DOES PARTICIPATION IN EXTRACURRICULAR ACTIVITIES IMPACT STUDENT ACHIEVEMENT?

Kristen J. Passarello

Dowling College, Oakdale, USA

Mrs.Passarello@gmail.com

Cristina M. Lenis

Dowling College, Oakdale, USA

Tm2la04@aol.com

Yansi V. Romero

Dowling College, Oakdale, USA

yansiromero@gmail.com

Kevin J. Maser

Dowling College, Oakdale, U.SA

kthemaze@optonline.net

Elsa-Sofia Morote

Dowling College, Oakdale, USA

morotee@dowling.edu

Bios

Kristen Passarello. Dowling Doctoral Student, Curriculum Associate for Secondary Science and Technology in Deer Park Union Free School District, M.S. in Educational Administration and Certificate of Advanced Study in Educational Leadership and Administration from The College of Saint Rose, M.A. in Secondary Education in Biology from Adelphi University, B.A. in Biology and B.A. in Behavioral Science with a minor in Chemistry and a minor in Art from Concordia College.

Cristina M. Lenis. Dowling Doctoral Student, Assistant Director, M.A. from Touro College in Special Education, M.A. from Touro College in Childhood Education, Grades 1-6, B.A. from Queens College in Psychology, Special Education Itinerary Teacher, Pre-School Teacher, Applied Behavioral Analysis Therapist, more info https://sites.goggle.com/site/touroclenis/home

Yansi V. Romero. Dowling Doctoral Student, Elementary school teacher Special Education Teacher, Bilingual teacher, M.A. obtained from Hofstra University, B.A. from Saint Joseph's College, Spanish Society Club.

Mentors:

Kevin J. Maser, Ed.D. Chairperson of Science at H. Frank Carey High School in Franklin Square, Adjunct Professor of Mathematics Instruction at Dowling College in Oakdale, and Corresponding Secretary for the Long Island STEM Education Leaders Association. Doctoral degree in Educational Administration, Leadership, and Technology from

Dowling College, Advanced Certificate in School Administration and M.S. in Secondary Science Education from Queens College, and a B.S. in Secondary Science Education from SUNY Oswego.

Elsa-Sofia Morote, Ed.D., Professor, Department of Educational Administration Leadership and Technology, Dowling College, international scholar, and researcher trained at the Massachusetts Institute of Technology (MIT). More info http://internationalprofessor.com

Abstract

The purpose of this study was to investigate the relationship between 11th grade students participating in after school sports, and organizations or both, on students' final Grade Point Average (GPA), English Language Arts (ELA) scores and Math scores. In addition, this study examined how participating in after school sports or in an after-school organization impact their self-concept and academic concept and determined the effect they had on students' Math scores, ELA scores, and overall GPA. This study was conducted in two high schools located in suburban, Long Island, New York, with a predominantly White population. The respondents in this study consisted of 284, 11th grade students. The data was analyzed using the structural equation model. Findings show that there is a correlation between percent of participation in organization and academic self-concept. There is a correlation between self-concept and academic self-concept as well as a correlation between self-concept and percent participation in sports. An inverse correlation was found between the percent of participation in an organization and self-concept.

Keywords: Organizations, ELA, Math, Sport(s), Variables, Self-Concept, Academic Self-Concept, Factor Analysis, Structural Equation Model

DOES PARTICIPATION

IN EXTRACURRICULAR ACTIVITIES IMPACT STUDENT ACHIEVEMENT?

Purpose of the Study

Growing evidence demonstrates the overall value of participation in organized activities for positive youth development, including fewer behavior problems, improved academic self-concept, and increased educational achievement (Feldman & Matjasko, 2005). To date, there haven't been many studies to determine if various extracurricular activities in combination have a greater impact than one particular type alone. Though there has been a great deal of research surrounding athletic extracurricular activities, there hasn't been much research comparing various types if extracurricular activities to determine if certain extracurricular activities has a greater affect on a student's overall grade point average or academic self-concept. The review of relevant literature indicated relationships among participation in extracurricular activities and academic achievement. Adolescent students' involvement in extracurricular activities, both athletic-based and academic-based, has shown to increase student achievement and increase academic self-concept. Researchers have essentially showed agreement throughout the review of literature.

This study is important because much of today's research tend to support the academic and psychological development benefits of extracurricular involvement. Many think that by participating in a variety of different organized activities will bring higher grades motivation and a positive self-concept. What we fail to realize is that for some youth overscheduling them with extracurricular activities can bring about negative consequences academically and psychologically.

The study also examined the effect of four variables (Academic Self-concept, Self-Concept, Percent of participation in sports and percent of participation in an organization) on students' academic achievement. Academic achievement is measured by scores in ELA, Math, and overall GPA. The study was conducted in two suburban, Long Island, New York high schools with a predominantly White population. Many schools encourage Middle school and High school students to join sports. This study will help schools determined which type of extracurricular makes the biggest positive impact on academic achievement.

