Does it make a Difference? An Examination of Intensive Academic and Social Supports Influence on Students of Color Post-Secondary Attendance

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Abstract

Academic and social supports are essential factors for the development of students of color during their high school career. These types of support enable students of color to maintain their motivation to graduate from high school. Additionally, academic and social supports provide students the necessary resources to enhance their cognitive and social skills. While there is no predetermined level of how much support students of color need to pursue a college degree upon high school graduation, I am determining whether one particular college condition, namely intensive academic and social supports, from Jeannie Oakes' (2003) conceptual model does influence students of color's post-secondary attendance. I discovered that the levels of both academic and social support vary across gender and race, specifically, among students of color and their white peers, and while I was not able to determine if there is an existing relationship between receiving both intensive academic and social supports and its influence of students of color decisions to pursue a college degree, it appears that students of color have less access to intensive academic and social supports during high school.

Introduction

For over fifty years, the United States education system has undergone a number of changes to provide equal educational opportunities for students of color. Tracing back to time, the *Brown v. Board of Education of Topeka* (1954), court cased over ruled the decision of *Plessy v. Ferguson* (1896) court cased which at the time was to have "separate but equal educational facilities." Since the over ruling of this court decision, the *Brown v. Board of Education of Topeka* led the way to other important events such as integration and the civil rights movement. Therefore, this historical event has enabled students of color specifically those who are African Americans and Hispanics to receive equal educational opportunities and share educational facilities with their white peers.

Even though students of color should be enjoying the luxury of equal educational opportunities, there is a lack of resources within the schools these students attend that prohibit them from pursuing a college degree (McLure & Child, 1998; Myers & Schirm, 1999). Out of all

the resources these students' schools lack, academic and social supports is by far one of the most critical resources needed for students to succeed (Saunders & Serna, 2004). When there is a lack of funding, students do not receive exposure to college preparation programs, qualified teachers, adequate school conditions, etc. (Myers & Schirm, 1999; Gullatt & Jan, 2003; Oakes, 2003; Myers, et. all, 2004). Due to the lack of resources within these schools, African Americans and Hispanics continue to struggle to apply, enter, and remain in college (Myers & Schirm, 1999; Myers, et. all, 2004; Gullatt & Jan, 2003; Saunders & Serna, 2004; Bergin, Cooks, Bergin, 2007). Several researchers have concluded that students of color are highly successful when they receive either academic or social support through their participation in a pre-collegiate preparation program or within their schools and home (Myers, et. all, 2004; Gullatt & Jan, 2003; Saunders & Serna, 2004; Bergin, Cooks, Bergin, 2007). Thus, graduating from high school is a milestone that many teenagers want to accomplish yet many do not have access to these important resources to be successful and while obtaining a college degree has become *the* definition of success for many students, few students of color compared to their white peers move on to college after high school completion.

For many students of color (Hispanics and African Americans) who represent working-class and ethnic minority backgrounds, attending college is simply a dream. Many researchers argue that students of color, especially those from a working-class background, lack access to many resources that would enable them to pursue a college education. Major challenges such as the admissions and financial aid processes, attainment of high test scores, alienation, and several other factors, may inhibit underrepresented students from continuing their education (Gullatt & Jan, 2003; McLure & Child, 1998; Myers & Schirm, 1999; Myers, et al. 2004; Saunders & Serna, 2004). It is important to have college opportunities because in college, students have the opportunity to develop strong cognitive and social skills, which can be transferred to multiple communities such as one's immediate family and college setting. More broadly, completing a post-secondary education prepares students to participate in democratic deliberation and innovative economies (Gullatt & Jan, 2003; Myers et al., 2004). According to King (2009), it is "estimated that 15% to 20% of the annual average growth in gross domestic product for the United States is explained by increases in educational levels" (p.1). Therefore, if these students are unable to attend college, they will have difficulty with social mobility.

