitted usable surveys. The return rate of 37% exceeded the standard rate considered acceptable for web based survey research (Couper; Crawford et al.).

The instrument for the MSL consists of demographic questions, several preexisting scales from national studies, as well as new scales and questions designed by the 19-person MSL research team at the University of Maryland. The entire instrument is included in Appendix A. The MSL research team designed the instrument using Astin's (1991, 1993) input-environment-outcome model as a framework with questions regarding the students' demographic and background characteristics, environmental influences, and outcome measures. A large portion of the MSL instrument consists of the revised version of the Socially Responsible Leadership scale (SRLS-R2) designed as a measure for the social change model of leadership development (SCM) (Dugan, 2006b).

Research Questions

This study examined the predictors of community service participation for college students. The following research questions provided the foundation for the analysis.

RQ1: How are college students who participate in community service different from college students who do not participate in community service?

RQ2: Using (a) background characteristics (gender, race/ ethnicity, socioeconomic status, age), (b) high school experiences, (c) pre-tests, (d) college student characteristics, (e) institutional characteristics, (f) college involvement experiences, and (g) scores on the SRLS-R2, what is the likelihood of predicting college community service participation?

RQ3: Which variables significantly predict community service participation in college? Which variables are the strongest predictors? Which variables are weaker predictors?

Hypotheses

Hypothesis 1: College students who participate in community service will be significantly different from college students who do not participate in community service on the following variables: (a) background characteristics (gender, race/ ethnicity, socioeconomic status, age), (b) high school experiences, (c) pre-tests, (d) college student characteristics, (e) institutional characteristics, (f) college involvement experiences, and (g) scores on the SRLS-R2.

I chose the predictor variables for this study based on prior research and literature on college community service participation. Chi-square analyses and *t* tests determined if significant differences existed between college students who participate in community service and those who do not participate.

Hypothesis 2: The proposed set of independent variables will significantly increase the odds of predicting college community service participation.

Secondly, I entered the same variables into a blocked entry logistic regression model according to an adapted version of Astin's (1991) input-environment-outcome

model and therefore tested the relationship between environmental influences and community service participation while still accounting for the input variables. It is hypothesized that this model of variables will significantly increase the percentage of cases correctly classified regarding participation in college community service.

Hypothesis 3: Individual predictor variables in this model will have a significant relationship with the outcome variable, college community service participation.

After reviewing the literature on this topic, variables emerged that previous research showed had a predictive relationship with college community service participation (e.g., high school community service participation, socially responsible leadership capacity, religious involvement, gender) (Astin & Sax, 1998; Cruce & Moore, 2007; Marks & Jones, 2004; Vogelgesang & Astin 2000). I included these variables in the predictive model in this study and expect similar results. The sub-hypotheses below stem from that previous literature. The contribution that this particular study makes to the literature is that the combination of variables included has not previously been tested for its ability to predict college community service participation.

Hypothesis 3a. Gender will be a strong predictor of college community service participation.

In previous studies, gender was a strong predictor of community service participation in college (Astin & Sax, 1998; Astin et al., 2000; Cruce & Moore, 2007; Fitch, 1991; Marks & Jones, 2004; Vogelgesang & Astin, 2000). Cruce and Moore found that being female doubled the likelihood of serving during college as a first-year student. It is proposed that the findings from this study will mirror findings from previous studies on gender as a predictor of college community service participation.

Hypothesis 3b. Students who had a high school community service requirement will be less likely to participate in community service in college.

Previous studies indicated that voluntary high school community service was a stronger predictor of future community service than required high school community service (Marks & Jones, 2004), although this is an underresearched topic and an area of interest for this study. Jones et al. (2008) also looked at this topic with a qualitative sample of students who graduated from Maryland public high schools with a 75 hour service-learning requirement. Participants stated that the required community service had little to no impact on their decisions to volunteer in college. What made the most difference for the Maryland high school graduates was whether they had found an organization or a cause that was important to them. Another study on the influence of high school community service on volunteering at age 26 found that neither required community service nor voluntary community service were significant predictors of future volunteering. However, for that particular sample of students, voluntary community service was a stronger positive predictor than required community service (Hart et al., 2007).

Hypothesis 3c. The frequency of high school community service involvement will have a significant positive relationship with college community service participation.

Participation in high school community service was the most important predisposing factor in whether a student continued community service in college (Astin & Sax, 1998, Vogelgesang & Astin, 2000). This finding is not surprising when considering that past behavior is the best predictor of future behavior (Ouellette & Wood, 1998; Triandis, 1977). A study examining predictors of college community service

participation must include previous participation in community service in order to assess the importance of this input characteristic.

Hypothesis 3d. Students' involvement in college, particularly in religious groups, service groups, or Greek organizations, will be a significant predictor of college community service participation.

Previous studies indicated that student involvement in college, particularly in organizations that encourage or require community service, was a predictor of college community service (Marks & Jones, 2004; Serow & Dreyden, 1990). Cruce and Moore (2007) suggested that college organizations that encourage or require community service connect the spirit of service with a powerful peer influence and that is why they are such strong predictors. Specific studies have shown that fraternity or sorority membership was a strong predictor of college community service participation (Cruce & Moore). Attending religious services was also a strong predictor of college community service participation (Astin & Sax, 1998). Involvement in college organizations as a whole, both on and off campus, as well as specific involvement in Greek organizations, service groups, religious groups, living/learning communities and political and advocacy groups will all be tested for their ability to predict college community service participation.

Hypothesis 3e. Students' scores on the SRLS-R2 will be a strong predictor of college community service participation.

Self-rated leadership ability was a strong predictor of college community service participation (Astin, 1993; Astin & Sax, 1998; Vogelgesang & Astin, 2000), and students' scores on the SRLS-R2 are a measurement of self-rated leadership ability. The SRLS-R2 allows students to rate their own abilities on eight different skills related to

leadership for social change. Previous studies also found an inverse correlation between leadership and community service in that college community service participation had a significant positive relationship with growth in leadership ability (Astin & Sax; Dugan & Komives, 2007; Eyler & Giles, 1999; Vogelgesang & Astin). Previous research demonstrated a strong correlation between leadership ability and community service participation and further evidence will be provided from this study to support this relationship.

Sample

The following section provides a detailed look at the sample on all of the variables included in the model. In the overall sample, females (61.9%, $n = 29,257$) were slightly overrepresented compared to males (38.1%, $n = 17,973$) in accordance with the national gender profile of 56.6% female (Chronicle of Higher Education, 2008). The 27.7% of respondents who identified as students of color ($n = 13,071$) is similar to the national profile of 27.9% and 27.8% “minority” students reported at public and private 4-year institutions respectively in the Chronicle Almanac. The majority of students in the sample were under 25 years old (90.6%), while 9.4% were 25 years or older.

When examining high school community service requirements, 33.1% of the respondents had a high school community service requirement, and 66.9% did not. Full-time students represented 94.8% of the sample while part-time students represented 5.2%. The national profile looks markedly different with 61.7% of students attending full-time (Chronicle of Higher Education, 2008). Students who live on campus were overrepresented in this study (48.4%), while, nationally, only 15% live on campus (Chronicle of Higher Education). Class standing was evenly distributed across all four

years with 22.7% freshmen/ first-year ($n = 10,735$), 21.4% sophomores ($n = 10,113$), 26.6% juniors ($n = 12,572$), and 29.2% seniors ($n = 13,810$).

The respondents in the sample attended 49 different colleges and universities. A complete list of institutions is included in Appendix B. Students who attended public institutions composed 56.9% of the sample. Students who attended private secular institutions made up 24.4%, and students who attended private religious institutions made up 18.7% of the sample. The majority of the students attended research institutions (67.0%); 23.0% attended masters granting institutions; and 10.1% attended baccalaureate institutions. Institutional size was measured by total undergraduate enrollment, and 50.7% of the respondents attended schools identified as large (10,001 or more), 37.0% attended schools identified as medium (3,001 – 10,000), and 12.3% attended schools identified as small (under 3,000). Selectivity of the institution was also considered with the majority of students (63.9%) attending very competitive and highly competitive schools. Most students attended schools that are in urban (40.0%) or suburban (41.3%) areas instead of rural (3.1%) or small town (15.6%) areas.

Finally the respondents were pretty evenly split with regards to residential setting, an institutional variable that describes the percentage of students who live on campus at a particular institution (Carnegie Foundation, n.d.). Thirty-two percent attended primarily non-residential institutions, 28.6% attended primarily residential institutions, and 39.4% attended highly residential institutions. Table 3.1 breaks down the sample by a number of characteristics.

Table 3.1

Characteristics of Students in the Sample (N = 47,230)

Student Characteristics	%	n
Gender		
Female	61.9	29257
Male	38.1	17973
Race		
White	72.3	34159
African American/Black	5.2	2445
Asian American	7.7	3653
Latino/a	4.2	2006
Multiracial	8.1	3806
Race not included	2.5	1161
Parents' education		
High school diploma, GED, or less	13.8	6523
Some college or Associates degree	20.9	9851
Bachelor's degree or higher	64.2	30337
Don't know	1.1	519
Parents' income		
Less than \$12,500	4.2	1981
\$12,500 - \$24,999	5.5	2585
\$25,000 - \$39,999	7.3	3455
\$40,000 - \$54,999	8.4	3978
\$55,000 - \$74,999	11.8	5590
\$75,000 - \$99,999	12.8	6049
\$100,000 - \$149,999	14.5	6834
\$150,000 - \$199,999	6.5	3072
\$200,000 and over	8.0	3769
Don't know	13.3	6277
Rather not say	7.7	3640
Age		
Less than 25	90.6	42782
25 and older	9.4	4448
High School Grades		
A+ or A	38.5	18162
A- or B+	37.1	17531
B	15.7	7412
B- or C+	6.0	2811
C or lower	2.8	1314
HS Participation in Community Orgs		
Never	23.1	10910
Sometimes	30.9	14598
Often	21.1	9943
Very Often	24.9	11779

Table 3.1 continued

Student Characteristics	%	<i>n</i>
HS Volunteer Work		
Never	9.0	4242
Sometimes	45.0	21258
Often	27.8	13116
Very Often	18.2	8614
HS Service Requirement		
Yes	33.1	15627
No	66.9	31603
Enrollment status		
Full time	94.8	44777
Less than full time	5.2	2453
Class standing		
Freshman	22.7	10735
Sophomore	21.4	10113
Junior	26.6	12572
Senior	29.2	13810
Political views		
Far left	3.6	1710
Liberal	33.0	15569
Middle of the road	37.5	17733
Conservative	24.5	11580
Far right	1.4	638
Private/Public/Religious/Secular		
Private Religious	18.7	8815
Private Secular	24.4	11528
Public	56.9	26887
Carnegie Type of Institution		
Research Extensive	49.0	23135
Research Intensive	18.0	8482
Masters	23.0	10841
Bachelors	10.1	4772
Institutional Size		
Small	12.3	5792
Medium	37.0	17486
Large	50.7	23952
Institutional Selectivity		
Less competitive	8.8	4169
Competitive	22.2	10508
Very competitive	31.1	14685
Highly competitive	32.8	15513
Most competitive	5.0	2355

Table 3.1 continued

Student Characteristics	%	<i>n</i>
Geographic Location of Institution		
Rural	3.1	1456
Small town	15.6	7363
Suburban	41.3	19518
Urban	40.0	18893
Residential setting		
Primarily non residential	32.0	15098
Primarily residential	28.6	13528
Highly residential	39.4	18604
College grades		
3.50-4.00	35.8	16906
3.00-3.49	37.7	17802
2.50-2.99	20.2	9540
2.00-2.49	5.3	2490
1.99 or less	1.0	492
Involvement in college organizations		
1 Never	21.5	10154
2	13.3	6263
3	30.0	14147
4	18.0	8505
5 Much of the time	17.3	8161
Involvement in off campus orgs		
1 Never	56.2	26560
2	10.0	4726
3	17.5	8286
4	8.7	4112
5 Much of the time	7.5	3546
Political/advocacy groups		
Yes	13.4	40917
No	86.6	6313
Religious groups		
Yes	20.0	37768
No	80.0	9462
Greek organizations		
Yes	17.4	38993
No	82.6	8237
Service groups		
Yes	12.6	41263
No	87.4	5967
Living on campus		
Yes	48.4	22874
No	51.6	24356

Table 3.1 continued

Student Characteristics	%	<i>n</i>
Living/learning community		
Yes	9.4	42802
No	90.6	4428

Table 3.2 provides means and standard deviations from the continuous variables entered as predictors in the model. The SRLS pre-test average and SRLS post-test average only differ by 0.10. Additionally, a difference is clear between the average number of hours students spent working on campus (3.2) versus off campus (7.6).

Table 3.2

Characteristics of Students in the Sample - Continuous variables (N = 47,230)

Student Characteristics	M	SD
Pre-test SRLS	3.9	0.5
Number of hours worked on campus	3.2	7.0
Number of hours worked off campus	7.6	12.5
Socio-cultural Discussions with Peers scale	2.7	0.8
Posttest SRLS	4.0	0.4

Data Preparation

The following section describes how I manipulated the MSL sample in order to fit the research design of this study on college community service participation. Details on the sample for this specific study and the changes made are included. Since the outcome variable for this study was college community service participation, I examined the sample for missing cases on this variable. Only one missing case emerged on the variable of college community service participation. I removed this case from the sample.

I also reduced the original set of data by eliminating cases in which respondents did not complete at least 90% of the SRLS-R2 segment of the MSL survey. Since the SRLS-R2 was used as an intermediate outcome in this study, it was important to ensure

that all respondents had completed the majority of the scale. I removed a total of 6,476 cases bringing the number of responses to 50,377. I analyzed the removed cases and found that they did not differ significantly from the total group of respondents on basic demographic variables or on the outcome variable of college community service participation.

Additionally, I removed the two associate colleges from the MSL data set for this study because of the low response rate associated with those two institutions and the small numbers that the respondents from those institutions represented in the data set. Combining or removing categories is recommended when categorical predictors have limited cases in each category to eliminate the possibility of problems with the logistic regression analysis (Pallant, 2007). Participants from two-year colleges represented less than 2.0% (974 cases) of the overall sample.

I designed this study on predictors of college community service participation to look at undergraduate college community service participation; therefore, it was important to only include students who identified themselves as first year/freshmen students, sophomores, juniors, or seniors. Students who designated themselves as “other” were removed from the sample. This entailed removing 1.2% of the sample (590 cases). Including only students who considered themselves first year students, sophomores, juniors, or seniors at a four-year college allows for comparisons with other similar studies.

The cases from one institution, Gallaudet University, did not fit into the categories of the institutional selectivity variable. Barron’s selectivity rating (*Barron’s Profiles of American Colleges*, 2007) was used in this study to note the selectivity of an institution

and the categories were less competitive, competitive, very competitive, highly competitive, and most competitive. Gallaudet University has a “special” selectivity distinction because it is a school specifically charged with serving deaf students; and therefore the traditional selectivity categories do not fit this institution. This institution was the only one of 50 schools in the sample to have a “special” selectivity rating according to Barron’s rating system. Because these cases composed less than 1% of the overall sample, I categorized them as missing. Any missing cases were removed pairwise prior to the logistic regression analysis because the analysis does not run with missing cases on any variable. This removed 402 (0.8%) cases from the model and brought the number of institutions included in the sample to 49.

I examined the other variables in the model for missing cases. A descriptive analysis determined how many missing cases existed for each variable. If more than 1% of the cases were missing on a particular variable, an additional analysis would be needed to determine if the cases were missing at random (Tabachnick & Fidell, 2007). However, all of the remaining variables had less than 1% of the responses missing. Therefore, after deleting the missing cases from each variable, the final number of cases in the sample for the study of predictors of college community service participation was 47,230. Table 3.3 provides a breakdown of the sample by the dependent variable, college community service participation.

Table 3.3

Numbers and Percentages of Students who Participate in College Community Service

College Community Service Participation	<i>n</i>	%
Yes	25,059	53.1
No	22,171	46.9

Variables and Measures

The following section details the independent and dependent variables for this predictive model of college community service participation. I modified several of the variables in order to eliminate potential problems with the analysis. These adjustments and their justifications are outlined in the following section.

Input Variables

Gender

Gender was in the predictive model as a dichotomous variable. The referent category was male and those respondents were coded as 0. Females were coded as 1.

Race/Ethnicity

Participants provided their racial or ethnic background on the MSL instrument. The choices were: White/Caucasian, African American/Black, American Indian/Alaska Native, Asian American/Asian, Native Hawaiian/Pacific Islander, Mexican American/Chicano, Puerto Rican, Cuban American, Other Latino/a American, Multiracial or multiethnic, and Race/ethnicity not included above. Due to the high number of response options, several categories had low numbers of responses (i.e., less than 1%). Combining categories is recommended when categorical predictors have limited cases in each category to eliminate the possibility of problems with the logistic regression analysis (Pallant, 2007). I combined Mexican American/Chicano, Puerto Rican, Cuban American, and other Latino American into one Latino/a variable. I also combined American Indian/Alaska Native and Native Hawaiian/Pacific Islander with the “race/ethnicity not included above” responses. I made this decision instead of entering

their race/ethnicity as missing so that these cases would continue to be included in the sample.

Parents' Education

The MSL instrument asked participants to select the highest level of formal education obtained by any of their parent(s) or guardian(s). The choices were: less than high school diploma or GED, high school diploma or GED, some college, Associates degree, Bachelors degree, Masters degree, Doctorate or professional degree (e.g., JD, MD, PhD), and don't know. Several of the categories had a low rate of responses due to the high number of response options. Combining the categories resulted in four new categories: parent with a high school diploma or less, at least one parent with some college, at least one parent with a Bachelors degree, and don't know. I combined these items to increase the number of responses in each category. As previously stated, combining categories is recommended when categorical predictors have limited cases in each category to prevent problems with the analysis (Pallant, 2007). Cruce and Moore (2007) used these same response choices in a similar study and parents' education was a significant predictor of college community service participation.

Parents' Income

Eleven categories composed the parents' income variable. The referent category was less than \$12,500. The remaining categories were: \$12,500 - \$24,999, \$25,000 - \$39,999, \$40,000 - \$54,999, \$55,000 - \$74,999, \$75,000 - \$99,999, \$100,000 - \$149,999, \$150,000 - \$199,999, \$200,000 and over, rather not say, and don't know.

Age

Participants directly entered their age instead of given a range of ages. Since students' class standing was also a predictor variable, the question of interest for age was whether students considered non-traditional by age were more likely to participate in community service in college than their traditionally aged counterparts as found in a previous study (Cruce & Moore, 2007). Therefore, I modified the age variable to become a dichotomous variable that measured either non-traditional age (i.e., 25 years or older), or traditional age (i.e., less than 25). Other studies on college students have used 25 as a cut off for non-traditional age college students (Pascarella & Terenzini, 2005).

High School Grades

The MSL instrument asked respondents to provide their average grades in high school. The response choices were: A+ or A, A- or B+, B, B- or C+, C, C- or D+, D or lower. Most students responded between an A+ or A average and a C+ average. Only 2.6% of the sample responded that they had a C, C- or D+, or D or lower average. Therefore, the last three categories were combined into one category entitled C or lower. I combined the responses because categories with very low numbers can cause problems with a logistic regression analysis (Pallant, 2007).

High School Community Service Requirement

The presence of a high school community service requirement was a dichotomous variable. Not having a high school community service requirement was the referent category and was coded as 0. Having a high school community service requirement was coded as 1.

High School Volunteer Work and Community Organization Participation

Both frequency of high school participation in community organizations and high school volunteer work were measured on a scale of 1 to 4 with 1 being Never and 4 being Very Often. These two variables were entered as continuous variables since they were measured on a scale. I entered high school volunteer work in the pre-test block instead of the background experiences block because past behavior is the best predictor of future behavior (Ouellette & Wood, 1998; Triandis, 1977). Since the outcome in this study is college community service participation, the best pre-test of college community service participation is whether students participated in community service in high school, and frequency of high school volunteer work is the closest match for this concept.

Socially Responsible Leadership Scale Pre-test

The model included the pre-test for the Socially Responsible Leadership scale since the Socially Responsible Leadership Scale post-test was the intermediate outcome. Each of the eight constructs of the social change model of leadership had a quasi-pretest consisting of one question for each. The scores on these eight questions were summed together and averaged to create an omnibus score for the quasi-pretest for socially responsible leadership. The omnibus measure for the SRLS quasi-pretest was tested and shown to be an accurate measure (Kroop, 2007). The Cronbach alpha for the scale is .71. Although this is somewhat low, values above .7 are generally acceptable (Pallant, 2007).

Environmental Variables

Enrollment Status

Enrollment status in college was a dichotomous variable. Attending college full-time was the referent category and was coded as 0. Attending college less than full-time was coded as 1.

Class Standing

Class standing was a categorical variable with four categories. Being a first year/freshmen student was the referent category. Sophomores, Juniors, and Seniors rounded out the other three categories.

Political Views

This variable was categorical and had five categories. The referent category was far left and the other categories were liberal, middle of the road, conservative, and far right.

Institutional Variables

All 6 of the institutional variables were categorical variables. For the public/private/religious variable, public was the referent category, and private secular and private religious were the other two categories. For size, the referent category was small (under 3,000 students) and the other categories were medium (3,001 – 10,000 students), and large (more than 10,000 students). I used the Carnegie classifications for institutional type (Carnegie Foundation, n.d.). The referent category was Research Extensive, and the other categories were: Research Intensive, Master's granting institutions, and Bachelor's granting institutions. Using the selectivity rating from *Barron's Profiles of American Colleges* (2007), less competitive was the referent category and the other categories were

competitive, very competitive, highly competitive, and most competitive. For geographic location, rural was the referent category. Small town, suburban, and urban made up the other categories. Finally, residential setting was the sixth institutional variable. The Carnegie Foundation uses residential setting in their classification system (Carnegie Foundation, n.d.). The first category, the referent category, was primarily non-residential meaning that less than 25% of the students live on campus. The other categories were primarily residential (25-49% live on campus), and highly residential (at least half of the students live on campus).

College Grades

Respondents provided the best estimate of their grades so far in college. The response options were 3.50 - 4.00, 3.00 – 3.49, 2.50 – 2.99, 2.00 – 2.49, 1.99 or less, and no college GPA. The percentage of respondents who indicated that they had no college GPA was less than 1.0%. Therefore, these cases were coded as missing and they were removed from the sample as detailed in the sampling section. Again, this category was removed because categorical predictors with very small numbers in any of the categories can cause problems with a logistic regression analysis (Pallant, 2007).

General Involvement Variables

Both on campus and off campus involvement were measured on a scale of 1 to 5 with 1 being never and 5 being much of the time. These two variables were entered as continuous variables since they were measured on a scale.