Statement of the Problem

1. What is the relationship among the four variables (self-concept, academic self-concept, level of student participation in after-school sports and organizations) and the final Grade Point Average (GPA), English Language Arts (ELA) and Math scores for eleventh graders?
2. What is the impact, if any, of the four variables (self-concept, academic self-concept, level of student participation in after-school sports and organizations) on the Final Grade Point Average (GPA), English Language Arts (ELA) and Math scores for eleventh graders?

Theoretical Framework

Participation in school-based extracurricular activities like sports, the arts, and academic clubs, provides opportunities for student growth both educationally and developmentally (Mahoney et al., 2006). There have been many studies that show a positive relationship between participating in after school sports or an organizational activity and a student's final Grade Point Average (GPA). Mahoney et al., (2005) stated

activity participation by adolescents has been found, to be linked with higher educational attainment and achievement reduced problem behaviors and heightened psychosocial competencies (Mahoney et al., 2005). Astin (1984) and Tinto (1975) stated involvement helps students connect with their institution and develop attachment that encourages exploration and it facilitates social interaction by increasing peer friendships and time with faculty and staff (Astin, 1984; Tinto, 1975). For the purposes of this study, the review of the research literature is divided into the following topical headings: academic self-concept, academic achievement, and extracurricular activities.

Academic Achievement

Many researchers have hypothesized that there is a significant correlation between academic achievement and the level of extracurricular participation, marked by increases in students' academic achievement (Feldman & Matjasko, 2005). Early research reported mixed results as to the association between participation in extracurricular activity and academic achievement in the form of grade point average (Holland & Andre, 1987). Extracurricular activities are believed to influence academic self-concept (Jacobs, Vernon, & Eccles, 2004). Stakeholders are concerned about educational performance within the public school setting. Many school reforms have been based off of these concerns stemming from student's academic achievement.

Within the recent past and in the unforeseeable future, most public school districts have endured and will continue to immanent budget cuts. Unfortunately, some of the first places school districts look to curb spending is within their extracurricular activities. Now that there is more research available regarding the impact of these extracurricular activities on students' academic achievement and academic self-concept, school boards

can now use this research to justify the spending on these programs. By focusing on student achievement, rather than money alone, school board members and school district administrators can see the correlation to support the maintenance and increased funding on such extracurricular activities (Goodman & Young, 2006).

In considering the correlation between academic achievement and the level of extracurricular participation, researchers have hypothesized that extracurricular participation is associated with increases in students' academic achievement (Feldman & Matjasko, 2005). In addition, the study done by Larson (2000) showed involvement in psychology activities was highly associated with student academic achievement and satisfaction. When motivation is involved it shows in the individual's outcomes in relationship to academic achievement and self-concept.

Participation in school extracurricular activities and community youth organizations has been found to be correlated with higher self-esteem, feelings of control over one's life, lower rates of delinquency, and higher educational aspirations and achievement (Holland & Andre, 1987; Larson, 1994). After analyzing longitudinal data from a sample of 10,000 youths in the High School and Beyond Study, Marsh (1992) found significant relationships between participation in extracurricular and community activities and positive changes in self-concept, schoolwork, and educational and occupational aspirations from 10^{th} to 12^{th} grade. Mahoney et al. (2003) found that whether, a child is participating in an after school sport or organization, it benefits them tremendously. He concluded participation in high school extracurricular contexts may give youth the opportunity to develop interpersonal competence and set goals, which in turn can increase educational attainment (Mahoney et al., 2003).

Academic Self-Concept

Conventional wisdom suggests that academic performance should be related to general self-esteem. According to Goodman and Young (2006), the higher the student's academic performance, the higher their self-esteem should be and vice versa. According to Holland and Andre (1987), all students start school being identified with academics, meaning their academic performance is relation to how they feel about themselves. Self-esteem, however, is only one of several predictors of academic performance (Steele, 1992). Being that many prior studies have shown that academic self-concept is significantly related to academic performance, further studies have been conducted to isolate the affect of academic self-concept between various ethnicities, and between genders.

In Marsh's study, he analyzed data collected in grades 10, 11, 12, and one year after graduation for 1,456 students. He found that reported grades for 11th and 12th graders were significantly related to academic self-concept measured the previous year. Therefore, prior academic self-concept influenced subsequent academic achievement (Marsh, 1990).