A number of students of color receive academic and social support during high school which enables them to be better equipped for college. Research has been conducted to examine the impact of each support type individually however, not much research has been done to analyze how the levels of these supports vary. Therefore, for the purposes of this study I concentrate on intensive academic and social supports' influences on students of color's post-secondary attendance. Moreover, this study seeks to analyze how the levels of academic and social support vary across gender and race. The research questions guiding the study are: what is the relationship between intensive academic and social supports and college attendance? Are there college attendance differences by race and gender? I hypothesize that when students of color are provided both intensive academic and social supports their likelihood of attending a post-secondary institution increases. In particular, I hypothesize that the levels of support will vary across gender; males will have higher level of support than females. Alongside, the levels of support will vary across race; more specifically white students will have higher levels of support compared to students of color.

Literature Review

The literature has shown that when students of color receive support from their teachers, parents, and peers, they feel more inclined to graduate from high school (McLure & Child, 1998; Oakes, 2003; Zwerling & London 1992). Besides graduating from high school, the support of these people is essential for these students success. Many researchers have described this type of support as social support (Saunders & Serna, 2004). Researchers, Saunders and Serna (2004) have defined social support as the interaction between students and mentors who provide guidance and who are present in the student's lives. Furthermore, Saunders and Serna (2004) along with Gullatt and Jan (2003) agree that "In education, students with limited capital benefit from the development of relationships with caring educated adults" (p.148). Meaning that students who have low academic expectations, meaning that they do not believe they have the potential to pursue a degree higher than a high school and/or bachelor's degree highly benefit from relationships with adults who can communicate with them about college. Alongside, researchers agree that even though social support is important, academic support is also an essential piece for students of color to succeed in high school. Thus, when students of color are provided with academic support within their high schools, they are more academically prepared for what college entails.

Social Support

Researchers, Saunders and Serna (2004) argue that students are more likely to succeed due to the social support they receive from peers, educators, and most importantly parents. These researchers Saunders and Serna (2004) present the idea that when students with low-academic expectations (do not plan to complete a bachelor's degree or higher) develop relationship with educated adults; they are more likely to succeed because they have role models from which they can learn and receive moral support. In addition, Saunders and Serna (2004) along with Gullatt and Jan (2003) agree that "In education, students with limited capital benefit from the development of relationships with caring educated adults" (Saunders & Serna, p. 148, 2004). According to researcher Rendon (2006) in order for these students to apply to college upon high school graduation they need to be constantly reminded of their value and to believe in themselves. Rendon (2006) states that "validation does not assume students can form connections on their own and asks college faculty and staff to take the initiative in reaching out to students to assist them to learn more about college," therefore, high schools and college access programs need to build a strong social support foundation for these students to develop the courage to ask for help (p.5).

Intensive Academic Support

Many students of color receive academic support from their participation in college access programs along with the involvement of their teachers and parents in their educational career (Saunders & Serna, 2004; Bergin, Cooks, & Bergin, 2007; & King, 2009). For example, a student of color who resides in a low-income community, might be encouraged by his/her teachers to participate in programs such as GEAR UP and Upward Bound which promote the importance of taking college preparatory courses during high school to enhance the students' writing, reading, and oral skills (Bergin, Cooks, & Bergin, 2007). However, some researchers, Gullatt and Jan (2003), Oakes (2003), have found that students need more than just weekly meetings with tutors; they need intensive academic support throughout their participation in the

program. By intensive academic support, I am referring to students being able to develop strong course-related learning strategies, self-confidence, and most importantly self-advocacy skills (Bergin, Cooks, & Bergin, 2007). If students of color acquire the skills mentioned above, not only will they increase their academic abilities in and outside of the classroom, but they would also be able to practice professionalism (public speaking, communicating in large groups, etc.) among others in their course grade. Additionally, researchers, such as McLure & Child, (1998), Oakes (2003) and Bergin, Cooks, and Bergin (2007), all agree that based on what studies have shown, "when students set goals to achieve and learn in coursework, they have higher grades, greater comprehension, and improved learning compared to students in control conditions" (Bergin, Cooks, & Bergin, p. 6, 2007).