Specific Involvement Variables

Involvement in political/advocacy groups, involvement in service groups, involvement in religious groups, and involvement in living/learning communities were all

included in the model as dichotomous variables. Not being a member of the group or organization was the referent category and coded as 0. Membership in the group or organization was coded as 1.

Involvement in Greek Organizations

On the MSL instrument, participants responded to two separate questions about whether they were members of cultural fraternities and sororities or social fraternities and sororities. Other studies that have looked at Greek membership as a predictor of college community service have only looked at it as a single variable (e.g., Cruce & Moore, 2007; Marks & Jones, 2004; Serow & Dreyden, 1990). A previous study using MSL data found that participants did not choose between cultural and social Greek organizations and often responded that they were involved in both even though they were only a member of one Greek organization (Shalka, 2008). Therefore, in order to avoid problems with interpretation, I combined these two variables to create one dichotomous variable entitled involvement in Greek organizations. Not being a member of a Greek organization was the referent category and coded as 0. Membership in a Greek organization was coded as 1.

Living on Campus

Participants had six options when asked where they were currently living while attending college. The response options were: parent/guardian or other relative home; other private home, apartment, or room; college/university residence hall; other campus student housing; fraternity or sorority house; and other. Previous studies have looked at living on campus as a predictor of college community service participation (Cruce & Moore, 2007; Fitch, 1991). This study also attempted to examine the relationship

between living on campus and college community service participation. Therefore, I condensed the six answer options into a dichotomous variable entitled living on campus. Living on campus included college/university residence hall, other campus student housing, and fraternity or sorority house. Living off campus included parent/guardian or other relative home, other private home, apartment, or room, and other. Not living on campus was the referent category and coded as 0. Living on campus was coded as 1. The variable mentioned above, residential setting, is an institutional characteristic, but living on campus is a student characteristic.

Socio-cultural Discussions with Peers Scale

The Socio-cultural Discussions with Peers scale measures a student's self-reported frequency of discussing topics with peers about values, social issues, religious beliefs, multiculturalism, and political opinions. This scale was developed and used for the National Study of Living Learning Programs (Inkelas, Vogt, Longerbeam, Owen, & Johnson, 2006). Six items make up the scale including:

1. Talked about different lifestyles/customs.
2. Discussed major social issues such as peace, human rights, and justice.
3. Discussed your views about multiculturalism and diversity.

Each question asks students to rate from 1 to 4, with 1 being Never and 4 being Very Often, how frequently they engage in the specific activities. The Cronbach alpha for the scale was .90. An omnibus measure of the socio-cultural discussions with peers scale was used as a variable in the model to predict college community service participation to determine if involvement in socio-cultural conversations had a relationship with participation in community service.

Intermediate Outcome: Socially Responsible Leadership Scale

Tyree (1998) originally designed the Socially Responsible Leadership scale to measure the eight different constructs of the social change model of leadership: congruence, consciousness of self, commitment, common purpose, controversy with civility, collaboration, citizenship, and change. Dugan (2006b) created a revised version of this scale (SRLS-R2) consisting of 68 questions. Each construct is measured with a separate subscale consisting of 6 to 11 questions. Example items are:

1. I participate in activities that contribute to the common good.
2. I believe I have responsibilities to my community.
3. My contributions are recognized by others in the groups I belong to.

Each question asks students to rate from 1 to 5, with 1 being strongly disagree and 5 being strongly agree, how closely these statements represent their opinions. For this study, I summed the 8 subscales of the SRLS-R2 and averaged them to create an omnibus measure for the post-test of socially responsible leadership. I used the omnibus measure instead of each subscale because the overall construct of socially responsible leadership was examined for its relationship with college community service participation, rather than each of the eight constructs. I also used the mean instead of the sum of the omnibus measure to ease the interpretation of the findings. Describing students' scores between 1 and 5 is easier to understand than describing them between 68 and 340. The omnibus measure for the SRLS posttest was tested and shown to be an accurate measure (Kroop, 2007). The Cronbach alpha for the SRLS-R2 scale was .93. Table 3.4 displays the Cronbach alphas for the scales used in this study.

Table 3.4

Reliability Levels for Scales in Various Formats

Scales	MSL	NSLLP	This Study
SRLS Pre-test	---	---	.71
Discussed socio-cultural issues with peers	.90	.86	.90
SRLS-R2 Post-test	.96	---	.93

Outcome: College Community Service Participation

The dependent, or outcome, variable was college community service participation. This was a dichotomous variable and was coded as either “yes” or “no” in response to the following question: “In an average academic term, do you engage in any community service?” The “yes” responses were coded as 1, and the “no” responses were coded as 0.

Analytic Plan

Preliminary Analyses

Preliminary analyses, specifically chi-square analyses and *t* tests, answered the first research question. The sample was split into students who participate in college community service and those who do not. I then tested the split sample for significant differences on all of the variables in the predictive model. Chi-squares analyses tested differences in the categorical variables and *t* tests tested mean differences in the continuous variables (Pallant, 2007). Effect sizes also determined the strength of the relationship between the variables in question and college community service participation. Tabachnick and Fidell (2007) warn that reporting results without effect sizes puts the researcher at risk of reporting trivial results as though they were extremely important.

Additional descriptive analyses shed light on the sample in terms of type and frequency of college community service participation. College community service participation was a broad construct made up of four different types of service as well as different frequencies of community service participation. The four different types of service included on the MSL instrument were service on your own, service with a class, service with a student organization, and service with federal work-study. The frequency with which each respondent participated in each of the four types of community service each term was also solicited and the choices were: 0 hours, 1-5 hours, 6-10 hours, 11-15 hours, 16-20 hours, 21-25 hours, and 26-30 hours. Although the main analysis did not involve type and frequency of community service, descriptive analyses of the type and frequency of community service provided context for the results of the model to predict general college community service participation.

Logistic Regression

In order to answer the second and third research questions for this study, I used a logistic regression analysis. The following sections describe the process through which the proposed data analyses addressed the research questions.

Logistic regression allows the researcher to determine the predictability of a certain outcome (Pampel, 2000). In this case, the outcome was college community service participation. A logistic regression model relates one or more continuous or categorical predictor variables to a dichotomous dependent variable, and yields regression coefficients, predicted values, and residuals (Wright, 1995). In logistic regression, unlike linear regression, the relationship is assumed to be nonlinear. Only two choices are available for the dependent variable, 0 and 1 (i.e., no community service

participation or community service participation), so the graph of a logistic regression analysis can never go above 1 or below zero and therefore most closely resembles an S-shaped curve (Wright).

In order to test a logistic regression model, three different types of questions have to be asked (Menard, 1995). First, does the model form appear to be correct? Are all of the assumptions satisfied? Second, is the relationship between all of the independent variables and the dependent variable above and beyond what might be expected as a coincidence or by chance? How strong is the relationship? Third, how important is each of the independent variables to the overall model and how much does each independent variable contribute to the predictability of the dependent variable? Which variables are stronger or weaker? How this study addressed all of these questions is detailed in the next sections.

Assumptions

Several assumptions must be met in order to conduct a logistic regression analysis. First, the dependent variable has to be a dichotomous variable where value 1 equals probability P_1 and value 0 has the probability $P_0 = 1 - P_1$. This assumption was met because the dependent variable, college community service participation in this study, was constructed as a dichotomous variable. Also, the outcomes have to be independent, meaning that a single case can only be represented once in the data set (Wright, 1995). This assumption was also met by this study as each student was only represented once in the data set. Third, the model has to be correctly specified. This assumption means that all relevant predictors have to be included and all irrelevant predictors must be left out of the model. This assumption is difficult to meet in practice (Wright), but all efforts were

made to ensure that this assumption was met as completely as possible. In particular, prior research on predictors of college community service participation was used to determine the variables that were employed in this model. Fourth, the dependent variable categories have to be mutually exclusive and collectively exhaustive (Wright). Each case can only be in one category at a time, and each case has to be in at least one category (Wright). Finally, large samples are necessary for a logistic regression analysis because standard errors for maximum likelihood coefficients are designed for large sample estimates. Maximum likelihood estimates are estimates of model parameters that are most likely to give rise to the pattern of observations in the sample data (Pampel, 2000). They are an integral part of the logistic regression analysis. Therefore, a minimum of 50 cases per variable is recommended (Aldrich & Nelson, 1984). In this study over 600 cases per variable exist, so this assumption was met and exceeded.

Describing the Findings and Equations for Logistic Regression

Four results are important to understand in interpreting a logistic regression analysis: probability, odds, logged odds, and odds ratios. Probabilities vary between 0 and 1, and express the likelihood of an event as a ratio of both occurrences and nonoccurrences (Pampel, 2000). For example, if the probability of a student participating in service is .50, that student has 1 chance of the event occurring and 1 chance of it not occurring, so the ratio is 1/1 or 1. A probability of .50 means that a student has equal chances of participating in community service or not participating in community service. An odds value can range from 0 to infinity and explains how much more likely it is that an observation is a member of one group (i.e., community service participators) versus another group (i.e., non- participators). The odds are calculated by taking the probability

(P_1) and dividing by 1 minus the probability ($1 - P_1$). Logged odds are calculated by taking the natural log of the odds. Logged odds are useful because they eliminate the lower limit of 0 (Pampel). As logged odds, odds that were below 1 but above 0 become negative numbers. Finally, an odds ratio estimates the change in the odds of membership in the target group for a one-unit increase in the predictor variable (Wright, 1995). Odds ratios are bounded by 0 but do not have an upper limit. Using the variable of gender as an example, an odds ratio of 1.0 indicates that the predictor variable has no influence on the odds of an event occurring. Both males and females have an equal likelihood of participating in community service. For gender, an odds ratios that was greater than 1 would indicate that the odds of community service participation for females (coded as $x = 1$) are greater than the odds of community service participation for males (coded as $x = 0$). The opposite would be true for odds ratios that are less than 1.

Collinearity Testing

In a logistic regression, collinearity, a problem that arises when independent variables are highly correlated, can lead to standard errors that are too high. Prior to the logistic regression analysis, collinearity testing ensured that the variables were not too highly correlated to produce substantive results. Some of the variables in this model do provide cause for concern regarding collinearity such as the involvement variables, community service participation variables, and institutional variables. Students who responded by saying that they were involved in college organizations were also most likely to be involved in fraternities and sororities and religious groups. Collinearity testing was undertaken in the same way that it is done for a linear regression in that I ran Pearson product moment correlations between each of the pairs of variables. Correlations

were checked to ensure that they were not higher than .70 (Tabachnick & Fidell, 2007). As a secondary check, I analyzed the tolerance and variance inflation factors (VIF). Tolerance values of less than .1 indicate a collinearity problem (Menard, 1995), and VIF values larger than 10 are also cause for concern (Field, 2005). Variables with high levels of collinearity can cause coefficients to show up as not statistically significant even if they are quite large (Menard). All variables were tested for collinearity and then if collinearity did present a problem, variables were reexamined for their overall contribution to the model.

Testing for Outliers

I examined the outliers in the model to ensure that no cases had an undue influence on the model. Two residual measures determined the influence of the cases on the model. First, I checked the standardized residuals to ensure that no more than 5% of cases had absolute values above 2 (Field, 2005). Second, I examined Cook's distance for any values above 1. Values above 1 indicate that a case is disproportionately influencing the model (Field).

Steps in a Logistic Regression Analysis

Statistically, several steps are necessary to run a logistic regression. The steps are detailed in the equations below, and the terms are defined in Table 3.5. First, the constant (b_0) and the product of the regression coefficients (b) and the predictors (X) are added together to form the quantity Z (Equation 1). In this equation, Z represents the logit, or the log odds of a certain event occurring. To calculate the odds ratio of the event occurring, the natural logarithmic base e is raised to the Z th power (Equation 2). In order

to figure out the probability of college community service participation, Z is put into Equation 3.

$$b_0 + b_1(X_1) + b_2(X_2) + \dots + b_k(X_k) = Z \quad (1)$$

$$e^Z \quad (2)$$

$$P(Y) = e^Z / (1 + e^Z) \quad (3)$$

Table 3.5

Definitions of Terms in a Logistic Regression Analysis

Term	Definition
P(Y)	Probability of Y occurring
E	Base of the natural logarithms (≈ 2.718)
B_0	Constant
$b_1 \dots b_k$	Logistic regression coefficients (attached to that predictor)
$X_1 \dots X_k$	Predictor variables

Testing the Predictive Model

Hypothesis 2 called for the predictive model as a whole to be tested for its ability to predict the likelihood of college community service participation. In this logistic regression analysis, I entered the variables in blocks, in accordance with Astin’s I-E-O model, from most distal to most proximal. The inputs were entered in the first three blocks, environments were entered in the next three blocks, and an intermediate outcome was entered in the last block. A multivariable blocked entry logistic regression allowed the proportion of error variance explained to be measured as each block was entered so it was possible to see how each block contributed to the overall predictability of the model. Table 3.6 indicates the order in which the blocks of variables were entered.

Table 3.6

<i>Order of Blocks for Logistic Regression Analysis</i>	
Block #	Variable Name
<i>Block 1 Demographics</i>	Gender Race/ Ethnicity Parents' Education Parents' Income Age
<i>Block 2 High School Experiences</i>	High school grades Participation in community organizations High school requirement
<i>Block 3 Pre-tests</i>	Quasi-pretest for Socially Responsible Leadership scale (omnibus score) High school volunteer work
<i>Block 4 College student characteristics</i>	Class standing Enrollment status Political views
<i>Block 5 Institutional characteristics</i>	Public/Private/Religious Size Carnegie type Selectivity Geographic location Residential setting
<i>Block 6 College involvement experiences</i>	College grades Involvement in college organizations Involvement in off-campus organizations Involvement in political/ advocacy groups Involvement in religious groups Involvement in service groups Involvement in living/learning community Involvement in fraternities or sororities Number of hours worked on campus Number of hours worked off campus Involvement in socio-cultural conversations with peers Living on campus

Table 3.6 continued

Block #	Variable Name
<i>Block 7 Intermediate outcome</i>	Post-test for Socially Responsible Leadership scale (omnibus score)

In order to test whether the overall model can predict the outcome above and beyond what might be expected by chance, several different characteristics of the model are important. Determining model fit for a logistic regression is done differently than for a linear regression. A linear regression uses the least squares criterion to select parameter estimates (Wright, 1995). A logistic regression, on the other hand, uses the maximum likelihood criterion to select parameter estimates (Wright). A maximum likelihood estimate maximizes the probability of a certain event occurring. In order to avoid multiplying probabilities and dealing with exceedingly small numbers, the likelihood function is turned into a log likelihood function (Pampel, 2000). The log likelihood is generally negative, and the deviance (calculated by multiplying the log likelihood by -2) is typically positive. The deviance represents the likelihood of producing the observed data with the estimated parameters for the independent variables and corresponds to the error sum of squares in linear regression (Pampel). The improvement in the log likelihood from the baseline model (i.e., assuming all the b coefficients equal zero) to after all the variables in the model are added will represent a good model fit. The smaller the deviance becomes, the better the model fit.

Another common goodness of fit test is Hosmer and Lemeshow's (H-L) test that divides participants into deciles based on predicted probabilities and then computes a chi-square from observed and expected frequencies (O'Connell, 2006). From the chi-square distribution, a probability (p) value is computed with 8 degrees of freedom to test the fit

of the logistic model. If the H-L goodness-of-fit test statistic is greater than .05, which is desirable for well-fitting models, the researcher fails to reject the null hypothesis that there is no difference between observed and model-predicted values. This implies that the model's estimates fit the data at an acceptable level. One problem with the H-L test for large samples is that as the sample size gets large, the H-L statistic can find smaller and smaller differences between observed and model-predicted values to be significant. The H-L test also works better with continuous variables, and so might not be a good indicator of fit for this model (O'Connell).

In a linear regression, the R^2 statistic provides the variance explained. In logistic regression, R^2 is not exactly the same, but becomes a pseudo- R^2 , and is a “proportional reduction in χ^2 or a proportional reduction in the absolute value of the log-likelihood measure. It indicates by how much the inclusion of the independent variables in the model reduces the badness-of-fit D_0 chi-square statistic” (Menard, 1995, p. 22). The deviance, explained above, can be used to calculate the pseudo- R^2 statistics. The equation to determine Hosmer and Lemeshow's pseudo- R^2 is listed below.

$$R^2 = [(-2 \ln L 1) - (-2 \ln L 0)] / (-2 \ln L 0) \quad (4)$$

The deviance is represented by the mathematical term $(-2 \ln L 0)$.

Two other tests of pseudo- R^2 , with slight variations from Hosmer and Lemeshow's pseudo- R^2 , are included in the SPSS output data and were used for this study. These are Cox and Snell pseudo- R^2 and Nagelkerke pseudo- R^2 . These were also analyzed as goodness of fit measures, but several researchers have found the Hosmer and Lemeshow pseudo- R^2 equation shown above to be the most useful of the available measures (Menard, 1995; O'Connell, 2006).

The predictive efficiency of the model can be measured by classification tables (Menard, 1995). The columns in a classification table represent the two predicted values of the dependent, while the rows are the two observed (actual) values of the dependent. The increase in the percentage of cases correctly classified as shown by the classification tables from the baseline model to the model after all the variables were included was a useful measure of the overall predictability of the model.

Testing the Predictive Power of Each Variable

Hypothesis 3 and sub-hypotheses 3a through 3e required testing of individual variables for their ability to predict college community service participation. Logistic regression can be used to predict a dependent variable using both continuous and categorical independent variables. A logistic regression provides similar outcomes to a linear regression in that it is possible to rank the relative significance of the independent variables. The predictive power of independent variables is explained in terms of odds ratios (i.e., the likelihood of a certain event occurring), not an actual change in the dependent variable. The following equations represent both ways to write the equation for a logistic regression analysis using both logged odds and regression coefficients.

$$Z = \ln(\text{odds}(\text{event})) = \ln(\text{prob}(\text{event})/\text{prob}(\text{nonevent})) \quad (5)$$

$$Z = b_0 + b_1X_1 + b_2X_2 + \dots + b_kX_k \quad (6)$$

Both equations produce the same result and measure the predictability of a dependent variable using a model of independent variables.

The influence of each of the individual independent variables on the dependent variable was measured by using the parameter estimates, odds ratios, and the Wald statistic. The parameter estimates (b coefficients) explain whether the variable has a

positive or negative relationship with the dependent variable. The odds ratio for a given independent variable represents the factor by which the odds of the event occurring change for a one-unit change in the independent variable. The Wald statistic is the squared ratio of the unstandardized logistic coefficient to its standard error. The Wald statistic also has a corresponding p value which explains whether the independent variable has a significant relationship with the dependent variable or not. If independent variables are not significant by the Wald statistic, they are most likely not contributing to the overall fit of the model (Menard, 1995). I analyzed the predictors of college community service participation by looking at all three measures of variable effect to see which had the strongest relationship with the dependent variable.

Summary

This chapter provided a detailed overview of the research design utilized for this study on the predictors of college community service participation, including a review of the purpose of the study, research design, research questions, hypotheses, data collection, and data analysis techniques. Preliminary analyses and logistic regression analysis were explained in detail and why they were appropriate choices for these specific research questions and hypotheses. The next chapter will provide the results of this study.

CHAPTER 4: RESULTS

This chapter presents the results of the descriptive analyses and logistic regression analysis that explored the relationship between a set of predictor variables and college community service participation. The results presented in this chapter are organized into three sections. The first section provides the results from descriptive analyses of the sample including a more in depth view of the students who participated in college community service with regards to all of the variables in the predictive model as well as type and frequency of community service. The next section addresses the second research question and includes an explanation of the testing for collinearity and outliers performed on the sample before running the logistic regression analysis. The presentation of findings from the overall model are included in this section. The third section attends to research question 3 and provides the findings related to the predictive ability of each of the independent variables.

Preliminary Analyses of the Sample: Research Question 1

The main purpose of this study was to examine predictors of college community service participation; however, preliminary analyses assisted in providing context and information about who participates in college community service. The first research question asked how college students who participate in community service are different from college students who do not participate in community service and whether those differences are significant. In order to answer the question, the sample was separated into students who participate in college community service and those who do not. Then, chi-square analyses and *t* tests were conducted to look for significant differences between the groups on the variables in the predictive model. Some information was also available

about the type and frequency of college community service performed by the respondents who completed the instrument. This information provided a context for the study and demonstrated the construction of the dependent variable.

Results for Hypothesis 1

The first hypothesis suggested that college students who participate in community service would be significantly different from college students who do not on all of the variables in the predictive model. The results from these analyses are presented in Table 4.1 and support this hypothesis on all but one variable.

Chi-square analyses were conducted on all of the categorical variables and college community service participation. Significant differences ($p < .001$) in the groups existed on all variables with the exception of presence of a high school community service requirement ($p = .044$). However, the differences between the two groups on this variable would also be considered significant using a less conservative p -value (e.g., $p < .05$). The results from these chi-square analyses indicated that the students who participate in college community service were significantly different from those who do not on almost all of the variables in the predictive model.

Even though almost all of the variables indicated a significant difference between the groups on the variable of interest, college community service participation, the effect size for most of the results was very small. The effect size is a measure of the strength of the relationship between two variables (Tabachnick & Fidell, 2007). Phi coefficients measured effect size for the 2 x 2 chi-square analyses and Cramer's V values measured effect size for variables that had more than two categories (Pallant, 2007). Cohen (1988) suggested using the following criteria for effect size: (.10 = small effect, .30 = medium

effect, .50 = large effect). Using these criteria, involvement in a living/learning community, living on campus, involvement in a political/advocacy group, college grades, attending a public, private, or religious institution, high school grades, and involvement in a religious group all had a small effect size. Involvement in high school community organizations, frequency of high school volunteer work, involvement in off campus organizations, involvement in Greek organizations, and involvement in service groups all had a small to medium effect size. One variable, involvement in college organizations, measured a greater than medium effect size.