Marsh and Yeung (1997) examined academic self-concept, school grades, and teacher ratings of achievement for three high schools over a three-year period using 603 participants. They found that there was a clear correlation between academic self-concept and academic achievement effects. Using structural equation models (SEM's), both academic self-concept and academic achievement were measured with numerous factors for each overall grade point average. Marsh and Yeung (1997) used the SEM's to assess the effects of prior academic self-concept on subsequent achievement while

controlling for the results of previous academic achievement. Further, they evaluated the influences of prior academic achievement on consecutive academic self-concept while monitoring the effects of prior academic self-concept. Those results were similar for both males and females. When comparing gender, females had higher achievement scores for English and math.

Extracurricular Activities

In Mahoney et al., (2006), recent national survey showed that more than 80% of children and youth participated in extracurricular contexts (Mahoney et al., 2006). Eccles and Gootman (2002) and Holland and Andres (1987), also stated there is an increasing awareness that participation is organized activity contexts offers valuable opportunities for growth and positive youth development (Eccles & Gootman 2002; Holland & Andres 1987). Participating in extracurricular activities becomes increasingly important during adolescence, as youth explore their emerging interests and identities, make friends with others, and strive to fit in with their peers. Participation in school-based extracurricular activities, like sports, the arts, and academic clubs, is a normative and important part of the school experience for many youth (Fredicks, 2012). In Fredricks and Eccles (2006), "adolescents participating in a greater number of activities in 11th grade obtained a higher grade point average and had greater point average and greater expectations about their educational attainment during and after high school" (Fredicks & Eccles, 2006, p.12). Prior research tends to support the developmental benefits of extracurricular involvement; participating in a range of organized contexts is related to higher grade, motivation, and school completion rates (Fredicks, 2012).

Hamachek (1995) stated that self-concept and school achievement are related. The only issue is how we look at this relationship; does self-concept produce achievement or does achievement produce self-concept. If academic achievement leads to self-concept/self-esteem, it would appear that there is some intervening variable (Hamachek, 1995).

Athletic Extracurricular Activities

Crosnoe (2001) studied 3,237 adolescents to determine if there was an association between male and female athletes in high school. He used information from students who completed six questionnaires in three consecutive school years from 1987 to 1990. In using the results from all three years, he reported that athletes placed a greater value on education than non-athletes and athletic participation generally has a positive association with academic achievement. Crosnoe (2001) was able to determine that female students had immediate academic improvement from athletic participation, however, for male students, the success took place over a longer period of time. For females, the greatest benefit of athletic involvement was their relationships to academically oriented friends. For males, athletic participation promoted involvement with positive academically oriented friends, which was associated with higher academic achievement after high school.

Equally important, Shulruf (2010) stated that extra-curricular activities are an integral component of school life. Marsh & Kleitman (2003) and McCarthy (2000), study found that participation in athletics is linked to improved school attendance, academic outcomes, social relationships and self--esteem (Marsh & Kleitman, 2003; McCarthy, 2000; Shulruf, 2010).

Academic Extracurricular Activities

McCarthy (2000) found that there is a significant correlation between academic extracurricular activities and academic performance. McCarthy's study proved that students who participate in academic extracurricular activities are stronger performers academically, and typically report higher GPA's than noninvolved peers or students who participated in other types of out-of-district extracurricular activities (McCarthy, 2000).

Fredicks (2012) concluded in his study that not many 10th-grade students in America were overscheduled in activities; students were not participating in any sports or organizations. Participation plays a very important part when it comes to playing sports and/or being in an organization because students are the ones that seek out their preference and most favorable one. Also, Shulruf (2010) stated that the participation in extracurricular activities does not affect students' educational outcome positively or negatively.

Definition of Terms

Self-concept is a "self-procured idea of something formed by mentally combining all aspects of the student's being. This may include and be expressed as psychological well-being, mood, and general confidence" (Hamachek, 1995 as cited in Maser, 2007, page 11).

"Academic self-concept is the perception that students have about themselves regarding their academic performance, abilities, and achievement" (Marsh & O'Neill, 1984 as cited in Maser, 2007, page 11).

"Extracurricular activity is any structures, school-sponsored activity which falls outside the normal school day. The activities are limited to non-credit sports teams and organizations" (Conners-Harris, 1999 as cited in Maser, 2007, p. 11)

The level of participation in "extracurricular activities for the 2005-2006 school year will identify the level of students' participation. The minimum numbers of hours required by faculty to supervise students in their particular activity, as identified in the School District's Collective Bargaining Agreement, will be used to identify the students' *level of participation* in extracurricular activities (Maser, 2007, page 10).

As identified in the School District's Collective Bargaining Agreement, the students' *level of participation* in extracurricular activities will be identified by the minimum numbers of hours required by faculty to supervise students in their particular activity.

Methods, Techniques, or Modes of Inquiry

The participants in this study were 11th-grade students in two suburban high schools in Long Island, New York. Eleventh-grade students were selected because they had attainted the highest-grade level before they had an opportunity to drop out. The survey instrument was developed by Maser (20007) administered to 11th-grade students during their social studies classes to learn more about the survey. IRB was approved and consent forms were used. .