Consequently, providing intensive academic support for students of color will not only enable them to graduate from high school, but to also pursue a college degree compared to their peers who do not receive this type of support. More so, researcher, Myers, et. al. (2004), argued that when analyzing a study conducted in 2000 found that rather than the intensity of the college access program academic curriculum is more important for students of color to remain in the program and continue receiving these resources from ninth through twelfth grade. For instance, Myers, et.al found in the same study that students of color within "Upward Bound would have had larger effects if students remained in the program for longer periods of time" (Myers, et. al., p. 17, 2004). More participation from teachers in the classroom is needed in order for students of color to succeed and potentially apply, enter, and remain in college post-high school graduation (Assouline & Lupkowski-Shoplik, 2012). Thus teachers, counselors, and even parents will have a better understanding of the level of support each student needs in order to be successful.

A Conceptual Framework for Examining the Relationship between Intensive Academic and Social Supports and College Attendance

Jeannie Oakes (2003) developed a comprehensive conceptual framework that consists of essential school elements to ensure the successful preparation of students for college. As a result of Oakes' (2003) wide-ranging experiences in classroom settings she developed a seven condition conceptual model. This model describes seven conditions that middle and upper-class teenagers with college educated parents enjoy in their schools and communities. The seven conditions that schools should consists of are: 1) safe and adequate school facilities; 2) a college-going school culture; 3) a rigorous academic curriculum; 4) qualified teachers; 5) intensive academic and social supports; 6) opportunities to develop a multi-cultural college-going identity; and 7) family neighborhood-school connections. For this study, I have chosen to operationalize condition five: intensive academic and social supports from Oakes (2003) model to examine intensive academic and social supports and their influence on students of color decisions to attend college after high school graduation.

Methods

The literature review for this study was collected through various searches using online databases such as JSTOR, ERIC, and Google Scholar. Journal articles, studies, and reports were used to better understand how academic and social supports have been defined and utilized in the literature on students of color throughout their high school experience. Each type of support was analyzed separately to comprehend its unique role and how much of an impact it had on students of color's college decisions. The journal articles and reports helped me understand how

researchers define academic support and social support and what outcomes they employ in relation to academic and social support. In addition to examining a wide range of empirical studies, for the purposes of this study, I have also chosen to analyze secondary data, the Education Longitudinal Studies of 2002 (ELS2002) provided by the National Center for Education Statistics (NCES), and identify a number of variables from the ELS Codebook to operationalize condition five: intensive academic and social supports from Oakes (2003) model to understand the relationship of this condition to college going.

Data Source and Sample

The data were drawn from the ELS 2002-2006 panel, collected for NCES. The NCES surveyed 14,000 United States tenth graders in spring 2002, and these same respondents were re-surveyed in spring 2004 (when students were asked to report their intended high school graduation status) and in spring 2006 (two years post-high school, assuming a traditional high school path). The final sample of respondents who completed all three surveys included 12,554 youth attending public, religious, and private high schools throughout the United States. Information was also collected from the students' parents, teachers, and school administrators. Even though the final sample of respondents who completed all three surveys included 12,554 youth for the purposes of this study, the sample size I used was 1,244 respondents. Therefore, the tables included in this paper will only provide results that reflected 1,244 respondents who completed all three surveys. This sample size was chosen by randomly selecting 10% of entire sample of ELS. This decision was made because the primary purpose of this paper was to learn how to do good research within a short nine-week summer research program time-frame and it was a useful exercise to explore the actual data as an initial step of conducting research.

Variables

Within the ELS files, the L appendix included entire set of variables within the database. The ELS: 2002 Electronic Codebook (ECB) and Data Analysis System (DAS) consisted of an extensive list of variables and my first step was to identify those variables most relevant to this study. In order to apply what was found in the literature searches, I mainly focused on marking survey question items that surveyed tenth graders (coded as "bys") and twelfth graders (coded as "f1s") as well as their parents, teachers, and school administrators. Ultimately, for this study, I utilized survey responses from three sources. The first set of variables identified questions that were asked in the student survey (coded as BYS).The second set of variables referred to questions asked to the parent of the student (coded as BYP), and the third set of variables focused on questions that were asked to the school administrator at the school the student attended (coded as BYA).

To make data analysis manageable and to help arrive at a reduced list of five variables from hundreds of possible variables, I created an excel sheet where I listed all variables that related to academic and social supports. After all the variables were listed in the excel sheet, I focused on those that described both types of support. By focusing on variables that only described both academic and social supports I was able to omit a number of variables thereby reducing the variables I would ultimately analyze. To select each variable that represented both academic and social supports, I had to defend how it offered academic and social support to students of color during their high school career.