Table 4.1

Descriptive Analysis of Students who do/do not Participate in College Community

Service – Chi-Square Tests

Student Characteristics	Yes – Service		No – Service		Sig	Phi/ Cramer's V
	%	<i>n</i>	%	<i>n</i>		
Gender $\chi^2(1, N = 47,230) = 287.3$					***	0.078 (P)
Female	65.5	16416	57.9	12841		
Male	34.5	8643	42.1	9330		
Race $\chi^2(5, N = 47,230) = 75.4$					***	0.040 (C)
White	73.6	18454	70.8	15705		
African American/Black	5.3	1319	5.1	1126		
Asian American	6.9	1729	8.7	1924		
Latino/a	4.0	998	4.5	1008		
Multiracial	7.8	1954	8.4	1852		
Race not included	2.4	605	2.5	556		
Parents' education $\chi^2(3, N = 47,230) = 212.2$					***	0.067 (C)
High school diploma, GED, or less	12.6	3146	15.2	3377		
Some college or Associates degree	19.5	4895	22.4	4956		
Bachelor's degree or higher	67.1	16813	61.0	13524		
Don't know	0.8	205	1.4	314		

** $p < .01$, *** $p < .001$

(P) = Phi coefficient (.10 = small effect, .30 = medium effect, .50 = large effect)

(C) = Cramer's V (.10 = small effect, .30 = medium effect, .50 = large effect)

Table 4.1 continued

Student Characteristics	Yes – Service		No – Service		Sig	Phi/ Cramer's V
	%	n	%	n		
Parents' income $\chi^2(10, N = 47230) = 167.1$					***	0.059 (C)
Less than \$12,500	4.0	1013	4.4	968		
\$12,500 - \$24,999	4.9	1220	6.2	1365		
\$25,000 - \$39,999	6.8	1693	7.9	1762		
\$40,000 - \$54,999	8.2	2051	8.7	1927		
\$60,000 - \$74,999	11.8	2962	11.9	2628		
\$75,000 - \$99,999	12.9	3225	12.7	2824		
\$100,000 - \$149,999	15.0	3769	13.8	3065		
\$150,000 - \$199,999	7.1	1774	5.9	1298		
\$200,000 and over	8.9	2223	7.0	1546		
Don't know	12.8	3208	13.8	3069		
Rather not say	7.7	1921	7.8	1719		
Age $\chi^2(1, N = 47230) = 203.6$					***	-0.066 (P)
Less than 25	92.4	23151	88.5	19631		
25 and older	7.6	1908	11.5	2540		
High school grades $\chi^2(4, N = 47230) = 939.4$					***	0.141 (C)
A or A+	44.0	11033	32.2	7129		
A- or B+	36.1	9046	38.3	8485		
B	13.3	3341	18.4	4071		
B- or C+	4.6	1163	7.4	1648		
C or lower	1.9	476	3.8	838		
HS participation in community orgs $\chi^2(3, N = 47230) = 2915.0$					***	0.248 (C)
Never	15.1	3794	32.1	7116		
Sometimes	28.8	7218	33.3	7380		
Often	23.6	5913	18.2	4030		
Very Often	32.5	8134	16.4	3645		
HS volunteer work $\chi^2(3, N = 47230) = 3858.0$					***	0.286 (C)
Never	4.5	1121	14.1	3121		
Sometimes	37.2	9322	53.8	11936		
Often	33.4	8358	21.5	4758		
Very Often	25.0	6258	10.6	2356		
HS service requirement $\chi^2(1, N = 47230) = 4.06$						-0.009 (P)
Yes	32.7	8188	33.6	7439		
No	67.3	16871	66.4	14732		

** $p < .01$, *** $p < .001$

(P) = Phi coefficient (.10 = small effect, .30 = medium effect, .50 = large effect)

(C) = Cramer's V (.10 = small effect, .30 = medium effect, .50 = large effect)

Table 4.1 continued

Student Characteristics	Yes – Service		No – Service		Sig	Phi/ Cramer's V
	%	n	%	n		
Enrollment status $\chi^2(1, N = 47230) = 137.3$					***	-0.054 (P)
Full time	95.9	24040	93.5	20737		
Less than full time	4.1	1019	6.5	1434		
Class standing $\chi^2(3, N = 47230) = 36.8$					***	0.028 (C)
Freshman	21.8	5466	23.8	5269		
Sophomore	22.2	5571	20.5	4542		
Junior	26.7	6700	26.5	5872		
Senior	29.2	7322	29.3	6488		
Political views $\chi^2(4, N = 47230) = 220.6$					***	0.068 (C)
Far left	3.3	824	4.0	886		
Liberal	31.7	7949	34.4	7620		
Middle of the road	36.4	9110	38.9	8623		
Conservative	27.2	6814	21.5	4766		
Far right	1.4	362	1.2	276		
Private/Public/Religious/ Secular $\chi^2(2, N = 47230) = 700.9$					***	0.122 (C)
Private Religious	22.2	5572	14.6	3243		
Private Secular	26.2	6560	22.4	4968		
Public	51.6	12927	63.0	13960		
Carnegie type $\chi^2(3, N = 47230) = 129.6$					***	0.052 (C)
Research Extensive	49.6	12437	48.3	10698		
Research Intensive	16.2	4060	19.9	4422		
Masters	23.3	5840	22.6	5001		
Bachelors	10.9	2722	9.2	2050		
Size $\chi^2(2, N = 47230) = 231.1$					***	0.070 (C)
Small	13.8	3452	10.6	2340		
Medium	38.6	9662	35.3	7824		
Large	47.7	11945	54.2	12007		
Selectivity $\chi^2(4, N = 47230) = 327.1$					***	0.083 (C)
Less competitive	6.8	1713	11.1	2456		
Competitive	22.0	5501	22.6	5007		
Very competitive	31.0	7758	31.2	6927		
Highly competitive	34.8	8724	30.6	6789		
Most competitive	5.4	1363	4.5	992		

** $p < .01$, *** $p < .001$

(P) = Phi coefficient (.10 = small effect, .30 = medium effect, .50 = large effect)

(C) = Cramer's V (.10 = small effect, .30 = medium effect, .50 = large effect)

Table 4.1 continued

Student Characteristics	Yes – Service		No – Service		Sig	Phi/ Cramer's V
	%	<i>n</i>	%	<i>n</i>		
Geographic location $\chi^2(3, N = 47230) = 133.9$					** *	0.053 (C)
Rural	2.6	640	3.7	816		
Small town	16.4	4100	14.7	3263		
Suburban	42.8	10718	39.7	8800		
Urban	38.3	9601	41.9	9292		
Residential setting $\chi^2(2, N = 47230) = 345.7$					***	0.086 (C)
Primarily non residential	28.5	7152	35.8	7946		
Primarily residential	28.7	7204	28.5	6324		
Highly residential	42.7	10703	35.6	7901		
College grades $\chi^2(4, N = 47230) = 667.0$					***	0.119 (C)
3.50-4.00	40.1	10038	31.0	6868		
3.00-3.49	37.4	9378	38.0	8424		
2.50-2.99	17.9	4481	22.8	5059		
2.00-2.49	4.0	1010	6.7	1480		
1.99 or less	0.6	152	1.5	340		
Involvement in college orgs $\chi^2(4, N = 47230) = 6727.0$					***	0.377 (C)
1 Never	10.8	2714	33.6	7440		
2	9.5	2381	17.5	3882		
3	29.8	7457	30.2	6690		
4	24.2	6066	11.0	2439		
5 Much of the time	25.7	6441	7.8	1720		
Involvement in off campus orgs $\chi^2(4, N = 47230) = 3527.0$					***	0.273 (C)
1 Never	44.3	11107	69.7	15453		
2	11.4	2853	8.4	1873		
3	20.9	5241	13.7	3045		
4	12.0	3002	5.0	1110		
5 Much of the time	11.4	2856	3.1	690		
Political/advocacy groups $\chi^2(1, N = 47230) = 862.6$					***	0.135 (P)
Yes	17.7	4434	8.5	1879		
No	82.3	20625	91.5	20292		

** $p < .01$, *** $p < .001$

(P) = Phi coefficient (.10 = small effect, .30 = medium effect, .50 = large effect)

(C) = Cramer's V (.10 = small effect, .30 = medium effect, .50 = large effect)

Table 4.1 continued

Student Characteristics	Yes – Service		No – Service		Sig	Phi/ Cramer's V
	%	<i>n</i>	%	<i>n</i>		
Religious groups $\chi^2(1, N = 47230) = 1552.0$					***	0.181 (P)
Yes	26.9	6731	12.3	2731		
No	73.1	18328	87.7	19440		
Greek orgs $\chi^2(1, N = 47230) = 2263.8$					***	0.219 (P)
Yes	25.3	6329	8.6	1908		
No	74.7	18730	91.4	20263		
Service groups $\chi^2(1, N = 47230) = 3045.6$					***	0.254 (P)
Yes	20.6	5155	3.7	812		
No	79.4	19904	96.3	21359		
Living on campus $\chi^2(1, N = 47230) = 433.2$					***	0.096 (P)
Yes	52.9	13265	43.3	9609		
No	47.1	11794	56.7	12562		
Living/learning community $\chi^2(1, N = 47230) = 545.1$					***	0.108 (P)
Yes	12.3	3088	6.0	1340		
No	87.7	21971	94.0	20831		

** $p < .01$, *** $p < .001$

(P) = Phi coefficient (.10 = small effect, .30 = medium effect, .50 = large effect)

(C) = Cramer's V (.10 = small effect, .30 = medium effect, .50 = large effect)

Although a significant difference did not exist between those students who had a high school community service requirement and those who did not, when I combined the high school community service requirement variable with whether a student volunteered in high school or not, significant findings emerged. The frequency of high school volunteer work variable was condensed to two categories, participation in high school volunteer work and no participation in high school volunteer work. These two categories were combined with whether they had a high school community service requirement or not to create four categories of students (i.e., had a requirement and volunteered, had a requirement and did not volunteer, no requirement and volunteered, no requirement and did not volunteer). A chi-square test compared this composite variable with college

community service participation. The differences were significant and the effect size was between small and moderate. The results from this chi-square analysis are presented in

Table 4.2

Table 4.2

Required and Voluntary High School Service by College Community Service

Participation

	Yes – Service		No – Service		Sig	Cramer’s V
	%	<i>n</i>	%	<i>n</i>		
HS req/vol service $\chi^2(3, N = 47230) = 1363.0$					***	0.170
No HS req/ No HS serv	3.8	945	11.6	2575		
No HS req/ Yes HS serv	63.6	15926	54.8	12157		
Yes HS req/ No HS serv	0.7	176	2.5	546		
Yes HS req/ Yes HS serv	32.0	8012	31.1	6893		

** $p < .01$, *** $p < .001$

Cramer’s V (.10 small effect, .30 medium effect, .50 large effect)

T tests were conducted to examine the continuous variables in the predictive model to determine if significant differences in the mean and standard deviation existed between those students who participate in college community service and those who do not. The results from the *t* tests are included in Table 4.3. The mean differences for all of the continuous variables were significant at $p < .001$. However, the effect sizes for all of the *t* tests of continuous variables were very small. The Eta-squared value measured the effect size for the *t* tests (Pallant, 2007). Cohen (1988) proposed guidelines for interpreting this value which are: .01= small effect, .06=moderate effect, .14=large effect. The *t* tests for the SRLS pre-test, SRLS post-test, and the Socio-cultural Discussions with Peers scale all had small effect sizes. The *t* tests for the number of hours employed both on and off campus had minimal effect sizes (i.e., $< .01$) indicating that the relationship

between college community service participation and the number of hours employed on or off campus was very weak.

Table 4.3

Descriptive Analysis of Students who did/did not Participate in College Community

Service – t tests

Category	Yes – Service	No – Service	Sig.	Eta squared
Pretest SRLS $t(46030) = -33.7$			***	0.023
M	3.96	3.81		
SD	0.47	0.49		
Number of hours worked on campus $t(47217) = -13.2$			***	0.004
M	3.58	2.73		
SD	7.43	6.47		
Number of hours worked off campus $t(44243)$ $= 19.8$			***	0.008
M	6.52	8.81		
SD	11.60	13.33		
Socio-cultural Discussions with Peers $t(45997)$ $= -32.0$			***	0.021
M	2.85	2.63		
SD	0.73	0.77		
Posttest SRLS $t(45969) = -46.8$			***	0.044
M	4.03	3.87		
SD	0.36	0.38		

** $p < .01$, *** $p < .001$
Eta-squared (.01 small effect, .06 moderate effect, 0.14 large effect)

Overall, the significant results from the preliminary analyses show significant differences between students who participate in community service and those who do not and support the decision to include the variables as predictors in a logistic regression analysis.

Descriptive Analysis of the Dependent Variable

The dependent variable in this study, college community service participation, was a general concept measuring whether students typically participate in college community service or not. The variable did not attempt to explain frequency or type of community service participation. However, some information about type and frequency

of community service was available for this sample. Tables 4.4 and 4.5 provide contextual information about the students who indicated that they participate in college community service with regards to the types of service in which they participate and the frequency of participation. This information was included in this chapter to enrich the findings on predictors of college community service participation and to create an overview of what that service typically looks like in terms of frequency and type.

Table 4.4

Number of Hours in which Students Participate in Community Service each Term by

Type (n = 25,059)

	0 %	1 - 5 %	6 - 10 %	11-15 %	16-20 %	21-25 %	26-30 %	Missing %
Service with a class	66.6	20.3	5.0	2.0	2.4	0.9	2.2	0.7
Service with a student organization	29.4	32.9	16.3	7.8	5.2	2.5	5.3	0.5
Service with federal work study	86.9	6.7	2.0	1.0	0.6	0.4	1.7	0.9
Service on your own	30.4	38.1	12.6	5.8	4.2	2.0	6.6	0.4

The number of students who said they regularly participate in community service while in college was 25,059, or 53.1% of the total sample. Table 4.4 presents responses about the type and frequency of community service participation from these students. Students who answered yes when asked if they participate in college community service, then selected in which kind of community service they participate from four categories, and for how many hours each term. The four categories of service were service with a class, service with a student organization, service with federal work study, and service on your own. The categories were not mutually exclusive, so a student could participate in one to four different types of service. The choices for number of hours spent participating in community service each term were 0, 1-5, 6-10, 11-15, 16-20, 21-25, and 26-30.

For all four categories of community service, the largest percentage of students chose either 0 hours or 1-5 hours each term. The largest percentages of students who participate in some amount of service (i.e., more than 0 hours) were with a student organization (70.0%) or on one's own (69.3%). A smaller proportion of students participate in some amount of service with a class (32.8%) or service with federal work study (12.4%). Even within the categories with higher participation rates, most students did not participate more than 10 hours per term. A small percentage, less than 7.0% for each category, participated in service for 26-30 hours each term.

In order to look at the amount of time that students devoted to all four types of community service, I created a composite variable that combined the respondents' answers to each of the questions about the four types of service. Table 4.5 provides a frequency table of the aggregate scores on this variable. For each type of community service, students reported the number of hours they participate in each type of community service each term. The answers ranged from 0 to 26-30 hours and scored between 0 and 6 (i.e., 0 = 0 hours, 1 = 1-5 hours, 2 = 6-10 hours, 3 = 11-15 hours, 4 = 16-20 hours, 5 = 21-25 hours, 6 = 26-30 hours). I created an aggregate score that combined each person's answers on the four types of service. A 0 represented that the student typically participates in service for a combined total of 0 hours each term. This possibility was unlikely because in this case, the student should have answered "no" to the question about whether they regularly participate in service. A 24 indicated that the student participates in service for between 104-120 hours (i.e., 26-30 times 4) each term. Most students scored somewhere between 1 and 4 on the aggregate scale (i.e., between 0 and 20 hours) (67.6%). Less than 1% of students rated themselves at a 15 or higher.

Table 4.5

<i>Composite Community Service Variable</i>		
Composite service score	Frequency	%
0	20	0.1
1	4524	18.1
2	5734	22.9
3	3819	15.2
4	2849	11.4
5	1850	7.4
6	2111	8.4
7	1099	4.4
8	862	3.4
9	555	2.2
10	391	1.6
11	210	0.8
12	348	1.4
13	135	0.5
14	94	0.4
15	51	0.2
16	42	0.2
17	32	0.1
18	48	0.2
19	16	0.1
20	12	0.0
21	6	0.0
22	3	0.0
23	3	0.0
24	8	0.0
Missing	237	0.9
<i>n = 25,059</i>		

Testing the Overall Logistic Regression Model: Research Question 2

The second research question asked the probability of predicting college community service participation from the model of predictor variables. Hypothesis 2 suggested that the proposed set of independent variables would significantly increase the odds of predicting college community service participation. This section outlines the findings for this research question and begins with an overview of the collinearity and

outlier testing followed by the block by block results from the logistic regression analysis.

Collinearity Testing

In order to ensure that the variables in the logistic regression model did not correlate too highly, collinearity testing was conducted on all of the variables by determining Pearson product-moment correlation coefficients, tolerance, and VIF values. Variables that are too highly correlated can lead to standard errors that are too high (Wright, 1995). This, in turn, can cause type 2 errors (i.e., failing to reject a null hypothesis when it is false). The variables with the highest relationships of multicollinearity were the institutional characteristics and the involvement variables. Matrices with the Pearson product-moment correlation coefficients between these variables are included in Appendix C. After running the analysis, all but one of the Pearson product-moment correlation coefficients were less than .70. This is the cut off for when a variable would be too highly correlated to be included in the model (Tabachnick & Fidell, 2007). A few other variables were high and close to the cut off value. The relationship between small colleges and bachelor's granting colleges exceeded the cut off value (.710). These variables remained in the model because the coefficient was so close to the cut off value and the other categories of both variables did not have problematic coefficient values. Field (2005) argued that simply removing one of the variables with high collinearity from the model is not a good option because it is statistically unclear which of the variables to remove. Instead, a relationship between the two variables must be acknowledged. The relationship between highly residential colleges and primarily residential colleges was also high (.511). Regarding the involvement variables, the

correlation coefficients were lower than the institutional variables and the highest correlation between the involvement variables was between frequency of participation in high school community organizations and frequency of volunteering in high school (.464).

As a secondary check, I analyzed the tolerance and VIF levels. All but one variable had tolerance levels higher than .1, and VIF values less than 10, the parameters set forth by Field (2005). One of the selectivity categories, highly competitive, had a tolerance level of .96 and a VIF value of 10.4. I made the decision to keep the variable in the model because it was so close to the cut off values and the other categories of selectivity did not have problematic tolerance or VIF values.

Testing for Outliers

The results from a logistic regression analysis are sensitive to outliers (Pallant, 2007). In order to insure that outliers did not overly influence this model to predict college community service participation, I took two precautions. Residual statistics indicated that less than 5% of the cases had standardized residuals higher than 2, a parameter used in other logistic regression research (Field, 2005). Cook's distance is another indicator that cases are influencing the logistic regression model. Cause for concern exists if the Cook's distance value is higher than 1 (Field). After looking at the Cook's distance values for this model, the highest value was .05 indicating that no cases were disproportionately influencing the model.

Blocked Entry Logistical Regression Analysis

The blocked entry logistic regression analysis used for this study regressed the dependent variable, college community service participation, on the independent

variables identified in the conceptual framework. The independent variables were entered in seven blocks corresponding to the following categories:

- (1) Background characteristics
- (2) High school characteristics and experiences
- (3) Pre-tests
- (4) College student characteristics
- (5) Institutional characteristics
- (6) College involvement experiences
- (7) Intermediate outcome

The logistic regression analysis demonstrated the influence that each block has on predicting the likelihood of participation in college community service as well as the overall model.

The block-by-block results of these regressions are presented in Table 4.6. The regression coefficients included in Table 4.6 display how the coefficients changed as new variables were added to the model. A significance level of $p < .01$ was established to test for the unique contribution of each variable entered into the regression equation. This level was set conservatively because of the large sample size so as to avoid finding statistical significance where there was not a strong correlation (Pallant, 2007).

The measures included in the table can be used to evaluate the statistical significance and explanatory power of the model as each block was added. Specifically, six measures assessed the model's fit—(-2log-likelihood, block χ^2 , Hosmer and Lemeshow's pseudo R^2 , Cox and Snell's pseudo R^2 , Nagelkerke's pseudo R^2 , and the percentage of cases correctly classified). The log-likelihood multiplied by -2 (abbreviated

as -2LL) approximates a chi-square distribution and is the criterion for increasing model fit in a logistic regression model. The degrees of freedom (df) are equal to the difference between the number of parameters in the two blocks (DesJardins, Dundar, & Hendel, 1999). As the -2LL decreases, the model fit improves. The block χ^2 represents the amount by which the -2LL decreases with each successive block. The pseudo R^2 measures (i.e., Hosmer and Lemeshow, Cox and Snell, and Nagelkerke) all represent the proportion of error variance that an alternative block reduces in relation to the null model, and range from a minimum value of 0 to a maximum value of 1 (Cabrera, 1994). This is different than in an ordinary least squares regression where R^2 serves as an indicator of how well a set of independent variables explains the observed variance of the dependent variable (Cabrera). The percentage of cases correctly classified provides another indicator of fit. This measure involves a comparison between the number of cases the model predicted as being either 0 (did not participate in college community service) or 1 (did participate in college community service) and their actual group membership (Field, 2005). Ideally, the percentage of cases correctly classified increases with each successive block.