The total combined 11th grade population of both schools was essentially even and consisted of 1,284 students that was predominantly White population of 88.5 percent. The minority population of 11.5 percent demographic composition was comprised of 4.0 percent Asian, 0.9 percent Black, 6.2 percent Hispanic, and 0.4 American Indian,

Alaskan or Pacific Islander. Eligibility for free or reduced lunch comprised 8.2 percent of the student population.

Instruments

Three parts were used in the survey instrument for this study (Maser, 2007, p.51). The first part consisted of five questions which were demographic for the first two, and self-reported final English grade, final math grade, and final grade point average (GPA) for the third, fourth and fifth. Grade ranges were given to the respondents to choose for the final English grade, final math grade, and final grade point average (GPA). The grade ranges and the corresponding number values used to calculate the final English grade rank, final math-grade rank, and final grade point average (GPA) rank are represented in Table 1.1.

Table 1.1

Grade Ranges and the Corresponding Number Values Used to Calculate the Final English Grade Rank, Final Math Grade Rank, and Final Grade Point Average (GPA) Rank

Grade Range	Corresponding Number Value
Below 50%	1
50% - 55%	2
56% - 60%	3
61% - 65%	4
66% - 70%	5
71% - 75%	6
76% - 80%	7
81% - 85%	8
86% - 90%	9
91% - 95%	10
96% - 100%	11
Higher than 100%	12

The last part of the survey instrument Maser (2007, p.52) asked if the respondent participated in extracurricular activities. If the respondent answered no, the respondent

was finished and the question as recorded as no participation. If the respondents answered yes, he/she then had to indicate in which extracurricular activity or activities he/she had participated. Students were given a choice of 16 sports and 39 organizations from which to chose. The determination for identifying the extracurricular activities used on the survey instrument was made based on a list of activities given to the researcher by the superintendent of schools.

Reliability

Content validity and construct validity were use to evaluate to the items consistency. An alpha coefficient of internal consistency was computed to assess the reliability of each of the variables that comprised the survey after the factor analysis.

Data Analysis

1. What is the relationship among the four variables (Self-concept, academic self-concept, level of student participation in after-school sports and organizations) and the final Grade Point Average (GPA), English Language Arts (ELA) and Math scores for eleventh graders? This question will be answered by correlation analysis.
2. What is impact of the four variables (self-concept, academic self-concept, level of student participation in after-school sports and organizations) on the final Grade Point Average (GPA), English Language Arts (ELA) and Math scores for eleventh graders? This question will be answered by correlation analysis.

Results

Dependent variable: English

Figure 1.1

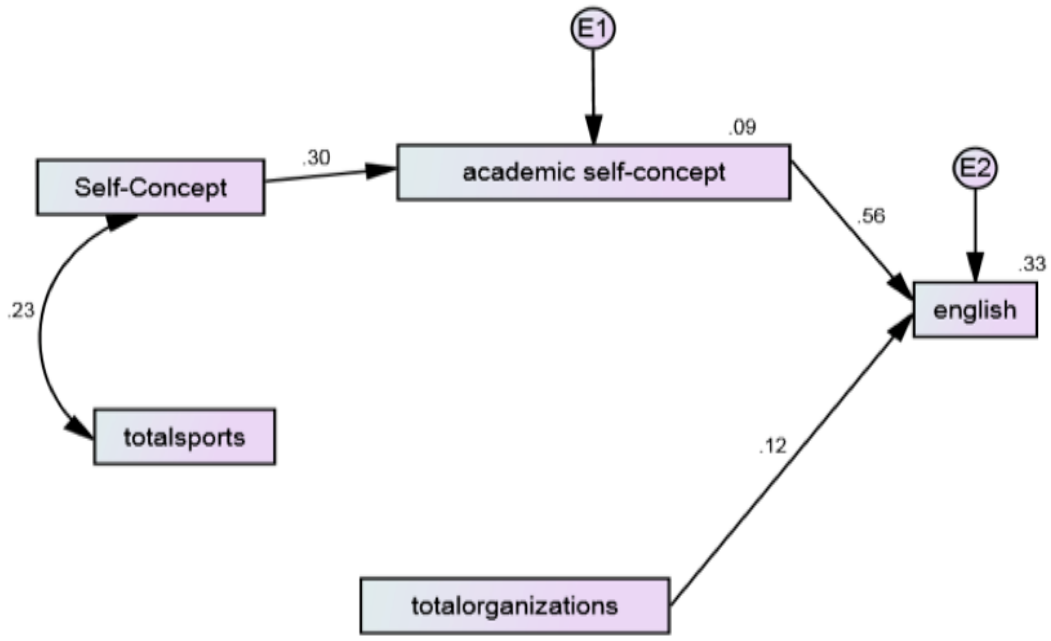

Figure 1.1 shows that there is a weak correlation between percent of participation in organization and academic self-concept. In contrast, percent of participation on organization inversely correlates with participation in **S**ports. That means that the more of a student participates in a sport the less he/she will participate in an organization. There is a negative correlation between the percent of participation in an organization and self-concept. There is a correlation between self-concept and academic self-concept. There is a correlation between self-concept and percent participation in sports.