Again for purposes of this research study exercise, the variable selection was limited to five variables that represented both academic and social supports and which were derived from the student, parent, and administrator surveys. The variables chosen were: BYS41D, BYS41G, BYP69B, BYA12B, and BYA12C. The first variable asked students whether they participated in academic honor society (coded as BYS41D). Variable BYS41G asked students whether they participated in school academic club. The third variable asked respondents whether their parents have set family rules about doing homework (coded as BYP69). Variable BYA12B asked the school administrator to provide the percentages of students who participated in a work study program. Lastly, the fifth variable asked the school administrator to provide the percentages of students who participated in an academic counseling program (coded as BYA12C). Table 1 provides a more detailed justification of how each variable potentially represents how students simultaneously received academic and social supports.

Table 1. Description of Variables

Variable Name	Variable Label	Characteristic of Academic Support	Characteristic of Social Support
BYS41D	Participated in academic honor society	Encourage students to maintain good grades Increase class participation to obtain good grades Behavior performance	Build a circle of friends with similar interests Peers encourage student to continue doing well
BYS41G	Participated in school academic club	Assistance from expert (tutor/teacher) in the subject area	Interact with other students Create study groups Share knowledge with other students
BYP69B	Parents who set family set rulers for 10th grader about doing homework	Students feel the need to complete homework	Parents are encouraging children to have discipline
BYA12B	Percentages of students who participated in a work study program	Provide opportunities to study in their working place Develop management skills Develop deadline commitments	Develop communication, leadership, and organization skills Receive guidance to be prepare for the workforce
BYA12C	Percentages of students who participated in an academic counseling program	Counselors provide advice on course schedule; educational plans post-high school; suggestion for extracurricular involvement/ jobs	Counselors provide advice on life decisions; familial issues

Data Cleaning and Data Analyses

As an analytic strategy, I ran initial frequencies, recoded variables,, and ran descriptive statistics such as means and standard deviations on SPSS software. SPSS stands for Statistical Package for Social Sciences. SPSS software if often used to collect, analyzes, and interprets large datasets. The statistical methods in SPSS and the datasets used can vary depending on the study, but for this study, SPSS was used to interpret the ELS 2002-2006 survey. In order to address how non-college and college attendees were distributed by gender and race, I ran frequencies at the beginning of my analyses to find any mistakes I may have made in the data entry. This exercise listed all the values obtained for the chosen variables along with the number of respondents who were assigned to that value. By running frequencies on the chosen variables, I was able to check for accuracy of values and it enabled me to double-check every variable used in this study.

Once the frequencies were run on the chosen variables, I had to recode each variable. I recoded some values in each variable as missing. For example, variable BYS41D consisted of other values such as -6. -4, -2, etc. which meant that students responded with something else than yes or no. As A result the missing values were replaced with means of each variable. Mean replacement is a commonly used method to substitute missing values in small sample data. Finally I ran descriptive statistics to get means and standard deviation for each variable and all three groups. I have provided an explanation of all tables included in the paper. These tables will provide descriptive statistics including percent distribution, means, and standard deviation of students who attended college and those who did not attend college. Table 2 shows the distribution of non-college attendees and college attendees across gender and race. The main purpose of tables 3 and 4 is to showcase the means and standard deviations of non-college and college attendees divided by gender (see table 3) and gender (see table 4). By completing these tables my expectations are to capture whether there are any differences in the selected variables between non-college attendees and college attendees.

Results

Table 2. Distribution of College Attendance by Gender and Race

Table 2 presents the distribution across students who did not attend college and those who attended college. This table was divided into two sub-groups: gender and race. According to table 2, a total of 294 students did not attend college upon high school graduation while a total of 950 students attended college. Based on the data, it can be inferred that more students attended college after graduating from high school. Even though there are a large number of students who attended college after high school graduation, there are significant differences across gender and race distributions.