Table 4.6

Results of Logistic Regression Analysis

Variable blocks	Block 1 Background Characteristics	Block 2 High School Experiences	Block 3 Pre- tests	Block 4 College Student Characteristics	Block 5 Institutional Characteristics	Block 6 College Involvement Variables	Block 7 SRLS Post-test
Gender							
<i>Male (ref.)</i>							
Female	0.340 ***	0.231 ***	0.126 ***	0.130 ***	0.155 ***	0.116 ***	0.105 ***
Race							
<i>White (ref.)</i>							
African American/Black	0.088	0.040	0.012	0.039	0.110	0.098	0.101
Asian American	-0.214 ***	-0.164 ***	-0.232 ***	-0.220 ***	-0.148 ***	-0.158 ***	-0.120 **
Latino/a	-0.028	0.109	0.044	0.061	0.197 ***	0.234 ***	0.239 ***
Multiracial	-0.063	0.000	-0.047	-0.037	0.031	-0.017	-0.014
Race not included	0.001	0.104	0.048	0.046	0.122	0.096	0.118
Parents' education							
<i>High school diploma, GED or less (ref.)</i>							
Some college or Associates Degree)	0.014	-0.035	-0.026	-0.039	-0.018	-0.054	-0.054
Bachelors Degree or higher	0.207 ***	0.095 **	0.091 **	0.079	0.075	-0.069	-0.067
Don't know	-0.332 ***	-0.340 ***	-0.323 ***	-0.297 **	-0.274 **	-0.285 **	-0.258
Parents' income							
<i>Less than \$12,500 (ref.)</i>							
\$12,500-\$24,999	-0.173 **	-0.170 **	-0.180 **	-0.166 **	-0.158	-0.121	-0.117
\$25,000-39,999	-0.151 **	-0.157 **	-0.163 **	-0.140	-0.151	-0.115	-0.106
\$40,000-54,999	-0.092	-0.111	-0.125	-0.103	-0.126	-0.091	-0.077
\$60,000-74,999	-0.060	-0.077	-0.085	-0.062	-0.081	-0.045	-0.033

Table 4.6 continued

Variable blocks	Block 1 Background Characteristics	Block 2 High School Experiences	Block 3 Pre-tests	Block 4 College Student Characteristics	Block 5 Institutional Characteristics	Block 6 College Involvement Variables	Block 7 SRLS Post-test
\$75,000-99,999	-0.080	-0.090	-0.116	-0.093	-0.118	-0.103	-0.089
100,000-149,999	-0.028	0.000	-0.026	-0.004	-0.032	-0.039	-0.026
150,000-199,999	0.061	0.129	0.100	0.117	0.090	0.029	0.034
200,000 and over	0.109	0.201 ***	0.135	0.158	0.106	-0.013	-0.007
Don't know	-0.185 ***	-0.135	-0.172 **	-0.124	-0.160 **	-0.131	-0.112
Rather not say	-0.067	-0.032	-0.088	-0.069	-0.105	-0.112	-0.086
Age							
< 25 (ref.)							
25 or older	-0.376 ***	-0.190 ***	-0.102 **	-0.111 **	0.002	0.153 ***	0.114
High School Grades							
A or A+ (ref.)							
A- or B+		-0.302 ***	-0.236 ***	-0.227 ***	-0.203 ***	-0.088 ***	-0.089 ***
B		-0.495 ***	-0.383 ***	-0.371 ***	-0.323 ***	-0.139 ***	-0.146 ***
B- or C+		-0.574 ***	-0.424 ***	-0.418 ***	-0.352 ***	-0.100	-0.112
C or lower		-0.637 ***	-0.467 ***	-0.466 ***	-0.384 ***	-0.128	-0.168
HS Participation in Community Orgs		0.436 ***	0.263 ***	0.251 ***	0.251 ***	0.059 ***	0.059 ***
HS Community Service Requirement							
No (ref.)							
Yes		-0.047	-0.151 ***	-0.149 ***	-0.176 ***	-0.162 ***	-0.160 ***
HS Volunteer Work			0.463 ***	0.475 ***	0.464 ***	0.421 ***	0.423 ***
Pretest SRLS			0.255 ***	0.265 ***	0.266 ***	0.228 ***	0.021
Enrollment status							
Full time (ref.)							
Less than full Time				-0.246 ***	-0.193 ***	0.022	0.024
Class standing							
Freshman (ref.)							
Sophomore				0.234 ***	0.237 ***	-0.012	-0.014
Junior				0.270 ***	0.298 ***	-0.084	-0.095 **

Table 4.6 continued

Variable blocks	Block 1 Background Characteristics	Block 2 High School Experiences	Block 3 Pre- tests	Block 4 College Student Characteristics	Block 5 Institutional Characteristics	Block 6 College Involvement Variables	Block 7 SRLS Post- test
Senior				0.304 ***	0.324 ***	-0.158 ***	-0.181 ***
Political views							
<i>Far left (ref.)</i>							
Liberal				0.054	0.030	0.102	0.107
Middle of the Road				0.047	0.030	0.149	0.158
Conservative				0.148 **	0.128	0.147	0.155
Far right				0.161	0.155	0.096	0.129
Public/Private/Religious							
<i>Public (ref.)</i>							
Private Secular					0.298 ***	0.110	0.110
Private Religious					0.423 ***	0.213 ***	0.204 ***
Carnegie Type							
<i>Research</i>							
<i>Extensive (ref.)</i>							
Research							
Intensive					-0.041	-0.069	-0.080
Masters					0.009	0.056	0.054
Bachelors					0.164	0.117	0.122
Size							
<i>Small (ref.)</i>							
Medium					0.085	0.101	0.104
Large					-0.009	0.001	-0.004
Selectivity							
<i>Less competitive</i> <i>(ref.)</i>							
Competitive					0.118	0.078	0.082
Very competitive					0.124	0.044	0.050

Table 4.6 continued

Variable blocks	Block 1 Background Characteristics	Block 2 High School Experiences	Block 3 Pre- tests	Block 4 College Student Characteristics	Block 5 Institutional Characteristics	Block 6 College Involvement Variables	Block 7 SRLS Post- test
Highly competitive					0.254 ***	0.167	0.178
Most competitive					0.087	-0.259 **	-0.238
Geographic location							
<i>Rural (ref.)</i>							
Small town					0.069	-0.223	-0.217
Suburban					-0.017	-0.190	-0.189
Urban					-0.039	-0.116	-0.111
Residential setting							
<i>Primarily non residential (ref.)</i>							
Primarily residential					0.107 ***	-0.069	-0.060
Highly residential					-0.027	-0.149	-0.145
College grades							
<i>3.50-4.00 (ref.)</i>							
3.00-3.49						-0.145 ***	-0.132 ***
2.50-2.99						-0.254 ***	-0.227 ***
2.00-2.49						-0.404 ***	-0.367 ***
1.99 or less						-0.743 ***	-0.711 ***
Involvement in college organizations						0.412 ***	0.396 ***
Involvement in off campus orgs						0.392 ***	0.383 ***
Political/advocacy groups							
<i>No (ref.)</i>							
Yes						0.140 ***	0.141 ***

Table 4.6 continued

Variable blocks	Block 1 Background Characteristics	Block 2 High School Experiences	Block 3 Pre-tests	Block 4 College Student Characteristics	Block 5 Institutional Characteristics	Block 6 College Involvement Variables	Block 7 SRLS Post-test
Religious groups							
<i>No (ref.)</i>							
Yes						0.017	0.021
Greek organizations							
<i>No (ref.)</i>							
Yes						0.968 ***	0.981 ***
Service groups							
<i>No (ref.)</i>							
Yes						1.242 ***	1.242 ***
Living/learning community							
<i>No (ref.)</i>							
Yes						0.171 ***	0.182 ***
Number of hours worked on campus						-0.001	-0.002
Number of hours worked off campus						-0.005 ***	-0.005 ***
Socio-cultural Discussions scale						0.101 ***	0.031
Living on campus							
<i>No (ref.)</i>							
Yes						0.107 ***	0.116 ***
Posttest SRLS							0.565 ***

Table 4.6 continued

Variable blocks	Block 1 Background Characteristics	Block 2 High School Experiences	Block 3 Pre-tests	Block 4 College Student Characteristics	Block 5 Institutional Characteristics	Block 6 College Involvement Variables	Block 7 SRLS Post-test
Constant	-0.099	-0.816	-2.473	-2.813	-3.178	-4.268	-5.471
Number of cases	47,230	47,230	47,230	47,230	47,230	47,230	47,230
Model χ^2	791.431	3925.829	5542.178	5716.583	6157.738	14842.562	15057.609
Block χ^2	791.431	3134.398	1616.350	174.405	441.154	8684.825	215.047
-2 Log Likelihood	64506.547	61372.150	59755.800	59581.395	59140.241	50455.416	50240.369
-2 Log Likelihood Improvement		3134.398	1616.350	174.405	441.154	8684.825	215.047
Degrees of Freedom	20	6	2	8	16	15	1
Hosmer & Lemeshow Pseudo R^2	0.012	0.060	0.085	0.088	0.094	0.227	0.231
Cox & Snell Pseudo R^2	0.017	0.080	0.111	0.114	0.122	0.270	0.273
Nagelkerke Pseudo R^2	0.022	0.106	0.148	0.152	0.163	0.360	0.364
Percent correctly classified	55.7	62.2	64.7	64.9	65.3	73.0	73.2

** $p < .01$, *** $p < .001$

The referent group, noted by italics, represents the category with which each other category is compared.

Block by Block Analysis

The following section describes the results presented in Table 4.6. The first block included respondents' demographic characteristics. Eight variables were significant in this block: gender ($\beta = .34, p < .001$), Asian American ($\beta = -.21, p < .001$), Bachelor's degree or higher ($\beta = .21, p < .001$), Don't know parents' education ($\beta = -.33, p < .001$), Parents' income between \$12,500 and \$24,999 ($\beta = -.17, p < .01$), Parents' income between \$25,000 and \$39,999 ($\beta = -.15, p < .01$), Don't know parents' income ($\beta = -.19, p < .001$), and age ($\beta = -.38, p < .001$). Being female maintained a significant positive relationship in all of the blocks indicating that women were more likely to participate in community service while in college than men. Similarly, being Asian American maintained a significant negative relationship throughout all seven blocks indicating that Asian American students were less likely than their White peers to participate in college community service. Demographic variables that were not significant were African American, Latino/a, Multiracial, race not included, some college or Associate's degree, students whose parents' income was between \$40,000 or higher, and those who would rather not say. The first block significantly increased the fit of the overall model $\chi^2(20, N = 47230) = 791.431, p < .001$. The pseudo- R^2 statistics were 0.012 (Hosmer and Lemeshow), 0.017 (Cox and Snell), and 0.022 (Nagelkerke). The percentage of cases correctly classified increased from 53.1% (before any variables were added) to 55.7%.

The second block, high school characteristics and experiences, contained these variables: high school grades, frequency of participation in community organizations and presence of a high school community service requirement. All categories of high school grades: A- to B+ ($\beta = -.30, p < .001$), B ($\beta = -.50, p < .001$), B- to C+ ($\beta = -.57, p < .001$),

C and below ($\beta = -.64, p < .001$) had significant negative relationships with college community service participation. Having an A+ or A average in high school was the referent category. Participation in community organizations while in high school was also significant ($\beta = .44, p < .001$). All of the variables that were significant in the first block were also significant in the second block with the exception of don't know parents' income. Having a parents' income of \$200,000 or more became significant in the second block ($\beta = .20, p < .001$). The addition of the high school experiences changed the relationship between parents' income and college community service participation by negating some predictive power and making a different category (\$200,000 or more) significant. Having a high school community service requirement was not significant in the second block. The second block significantly increased the fit of the overall model $\chi^2(6, N = 47230) = 3134.398, p < .001$. The pseudo- R^2 statistics were 0.060 (Hosmer and Lemeshow), 0.080 (Cox and Snell), and 0.106 (Nagelkerke). The percentage of cases correctly classified increased from 55.7% to 62.2%.

The third block, pre-tests, included two variables: frequency of high school community service participation and the pre-test for the Socially Responsible Leadership scale. Both of the variables added in this block were significant: high school community service ($\beta = .46, p < .001$), pre-test SRLS ($\beta = .26, p < .001$). The other variables entered in the first two blocks remained significant except there was another change in the parents' income variable. The don't know parents' income category became significant again ($\beta = -.17, p < .01$) and the \$200,000 or more category was no longer significant. Most likely, shared variance exists between the high school characteristics and pre-tests and the parents' income variable. The presence of a high school community service

requirement variable became significant in this block ($\beta = -.15, p < .001$). Results indicated that after controlling for the frequency of high school volunteer work and the SRLS pre-test, a high school community service requirement had a significant negative relationship with college community service participation. The third block significantly increased the fit of the overall model $\chi^2(2, N = 47230) = 1616.350, p < .001$. The pseudo- R^2 statistics were 0.085 (Hosmer and Lemeshow), 0.111 (Cox and Snell), and 0.148 (Nagelkerke). The percentage of cases correctly classified increased from 62.2% to 64.7%.

The fourth block included the college student characteristics. These variables were enrollment status, class standing, and political views. The following variables were significant: attending less than full-time ($\beta = -.25, p < .001$), sophomore ($\beta = .23, p < .001$), junior ($\beta = .27, p < .001$), senior ($\beta = .30, p < .001$), conservative ($\beta = .15, p < .01$). Being a full time student, first year/freshman, and considering oneself “far left” were the referent categories. Being female retained a significant positive relationship with college community service participation while being Asian American and 25 years or older still had significant negative relationships with college community service participation in the fourth block. The number of significant socioeconomic status variables decreased in the fourth block and only one parents’ education variable (i.e., don’t know), and one parents’ income variable (i.e., between \$12,500-\$24,999) were still significant. This change indicated that the college student characteristics were a better predictor of college community service participation than the socioeconomic status variables. The high school characteristics and pre-tests maintained their significance. The fourth block significantly increased the fit of the overall model although it did contribute the smallest increase in

model fit $\chi^2(8, N = 47230) = 174.405, p < .001$. The pseudo- R^2 statistics were 0.088 (Hosmer and Lemeshow), 0.114 (Cox and Snell), and 0.152 (Nagelkerke). The percentage of cases correctly classified increased from 64.7% to 64.9%.

The fifth block included the institutional characteristics. The significant variables were: private secular institution ($\beta = .30, p < .001$), private religious institution ($\beta = .42, p < .001$), highly competitive ($\beta = .25, p < .001$), and primarily residential ($\beta = .11, p < .001$). The referent categories were public institutions, less competitive institutions, and primarily non-residential institutions. After adding the institutional characteristics to the model, Latino/a entered the regression ($\beta = .20, p < .001$). Results indicated that after controlling for the institutional characteristics, being Latino/a had a significant positive relationship with college community service participation. Having a conservative political view lost significance suggesting that characteristics of the institution that the student attended had stronger relationships with community service participation than political views. The fifth block significantly increased the fit of the overall model $\chi^2(16, N = 47230) = 441.154, p < .001$. The pseudo- R^2 statistics were 0.094 (Hosmer and Lemeshow), 0.122 (Cox and Snell), and 0.163 (Nagelkerke). The percentage of cases correctly classified increased from 64.9% to 65.3%.

The sixth block included the college involvement variables, some of the strongest predictors in the model. The significant variables were: 3.00-3.49 GPA ($\beta = -.15, p < .001$), 2.50-2.99 GPA ($\beta = -.25, p < .001$), 2.00-2.49 GPA ($\beta = -.40, p < .001$), 1.99 or less GPA ($\beta = -.74, p < .001$), frequency of involvement in college organizations ($\beta = .41, p < .001$), frequency of involvement in off campus organizations ($\beta = .39, p < .001$), involvement in political/advocacy groups ($\beta = .14, p < .001$), involvement in service

groups ($\beta = 1.24, p < .001$), involvement in Greek organizations ($\beta = .97, p < .001$), involvement in living/learning communities ($\beta = .17, p < .001$), number of hours employed off campus ($\beta = -.01, p < .001$), Socio-cultural Discussions with Peers ($\beta = .10, p < .001$), and living on campus ($\beta = .11, p < .001$).

Several variables lost significance with the addition of the involvement variables including parents' income, B- or C+ average in high school, C and below average in high school, enrollment status, being a sophomore or junior in college, attending a private secular institution, attending a highly competitive institution, and attending a primarily residential institution. The college involvement characteristics were stronger predictors of college community service participation and negated the relationships between some of the variables from the previous blocks and the outcome. Interestingly, the high school experiences and pre-tests still had significant relationships with college community service participation meaning that even after adding the college involvement variables, high school participation in volunteer and community activities still had a strong relationship with college community service participation. A significant negative relationship emerged between students who attended the most competitive institutions and college community service participation ($\beta = -.26, p < .01$), but this disappeared in the final block. The sixth block significantly increased the fit of the overall model more than any other block $\chi^2(15, N = 47230) = 8684.825, p < .001$. The pseudo- R^2 statistics were 0.227 (Hosmer and Lemeshow), 0.270 (Cox and Snell), and 0.360 (Nagelkerke). The percentage of cases correctly classified increased from 65.3% to 73.0%.

The final block included the SRLS-R2. The variable was significant ($\beta = .57, p < .001$). This final variable negated the influence of several variables from previous blocks:

parents' education, age, SRLS pre-test, selectivity, and Socio-cultural Discussions with Peers. Negating the influence of these variables indicated that socially responsible leadership capacity had a stronger relationship with college community service participation than any of the negated variables. Adding this intermediate outcome to the model cancelled out the significance of the other scales, the SRLS pre-test and the Socio-cultural Discussions with Peers scale. Whether the respondents considered themselves strong socially responsible leaders when they began college was strongly overshadowed by how they assessed their socially responsible leadership at the time they responded to the instrument. Also, how students assessed their socially responsible leadership capacity cancelled out the frequency with which they conversed about issues of multiculturalism and diversity indicating that the relationship between the socially responsible leadership capacity and college community service participation was strong. Although the final block only made a small contribution to the overall model, it was still significant. The seventh block significantly increased the fit of the overall model $\chi^2(1, N = 47230) = 215.047, p < .001$. The pseudo- R^2 statistics were 0.231 (Hosmer and Lemeshow), 0.273 (Cox and Snell), and 0.364 (Nagelkerke). The percentage of cases correctly classified increased from 73.0% to 73.2%.

Results for Hypothesis 2

Hypothesis 2 suggested that the proposed set of independent variables would significantly increase the odds of predicting college community service participation. After analyzing the logistic regression block by block, the evidence supports the hypothesis because this proposed set of predictors increased the odds of predicting college community service participation from 53.1% to 73.2%.

Table 4.7 summarizes the increases in model fit that each block contributed to the model. In the model to predict college community service participation, the -2LL decreased with each block. Therefore, each of the seven blocks added to this model improved the fit of the overall model. The blocks that improved the fit most were block 6, college involvement experiences $\chi^2(15, N = 47230) = 8684.825, p < .001$, block 2, high school experiences and characteristics $\chi^2(6, N = 47,230) = 3134.398, p < .001$, and block 3, pre-tests $\chi^2(2, N = 47230) = 1616.350, p < .001$. Table 4.7 lists the amount by which the -2LL decreased with each successive block as well as the significance level of each block. Each block was significant at the $p < .001$ level indicating that each block increased the fit of the model significantly. However, the fit of the model increased in much smaller increments with the addition of the college student characteristics block $\chi^2(8, N = 47230) = 174.405, p < .001$, the SRLS posttest block $\chi^2(1, N = 47230) = 215.047, p < .001$, and the institutional characteristics block $\chi^2(16, N = 47230) = 441.154, p < .001$.

Table 4.7

Improvement in Fit Associated with Adding Additional Blocks of Variables to the Model of College Community Service Participation

	Block 1 Background Characteristics	Block 2 High School Experiences	Block 3 Pre-tests	Block 4 College Student Characteristics	Block 5 Institutional Characteristics	Block 6 College Involvement Variables	Block 7 SRLS Post-test
Change in model χ^2	791.431	3134.398	1616.350	174.405	441.154	8684.825	215.047
<i>p</i> -value	<i>p</i> < .001	<i>p</i> < .001	<i>p</i> < .001	<i>p</i> < .001	<i>p</i> < .001	<i>p</i> < .001	<i>p</i> < .001
<i>df</i>	20	6	2	8	16	15	1

The classification plot, included in Figure 4.1, is another indicator of model fit. If the model perfectly fits the data, then this histogram would show all of the cases for which students participated in college community service on the right side and all of the cases for which students did not participate in college community service on the left side. In a classification plot, the more the cases cluster at each end of the graph, the better (Field, 2005). Although in practice, a perfect model is rarely achieved, the classification plot in Figure 4.1 does show that most of the Yes cases cluster on the right side and most of the No cases cluster on the left side as it should. Overall, both the six measures of goodness of fit included in Table 4.6 and the classification plot indicated that the results supported hypothesis 2. This model of predictors, after adding all of the seven blocks, provided a good fit and significantly increased the probability of predicting college community service participation.

Examining the Individual Predictors: Research Question 3

The third research question examined which variables significantly predicted community service participation in college and which variables were the strongest and weakest predictors. Hypothesis 3 and sub-hypotheses 3a through 3e stemmed from this research question and the previous literature on predictors of college community service participation. The hypotheses posited that individual predictors would have a significant relationship with college community service participation, particularly gender, the presence of a high school community service requirement, frequency of high school community service participation, college involvement variables, and socially responsible leadership capacity.

Unlike linear regression, which calculates the expected value of the dependent variable, in logistic regression the dependent variable is the log-odds that a particular choice (i.e., participation in college community service) will be made (DesJardins, 2001). The estimated regression coefficients produced in the analysis are changes in the log-odds of the event (i.e., participation in college community service) due to incremental changes in the values of the independent variables. The estimated regression coefficients (B) for the final block (i.e., all variables from the conceptual model included) are presented in Table 4.8. Positive regression coefficients indicated that participation in college community service was more likely while negative regression coefficients indicated that participation was less likely.

Interpretation of changes in log-odds is conceptually difficult, therefore it is best to transform the log odds (B) by taking the natural log of both sides of the equation to facilitate interpretation. This changed the log odds to an odds ratio ($\exp(B)$), which

allowed for interpretation of a one-unit change in an independent variable as a change in the odds of the event occurring. For example, an odds ratio of 1.270 for Latino/a participants meant that the odds of participating in college community service were about 1.270 times (or 27.0%) more likely for Latino/a students than for White students (DesJardins, 2001). Table 4.8 includes the odds ratios ($\exp(B)$) for each independent variable. Odds ratios that were less than 1 occurred when the regression coefficients were negative. These were also difficult to interpret (e.g., 0.887 times more likely). Therefore, inverse odds ratios were used to facilitate interpretation (DesJardins, 2001). I calculated the inverse odds ratio by dividing 1 by the odds ratio (i.e., $1/0.887$). Dividing 1 by the odds ratio for Asian American students resulted in an inverse odds ratio of 1.13 and this indicated that the odds of not participating in college community service were 1.13 times (or 13%) higher for Asian American students than White students. The influences on community service participation measures were only calculated for significant variables. The arrows to the right of the influences on community service participation column in Table 4.8 indicate the direction of the relationship.

The test for significance for each regression coefficient is the Wald statistic. The Wald statistic shows whether the regression coefficient (B) was significantly different from zero and if it had a significant relationship with the dependent variable. Table 4.8 includes the Wald statistic and the significance levels for each variable. The confidence interval in the table represents the range of values that the researcher can be 95% confident encompassed the true value of the odds ratio. The confidence intervals are smaller with larger samples, increasing their precision (Pallant, 2007). For this model, no confidence interval range was larger than 0.6.