Figure 1.1 displays the following influences utilizing the standardized beta weights: value .56 is the effect of academic self-concept on the students' English GPA and value .12 is the effect of students' participation in organizations on the students' English GPA. The level of student participation in sports activities had no direct effect on the students' English GPA's. The entries .56 and .12 are standardized beta regression weights. This prediction has an r2= .33 which indicates 33 percent variance of the students' English GPA ranks is explained by the students' academic self-concept, participating in organizations and participating in sport activities. This indicates that 33 percent of the effects can be predicted.

Dependent variable: Math

Figure 1.2

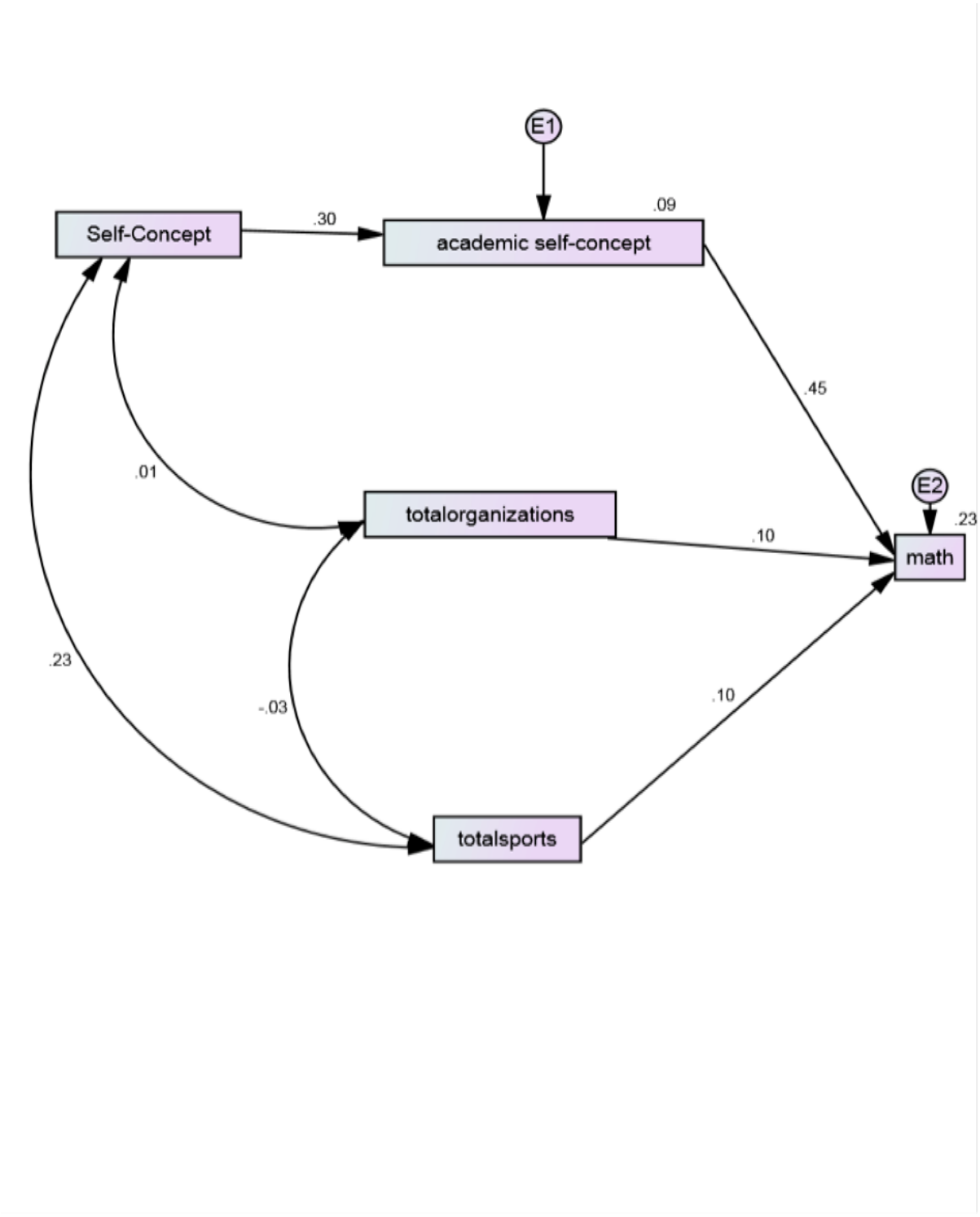

Figure 1.2 shows that there is a strong correlation between percent of participation in an organization and self-concept. There is a correlation between self-concept and academic self-concept. That means that a student's positive self-concept about themselves will show in their academics. There is a weak correlation between self-concept and the percent of participation in an organization. There is a weak correlation between the percent of participation in sports and the participation in an organization. That means that the more a student participates in a sport the less he/she will participate in an organization and vice versa.