According to table 2, across college attendees and non-college attendees, males are more prominent in each group. Out of the 294 students who did not attend college, males accounted for 58% of the group. On the contrary side, out of the 950 students who attended college, males accounted for 47% of the total group size (447 male college attendees). In other words, a higher proportion of men are found among the non-college attendees than college attendees. Additionally, females accounted for 42% of the total non-college attendee group (124 female non-college attendees). In comparison to the percentage of female college attendees (53%; 503 female college attendees), the data shows that there is not a significant difference among female

non-college and college groups. More so, the data shows that the percentage of males who do not attend college is higher than that of females. In terms of the distribution of college attendance across race, students of color accounted for 53% (156 students) of the students who did not attend college, compared to their white peers, who did not attend college 47% (138 students). Nonetheless, when comparing students of color who attended college to their white peers who also attended college, there is an existing gap. Students of color only accounted for 41% of the total number of college attendees. Paralleled to their white peers, who accounted for 59% of the total number of college attendees there is a 18% difference among these two groups.

Table 2. Distribution of College Attendance by Gender and Race

	No College (n=294)	College (n=950)
Gender		
Male	170 (58%)	447 (47%)
Female	124 (42%)	503 (53%)
Race		
Students of Color	156 (53%)	391 (41%)
White	138 (47%)	559 (59%)

Table 3. Means and Standard Deviations by Gender

In table 3, the data presented displays the means and standard deviations of non-college attendees and college attendees by gender. The overall sample means are also presented in order to show the average level of each variable. In examining whether a student participated in an academic honor society, non- college attendees have lower average levels of participation than college attendees. Among the non-college attendees, only 5% of female and 5% of male students participated in academic honor society whereas 12% and 10% of college attendees did. In terms of school academic club participation, non-college attendees also have lower participation rate on average. Among non-college attendees, only 8% of females and 3% of males participated in school academic club compared to the participation of college attendees where 12% of females and 9% of men participated. Among the females, similar rates of participation are identified with respect to participating in an academic honor society or a school academic club.

When asked whether respondents' family has set rules about doing homework, non-college attendees have lower levels of family rules about doing homework. In this case, 87% of female and 92% of male reported that they did not have family rules about doing homework while their college attendee peers both reported that 91% of them had family rules about doing homework. Even though there was a difference in percentages among non-college and college females, the average across groups is similar. Based on the date presented in table 3, the non-college attendees attend high schools with students who have lower participation rates in both work study and academic counseling programs. Thus, non-college attendees came from high schools with greater participation rates in work study programs (see the mean of non-college females=7.97 whereas the mean of college females=8.64). However when comparing males who came from high schools with high participation rates in work study programs (see the mean of non-college males=9.40 whereas the mean of college males=8.81), it shows that in terms of work study participation non-college attendees might have higher aspirations for getting jobs

rather than attending college after graduating high school. Lastly, the high school administrator reported that students who did not attend college came from high school with low rates of participation in academic counseling programs (see the mean of non-college female=78.94 while the mean of college female=77.91). Nonetheless, college males who participated in an academic counseling program have a higher participation rate than all the students (see the mean of college male=77.88 compared to all students mean=76.19).

Table 3. Means and Standard Deviations by Gender

Variable	Scaling	No College			College		
		All (n=294)	Female (n=124)	Male (n=170)	All (n=950)	Female (n=503)	Male (n=447)
Participated in academic honor society	0=no; 1=yes	.05 (.21)	.05 (.22)	.05 (.20)	.11 (.31)	.12 (.32)	.10 (.29)
Participated in school academic club	0=no; 1=yes	.05 (.21)	.08 (.27)	.03 (.15)	.11 (.31)	.12 (.32)	.09 (.29)
Family rules for 10th grader about doing homework	0=no; 1=yes	.90 (.27)	.87 (.30)	.92 (.23)	.90 (.27)	.91 (.26)	.91 (.28)
Percentages of students who participated in work study program	Continuous, 0-50%	8.79 (6.46)	7.97 (5.21)	9.40 (7.20)	8.72 (5.77)	8.64 (5.52)	8.81 (6.10)
Percentages of students who participated in an academic counseling program	Continuous, 0-100%	76.19 (28.26)	78.94 (27.44)	74.18 (28.76)	77.89 (28.21)	77.91 (28.29)	77.88 (28.16)

Note: The decimal numbers outside the parentheses represent the mean and inside the parentheses is the standard deviation of each variable.