Table 4.8

Interpreting the Regression Coefficients

	B	Wald	Sig.	Odds ratio exp(B)	Confidence Interval		IOR (1/odds ratio)	Influence on odds of service participation
					Lower	Upper		
Gender								
<i>Male (ref.)</i>								
Female	0.105	19.804	***	1.111	1.061	1.164		11% ↑
Race								
<i>White (ref.)</i>								
African								
American/Black	0.101	3.786		1.106	0.999	1.224		
Asian American	-0.120	7.827	**	0.887	0.816	0.965	1.13	13% ↓
Latino/a	0.239	17.393	***	1.270	1.135	1.421		27% ↑
Multiracial	-0.014	0.122		0.986	0.909	1.069	1.01	
Race not Included	0.118	2.715		1.125	0.978	1.294		
Parents' education								
<i>High school diploma, GED or less (ref.)</i>								
Some college or Associates degree)	-0.054	1.999		0.947	0.878	1.021	1.06	
Bachelors degree or higher	-0.067	3.590		0.935	0.872	1.002	1.07	
Don't know	-0.258	5.398		0.773	0.622	0.960	1.29	
Parents' income								
<i>Less than \$12,500 (ref.)</i>								
\$12,500 – \$24,999	-0.117	2.719		0.890	0.774	1.022	1.12	
\$25,000 – \$39,999	-0.106	2.473		0.900	0.789	1.026	1.11	
\$40,000 – \$54,999	-0.077	1.349		0.926	0.814	1.054	1.08	
\$60,000 – \$74,999	-0.033	0.280		0.967	0.855	1.095	1.03	
\$75,000 – \$99,999	-0.089	2.001		0.914	0.808	1.035	1.09	
\$100,000 – \$149,999	-0.026	0.174		0.974	0.861	1.102	1.03	
\$150,000 – \$199,999	0.034	0.230		1.035	0.900	1.189		
\$200,000 and Over	-0.007	0.009		0.994	0.867	1.138	1.01	
Don't know	-0.112	3.202		0.894	0.790	1.011	1.12	
Rather not say	-0.086	1.614		0.918	0.804	1.048	1.09	
Age								
<i>< 25 (ref.)</i>								

Table 4.8 continued

	B	Wald	Sig.	Odds ratio exp(B)	Confidence Interval		IOR (1/odds ratio)	Influence on odds of service participation
					Lower	Upper		
25 and older	0.114	6.203		1.121	1.025	1.226		
High School Grades								
<i>A or A+ (ref.)</i>								
A- or B+	-0.089	11.231	***	0.915	0.868	0.964	1.09	9% ↓
B	-0.146	16.609	***	0.864	0.805	0.927	1.16	16% ↓
B- or C+	-0.112	4.642		0.894	0.807	0.990	1.12	
C or lower	-0.168	5.157		0.845	0.731	0.977	1.18	
HS Participation in Community Orgs	0.059	23.109	***	1.061	1.036	1.087		6% ↑
HS Community Service Requirement								
<i>No (ref.)</i>								
Yes	-0.160	43.758	***	0.852	0.813	0.894	1.17	17% ↓
HS Volunteer Work	0.423	802.55	***	1.526	1.482	1.571		53% ↑
Pretest SRLS	0.021	0.570		1.022	0.967	1.080		
Enrollment status								
<i>Full time (ref.)</i>								
Less than full Time	0.024	0.188		1.024	0.920	1.141		
Class standing								
<i>Freshman (ref.)</i>								
Sophomore	-0.014	0.178		0.986	0.923	1.053	1.01	
Junior	-0.095	7.353	**	0.910	0.849	0.974	1.10	10% ↓
Senior	-0.181	24.772	***	0.834	0.777	0.896	1.20	20% ↓
Political views								
<i>Far left (ref.)</i>								
Liberal	0.107	3.019		1.113	0.986	1.255		
Middle of the Road	0.158	6.485		1.171	1.037	1.322		
Conservative	0.155	5.918		1.168	1.031	1.324		
Far right	0.129	1.319		1.138	0.913	1.419		
Public/Private/Religious								
<i>Public(ref.)</i>								
Private Secular	0.110	5.648		1.117	1.020	1.223		
Private Religious	0.204	18.096	***	1.227	1.116	1.348		23% ↑
Carnegie Type								
<i>Research Extensive (ref.)</i>								
Research Intensive	-0.080	5.008		0.923	0.860	0.990	1.08	
Masters	0.054	1.559		1.056	0.970	1.150		
Bachelors	0.122	2.568		1.129	0.973	1.311		
Size								
<i>Small (ref.)</i>								
Medium	0.104	3.199		1.110	0.990	1.243		

Table 4.8 continued

	B	Wald	Sig.	Odds ratio exp(B)	Confidence Interval		IOR (1/odds ratio)	Influence on odds of service participation
					Lower	Upper		
Large Selectivity	-0.004	0.003		0.996	0.874	1.136	1.00	
Less competitive(ref.)								
Competitive	0.082	1.776		1.085	0.962	1.225		
Very competitive	0.050	0.636		1.051	0.930	1.188		
Highly competitive	0.178	5.633		1.195	1.031	1.384		
Most competitive	-0.238	5.590		0.788	0.647	0.960	1.27	
Geographic location								
Rural (ref.)								
Small town	-0.217	5.858		0.805	0.675	0.960	1.24	
Suburban	-0.189	4.472		0.828	0.695	0.986	1.21	
Urban	-0.111	1.684		0.895	0.756	1.058	1.12	
Residential setting								
Primarily non residential (ref.)								
Primarily residential	-0.060	2.583		0.942	0.875	1.013	1.06	
Highly residential	-0.145	5.643		0.865	0.767	0.975	1.16	
College grades								
3.50-4.00 (ref.)								
3.00-3.49	-0.132	24.450	***	0.877	0.832	0.924	1.14	14% ↓
2.50-2.99	-0.227	47.710	***	0.797	0.747	0.850	1.25	25% ↓
2.00-2.49	-0.367	46.895	***	0.693	0.624	0.769	1.44	44% ↓
1.99 or less	-0.711	37.324	***	0.491	0.391	0.617	2.04	104% ↓
Involvement in college organizations	0.396	1645.13	***	1.486	1.457	1.514		49% ↑
Involvement in off campus orgs	0.383	1423.06	***	1.467	1.438	1.496		47% ↑
Political/advocacy groups								
No (ref.)								
Yes	0.141	15.662	***	1.151	1.074	1.235		15% ↑
Religious groups								
No (ref.)								
Yes	0.021	0.458		1.021	0.961	1.086		
Greek organizations								
No (ref.)								
Yes	0.981	897.995	***	2.667	2.502	2.844		167% ↑
Service groups								
No (ref.)								
Yes	1.242	837.293	***	3.461	3.182	3.765		246% ↑

Table 4.8 continued

	B	Wald	Sig.	Odds ratio exp(B)	Confidence Interval		IOR (1/odds ratio)	Influence on odds of service participation
					Lower	Upper		
Living/learning community								
<i>No (ref.)</i>								
Yes	0.182	19.832	***	1.200	1.107	1.300		20% ↑
Number of hours worked on campus	-0.002	1.392		0.998	0.995	1.001	1.00	
Number of hours worked off campus	-0.005	23.348	***	0.995	0.993	0.997	1.01	1% ↓
Socio-cultural Discussions scale	0.031	3.574		1.032	0.999	1.065		
Living on campus								
<i>No (ref.)</i>								
Yes	0.116	16.458	***	1.123	1.062	1.188		12% ↑
Posttest SRLS	0.565	212.848	***	1.759	1.630	1.897		76% ↑
Constant	-5.471							

** $p < .01$, *** $p < .001$

Significant Independent Variables

Table 4.8 makes clear which variables had a significant relationship with the dependent variable after controlling for the other variables in the model. The results from this table also show which variables were stronger predictors and which ones were weaker.

Results for Hypothesis 3

The third hypothesis posited that individual predictor variables in this model would have a significant relationship with the outcome variable. This hypothesis was supported by the results in that many of the predictors in the model were significant. The following section outlines the specific significant variables.

Results for hypothesis 3a. The results supported the hypothesis that gender would be a strong predictor of college community service participation. Women were 11% more likely to participate in college community service than men.

Demographic characteristics. Other demographic characteristics also had a significant relationship with participation in college community service. Regarding race and ethnicity, Asian Americans were 13% less likely and Latino/a students were 27% more likely to participate in college community service than White students. A post hoc analysis was conducted to determine if the two Hispanic Serving Institutions (HSI) included in the dataset influenced the rate of community service participation for Latino college students. However, a chi-square analysis indicated that the 464 (23.1%) out of 2006 Latino students who attended HSI were less likely to participate in community service than the 1542 (76.9%) Latino students who did not attend HSI, $\chi^2(1, n = 2006) = 21.069, p < .001$. Parents' education, parents' income level, and being 25 years or older did not have a significant relationship with college community service participation.

Results for hypothesis 3b. The results also supported the hypothesis that the presence of a high school community service requirement would have a negative relationship with college community service participation. Students who had a high school community service requirement were 17% less likely to participate in community service in college than those who did not have a community service requirement in high school.

High school grades. High school grades were also a significant predictor. Students who received high school grades of either A- or B+, and B were 9% and 16% less likely, respectively, to participate in college community service than students who had an A+ or A average in high school.

Results for hypothesis 3c. This hypothesis stated that the frequency of high school community service involvement would have a significant positive relationship

with college community service participation. The results indicated that students' experiences while in high school, particularly with community service participation, had a relationship with the decision to participate in college community service. The more frequently students reported volunteering in high school the more likely (53%) they were to participate in community service while in college. Similarly, the more frequently students participated in high school community organizations, the more likely (6%) they were to participate in college community service.

College student characteristics. One out of three college student characteristics had a significant relationship with the likelihood to participate in college community service. Class standing while in college had a significant relationship with participation in community service. Juniors were 10% less likely and seniors were 20% less likely to participate in community service than first year students while in college. Neither enrollment status nor a student's political views had a significant relationship with the decision to participate in college community service.

Institutional characteristics. The institutional characteristics examined in this model for their ability to predict college community service participation were control and religious affiliation, size, Carnegie type, location, residential setting, and selectivity. Only one had a significant relationship with college community service participation. Students who attended private, religious colleges were 23% more likely to participate in college community service than students who attended public institutions.

Results for hypothesis 3d. This hypothesis stated that college involvement variables would be the most significant predictors of college community service participation, particularly involvement in religious groups or fraternities and sororities. In

general, the results supported this hypothesis. As general involvement in college organizations increased, students were 49% more likely to participate in college community service. Similarly, as involvement in off campus community organizations increased, students were 47% more likely to participate in community service. Students involved in political/advocacy groups (15%), service groups (246%), living/ learning communities (20%), and Greek organizations (167%) were more likely to participate in college community service. As expected, involvement in organizations that required or encouraged community service as a condition of membership (e.g., service groups and Greek organizations) was the strongest predictor of college community service participation. However, the results did not support one aspect of this hypothesis. Students who were members of religious groups were not significantly more likely to participate in college community service than students who did not participate in religious groups.

Post hoc analyses explored further whether students who were involved in student organizations were participating in community service through those organizations. Chi-square analyses did show differences between students who were involved in specific student organizations and those were not on whether they indicated that they participated in community service with a student organization. The results were: general involvement in college organizations $\chi^2(4, n = 24935) = 7350, p < .001$, living/learning communities $\chi^2(1, n = 24935) = 284.604, p < .001$, political/advocacy groups $\chi^2(1, n = 24935) = 398.889, p < .001$, service groups $\chi^2(1, n = 24935) = 1035.184, p < .001$, and Greek organizations $\chi^2(1, n = 24935) = 1820.34, p < .001$. The effect sizes for the specific student groups were between small and medium, but the effect size of general college

involvement was large indicating a strong relationship between membership in college organizations and participation in community service through those organizations. .

Other college involvement variables. The additional college involvement variables also had significant relationships with the dependent variable. Students who had grade point averages of 3.00-3.49, 2.50-2.99, 2.00-2.49, and 1.99 and less were 14%, 25%, 44%, and 104%, respectively, less likely to participate in community service than those who had a grade point average of 3.50-4.00. Students who lived on campus were 12% more likely to participate in community service than those who lived on their own or with their family. Working off campus had an inverse relationship with participation in college community service. For every additional hour that students worked off campus, they were 1% less likely to participate in college community service. However, working on campus did not have a significant relationship with college community service participation.

Results for hypothesis 3e. The final hypothesis stated that students' scores on the SRLS-R2 would be a strong predictor of college community service participation. The results supported this hypothesis because the intermediate outcome, socially responsible leadership capacity, did have a significant relationship with college community service participation. For each additional point that students rated themselves on the SRLS-R2, students were 76% more likely to participate in college community service. Socially responsible leadership capacity was one of the strongest predictors of college community service participation in the model.

Summary

This chapter presented results from the preliminary analyses of the sample and a blocked entry logistic regression analysis to predict college community service participation. The preliminary results demonstrated the differences in students who participate in college community service and those who do not. This section of the chapter also looked at the profile of students who participated in college community service in terms of type and frequency in order to provide more context for the study on college community service participation and to set up future studies. The results provided in the next section of the chapter showed the overall fit of the model with the addition of each of the seven blocks. The final section demonstrated the individual contributions of the independent predictor variables, and provided an overview of which were the strongest and weakest predictors. The next chapter includes a discussion of the results, implications of the study, limitations, and suggestions for future research.

CHAPTER 5: DISCUSSION

This chapter provides a discussion of the results from the study in the context of literature about predictors of college community service participation. The first section of the chapter includes a restatement of the problem as well as a review of the methods used. The next section gives a brief overview of the results followed by a discussion of the results integrated with the existing literature. The subsequent section explores the limitations of the study. The final section of the chapter provides implications of the study for higher education practitioners and secondary education policy on required community service and outlines directions for future research.

Statement of Problem

Although studying outcomes of community service in college is a timely research topic, few studies look at predictors of community service participation at the college level (Cruce & Moore, 2007). The research that does exist contains incomplete information about which variables predict community service participation. Are students predisposed to participate because of certain background characteristics or because they participated in community service in high school? Do some students participate in community service in high school because it is required, but as soon as the requirement is taken away when they enter college, they are no longer compelled to volunteer for community service opportunities? Are some students involved in other activities in college that then lead to community service participation? Are students who rate themselves highly on the values associated with socially responsible leadership more likely to participate in community service opportunities? This study attempted to establish a connection between community service participation and such possible

predictors as background characteristics, high school community service participation, the presence of a high school community service requirement, on campus and off campus college involvement experiences, and scores on the SRLS-R2 and college community service participation.

According to previous research, community service participation in college is associated with significant increases in citizenship, cognitive, and affective outcomes (Astin & Sax, 1998; Eyer & Giles, 1999; Pascarella & Terenzini, 2005). Community service participation provides college students with opportunities to develop in these outcome areas. Identifying predictors of college community service participation is an important strategy to encourage more students to participate. Examining predictors also allows for an exploration of the social dynamics related to who participates in college community service (Marks & Jones, 2004). An awareness of the predictors for college community service participation enables more appropriately designed interventions that may encourage greater numbers of students to become involved in community service including students currently underrepresented in community service participation like men (e.g., Astin & Sax, 1998; Cruce & Moore, 2007). Community service participation is promoted as a worthwhile aspect of a college education and an activity that is related to key college outcomes like moral and social responsibility (AAC&U, 2002). With that in mind, it is important to identify the variables that accurately predict participation in community service for college students.

Review of Methods

This study used data from the Multi-Institutional Study of Leadership, with a sample of 47,230 college students. Of those students, 53.1% (25,059) indicated that they

participated in community service in an average term. The research questions examined whether students who participate in community service are different than those who do not and whether a model including demographic characteristics, precollege experiences, and college environmental influences could significantly improve the predictability of college community service participation.

The analysis of the sample began by looking at differences between students who participate in college community service and those who do not. Using chi-square and *t* tests, all of the variables in the predictive model were analyzed. Frequency tables also provided a more in depth look at the dependent variable, college community service participation. Next, a logistic regression analysis tested a model of predictors of college community service participation derived from theoretical influences. The logistic regression analysis allowed the prediction of membership into one of two categories, participators and non-participators in college community service. The goal was to fit a model to the data that estimated the outcome variable from known values of the predictor variables (Field, 2005).

The predictor variables were entered into the model according to an adapted version of Astin's (1991,1993) input-environment-outcome college impact model. Astin's model is based on the idea that background characteristics and other input variables must be controlled for in order to determine the relationship between an environmental characteristic and an outcome. The predictive model in this study consisted of seven hierarchical blocks that included demographic characteristics, high school experiences, pretests, college student characteristics, institutional characteristics,

college involvement experiences, and an intermediate outcome, socially responsible leadership capacity.

Summary of Results

The model correctly predicted 73.2% of cases with regards to college community service participation indicating a significant relationship between the set of predictor variables and college community service participation. In the preliminary analyses, chi-square and *t* tests showed significant differences between students who participate in college community service and those who do not on all but one of the variables in the predictive model. However, the effect size, or strength of the relationship between two variables, was small for most of the pairings. Small effect sizes emerged between college community service participation and involvement in a living/learning community, living on campus, involvement in a political/advocacy group, college grades, attending a public, private, or religious institution, high school grades, and involvement in a religious group. Frequency of involvement in high school community organizations, high school volunteer work, and off campus organizations, involvement in Greek organizations, and involvement in service groups all had a small to moderate effect size. One variable, frequency of involvement in college organizations, measured a greater than moderate effect size.

The non-significant variable was presence of a high school community service requirement. However, this changed after presence of a high school community service requirement was combined with frequency of high school volunteer work to create a composite variable with four categories (i.e., no requirement no service, no requirement yes service, yes requirement no service, yes requirement yes service). The composite

variable had a small to moderate effect size. The t tests for the continuous variables were all significant, but the SRLS pre-test, SRLS-R2, and the Socio-cultural Discussions with Peers scale all had small effect sizes while the t tests for the number of hours employed both on and off campus had virtually no effect size ($< .01$) indicating that the relationship between college community service participation and the number of hours employed on or off campus was very weak.

Additional descriptive analyses of the students who participate in college community service provided more information about the type and frequency of community service in which they participated. More students participate in college community service on their own or with a student organization than as part of a course or federal work study. Also, almost 70% of college student respondents who participate in community service were contributing a minimal amount of time (i.e., less than 20 hours each term) to community service participation, and less than 1% of students were contributing more than 75 hours each term.

The results from the logistic regression analysis demonstrated a good fit for the overall model as well as significant relationships between many of the predictor variables and college community service participation. Several measures of model fit indicated that the addition of each of the seven blocks to the overall model significantly improved the ability of predicting college community service participation. The $-2\log$ likelihood decreased significantly with each of the seven successive blocks. These decreases showed that the addition of each of the blocks significantly improved the fit of the overall model. The blocks with the most influence on the overall fit of the model were college involvement experiences, high school experiences, and pre-tests. The pseudo R^2

measures, Hosmer and Lemeshow, Cox and Snell, and Nagelkerke, all increased with the addition of each block signaling improved model fit. Finally, the percentage of cases accurately classified improved from 53.1% (before any variables were added to the model) to 73.2% (after all of the variables were added). These measures, taken as a whole, were evidence that the conceptual model was an effective way of predicting college community service participation.

Strong relationships existed between some of the individual predictors and college community service participation. With regards to demographic characteristics, gender and race/ethnicity had a significant relationship with college community service participation. Women were 11% more likely than men to participate in community service. In comparison with White students, the referent category, Asian American respondents were 13% less likely, while Latino/a respondents were 27% more likely to participate in community service while in college.

Frequency of high school volunteer work and participation with community organizations both had a significant predictive relationship with future community service participation in college. The more frequently that students were involved with community organizations in high school, the more likely (6%) they were to participate in community service in college. Similarly, the more frequently that students were involved in high school volunteer work, the more likely (53%) they were to participate in community service in college. However, students who had a high school community service requirement were 17% less likely to participate in community service while in college than students who did not have a high school community service requirement.

Grades were an important indicator in both high school and college. Students who had lower than an A average in high school were less likely to participate in college community service. The same, yet even stronger, relationship was found with college grades and college community service participation. Students who had less than a 3.50-4.00 grade point average in college were less likely to participate in community service. Another college student characteristic that had a significant relationship with community service participation was class standing. Juniors and seniors were less likely to participate in college community service than first year students.

Only one of the institutional characteristics had a significant relationship with college community service participation. Students who attended private, religious institutions were 23% more likely to participate in college community service than students who attended public institutions. The other institutional variables, Carnegie type, size, selectivity, geographic location, and residential setting, did not have significant relationships with college community service participation.

College involvement variables had the strongest relationships with college community service participation. The frequency of students' general involvement on campus increased the likelihood of participation in college community service by 49%. Similarly, the frequency of students' involvement in off campus community organizations increased the likelihood of participation in college community service by 46%. Additionally, students were more likely to participate in college community service if they were involved with political/advocacy groups (15%), service groups (246%), Greek organizations (167%), or living/learning communities (20%). Furthermore, simply living on campus versus off campus increased the likelihood of participation in college

community service by 12%. Working off campus had an inverse relationship with college community service participation. For every hour that students worked off campus they were 1% less likely to participate in college community service. The intermediate outcome, socially responsible leadership capacity, also had a significant positive relationship with college community service participation. With each additional point scored on the SRLS-R2, the respondents were 76% more likely to participate in college community service. The following section takes these results and contextualizes them with previous literature on predictors of college community service participation.

Discussion of Results

The descriptive analyses indicate that most students are participating in community service either through a student organization or on their own instead of through a class or federal work study. Increased efforts on college campuses to promote and increase service-learning opportunities appear to be falling short of the opportunities provided for community service involvement through student organizations. Also, the following discussion of the findings should be read through the lens of the amount of time in which students are devoting towards community service participation. Students are only contributing a minimal amount of time toward community service activities (i.e., generally less than 20 hours per term), which averages out to only 1.25 hours per week over a 16 week semester. Therefore, the discussion that follows is qualified by the result that only 53.1% of all students are participating in community service, and of that group most reported that they are only participating in 1 hour per week.

Demographic Characteristics

Gender

The results from this study support previous research regarding gender and college community service participation. Previous studies indicated that women were more likely to participate in college community service than men (Astin & Sax, 1998; Astin et al., 2000; Bonnet, 2008; Cruce & Moore, 2007; Fitch, 1991; Marks & Jones, 2004; Sax, Astin, & Astin, 1996; Serow & Dreyden, 1990; Vogelgesang & Astin, 2000). This study found that, indeed, women are 11% more likely to participate in college community service than men. These findings suggest that more research is needed to determine the reasons behind the discrepancies between male and female volunteering and to develop ways to attract more men into college community service participation. Rhoads (1997) suggested that men and women have different attitudes toward interacting with the community in that women are operating from an ethic of care and interconnectedness while men are seeking greater autonomy. Women are able to empathize with the concept of “other” while men are generally more focused on their own sense of individualism. This undoubtedly has a relationship with whether they find value in engaging in community service opportunities.

Race/Ethnicity

After examining the results from this study, a different look at the relationship between race/ethnicity and college community service participation is needed. The previous literature on the relationship between race and ethnicity and college community service participation was inconsistent. Marks and Jones (2004) found no relationship between college community service participation and race/ethnicity, while Cruce and

Moore (2007) found that African American, Latino, and Asian American first year college students were all more likely to participate in community service than their White peers. The results from this study showed that Latino/a college students are 27% more likely to participate in community service than their White peers while Asian American college students are 13% less likely to participate than their White peers. No significant differences were found in the likelihood to participate in college community service between African American, Multiracial, or those college students who said that their race was not included and their White peers. Due to the placement of White students as the referent category, the results are all based on the relationships between different races and ethnicities and White students. The results could present another way if a different category of students served as the referent category. For example, if African American students were the referent category, significant differences might be apparent between African American students and Latino students. For this study, however, White students were chosen as the referent category because they represented the largest percentage of students (72.3%). The MSL sample is also notable for its representation of students of color. The higher numbers of students of color could differentiate this study from previous studies on predictors of college community service participation and influence the results regarding race and ethnicity.