Figure 1.2 displays the following influences utilizing the standardized beta weights: value .45 is the effect of academic self-concept on the students' Math scores, value .10 is the effect of students' participation in organizations on the students' Math scores and value .10 is the effect of students' participation in sports on the student's Math scores. The level of student participation in sports activities had a weak correlation with the student participation in organization. The level of organization had a weak correlation with self-concept. The entries .45, .10 and .10 are standardized beta regression weights. This prediction has an r2= .23 which indicates 23 percent variance of the students' Math score ranks is explained by the students' academic self-concept, participating in organizations and participating in sport activities. This indicates that 23 percent of the effects can be predicted.

Figure 1.3

Dependent variable: Final Grade Point Average (GPA)

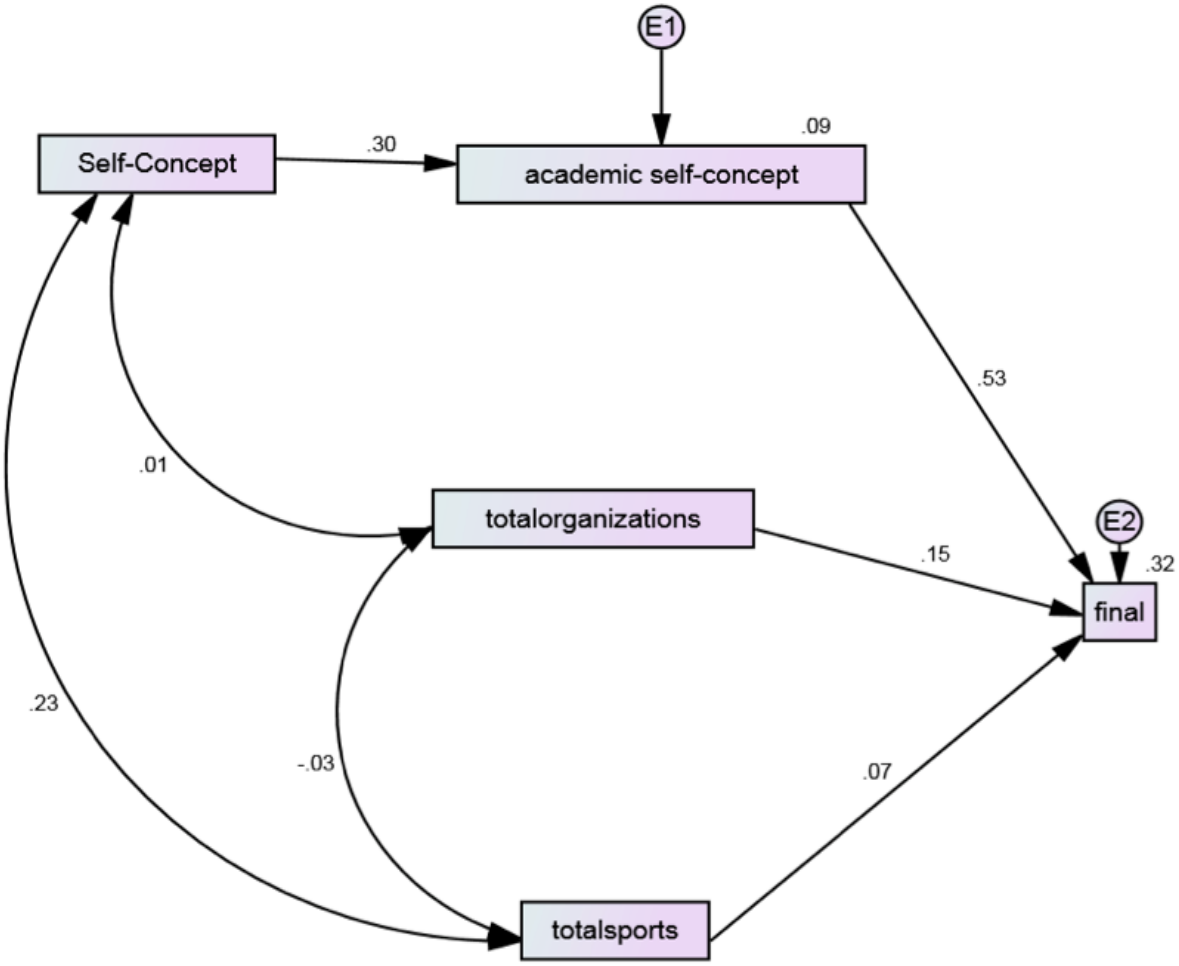

Figure 1.3 shows that there is a strong correlation between percent of participation in an organization and self-concept. There is a strong correlation between self-concept and academic self-concept. That means that a student's positive self-concept about themselves will show in their academics. There is a weak correlation between self-concept and the percent of participation in an organization. There is a weak correlation between the percent of participation in sports and the participation in an organization. That means that the more a student participates in a sport the less he/she will participate in an organization and vice versa. There is a weak correlation between a students' self-concept and the percent of participation in an organization.

Figure 1.3 displays the following influences utilizing the standardized beta weights: value .53 is the effect of academic self-concept on the students' final Grade Point Average (GPA), value .15 is the effect of students' participation in organizations on the students' final Grade Point Average (GPA) and value .07 is the effect of students' participation in sports on the student's final Grade Point Average (GPA). The entries .53, .15 and .07 are standardized beta regression weights. This prediction has an r2=.32 which indicates 32 percent variance of the students' final Grade Point Average (GPA) ranks is explained by the students' academic self-concept, participating in organizations and participating in sport activities. This indicates that 32 percent of the effects can be predicted.

Conclusion

The purpose of this study was to investigate the relationship between 11th grade students participating in after school sports, and organizations or both, on students' final Grade Point Average (GPA), English Language Arts (ELA) scores and Math scores.

Participation in school-based extracurricular activities, like sports, the arts, and academic clubs, is a normative and important part of the school experience for many youth (Fredicks, 2012). Findings show that there is a correlation between percent of participation in organization and academic self-concept, which supports prior research supporting the developmental benefits of extracurricular involvement; participating in a range of organized contexts is related to higher grade, motivation, and school completion rates (Fredicks, 2012). Additionally, an inverse correlation was found between the percent of participation in an organization and self-concept.