Table 4. Means and Standard Deviations by Race

In table 4, the data shows means and standard deviations of non-college attendees and college attendees by race. More specifically, the overall sample means are also presented in order to show the average level of each variable. In examining whether students participated in an academic honor society, non- college attendees have extremely lower average levels of participation than college attendees. Among the non-college attendees, only 7% of students of color and 3% of white students participated in an academic honor society whereas 7% and 13% of college attendees were participants in an academic honor society. When students were asked about school academic club participation, non-college attendees also have lower participation rates on average. Among students who did not attend college, only 7% of students of color and 3% of white non-college attendees reported participation in a school academic club compared to 9% and 12% of students of color and white students, respectively that participated. According to the data, both students of color and white students who attended college have equal participation rates in an academic honor society and school academic club.

Furthermore, when respondents were asked whether they had set family rules about doing homework, non-college students of color (88%) have the same level of family rules about doing homework than their non-college white peers (91%). In addition, students of color whose family set rules about doing homework have a higher mean than all students (see the mean for students of color college attendee=92% but the mean of all students=90%). However, only 89% of white

students reported to have family rules about doing homework. According to the school administrator's report, non-college students of color come from high schools with lower participation rates in work study programs than students of color who attended college (see the mean for students of color non-college attendee=8.64but the mean of college students of color=8.97). Surprisingly, the mean for white students who did not attend college and participated in a work study program is much higher than that of white college attendees (see the mean for white non-college students=8.97 whereas the mean of white college students=8.40). The data presented on this table shows the high school of students of color who did not attend college and those who did have very close participation rates in academic counseling programs. When comparing students of color who attended college to their white college peers, students of color come from high schools where there is a higher participation rate in academic counseling programs.

Table 4. Means and Standard Deviations by Race

Variable	Scaling	No College			College		
		All (n=294)	SoC (n=156)	White (n=138)	All (n=950)	SoC (n=391)	White (n=559)
Participated in academic honor society	0=no; 1=yes	.05 (.21)	.07 (.25)	.03 (.15)	.11 (.31)	.07 (.26)	.13 (.33)
Participated in school academic club	0=no; 1=yes	.05 (.21)	.07 (.25)	.03 (.17)	.11 (.31)	.09 (.29)	.12 (.32)
Family rules for 10th grader about doing homework	0=no; 1=yes	.90 (.27)	.88 (.27)	.91 (.26)	.90 (.27)	.92 (.23)	.89 (.30)
Percentages of students who participated in work study program	Continuous, 0-50%	8.79 (6.46)	8.64 (6.04)	8.97 (6.92)	8.72 (5.77)	9.18 (6.20)	8.40 (5.44)
Percentages of students who participated in an academic counseling program	Continuous, 0-100%	76.19 (28.26)	78.92 (25.26)	73.10 (31.11)	77.89 (28.21)	78.28 (26.36)	77.63 (29.46)

Note: The decimal numbers outside the parentheses represent the mean and inside the parentheses is the standard deviation of each variable.

Conclusion

Based on my analysis the results indicate that males and females as well as students of color and white students have different levels of academic and social supports. Generally, the mean levels of reported support among college attendees were higher than the non-college attendees which may suggest that having intensive academic and social supports does relate to eventual college enrollment. I do not know whether these differences significantly influence post-secondary attendance post high school graduation because I did not do a significant test which requires another set of strategies. For the purposes of this study, significant difference tests were not needed. The results shown above are the preliminary analyses to further explore the descriptive patterns of my interested variables. For future analysis, I will have to conduct a significant test using t-tests and then regression analysis.

Overall, this study enabled me to understand the process of doing a preliminary analysis and become more exposed to research. In order to acquire more significant findings, I would like to apply these analyses to the total sample population. In addition, I would like to explore some

of the differences that appeared in terms of support levels across race and gender. Some variables presented that students of color had higher levels of both academic and social support compared to their white peers but the percentages of students of color who attended college was lower than that of white students and I would like to explore this phenomenon more fully.

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