Although the findings from this study do not mirror the findings from other studies, they present a different angle. The results support the suggestion that community service is not just an activity to which White students are attracted. Latino/a students' propensity to participate is encouraging. However, the finding that Asian American students are less likely to participate in community service is troubling and merits further

investigation. Asian American students might feel less welcome in the community service opportunities that are typically offered on campus. Also, Asian American students could experience pressure to succeed academically and therefore not have time for other activities on campus (Kodama, McEwen, Liang, & Lee, 2001). However, this suggestion is offered with caution because of the tendency to homogenize Asian American students as a “model minority” who all succeed academically (Hune & Chan, 1997).

Jones et al. (2008) found that the participants in their study on high school community service requirements often mentioned activities in their own communities or with their churches that they participated in but did not define as community service. This same phenomenon could be true with Asian American students in that they may not define the activities in which they are participating in their own communities and churches as community service. White students, more familiar with the term community service because it is a part of their own cultural landscape, could define these same activities as community service participation. Relatedly, emerging research indicates that Asian American students tend to rate their own involvement in a number of different activities as less frequent than other racial and ethnic groups, thus negatively skewing results (Wang, Hempton, Dugan, & Komives, 2007).

Socioeconomic Status

Strong relationships do not exist between the variables measuring socioeconomic status and college community service participation in this study. Neither parents’ income level nor parents’ education level have a significant relationship with community service participation. These findings are contradictory to Marks and Jones’ (2004) study that found that students with a higher socioeconomic status (measured with a composite

variable that included parents' education, parents' income, and household effects) were more likely to participate in college community service. However, the parents' education and parents' income variables from this study were self-reported. Many students answered that they would "rather not say" or that they did not know in response to the question about their parents' income level. The more than 20% of students who chose not to answer the question could have negated a possible relationship between the two variables. Using information collected on a form for admission, such as the FAFSA, could greatly improve the accuracy of these variables in measuring the relationship between socioeconomic status and college community service participation.

Age

In this study, age was measured as a dichotomous variable (0 = less than 25, 1 = 25 or older). Cruce and Moore's (2007) results indicated that non-traditional age students were more likely to participate in college community service than their traditionally aged counterparts. In this study, the relationship between age and college community service participation is not significant. One explanation could be that only 9.4% of this sample are 25 years or older and a sample with a higher percentage of older students could produce different results. Jennings and Stoker (2004) suggested that the influence of students' participation in community service while they are in primary and secondary school often does not show up until middle age. The results from this study do not show a relationship between these two variables, but because of the incongruence with previous studies, further study is warranted.

High School Experiences and Characteristics

High School Volunteer Work and Community Participation

Not surprisingly based on previous research, the frequency of volunteer work and the frequency of a student's involvement in community organizations while in high school (measured with different variables in this study) are significant predictors of participation in college community service. Previous studies found high school participation in community service to be the strongest predictor of college community service participation (Astin & Sax, 1998; Astin et al., 2000; Hart et al., 2007; Sax et al., 1996). The findings from this study indicate that the more frequently a respondent volunteers while in high school, the more likely (53%) he or she is to participate in college community service. The same pattern is true for frequency of participation in community organizations while in high school but the relationship is not as strong (i.e., 6% more likely). One theory from the field of psychology suggests that past behavior is the best predictor of future behavior (Oulette & Wood, 1998; Triandis, 1977). Students who participate in community service in high school develop a habit or pattern that they continue to follow in college. Hart et al. (2007) suggested that participating in high school community service facilitated identity development for students as someone who helps in the community and that identity is carried with them into future participation. The findings from this study support the previous suppositions in that frequency of high school community service participation is one of the strongest predictors of college community service participation.

High School Community Service Requirements

The results from previous research on the relationship between a high school community service requirement and future college community service participation were mixed. Marks and Jones (2004) found that students who were required to participate in community service in high school were less likely to continue that participation in college. However, the results from Metz and Youniss' (2003, 2005) studies indicated that required service led to higher rates of volunteerism and intentions to volunteer in the future. Hart et al.'s (2007) findings showed no difference in the relationship between required high school community service participation and voluntary high school community service participation and civic and youth volunteering eight years later.

The results from this study regarding high school community service requirements were also mixed. After the chi-square analyses, presence of a high school requirement was the only variable that was not significant when the sample was divided into students who participate in college community service and those who do not. For those students who participate in college community service, 32.7% had a high school community service requirement, while for those students who do not participate in college community service, 33.6% had a high school community service requirement. This difference was not significant. However, when this variable was combined with frequency of high school volunteer work to create a composite variable, the differences between all four of the groups were significant. This finding indicates that the relationship between frequency of high school volunteer work and college community

service participation was stronger than the relationship between presence of a high school community requirement and college community service participation.

The findings for the logistic regression analysis regarding high school community service requirements are similar. Students are 17% less likely to participate in community service while in college if they had a high school community service requirement, but as the frequency of their participation in high school community service increases, they are 53% more likely to participate in college community service. The effect size of frequency of high school volunteer work is more than three times greater than that of presence of high school community service requirement indicating that the frequency of high school community service participation has a greater influence on college community service participation than whether a student has a high school community service requirement or not. Students who participate regularly in high school community service are unlikely to be influenced by the presence of a high school community service requirement, while those students with little to no high school community service participation are more likely to be negatively influenced by the requirement. Although the finding regarding the predictive value of having a high school community requirement is small, it is significant, and it emerged even after controlling for the frequency with which the respondents participated in volunteer work in high school.

The results from the logistic regression analysis support previous findings that suggest that requiring community service is not an effective way to increase future community service participation (e.g., Marks & Jones, 2004). The mandatory nature of a high school community service requirement could discourage students from developing an intrinsic commitment to service that would compel them to continue that community

service participation in college (Jones et al., 2008; Marks & Jones; Sobus, 1995; Stukas et al., 1999). If a student receives external pressure to participate in community service, he or she does not have the same opportunity to develop an intrinsic desire to participate. This, in turn, could stunt the development of a life-long commitment to service. Jennings and Stoker (2004) found that the seeds of adult civic participation are planted during the high school years, and so how community service is presented to students during this influential phase of their lives should be deeply examined.

Educational Capital

The findings from this study support the previous research on the relationship between the educational capital with which a student enters college and whether he or she participates in community service. Educational capital is the accumulation of knowledge and skills that students gather throughout their educational career (Callan & Finney, 2002).

High School Grades

Cruce and Moore (2007) found that ACT composite scores had a significant positive relationship with participation in community service during the first year of college. In this study, ACT composite scores were not available, but high school grades provided a measure of educational capital. High school grades have a significant relationship with college community service participation. Students who had an all A average in high school are 9% more likely to participate in college community service than students who had an A- or B+ average and 16% more likely to participate than students who had a B average in high school. Surprisingly, having lower than a B average in high school does not have a statistically significant relationship with college

community service participation different from having an A average. It is possible that other stronger predictors cancel out this relationship. However, the results show that for this sample, students with a B- or C+ average are 12% less likely and students with averages of C and below are 18% less likely to participate in college community service than their peers who had an A average in high school. These results are not generalizable to a larger population because they are not statistically significant, but the trend is worth noting. Results indicate that students with higher grades in high school are more likely to participate in college community service participation. A similar relationship between college grades and college community service participation exists which will be discussed in the college student characteristics section.

Honors students and students with high academic achievement in high school often have exposure to community service opportunities the influence of which could carry over into the college experience because of the relationship between high school community service participation and college community service participation (Scales & Roehlkepartain, 2004). Organizations like National Honor Society provide community service opportunities for students selected for membership. Jones et al. (2008) found that students often received community service hours in high school toward their requirements simply for being a member of an honors or AP class without ever performing any community service at all.

Educational capital is a complicated concept because it is often related to social capital and socioeconomic status and students do not always have control of their own educational capital. Awareness of educational capital is important, but should not be a determinant in who is provided opportunities for community service participation. The

research suggests that the intersection of educational capital and socioeconomic privilege awards students who benefit from both with the time and opportunity to serve that other students do not have (Scales & Roehlkepartain, 2004). Due to the increased opportunity of those with privilege to participate in community service, it has become known as largely a middle class value. Community service participation typically involves becoming connected with an already established cause or organization (Jones & Gasiorski, 2008). Grassroots organizations, however, are often the pathway for marginalized groups, without much educational capital or socioeconomic privilege, to further a cause. The participation associated with grassroots organizations is often not considered community service, and is an under researched phenomenon because, by nature, grassroots organizations are new, small, and difficult to track (Jones & Gasiorski). A study on community service participation suffers from the lack of research regarding grassroots organizations.

College Student Characteristics

The college student characteristics in this model include grades, enrollment status, political views, and class standing.

College Grades

College grades have a significant relationship with college community service participation. Students who have a 3.50 – 4.00 are 14% more likely to participate in college community service than students with a 3.00-3.49 and 25% more likely than students with a 2.50 – 2.99. The relationship strengthens as grades decrease. Students with a 2.00-2.49 are 44% less likely and students with a 1.99 or below are 104% less likely to participate in college community service than students with a 3.50-4.00 grade

point average. The reasons for this strong relationship are similar to high school grades in that college students who are part of honors programs and competitive living/learning communities or other organizations have experiences built into their programs or curriculum that intentionally introduce students to community service opportunities. Also, research on volunteer motivations indicated that many students serve for egoistic reasons and for how it will benefit them (Marotta & Nashman, 1998). Students with intentions to attend medical school, obtain other advanced degrees, or who want to otherwise improve their resumes know that it behooves them to participate in college community service to impress admissions committees and future employers (Jones & Hill, 2003).

Enrollment Status

A previous study indicated that part-time enrollment status was a significant negative predictor of college community service participation for first year students (Cruce & Moore, 2007). The results from this study show no significant relationship between part-time enrollment status and college community service participation, however this study looks at all years of class standing. Students who attend school part time do not have a significantly lower rate of community service participation than full time college students. Other predictors that were not included in Cruce and Moore's model (e.g., high school community service participation) could have cancelled out the influence of this relationship. Also, this sample includes students from all four class years, not just first year students, and enrollment status might not influence juniors and seniors as much as first year students. Or, the relationship between class standing and college community service participation could be cancelling out the relationship between

enrollment status and college community service participation. This lack of a significant relationship between enrollment status and college community service participation challenges the assumption that traditional college students are those who are largely participating in college community service.

Political Views

With regards to political views, one previous study looked at political affiliation and college student leadership in a community service organization and found no predictive ability (Arnold & Welch, 2007). The results from this study on predictors of college community service participation mirror those previous findings and also do not indicate a significant relationship between the two. College students with certain political affiliations do not seem to be significantly more active in community service than others. This finding provides evidence to support the idea that community service is a desired goal across the political spectrum, but differences could emerge in the way it is conceptualized or carried out (Kahne & Westheimer, 1999).

Class Standing

The findings from this study do indicate a relationship between class standing and college community service participation. Juniors are 10% less likely and seniors are 20% less likely to participate in college community service than first year students. A significant difference does not exist between first year students and sophomores. One explanation for the increased likelihood of first year and second year students' participation is that the enthusiasm of first year students to become involved in lots of different activities wanes by the time that they are juniors and seniors. Juniors and seniors also could be consumed with coursework and job searching and unable to find extra time

for community service participation. The influence of high school community service participation might also carry over into the first years of college but gradually wear out by the time the students are juniors and seniors.

Institutional Characteristics

Institutional characteristics are included in the model in order to control for a student's decision to attend a certain type of institution while examining other predictors of college community service participation (Vogelgesang & Astin, 2000). The institutional characteristics included in this model are public, private, religious affiliation, Carnegie type, size, location, selectivity, and residential setting. A significant relationship emerged between one institutional characteristic and college community service participation. Students who attend private religious institutions are 23% more likely to participate in college community service than students who attend public institutions. This finding mirrors the results from previous studies (Cruce & Moore, 2007; Serow & Dreyden, 1990). Private religious institutions often promote service opportunities, both curricular and cocurricular, more than their public and secular counterparts (Serow & Dreyden). Relatedly, students who consider themselves more religious are more likely to participate in college community service (Astin & Sax, 1998; Astin et al., 2000; Fitch, 1991; Lopez et al., 2007; Marks & Jones, 2004; Serow & Dreyden, 1990), and these students are most likely attracted to religiously affiliated institutions.

The remaining institutional variables do not have a significant relationship with college community service participation. The Carnegie type, selectivity, size, location, and residential setting of an institution do not make students significantly more likely to participate in community service. Another possible reason for the lack of significance is

that other variables in the model are stronger predictors of college community service participation and outweigh the influence of the institutional characteristics. This absence of significance parallels other college impact research that finds traditional institutional variables lack influence (Pascarella & Terenzini, 2005).

College Involvement Characteristics

The college involvement variables, both general and specific, have the strongest relationships with participation in college community service.

General College Involvement

Findings indicate that the more frequently students participate in campus-based organizations, the more likely (49%) they are to participate in community service. Although previous research on the relationship between college community service participation and general campus involvement was scarce, one study did note that general involvement had a relationship with student community service leadership (i.e., leading a student service organization) (Arnold & Welch, 2007). Results from this study also indicate that the more frequently students participate in off campus organizations, the more likely (46%) they are to participate in community service. Although most traditional college student impact models do not include environmental influences that take place outside of campus, Weidman's (1989) model stresses the importance of including off campus influences since college students do not exist in a vacuum. The findings in this study support the theory that off campus influences should be included in a comprehensive model of college impact.

Involvement in Specific College Groups

Predictive relationships also exist between specific types of involvement and college community service participation. Involvement in service-related student organizations has an expected relationship with community service participation. Students who join service groups are 247% more likely to participate in community service than those who do not. Also, students who join Greek organizations are 167% more likely to participate in community service than those who do not. This finding supports previous research about the relationship between membership in Greek organizations and college community service participation (Cruce & Moore, 2007; Marks & Jones, 2004; Serow & Dreyden, 1990). Students are also more likely to participate in community service if they join a political/ advocacy group (15%) or a living/learning community (20%). These groups and organizations often participate as an entire organization or have community service participation as a condition of membership. Similar to the influence of a high school community service requirement, a community service requirement for a Greek organization or service organization could diminish the intrinsic motivation to participate in community service outside of that group experience. However, an element of self-selection is present with these groups not present with a high school community service requirement.

To further trouble this dynamic, the community service participation that Greek students are encouraged to do typically centers on charity and philanthropy and might not have the same influence on students or the community as direct service in the community (Scheuermann, 1996). Charity and philanthropy work often are not accompanied by reflection which has been shown to increase outcomes related to service participation

(Astin et al. 2000; Eyler & Giles, 1999; Gray, Ondaatje, Fricker, & Geschwind, 2000). Therefore, although this finding regarding increased likelihood of community service participation for Greek students is positive for proponents of just volume or quantity of community service participation, further investigation should explore the type and quality of community service participation for Greek students.

Surprisingly, involvement in religious groups is not a significant positive predictor of college community service participation as found in previous studies (Astin & Sax, 1998; Astin et al., 2000; Fitch, 1991; Lopez et al., 2007; Marks & Jones, 2004; Serow & Dreyden, 1990). One reason for the discrepancy in findings could be that the MSL instrument asks students if they are involved in student religious groups, but does not ask them about familial or community-based religious involvement. The question on the MSL instrument does not measure frequency of involvement or ask students if they regularly attend religious events, but instead is very specific to involvement in student religious groups. Notwithstanding the differences in questions, the lack of relationship between college community service participation and involvement in student religious groups is still a surprising finding. Another explanation is that students who participate in community service or volunteering with their church do not see it as community service and more a part of regular church participation or religious affiliation. Often times, religious students participate in service work through their church or faith institution, but they do not consider their work “community service participation” in the same way they consider participating in a school-sponsored community service event (Jones et al., 2008).

Number of Hours Spent Working

The relationship between the number of hours that students work both on and off campus and college community service participation is not straightforward. Previous research indicated that students who worked fewer hours were more likely to participate in community service in college (Fitch, 1991; Marks & Jones, 2004). However, Cruce and Moore (2007) found that students who worked at moderate levels were actually more likely to participate in community service during their first year of college. This study adds another dimension to these findings because it makes a distinction between working on campus and working off campus. With each additional hour that students work off campus, they are 1% less likely to participate in community service. Although this seems small, a student who works 20 hours a week off campus is 20% less likely to participate in community service than a student who does not work off campus. Interestingly, the number of hours a student works on campus is not significantly related to community service participation. The findings indicate that the relationship is also negative but not significant. The difference between working on campus and working off campus is worth exploring. Working on campus could make a student feel more engaged with the campus and also take on other campus-related activities like community service participation. Also, students who work on campus work fewer hours on average than those students who work off campus (3.2 versus 7.6). This would leave more time for other activities like community service participation.

Living On Campus

The final significant involvement predictor is whether a student lives on or off campus. Students who live on campus are 12% more likely to participate in community

service than students who live off campus. This is consistent with previous findings (Cruce & Moore, 2007; Fitch, 1991). A student who lives on campus has better access to and more knowledge about on-campus community service opportunities. Similarly, a student who lives on campus might feel more engaged with the campus community and willing to participate in on campus community service opportunities. Also, students who live off campus and commute could be involved in their own communities but do not define their involvement as community service since it is not part of a school organization or school-sponsored (Jones et al., 2008). In addition, students who live off campus traditionally spend more time commuting or working and are unable to put that time towards community service participation (Kuh, Gonyea, & Palmer, 2001).

Sociocultural Discussions with Peers

One surprising finding was the lack of a significant relationship between the Sociocultural Discussions with Peers scale and college community service participation. Other studies using MSL data and looking at leadership capacity outcomes found this to be one of the variables that predicted the most variance (e.g., Dugan, Garland, Jacoby & Gasiorski, 2008; Shalka, 2008). In this study, the Sociocultural Discussions with Peers scale had a significant positive relationship with college community service participation until socially responsible leadership capacity was added as an intermediate outcome in the seventh block. This finding indicates that the relationship between socially responsible leadership capacity and college community service participation is stronger than that between the Sociocultural Discussions with Peers scales, and that there is most likely some overlap between what the two scales measured. Students who spend a significant portion of their time discussing multicultural issues are probably more likely

to be interested in creating change for the common good. This relationship is supported by evidence from other MSL studies (e.g., Dugan et al.; Shalka).

Socially Responsible Leadership Capacity

A strong relationship exists between the intermediate outcome, socially responsible leadership capacity, and college community service participation. With each additional point on the scale, students are 76% more likely to participate in community service while in college. However, the mean for this scale was 4.0 and the standard deviation was 0.4 meaning that 68% of students scored between 3.6 and 4.4 and 95% of students scored between 3.2 and 4.8. Therefore, the differences between students on the Socially Responsible Leadership scale tended to be smaller than one point on the scale and closer to tenths of a point. Most students rated themselves highly on the scale and their scores fell within this narrow range. Therefore, even though students with higher scores were more likely to participate in college community service, in order to be 76% more likely to participate, one student's score had to be one whole point higher than another's. Generally, the differences were smaller than one whole point, so the increased likelihood between students was less than 76%.

Regardless, the relationship between socially responsible leadership capacity and college community service participation is consistent with previous research which found self-rated leadership ability to be one of the most significant predictors of college community service participation (Astin & Sax, 1998; Sax et al., 1996; Vogelgesang & Astin, 2000). Dugan (2008) cautions against completely equating self-rated leadership ability and socially responsible leadership capacity because of the heavy reliance in Astin's studies on positional roles of leadership. The SRLS-R2 does not mention the term

leadership and asks students about their attitudes and beliefs regarding social change versus whether they hold positions in leadership organizations. However, the previous research in this area is important to note because it does parallel the results from this study.

The direction of the relationship between community service participation and leadership is in need of future study. Students who consider themselves strong leaders might more frequently engage in community service opportunities. Or, students who frequently participate in community service opportunities might develop confidence in their leadership abilities from the experience. Previous research also supported the development of leadership ability as a result of community service participation (e.g., Astin & Sax, 1998). The findings from this study support the suggestion that a strong predictive relationship exists between socially responsible leadership capacity and college community service participation.

Summary

The results from this study indicate a good model fit between this set of predictor variables and college community service participation. Some of the most influential predictor variables were high school community service participation, college involvement experiences, and socially responsible leadership capacity. The findings indicate that the more frequently students participated in high school volunteer work, the more likely they are to continue that participation on into college. The results support the theory that the seeds for college community service participation are sown in high school or before. However, an important finding from this study is that if a student does not have the opportunity to participate in community service at the high school level, interventions

exist at the college level that could encourage participation in community service. The activities in which students are involved in college have a strong influence on whether they decide to participate in college community service participation. Greek organizations and service groups have the strongest predictive relationships with community service participation. Also, students with high socially responsible leadership capacity are more likely to participate in college community service. This finding affirms the research that suggests that students with high self-rated leadership ability are more likely to participate in service (e.g., Astin & Sax, 1998) and suggests a strong link between leadership and community service. Overall, the findings from this study support the notion that background characteristics and pre-college experiences alone do not predict college community service participation. A student's involvement while in college as well as commitment to change for the common good, both areas which interventions can be designed to address, greatly increase the likelihood of participation in community service. The next section describes some of the limitations of this study on predictors of college community service participation.

Delimitations

Several delimitations are important to acknowledge because of their potential influence on the results of the study. First, this study used a secondary analysis of data from the Multi-institutional Study of Leadership (MSL). The MSL focused on leadership capacity outcomes and not community service participation, therefore several adaptations were made to adapt the data to the research questions for this study. Due to its secondary nature, this study was limited by the availability of variables in the data set (Titus, 2006). Although the use of secondary data is widespread in educational and social science

research, secondary data places limits on the researcher by defining the variables that can be measured in his or her studies (Strayhorn, 2006). Additional predictors for college community service participation most likely exist, but were not included in this study due to their exclusion from the MSL study. For example, Cruce and Moore (2007) found that academic major was a predictor of community service participation during the first year of college. Additionally, Marks and Jones (2004) found that family involvement in the community had a relationship with college community service participation. Neither of these variables was available on the MSL instrument, and therefore, neither were part of this predictive model.

The response rate for the MSL was 37%. Although this response rate exceeds that typically expected for an online survey of this nature (Couper, 2000; Crawford et al., 2001), over 60% of the students sampled did not respond to the survey. A possibility exists that there was a response bias and that students who responded were more likely to be involved in community service participation or student organizations in general. Although this must be acknowledged, several steps were taken to ensure a random sample including oversampling by 70%.

Another delimitation was that the individual student data for this study were nested within institutions and multi-level modeling was not used as suggested by other researchers (e.g., Raudenbush & Bryk, 2002). However, other national studies that used data nested within institutions and looked at predictors of college community service employed logistic regression analysis (e.g., Astin & Sax, 1998). In another dissertation using MSL data, Owen (2008) found that multi-level modeling produced no significant relationship for the institutional variables in the study. One institutional variable was

significant in this study, and the overall block of institutional variables was also significant, but it had one of the smallest contributions to model fit of the seven blocks. The logistic regression analysis controlled for the relationships between the institutional variables and college community service participation in order to accurately measure the relationships between the other predictor variables and college community service participation. For this study, the institutions in the sample represented a diverse array of institutions geographically, and on other variables such as size, religious affiliation, and institutional type (Dugan & Komives, 2007). Each institution included in the study randomly sampled their population or conducted a whole population sample.