McCarthy (2000) found that there is a significant correlation between academic extracurricular activities and academic performance. McCarthy's study proved that students who participate in academic extracurricular activities are stronger performers academically, and typically report higher GPA's than non-involved peers or students who participated in other types of out-of-district extracurricular activities (McCarthy, 2000). Findings show that a student's positive self-concept about themselves will definitely show in their academics, which agreed with McCarthy's findings.

According to Holland and Andre (1987), all students start school being identified with academics, meaning their academic performance is relation to how they feel about themselves (Holland and Andre, 1987). The Marsh & Kleitman (2003) and McCarthy (2000), study found that participation in athletics is linked to improved school attendance, academic outcomes, social relationships and self-esteem (Marsh & Kleitman, 2003; McCarthy, 2000; Shulruf, 2010). This study indicated that there is a correlation between self-concept and academic self-concept as well as a correlation between self-concept and percent participation in sports. This study further examined how participating in after

school sports or in an after-school organization impacts self-concept and academic concept and determined the effect they had on students' Math scores, ELA scores, and overall GPA.

Recommendations

We recommend the after-school organizations would be separated into categories: Athletic, academic, interest-based, and service-based. The study would have a larger sample size for example to include or contrast suburban minority schools vs. suburban white schools. The survey could include questions regarding reasons students would not participate in after-school activities.

Additional recommendations are:

1. Replicate this study in multiple minority, middle class, and upper class districts, with different demographics and population sizes, to determine if the findings are similar.
2. This study concentrated on academic self-concept and not other factors of adolescent development. A closer examination of different developmental factors pertaining to adolescent development should be studied to determine their significance in relation to academic achievement.
3. Additional research should expand the breadth of questions to isolate specific hindrances to a student's ability to participate in extracurricular activities. Such a study could aid policy makers to apply more resources to adolescent development to further increase academic achievement.
4. The question pertaining to extracurricular involvement should be taken a step

further. Future studies can research non-school based activities within the community, such as religious clubs that may fall under the auspices of extracurricular participation and their affect on adolescent development and academic achievement.

References

1. Astin, A. W. (1984). Student involvement: A developmental theory for higher education. *Journal for College Student Personnel, 25*, 297-309.

2. Brown, R., & Evans, W. P. (2002). Extracurricular activity and ethnicity: Creating greater school connection among diverse student populations. *Urban Education,* 37(1), 41-58.

3. Connors-Harris, A. (1999). A Study of the participation of marginally academic students in extracurricular activities and the relation to school persistence. *Dissertation Abstracts International*, 60(4A), 0950.

4. Crosnoe, R. (2001). The social world of male and female athletes in high school. *Sociological Studies of Children and Youth*, 8, 87-108.