Additionally, an additive model was assumed for this model of college community service participation. This means that the changes in the dependent variable associated with a one-unit change in an independent variable did not depend on the value of any of the other independent variables. This assumption was made because prior research and literature provided little guidance as to the existence of interaction effects between the variables in this model and the outcome variable. Also, Menard (1995) suggested that testing all interaction effects in a complex model “carries increasingly more risk of capitalizing on random sampling variation as the number of variables in the model increases” (p. 65). Thus, it is possible that interaction effects existed and were not accounted for in this predictive model.

The MSL study also relied upon student self-reported data. Self-reported data have been questioned in the past for their ability to reliably and accurately measure educational outcomes. However, if certain conditions are upheld, researchers indicated that self-reporting is reliable (Anaya, 1999; Astin, 1993; Bauer, 1992; Gonyea, 2005;

Pace, Barahona, & Kaplan, 1985; Pike, 1995). These conditions include rigorous methodological standards, ease of participant use, ability to comprehend questions, ability to retrieve necessary information, perceived value of the questions being asked, and clarity of response options (Gonyea). Specific studies about student self-reported data have shown a fairly high degree of accuracy can be reached. These studies included a study on self-reported academic accomplishments in high school (Walsh & Maxey, 1972), self-reported class rank and grades (Armstrong, Jensen, McCaffrey, & Reynolds, 1976), and self-related background and school-related data (Fetters, Stowe, & Owing, 1984). In addition, Turrentine (2001) conducted a study of the frequency and quality of self and peer-reported leadership behaviors, a similar research topic to the MSL, and found that the self-reported behaviors were largely accurate.

Limitations

Although this study provided an opportunity to make a contribution to the literature on predictors of college community service, particularly high school community service requirements, several limitations exist. First, this data set was biased in some areas. The sample was strongly biased towards full-time students attending four-year institutions. The decision was made to remove students who attended community colleges from the sample because they represented such small numbers. However, nationally, community college students make up 40% of college students. Part-time students make up over half of all college students nationally (Chronicle of Higher Education, 2008), but they only represent about 6% of the sample for this study. Another finding that demonstrated bias relates to living on campus. Nationally, 15% of students live on campus (Chronicle of Higher Education); however, in this sample slightly less

than half (48%) of students live on campus. Due to some of these findings, the results can only be considered generalizable with populations that are similar to this sample. A separate study on students in two-year colleges, part-time students, or commuter students would be an interesting follow-up to this study.

Second, a complication emerged when utilizing the high school community service variables. For students who reported volunteering and having a high school community service requirement, there is no way to determine if all of their volunteering was required or if they were doing some volunteering for purely voluntary reasons. They could have performed some volunteer work to complete the requirement, but then they also might have done additional community service on their own. This complication made it difficult to draw conclusions about the relationship between required service and voluntary service and college community service participation. Students also did not have an opportunity to respond about the quality of their high school community service participation, so that was also not taken into account. However, it is still possible to conclude that after controlling for the frequency of high school volunteer work (and all other variables in the model), students were less likely to participate in community service in college if they had a high school community service requirement.

Another limitation existed with the dependent variable, college community service participation. Because the dependent variable is a dichotomous variable, the “yes” responses for college community service incorporated different frequencies and overall quantities of community service participation. Students who answered “yes” to that question could have served for as little as 1 hour or as much as 30 hours a week throughout the semester. Indeed, in this sample the amount of hours in which the students

participated each term spanned from 1 hour to 120 hours although almost 70% participated less than 20 hours each term. All of these students were grouped together as having participated in college community service. A more nuanced look at college community service would account for differences in number of hours of community service. Eyler and Giles (1999) found that the number of hours a student spent participating in community service had an impact on the outcomes related to that service. Although this was an obvious limitation, looking at community service participation as a generic, broad construct was the first step in determining that a link existed between a set of predictor variables and the decision to participate in college community service. Other studies that looked at predictors of community service participation also conceptualized community service participation as a general concept (e.g., Cruce & Moore, 2007; Marks & Jones, 2004). Now that this link has been established, future studies can examine the influence of this set of predictor variables on the frequency of community service participation for college students.

Another limitation of the dependent variable is that it does not distinguish between different types of community service participation. Answering “yes” to the question of college community service could include service with a student organization, service on one’s own, service with a class, and service with federal work-study. Additional analyses provided a descriptive look at the sample in terms of type and frequency of service so that a context could be provided for the model of general college community service participation. The general college community service participation variable was used because, as previously mentioned, the first step in this line of research was to determine if a relationship existed between the predictor variables and college

community service participation. Now the outcome variable can be expanded to distinguish between different kinds of community service. Also, related to this, quality of community service in college could not be determined from the survey responses. Involvement measures, ideally, should account for the quality of effort and amount of both physical and psychological investment (Astin, 1984; Pace, 1984). High quality experiences are associated with a high quality of effort (Pace). In order to assess quality, it is likely that a qualitative study would best explain how the quality of students' community service experiences in high school influenced students' community service experiences in college or how students' background attributes and college experiences are related to the quality of their college community service experience. Additionally, a qualitative study is best equipped to examine students' motivations for college community service participation.

Implications for Practice

The findings from this study support several implications for both higher education practitioners and secondary education policy regarding community service participation. In this section, I propose changes in higher education community service programs that could attract more students into college community service participation and provide students with opportunities to benefit from positive outcomes related to that participation. In addition, the findings from this study suggest changes in the way that high school community service is presented to high school students particularly with regards to requirements.

Previous research that found that women were more likely to participate in community service than men is supported by the results from this study (Astin & Sax,

1998; Astin et al., 2000; Bonnet, 2008; Cruce & Moore, 2007; Fitch, 1991; Marks & Jones, 2004; Sax et al., 1996; Serow & Dreyden, 1990; Vogelgesang & Astin, 2000). College student educators who facilitate community service programs and organizations should reach out to men at colleges and universities in an attempt to redefine the traditional definition of masculinity that men are trying to fit, into something that includes caring for the community and giving back. Edwards and Jones (2009) explained that college men felt pressure to “not be gay, feminine, or vulnerable and to not cry” (p. 210). Community service participation could be seen as an activity that contradicts traditional views of masculinity and men do not want to participate as they might be seen as weak or overly feminine. Asking a focus group of men at the institution to suggest community service activities in which they might be interested could help develop ideas. Also, studying the motivations to serve of college students could provide insight as to why male students are less likely to participate (Cruce & Moore, 2007).

Although men might not naturally gravitate toward community service participation (Rhoads, 1997), invitations to participate and offering programs more appealing to men could help reverse this trend. The finding about Greek organizations and college community service participation could also assist in bringing more men into community service participation. Fraternities could look to their long history of philanthropy and service in order to create opportunities for men to participate in community service. Since men are not participating in community service at the same rate as women, they are missing some of the opportunities to develop positive outcomes. Increasing the number of men involved in community service in college would offer

them the opportunity to develop positive outcomes while helping the community at the same time.

Race and ethnicity are also important considerations when looking at populations most likely to participate in community service. The community service participation rate of the Latino/a community demonstrated in the findings of this study should be explored further. Determining whether Latino/a students are participating more in their own communities or through school organizations could help develop a strategy to recruit other racial and ethnic groups into community service participation at the same levels. Also, this finding has not been replicated in other studies, so at this time it is important to proceed with caution and to not assume that Latino/a students do not need to be encouraged to participate in community service.

Additionally, according to the findings from this study, Asian American students are less likely to participate in community service and efforts should be made to reach out to this community through student organizations or through community service opportunities aimed at the Asian American community. It is also possible that Asian American students, as well as other students of color, are providing service to their communities at the same rate but their definition of community service differs from other racial and ethnic groups. Rhoads (1997) suggests a complicating factor when discussing the connection between race and college community service participation. He found that students of color, particularly African American students, had limited involvement in campus wide community service activities. They tended to be more involved in their own communities or student groups. Also, typically the communities served are largely made up of people of color and this influences the overall experience for students of color.

Sensitivity and inclusivity must be considered when designing community service opportunities for college students. Overall, because of what is known about the positive outcomes associated with college community service participation, specific effort should be made to design different community service programs and opportunities that are appealing to all students regardless of race, ethnicity, or gender.

The results from this study support the influence of high school community service experiences on future college community service participation. Students who participated in community service while in high school are considerably more likely to continue that participation into college, especially during the first year, than students who had not participated in high school. This study further supports the notion that students arrive at college with a complex history of past experiences that influence how they navigate the college environment (Astin, 1991). Keeping the lines of dialogue open with secondary educators is also an important consideration for college student educators. Partnering with high schools to develop community service opportunities for both secondary and postsecondary students could provide opportunities for high school students to become involved as well as to ensure that the community service program is a high quality program with delineated goals and outcomes. Students' experiences with high school community service influence their willingness to seek out and engage in community service participation in college. Jones et al. (2008) found that students with high school community service requirements often had negative experiences with community service participation in high school; therefore they were unlikely to continue that participation into college unless a college student educator interceded and encouraged them to participate at the college level.

It is also important to consider that community service opportunities for high school students are typically more available in affluent communities (Scales & Roehlkepartain, 2004). Therefore, students who do not come from schools with community service opportunities do not have the benefit of high school community service experience and are not as likely to seek out community service opportunities in college. The advantages of participating in community service in both high school and college should be offered to all students regardless of background. Specific efforts should be made to recruit students who did not have the opportunity to participate in community service in high school through introduction to community service courses or programs.

The results of this study, as well as other previous research that indicates that requiring service is not an effective way to increase future community service participation (e.g., Marks & Jones, 2004; Stukas et al., 1999), inform the decision on whether to require community service participation in high school at the school, district, city or statewide level. The findings from this study indicate that, controlling for all other variables in the model, students who were required to participate in community service in high school are 17% less likely to participate in community service in college. This study does not account for the quality or the frequency of the service experience. Also, this study does not address how mandatory community service in high school could be related to other outcomes, only future community service participation, so it could be short-sighted to eliminate a mandatory high community service program without examining other outcomes.

However, the evidence is mounting against the decision to require community service in high school if the desired outcome is future participation. Marks and Jones

(2004) suggested that strongly encouraging community service and facilitating opportunities for students versus requiring community service was a preferred model in increasing the likelihood of long-term community service participation. Something about the perceived forced nature of requiring service seems to discourage the long-term commitment that it was intended to develop (Sobus, 1995). College student educators should also be prepared to work with students whose only experience with community service was the result of a requirement and whose experience was not perceived as an enjoyable or worthwhile one (Jones et al., 2008).

Both high school and college grades are significant predictors of college community service participation. Students who achieve better grades in both high school and college are more likely to participate in college community service. Although students with high grades are more likely to participate in community service, students who do not have high grades should also be able to experience the benefits of community service participation. Participation in community service could also improve academic achievement for some students if it is tied to the curriculum (Astin & Sax, 1998; Astin et al., 2000; Eyler & Giles, 1999; Vogelgesang & Astin, 2000). Reaching out to underperforming students and encouraging them to participate in community service could improve their grades and make them feel more engaged. Adding more community service opportunities to the course curriculum in the form of service-learning could also help boost students' academic achievement (Astin & Sax; Astin et al., Eyler & Giles; Vogelgesang & Astin).

College students who are involved in activities and organizations both on and off campus are more likely to participate in community service. In order to capitalize on this

link, college student educators should encourage general involvement for students which in turn might lead to college community service participation. Students who find an organization or activity with which to participate feel more engaged with the entire campus community (Kuh, Kinzie, Schuh, & Whitt, 2005). Many different organizations, both on and off campus, encourage community service or consider that participation an integral part of membership in the organization. Therefore, if a student joins one of these organizations (e.g., service groups or Greek organizations) the likelihood that he or she will also participate in community service increases. The results from this study can only inform general community service participation, but research suggests that community service participation coupled with reflection and academic content increases positive outcomes for students (Vogelgesang & Astin, 2000). An ideal situation would include community service opportunities for students that consisted of these important elements.

College students who consider themselves strong in socially responsible leadership capacity are more likely to participate in community service. Other research has found that self-rated leadership ability is one of the strongest predictors of college community service participation (Astin & Sax, 1998; Vogelgesang & Astin, 2005), although that research largely focuses on positional leadership (Dugan, 2008). Students who consider themselves strong, socially responsible leaders value citizenship, commitment, collaboration, common purpose, controversy with civility, congruence, and change (HERI, 1996). These values are often espoused by centers of community service and engagement on college campuses. The congruence between the values of socially responsible leadership and community service participation are not coincidental and are important to consider when designing community service programs for students. Students

with high scores on the SRLS-R2 are more likely to participate in college community service participation but more outreach might be needed for students who do not score as highly on the SRLS.

Student leaders are more likely to participate in community service, and therefore the confidence that they have in their leadership skills should be utilized in designing programs. Community service programs for college students should have opportunities for students in which they can use their leadership skills to reach out to other students and encourage them to participate. Persuading students to participate in community service might help them make that initial decision to participate that they might not have made without encouragement. A reciprocal relationship clearly exists between community service and leadership ability. Institutions should consider how to connect the two in meaningful ways and not assume that the connections are there just because two campus offices are devoted to the work.

Implications for Future Research

Research on community service participation in college is abundant, but suffers from several limitations including a failure to define community service consistently and a lack of longitudinal research. Future research in this area should use a concrete and consistent definition of college community service participation which would facilitate measurement and improve the generalizability of the results. The definition of community service should also be clear and provided for students who are completing survey instruments. The concept of community service participation should be all-inclusive and include service in which students participate with their own communities, families, or churches as well as school-based service to ensure that all students are being

credited with the community work in which they participate. I recommend using the language community or civic participation instead of community service because of the negative connotations sometimes associated with court-ordered community service and defining it in the following way: Community or civic participation includes work performed of a volunteer nature, or generally without pay or coercion, that could be carried out in one's own community, with family, through a faith community, for a class, or through a school organization or school-sponsored activity that has the intention of improving the community and promoting the common good.

Currently, a hypothesis exists that both high school and college community service participation have a long-term impact on the decision to remain engaged in one's community (Hart et al., 2007; Vogelgesang & Astin, 2005), but longitudinal data are sparse to support this hypothesis. The body of research on community service participation at the college level would benefit from longitudinal research on community service participation that begins at the K-12 level and follows students into adulthood.

The results from this study do indicate the importance of some predictor variables in determining who participates in college community service. Gender, race/ethnicity, high school community service participation, presence of a high school community service requirement, high school and college grades, attending a private religious institution, class standing, living on campus, involvement (both general and specific), and socially responsible leadership capacity all had a significant predictive relationship with college community service participation. Future research on predictors of college community service should include variables missing from this model that might add to the predictive power of the overall model (e.g., increase the predictability from 73.2%).

College major, parents' involvement in service, participation in a community action program, importance placed on material wealth, tutoring another student, and having dinner in a teacher's home are all variables that have been used in other studies but were not available with this data set (Astin & Sax, 1998; Cruce & Moore, 2007; Marks & Jones, 2004). Others could include religion and frequency of religious involvement. Future research would benefit from an instrument specifically designed to analyze predictors of college community service participation so that all of the necessary variables are included.

Another key finding from this study is that only slightly more than half of all college students participate in community service and of that group almost 70% are participating for less than 20 hours each term. Although this model did help to predict community service participation, almost half of all college students are not participating and future studies should focus on this group.

Additional steps in this line of research should also include predictors of frequency, type, and quality of community service participation. Previous research suggested that the greater the amount of time that a student spends engaged in a community service project, the greater the outcomes associated with that experience (Eyler & Giles, 1999; Niemi, et al., 1999). The findings from this study identified predictors of general participation in college community service, but it is possible that those predictors would differ for a student who participates for 30 hours per week versus one hour per week. They might also differ for a student who participates in an after-school tutoring program versus a student who spends time registering voters. Additionally, the predictors might differ for a student who says that he or she had a very

worthwhile community service experience and a student who says that he or she felt the community service experience was a waste of time.

One area of interest in this study was the relationship between high school community service requirements and college community service participation. The findings indicate that a student who had a high school community service requirement is 17% less likely to participate in service in college than a student who did not have a high school community service requirement. Qualitative studies supported this finding (e.g., Jones & Hill, 2003; Jones et al., 2008) by indicating that students feel that participation in community service is just another homework assignment to be completed and never thought about again. Future research could pair both quantitative and qualitative methods to explore further the relationship between high school community service requirements and college community service participation as well as the motivation behind stopping or continuing community service in college. Is it the requirement itself or is it that the quality of the community service experience suffers when the service is required? Future research should clearly delineate between required high school community service and voluntary high school community service to determine each of their relationships to college community service participation.

One group of students not included in this study was community college students. This group of students is one of the fastest-growing in higher education and currently makes up 40% of all postsecondary students (The Chronicle of Higher Education, 2008). Clearly, research on community college students is a necessary and important next step to develop a comprehensive look at college community service participation. This group of students is typically older, more likely to attend school part-time, and more likely to have

job and family responsibilities outside of the college environment than four-year college students (The Chronicle of Higher Education). The relationship between these characteristics and college community service participation would add a new perspective to inform the research.

Future research on predictors of college community service participation could attempt more sophisticated modeling now that a baseline predictive relationship has been established between the outcome, college community service participation, and this set of predictor variables. In addition to the qualitative, longitudinal studies suggested above, hierarchical linear modeling could be a good way to test the influence of the data nested within institutions. Although only one of the institutional characteristics emerged significant, the block of institutional characteristics was significant. The institutional characteristics were included and controlled for in this study, but it would be a good idea to explore this relationship further with more sophisticated analyses.

Conclusion

The goal of this study was to analyze and identify significant predictors of college community service participation. This goal was met as the results indicated that a significant relationship existed between the predictive model tested in this study and college community service participation. The model included demographic characteristics, high school experiences, pre-tests, college student characteristics, institutional characteristics, college involvement experiences, and socially responsible leadership capacity. Although all seven of the blocks were significant and the overall fit was good, high school community service participation, college involvement variables

(both general and specific), and socially responsible leadership capacity were the strongest predictors of college community service participation.

A predictor of interest, the presence of a high school community service requirement, was a significant negative predictor of college community service participation. This finding supported previous research that suggested that requiring community service in high school was not an effective way to encourage long-term community service participation. Future research should explore this finding further and determine whether requiring high school community service participation achieves its espoused goals. Supporting high school community service requirements has become one of those rational myths (Pascarella & Terenzini, 2005) in which people assume that the policy must be beneficial for students without much empirical support.

Uncovering predictors of college community service participation can help determine who is missing from the group of students that typically engage in community service in order to design programs and interventions that will include a more diverse sample of college students. Community service provides opportunities for students to give back to their communities while at the same time developing affectively, cognitively, and in terms of citizenship (Astin & Sax, 1998). Both students and communities would benefit from increased student participation in college community service.

Appendix A: MSL Survey Instrument

NOTE:

This is a paper and pencil version of what will be presented as an on-line web survey. Skip patterns will automatically take the respondent to the appropriate section. Shaded sections/items will be used in split samples and will not be asked of all participants.

COLLEGE INFORMATION

1. Did you begin college at your current institution or elsewhere? (Choose One)

- Started here
- Started elsewhere

2. Thinking about this academic term, how would you characterize your enrollment? (Choose One)

- Full-Time
- Less than Full-Time

3. What is your current class level? (Choose One)

- First year/freshman
- Sophomore
- Junior
- Senior
- Graduate student
- Other

4. Are you currently working OFF CAMPUS?
(Circle one) YES NO

If NO skip to #5

4a. Approximately how many hours do you work off campus in a typical 7 day week?

4b. In your primary off campus position, how frequently do you: (Circle one for each item)

- | | |
|----------------------|-----------------------|
| 1 = Never | 3 = Often |
| 2 = Sometimes | 4 = Very Often |

- | | | | | |
|--|---|---|---|---|
| Perform repetitive tasks..... | 1 | 2 | 3 | 4 |
| Consider options before making decisions..... | 1 | 2 | 3 | 4 |
| Perform structured tasks..... | 1 | 2 | 3 | 4 |
| Have the authority to change the way some things are done..... | 1 | 2 | 3 | 4 |
| Coordinate the work of others..... | 1 | 2 | 3 | 4 |
| Work with others on a team..... | 1 | 2 | 3 | 4 |

5. Are you currently working ON CAMPUS?

(Circle one) YES NO

If NO skip to #6

5a. Approximately how many hours do you work on campus in a typical 7 day week?

5b. In your primary position, how frequently do you:
(Circle one for each item)

- | | |
|----------------------|-----------------------|
| 1 = Never | 3 = Often |
| 2 = Sometimes | 4 = Very Often |

- | | | | | |
|--|---|---|---|---|
| Perform repetitive tasks | 1 | 2 | 3 | 4 |
| Consider options before making decisions..... | 1 | 2 | 3 | 4 |
| Perform structured tasks..... | 1 | 2 | 3 | 4 |
| Have the authority to change the way some things are done..... | 1 | 2 | 3 | 4 |
| Coordinate the work of others..... | 1 | 2 | 3 | 4 |
| Work with others on a team..... | 1 | 2 | 3 | 4 |

6. In an average academic term, do you engage in any community service?

YES NO

If NO skip to #7

In an average academic term, approximately how many hours do you engage in community service? (circle one for each category).

- | | | | | | |
|---|-----|------|-------|-------|-------------|
| <u>As part of a class</u> | | | | | |
| 0 | 1-5 | 6-10 | 11-15 | 16-20 | 21-25 26-30 |
| <u>With a student organization</u> | | | | | |
| 0 | 1-5 | 6-10 | 11-15 | 16-20 | 21-25 26-30 |
| <u>As part of a work study experience</u> | | | | | |
| 0 | 1-5 | 6-10 | 11-15 | 16-20 | 21-25 26-30 |
| <u>On your own</u> | | | | | |
| 0 | 1-5 | 6-10 | 11-15 | 16-20 | 21-25 26-30 |

7. Check all the following activities you engaged in during your college experience.

- Studied abroad
- Experienced a practicum, internship, field experience, co-op experience, or clinical experience
- Participated in a learning community or some other formal program where groups of students take two or more classes together.
- Enrolled in a culminating senior experience (capstone course, thesis etc.)

- o None of the above

YOUR PERCEPTIONS BEFORE ENROLLING IN COLLEGE

8. Looking back to *before you started college*, how confident were you that you would be successful at the following:
(Circle one response for each.)