5. Eccles, J. S., & Gootman, J. A. (Eds). (2002). *Community programs to promote youth development.* Washington, D.C: National Academy Press.

6. Feldman, A. F., & Matjasko, J. L. (2005). The role of school-based extracurricular activities in adolescent development: A comprehensive review and future directions. *Review of Educational Research*, 75(2), 159-210.

7. Fredicks, J. A. (2012). Extracurricular participation and academic outcomes: Testing the
    a. over-scheduling hypothesis. Youth Adolescence, 41-295-206.

8. Fredricks, J. A., & Eccles, J. S. (2002). Children's competence and value beliefs from childhood through adolescence: Growth trajectories in two male-sex-typed domains. *Developmental Psychology*, 38(4), 519-533.

9. Fredricks, J. A., & Eccles, J. S. (2006). Is extracurricular participation associated with beneficial outcomes? Concurrent and longitudinal relations. *Developmental Psychology,* 42(4), 698-713.

10. Gerber, S. B. (1996). Extracurricular activities and academic achievement. *Journal of Research and Development in Education,* 30(1), 42-50.

11. Goodman, G. S., & Young, I. P. (2006). The value of extracurricular support in increased student achievement: An assessment of a pupil personnel model including school counselors and school psychologists concerning student achievement as measured by an academic performance index. *Educational Research Quarterly*, 30(1), 3-13.

12. Guay, F., Marsh, H. W., & Boivin M. (2003). Academic self-concept and academic achievement: Developmental perspectives on their causal ordering. *Journal of Educational Psychology,* 95(1), 124-136.

13. Holland, A., & Andre, T. (1987). Participation in extracurricular activities in secondary school: What is known, what needs to be known? *Review of Educational Research, 57,* 437-466.

14. Holland, A., & Andre, T. (1994). The relationship of self-esteem to selected personal and environmental resources of adolescents. *Adolescence*, 29(114), 345-360.

15. Jacobs, J. E., Vernon, M. K., & Eccles, J. S. (2004). Relations between social self-perceptions, time use, and prosocial or problem behaviors during adolescence. *Journal of Adolescent Research*, 19(1), 45-62.

16. Larson, R. W. (2000). Toward a psychology of positive youth development. *American*
    a. *Psychologist, 55,* 170-183.

17. Mahoney, J. L., (2000). School extracurricular activity participation as a moderator in the development of antisocial patterns. *Child Development*, 71(2), 502-516.

18. Mahoney, J. L., Cairns, B. D., & Farmer, T. (2003). Promoting interpersonal competence and educational success through extracurricular activity participation. *Journal of Educational Psychology, 95,* 409-418.

19. Mahoney, J. L., Lord, H., & Carryl, E. (2005). An ecological analysis of after-school program participation and the development of academic performance and motivational attributes for disadvantaged children. *Child Development*, 76(4), 811-825.

20. Mahoney, J. L., Harris, A. L, & Eccles, J. S. (2006). Organized activity participation positive youth development, and the overscheduling hypothesis. *Society for Research in Child Development: Social Policy Report, 20,* 1-30.

21. Marsh, H. W. (1990). Causal ordering of academic self-concept and academic achievement: A multiwave, longitudinal panel analysis. *Journal of Educational Psychology,* 82(4), 646-656. Marsh, H. W., & Yeung, A. S. (1997). Causal effects of academic self-concept on academic achievement: Structural equation models of longitudinal data. *Journal of Educational Psychology,* 89(1), 41-54.

22. Marsh, H. W., & Kleitman. S. (2003). School athletic participation: Mostly gain with little pain. *Journal of Sport & Exercise Psychology*, 25(2), 205-228.

23. Marsh, H. W., & O'Neill, R. (1984). Self Description Questionnaire III: The construct validity of multidimensional self-concept ratings by late adolescents. *Journal of Educational Measurement*, 21(2), 153-174.

24. Maser, K. J. (2007). The level of student participation in extracurricular activities, adolescent development, and academic achievement. Dowling College.

25. McCarthy, K.J. (2000). The effects of students' activity participation, gender, ethnicity, and socioeconomic level on high school student grade point averages and attendance. Boulder: University of Colorado.

26. McNeal, R. B., Jr. (1998). High school extracurricular activities: Closed structures and stratifying patterns of participation. *Journal of Education Research*, 91(2),
    a. 183-191.

27. Shapiro, S. (1997). Is meta-analysis a valid approach to the evaluation of small effects in observational studies? *Journal of Clinical Epidemiology, 50*(3), 223-229.

28. Shulruf, B. (2010). Do extra-curricular activities in schools improve educational outcomes? A critical review and meta-analysis of the literature. *Internal Review of Education 56*, 591-612.

29. Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research, 45*, 89-125.