1 = Not at all confident 3 = Confident
2 = Somewhat confident 4 = Very confident

- Handling the challenge of college-level work.. 1 2 3 4
- Feeling as though you belong on campus..... 1 2 3 4
- Analyzing new ideas and concepts..... 1 2 3 4
- Applying something learned in class to the "real world"..... 1 2 3 4
- Enjoying the challenge of learning new material 1 2 3 4
- Appreciating new and different ideas, beliefs .. 1 2 3 4
- Leading others 1 2 3 4
- Organizing a group's tasks to accomplish a goal 1 2 3 4
- Taking initiative to improve something..... 1 2 3 4
- Working with a team on a group project 1 2 3 4

9. Looking back to *before you started college*, how often did you engage in the following activities:
(Circle one response for each.)

1 = Never 3 = Often
2 = Sometimes 4 = Very Often

- Performing volunteer work 1 2 3 4
- Participating in student clubs/ groups..... 1 2 3 4
- Participating in varsity sports 1 2 3 4
- Took leadership positions in student clubs, groups or sports 1 2 3 4
- Participating in community organizations (e.g. church youth group, scouts)..... 1 2 3 4
- Taking leadership positions in community organizations 1 2 3 4
- Participating in activism in any form (e.g. petitions, rally, protest)..... 1 2 3 4
- Getting to know people from backgrounds different than your own 1 2 3 4
- Learning about cultures different from your own..... 1 2 3 4

Participating in training or education that developed your leadership skills.....1 2 3 4

10. Looking back to *before you started college*, please indicate your agreement with the following items by choosing the number that most closely represented your opinion about that statement AT THAT TIME:
(Circle one response for each.)

1 = Strongly disagree 4 = Agree
2 = Disagree 5 = Strongly Agree
3 = Neutral

- Hearing differences in opinions enriched my thinking1 2 3 4 5
- I had low self esteem.....1 2 3 4 5
- I worked well in changing environments 1 2 3 4 5
- I enjoyed working with others toward common goals.....1 2 3 4 5
- I held myself accountable for responsibilities I agree to1 2 3 4 5
- I worked well when I knew the collective values of a group.....1 2 3 4 5
- My behaviors reflected my beliefs1 2 3 4 5
- I valued the opportunities that allowed me to contribute to my community, 1 2 3 4 5
- I thought of myself as a leader ONLY if I was the head of a group (e.g. chair, president) ...1 2 3 4 5

11a. Before you started college, how would you describe the amount of leadership experience you have had (e.g., student clubs, performing groups, service organizations, jobs)? Please circle the appropriate number
No experience 1 2 3 4 5 Extensive experience

11b. Before you started college, how often did others give you positive feedback or encourage your leadership ability (e.g., teachers, advisors, mentors)?
Please circle the appropriate number
Never 1 2 3 4 5 frequently

11c. Before you started college, How would you have reacted to being chosen or appointed the leader of a group? Please circle the appropriate number
Very 1 2 3 4 5 very
uncomfortable comfortable

11d. Before you started college, how often did you see others be effective leaders?
Please circle the appropriate number
Never 1 2 3 4 5 frequently

11e. Before you started college, how often did you think of yourself as a leader
Please circle the appropriate number
Never 1 2 3 4 5 frequently

- o Sports- Leisure or Intramural (ex: Intramural flag football, Rock Climbing)
- o Special Interest (ex: Comedy Group)
- o Student governance group (ex: Student Government Association, Residence Hall Association, Interfraternity Council) **IF CHECKED go to item 14A**

14A. Were you involved in your campus-wide student government association? (Circle one) YES NO

If No, skip to item 15.

Thinking about your student government experience, indicate your level of agreement with the following items:

(Circle one response for each.)

- 1 = Strongly disagree 4 = Agree
- 2 = Disagree 5 = Strongly agree
- 3 = Neutral

I found it hard to represent my constituents' concerns..... 1 2 3 4 5

I successfully initiated change on behalf of my constituents (e.g., policy, institutional, or social) 1 2 3 4 5

My motivation for involvement was about gaining influence..... 1 2 3 4 5

My motivation for involvement was to receive recognition 1 2 3 4 5

My motivation for involvement was to help others..... 1 2 3 4 5

I have witnessed effective constituency-based efforts for change 1 2 3 4 5

Effective constituency-based efforts for change have influenced my own actions..... 1 2 3 4 5

I held a constituency-based position prior to this college SGA experience (e.g. high school or other governance group)..... 1 2 3 4 5

Experience with previous constituency based positions did NOT make me more effective in my college SGA work..... 1 2 3 4 5

15. At any time during your college experience, how often have you been in mentoring relationships where another person intentionally assisted your growth or connected you to opportunities for career and personal development? Indicate how many times

Student affairs staff (e.g., a student organization advisor, career counselor, the Dean of Students, or residence hall coordinator):
.....never once several many

Faculty never once several many
Employers never once several many
Community members never once several many
Other students never once several many

16. During interactions with other students outside of class, how often have you done each of the following in an average school year? (Circle one for each.)

- 1 = Never 3 = Often
- 2 = Sometimes 4 = Very Often

Talked about different lifestyles/ customs.....1 2 3 4

Held discussions with students whose personal values were very different from your own.....1 2 3 4

Discussed major social issues such as peace, human rights, and justice1 2 3 4

Held discussions with students whose religious beliefs were very different from your own.....1 2 3 4

Discussed your views about multiculturalism and diversity1 2 3 4

Held discussions with students whose political opinions were very different from your own.....1 2 3 4

DEVELOPING YOUR LEADERSHIP ABILITIES

17. Since starting college, how many times have you participated in the following types of training or education that developed your leadership skills (ex: courses, Resident Assistant training, organization retreats, job training) (Circle one for each.)

17a- Short-Term Experiences (ex: individual or one-time workshops, retreats, conferences, lectures, or training)
Never once several many

17b-Moderate-Term Experiences (ex: a single course, multiple or ongoing retreats, conferences, institutes, workshops, and/or training).
Never once several many

If NEVER skip to 17c:

Did your experience involve any academic courses?
YES NO

If no, skip to 17c

a. How many leadership courses have you completed?

- b. How many other courses have you taken that contributed to your leadership abilities (e.g. ethics course, personal development courses, management courses)? *Keep in mind you might have taken such a course but it did not contribute to your leadership.*

17c- Long-Term Experiences (ex: multi-semester leadership program, leadership certificate program, leadership minor or major, emerging leaders program, living-learning program),
 Never once several many

if NEVER skip to 18

Which of the following Long-Term Activities did you experience? (check all that apply)

- Emerging or New Leaders Program
- Peer Leadership Program
- Leadership Certificate Program
- Multi-Semester Leadership Program
- Senior Leadership Capstone Experience
- Residential Living-learning leadership program
- Leadership Minor
- Leadership Major
- Other

ASSESSING LEADERSHIP DEVELOPMENT

18. Please indicate your agreement or disagreement with the following items by choosing the number that most closely represents your opinion about that statement.
 (Circle one response for each.)

For the statements that refer to a group, think of the most effective, functional group of which you have been a part. This might be a formal organization or an informal study group. For consistency, use the same group in all your responses.

- | | |
|------------------------------|---------------------------|
| 1 = Strongly disagree | 4 = Agree |
| 2 = Disagree | 5 = Strongly Agree |
| 3 = Neutral | |

- I am open to others' ideas..... 1 2 3 4 5
- Creativity can come from conflict..... 1 2 3 4 5
- I value differences in others 1 2 3 4 5
- I am able to articulate my priorities..... 1 2 3 4 5
- Hearing differences in opinions enriches my thinking..... 1 2 3 4 5
- I have low self esteem 1 2 3 4 5
- I struggle when group members have ideas that are different from mine..... 1 2 3 4 5

- Transition makes me uncomfortable.....1 2 3 4 5
- I am usually self confident.....1 2 3 4 5
- I am seen as someone who works well with others1 2 3 4 5
- Greater harmony can come out of disagreement.....1 2 3 4 5
- I am comfortable initiating new ways of looking at things1 2 3 4 5
- My behaviors are congruent with my beliefs1 2 3 4 5
- I am committed to a collective purpose in those groups to which I belong1 2 3 4 5
- It is important to develop a common direction in a group in order to get anything done.....1 2 3 4 5
- I respect opinions other than my own1 2 3 4 5
- Change brings new life to an organization.....1 2 3 4 5
- The things about which I feel passionate have priority in my life.....1 2 3 4 5
- I contribute to the goals of the group1 2 3 4 5
- There is energy in doing something a new way1 2 3 4 5
- I am uncomfortable when someone disagrees with me.....1 2 3 4 5
- I know myself pretty well1 2 3 4 5
- I am willing to devote the time and energy to things that are important to me.....1 2 3 4 5
- I stick with others through difficult times.....1 2 3 4 5
- When there is a conflict between two people, one will win and the other will lose.....1 2 3 4 5
- Change makes me uncomfortable1 2 3 4 5
- It is important to me to act on my beliefs...1 2 3 4 5
- I am focused on my responsibilities.....1 2 3 4 5
- I can make a difference when I work with others on a task.....1 2 3 4 5
- I actively listen to what others have to say1 2 3 4 5
- I think it is important to know other people's priorities.....1 2 3 4 5

- My actions are consistent with my values..... 1 2 3 4 5
- I believe I have responsibilities to my community..... 1 2 3 4 5
- I could describe my personality..... 1 2 3 4 5
- I have helped to shape the mission of the group..... 1 2 3 4 5
- New ways of doing things frustrate me..... 1 2 3 4 5
- Common values drive an organization..... 1 2 3 4 5
- I give time to making a difference for someone else..... 1 2 3 4 5
- I work well in changing environments..... 1 2 3 4 5
- I work with others to make my communities better places..... 1 2 3 4 5
- I can describe how I am similar to other people..... 1 2 3 4 5
- I enjoy working with others toward common goals..... 1 2 3 4 5
- I am open to new ideas..... 1 2 3 4 5
- I have the power to make a difference in my community..... 1 2 3 4 5
- I look for new ways to do something..... 1 2 3 4 5
- I am willing to act for the rights of others..... 1 2 3 4 5
- I participate in activities that contribute to the common good..... 1 2 3 4 5
- Others would describe me as a cooperative group member..... 1 2 3 4 5
- I am comfortable with conflict..... 1 2 3 4 5
- I can identify the differences between positive and negative change..... 1 2 3 4 5
- I can be counted on to do my part..... 1 2 3 4 5
- Being seen as a person of integrity is important to me..... 1 2 3 4 5
- I follow through on my promises..... 1 2 3 4 5
- I hold myself accountable for responsibilities I agree to..... 1 2 3 4 5
- I believe I have a civic responsibility to the greater public..... 1 2 3 4 5
- Self-reflection is difficult for me..... 1 2 3 4 5
- Collaboration produces better results..... 1 2 3 4 5
- I know the purpose of the groups to which I belong..... 1 2 3 4 5
- I am comfortable expressing myself..... 1 2 3 4 5

- My contributions are recognized by others in the groups I belong to..... 1 2 3 4 5
- I work well when I know the collective values of a group..... 1 2 3 4 5
- I share my ideas with others..... 1 2 3 4 5
- My behaviors reflect my beliefs..... 1 2 3 4 5
- I am genuine..... 1 2 3 4 5
- I am able to trust the people with whom I work..... 1 2 3 4 5
- I value opportunities that allow me to contribute to my community..... 1 2 3 4 5
- I support what the group is trying to accomplish..... 1 2 3 4 5
- It is easy for me to be truthful..... 1 2 3 4 5

THINKING MORE ABOUT YOURSELF

19. How would you characterize your political views?
(Mark One)
- Far left
 - Liberal
 - Middle-of-the-road
 - Conservative
 - Far right

20. In thinking about how you have changed during college, to what extent do you feel you have grown in the following areas? (Circle one response for each.)

1 = Not grown at all 3 = Grown
2 = Grown somewhat 4 = Grown very much

- Ability to put ideas together and to see relationships between ideas..... 1 2 3 4
- Ability to learn on your own, pursue ideas, and find information you need..... 1 2 3 4
- Ability to critically analyze ideas and information..... 1 2 3 4
- Learning more about things that are new to you..... 1 2 3 4

21. Please indicate the extent to which you agree or disagree with the following statements.
(Circle one response for each.)

1 = Strongly disagree 3 = Agree
2 = Disagree 4 = Strongly agree

- Since coming to college, I have learned a great deal about other racial/ethnic groups..... 1 2 3 4

- I have gained a greater commitment to my racial/ethnic identity since coming to college .. 1 2 3 4
- My campus's commitment to diversity fosters more division among racial/ethnic groups than inter-group understanding 1 2 3 4
- Since coming to college, I have become aware of the complexities of inter-group understanding..... 1 2 3 4

THINKING ABOUT LEADERSHIP

22. How confident are you that you can be successful at the following: (Circle one response for each.)
 1 = Not at all confident 3 = Confident
 2 = Somewhat confident 4 = Very confident

- Leading others..... 1 2 3 4
- Organizing a group's tasks to accomplish a goal. 1 2 3 4
- Taking initiative to improve something 1 2 3 4
- Working with a team on a group project..... 1 2 3 4

23. To what degree do you agree with these items?
 (Circle one response for each.)

- 1 = Strongly disagree
- 2 = Disagree
- 3 = neither agree or disagree
- 4 = Agree
- 5 = Strongly agree

- It is the responsibility of the head of a group to make sure the job gets done 1 2 3 4 5
- A person can lead from anywhere in the organization, not just as the head of the organization 1 2 3 4 5
- I spend time mentoring other group members..... 1 2 3 4 5
- I think of myself as a leader ONLY if I am the head of a group (e.g. chair, president) 1 2 3 4 5
- Group members share the responsibility for leadership 1 2 3 4 5
- I am a person who can work effectively with others to accomplish our shared goals..... 1 2 3 4 5
- I do NOT think of myself as a leader when I am just a member of a group 1 2 3 4 5
- Leadership is a process all people in the group do together 1 2 3 4 5
- I feel inter-dependent with others in a group. 1 2 3 4 5
- I know I can be an effective member of any group I choose to join..... 1 2 3 4 5

- Teamwork skills are important in all organizations 1 2 3 4
- The head of the group is the leader and members of the group are followers 1 2 3 4

YOUR COLLEGE CLIMATE

24. Select the number that best represents your experience with your overall college climate

- | | | |
|---|---------------|---------------------------------------|
| Closed, hostile, intolerant, unfriendly | 1 2 3 4 5 6 7 | Open, inclusive, supportive, friendly |
|---|---------------|---------------------------------------|

BACKGROUND INFORMATION

25. What were your average grades in High School?
 (Choose One)

- A or A+
- A- or B+
- B
- B- or C+
- C
- C- or D+
- D or lower

26. Did your high school require community service for graduation? (Circle One) YES NO

27. What is your age?

28. What is your gender?

- Female
- Male
- Transgender

29. What is your sexual orientation?

- Heterosexual
- Bisexual
- Gay/Lesbian
- Rather not say

30. Indicate your citizenship and/ or generation status:
 (Choose One)

- Your grandparents, parents, and you were born in the U.S.
- Both of your parents AND you were born in the U.S.
- You were born in the U.S., but at least one of your parents was not
- You are a foreign born, naturalized citizen

- You are a foreign born, resident alien/ permanent resident
- You are on a student visa

31. Please indicate your racial or ethnic background. (Mark all that apply)

- White/Caucasian
- African American/Black
- American Indian/Alaska Native
- Asian American/Asian
- Native Hawaiian/Pacific Islander
- Mexican American/Chicano
- Puerto Rican
- Cuban American
- Other Latino American
- Multiracial or multiethnic
- Race/ethnicity not included above

32. Do you have a mental, emotional, or physical condition that now or in the past affects your functioning in daily activities at work, school, or home?

Yes No

if Yes Please indicate all that apply:

- Deaf/Hard of Hearing
- Blind/Visually Impairment
- Speech/language condition
- Learning Disability
- Physical or musculoskeletal (e.g. multiple sclerosis)
- Attention Deficit Disorder/ Attention Deficit Hyperactivity Disorder
- Psychiatric/Psychological condition (e.g. anxiety disorder, major depression)
- Neurological condition (e.g. brain injury, stroke)
- Medical (e.g. diabetes, severe asthma)
- Other

33. What is your current religious affiliation? (Choose One)

- None
- Agnostic
- Atheist
- Buddhist
- Catholic
- Hindu
- Islamic
- Jewish
- Mormon
- Quaker
- Protestant (e.g. Baptist, Methodist, Presbyterian)
- Other
- Other Christian
- Rather not say

34. What is your best estimate of your grades so far in college? [Assume 4.00 = A] (Choose One)

- 3.50 – 4.00
- 3.00 – 3.49

- 2.50 – 2.99
- 2.00 – 2.49
- 1.99 or less
- No college GPA

35. What is the HIGHEST level of formal education obtained by any of your parent(s) or guardian(s)? (Choose one)

- Less than high school diploma or GED
- High school diploma or GED
- Some college
- Associates degree
- Bachelors degree
- Masters degree
- Doctorate or professional degree (e.g., JD, MD, PhD)
- Don't know

36. What is your best estimate of your parent(s) or guardian(s) combined total income from last year? If you are independent from your parents, indicate your income. (Choose one)

- Less than \$12,500
- \$12,500 - \$24,999
- \$25,000 – \$39,999
- \$40,000 – \$54,999
- \$55,000 - \$74,999
- \$75,000 - \$99,999
- \$100,000 - \$149,999
- \$150,000 - \$199,999
- \$200,000 and over
- Don't know
- Rather not say

37. Which of the following best describes where are you currently living while attending college? (Choose one)

- Parent/guardian or other relative home
- Other private home, apartment, or room
- College/university residence hall
- Other campus student housing
- Fraternity or sorority house
- Other

INDIVIDUAL CAMPUS ITEMS

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

Appendix B: List of Institutions in the Sample

Auburn University	Oregon State University
Brigham Young University	Portland State University
California State University – Northridge	Rollins College
California State University – San Marcos	Simmons College
Claflin University	St. Norbert College
Colorado State University	State University of New York – Geneseo
DePaul University	Susquehanna University
Drake University	Syracuse University
Drexel University	Texas A & M University
Elon University	Texas Women’s University
Florida International University	University of California at Berkeley
Florida State University	University of Arizona
Franklin College	University of Arkansas
George Mason University	University of Illinois
Georgia State University	University of Maryland, Baltimore County
John Carroll University	University of Maryland, College Park
Lehigh University	University of Maryland, Eastern Shore
Marquette University	University of Minnesota, Twin Cities
Meredith College	University of Nevada, Las Vegas
Metro State College of Denver	University of New Hampshire
Miami University of Ohio	University of North Carolina, Greensboro
Moravian College	University of North Dakota
Mount Union College	University of Rochester
North Carolina State University	University of Tampa
Northwestern University	

Appendix C: Correlation Matrices

Pearson Product-Moment Correlations Between Institutional Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Private secular	-	-0.272**	-0.140**	0.222**	-0.093**	0.162**	0.401**	-0.025**	0.019**	-0.077**	0.403**	-0.101**	-0.244**	0.174**	-0.057**	0.424**
2. Private religious		-	-0.150**	0.067**	0.435**	0.368**	0.094**	0.210**	0.016**	-0.061**	-0.110**	-0.085**	0.015*	0.237**	-0.303**	0.378**
3. Research intensive			-	-0.255**	-0.157**	-0.175**	-0.023**	0.117**	0.093**	-0.183**	-0.107**	0.031**	-0.014*	-0.275**	0.203**	-0.337**
4. Masters				-	-0.183**	0.087**	0.399**	0.139**	-0.129**	-0.074**	-0.125**	-0.097**	-0.022**	0.167**	-0.145**	0.262**
5. Bachelors					-	0.710**	-0.257**	0.220**	0.008	-0.234**	-0.077**	-0.060**	0.141**	0.064**	-0.212**	0.290**
6. Small						-	-0.287**	0.284**	0.122**	-0.261**	-0.086**	-0.067**	0.102**	0.043**	-0.129**	0.364**
7. Medium							-	-0.076**	-0.167**	0.034**	0.299**	-0.046**	-0.145**	0.282**	-0.180**	0.425**
8. Competitive								-	-0.359**	-0.374**	-0.123**	0.010	-0.018**	-0.048**	-0.139**	0.145**
9. Very competitive									-	-0.470**	-0.154**	0.171**	-0.061**	-0.050**	0.083**	-0.188**
10. Highly competitive										-	-0.160**	-0.125**	0.203**	-0.080**	0.227**	0.077**
11. Most competitive											-	-0.041**	-0.098**	0.273**	-0.145**	0.284**
12. Rural												-	-0.077**	-0.150**	-0.113**	0.221**
13. Small town													-	-0.361**	0.054**	0.012*
14. Suburban														-	-0.210**	0.188**
15. Primarily residential															-	-0.511**
16. Highly residential																-

* $p < .01$, ** $p < .001$

Pearson Product-Moment Correlation Between Measures of Involvement

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. HS Comm Orgs	-	0.464**	-0.024**	0.234**	0.170**	0.398**	0.055**	0.305**	0.035**	0.103**	0.057**	0.052**	-0.036**	0.088**	0.042**	0.177**
2. HS Volunteering		-	0.114**	0.294**	0.192**	0.179**	0.076**	0.151**	0.051**	0.149**	0.083**	0.046**	-0.092**	0.153**	0.121**	0.195**
3. HS Requirement			-	0.017**	0.027**	-0.043**	0.018**	-0.005	0.029**	-0.004	0.021**	-0.016*	-0.053**	0.044**	0.074**	-0.012
4. Pretest SRLS				-	0.127**	0.095**	0.021**	0.058**	0.015*	0.041**	0.035**	0.010	-0.023**	0.197**	0.058**	0.539**
5. College Orgs					-	0.119**	0.221**	0.224**	0.291**	0.251**	0.158**	0.142**	-0.222**	0.220**	0.200**	0.220**
6. Off Campus						-	0.083**	0.307**	-0.025**	0.106**	0.047**	0.033**	0.123**	0.114**	-0.156**	0.188**
7. Political Groups							-	0.130**	0.125**	0.144**	0.121**	0.045**	-0.055**	0.188**	0.055**	0.086**
8. Religious Groups								-	0.062**	0.167**	0.115**	0.049**	-0.089**	0.079**	0.068**	0.076**
9. Greek orgs									-	0.119**	0.065**	-0.015*	-0.072**	0.042**	0.114**	0.020**
10. Service groups										-	0.120**	0.061**	-0.072**	0.078**	0.061**	0.080**
11. Living/ learning com											-	0.073**	-0.076**	0.102**	0.118**	0.041**
12. # hours employed on												-	-0.197**	0.067**	0.056**	0.054**
13. # hours employed off													-	-0.002	-0.378**	0.060**
14. Socio-cultural scale														-	0.018**	0.390**
15. Living on campus															-	-0.041**
16. Posttest SRLS																-

* $p < .01$, ** $p < .001$

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