

**How to succeed in high school by really trying:
Does activity participation benefit students at all levels of social self-concept?**

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Activity participation has been demonstrated to have considerable benefit for adolescents (Youniss and Yates, 1997). However, much of the research to date has centered on associations between participation and school-related outcomes such as educational achievement (Eccles & Barber, 1999; Otto, 1975, 1976), school attachment (Eccles & Barber, 1999), and drop-out rates (Mahoney & Cairns, 1996), or on problem behaviors (Mahoney, 2000). Generally, it is believed that extra-curricular activities are beneficial for adjustment: that they can provide an alternative outlet for students who do not excel in academics; that they provide, as well, an opportunity for students to test untried potential and to overcome lack of confidence. It is, thus, important to consider longer-range effects and whether benefits are similar for all students and all activities. This study examines associations between activity involvement and patterns of adjustment across time a) in general and b) for adolescents who enter secondary school with differing levels of self-assessed social self-concept.

Methods

Participants were from the Michigan Study of Adolescent Life Transitions (MSALT). Longitudinal survey data from approximately 1000 MSALT participants at Waves 1, 5, 6, 7, and 8 are included in these analyses, and were collected at sixth grade, tenth grade, twelfth grade, and two and six years after high school.

Social Self-concept. In the sixth grade, self-perceived social self-concept was measured with a scale of three items such as “How good are you at making friends?” Response options ranged from 1= “not at all” to 7= “very good.” Participants were divided into 3 categories based upon being half a standard deviation above or below the mean, or in the middle.

Activity involvement. In the tenth grade, adolescents were provided with a list of sports and school and community clubs and organizations, and they indicated all activities in which they participated. We grouped the school-based activities into four categories that might be expected to provide opportunities for students to develop social connections and become known to their peers: Performance Activities - participation in school band, drama, and/or dance; Team Sports - participation on one or more school teams; and School Involvement - participation in student government, pep club, and/ or cheerleading; and Academic Clubs - participation in debate, foreign language, math, or chess clubs, science fair, or tutoring in academic subjects. These categorizations focus on the content or domain of the activity. Students could participate in more than one activity type and our activity categories are, thus, non-exclusive.

Psychological Adjustment. Psychological adjustment was measured at Waves 5, 6, 7, and 8 using scales made up of items with responses ranging from 1= “never” to 7= “daily.” Depressed Mood was measured with 3-items such as “how often do you feel unhappy, sad, or depressed?” The reliabilities for depressed mood across the four waves were between .71 and .75. The Worry scale included three items about worries about family finances and finding a job in the future as well as feeling discouraged about the future (alphas ranged from .63 to .76). Social Isolation was measured with 2 items about how often the participant felt lonely and had trouble fitting in with others (alphas ranged from .51 to .54). Self-Esteem was measured with three items such as “how often do you feel satisfied with yourself the way you are?” (alphas ranged from .78 to .82).

Results

First, a 2 (gender) X 2 (activity participation) X 4 (time) repeated measure MANOVA was performed for each dependent variable, nesting the 4-level “time” component within subjects. Table 1 summarizes between and within subjects effects revealed by these analyses.

Depressed Mood. Significant linear, quadratic, and cubic effects revealed that depressed mood levels initially decreased over time, and then stabilized. This downward linear effect was more marked

for females (see gender by linear time interaction). Activity involvement was unrelated to level or changes in depressed mood.

Social Isolation. Social isolation decreased across time. In addition, athletes reported lower isolation than non-athletes (see Figure 1).

Worry. There were significant linear and cubic effects. Worry declined somewhat from 16 to 18, rose to a peak at 21 and then declined by 24. Interestingly, this significant cubic effect – a decline, increase, and decline – occurred for all activity and gender groups. In addition, although women were more worried than men on average, their pattern of change did not differ from men's. There was, however, an interaction of performing art and gender with the quadratic effect of time, such that male performing artists did not experience the normative decline in worry between 16 and 18 (see Figure 1). In addition, the linear increase in worry was moderated by school involvement, with those who were involved increasing less than those who were not (although the involved students were higher at 16) (see Figure 2).

Self esteem. A significant normative linear increase was found for self-esteem. In addition, there was a significant cubic effect for the interaction between time, academic club participation, and gender (see Figure 3). While participation was associated with self-esteem increase for females from age 16 to 18 and then a return to levels comparable to that of non-participants, the effect for males was different. Male participants experienced self-esteem decline from 16 to 18 and then rebound from 18 to 21—presumably the college years for this group. Subsequently, however, they experienced another period of decline between age 21 and age 24.

Social Self-concept and Activity

First, we assessed the distribution of students at relative social self-concept advantage or disadvantage in each activity type. Students with relatively low social self-concept in sixth grade were just as likely to participate in performing arts and academic clubs in 10th grade as were students who felt more socially competent (see Figure 4). However, participating in team sports and in school involvement activities was more prevalent among those with relatively high social self-concept ($\chi^2 = 16.60$, $p < .001$ and $\chi^2 = 17.79$, $p < .001$). Logistic regression analysis indicated, however, that it was only to team sports participation that social self-concept predicted.

Second, we examined main effects and interactions for activity types and social self-concept categories through a series of 2 (activity) by 3 (social self-concept group) repeated measures MANCOVAs (controlling for gender) on depressed mood, worry, social isolation, and self-esteem for Waves 5-8. Social self-concept group had, not unexpectedly, a consistent effect on depression, social isolation, and self-esteem levels, holding time constant. Patterns across time were not significantly different for the social self-concept groups. Table 1 summarizes between and within subjects effects revealed by these analyses.

Social self-concept and team sports participation had a significant interactive effect on the linear component in the data for social isolation (see Figure 5). For individuals with relatively low social self-concept, participation in sports was associated with consistent benefit at age 16, 18, and 21. For “high social” individuals, non-athletes started out at disadvantage, but then “caught up” by age 18. They did not, however, experience the continued reduction in social isolation that is normative and that athletes experience through the college years. However, they again caught up with gains of athletes after college.

A significant effect on the cubic trend in the data also marks a time by social self-concept by activity interaction on worry for sports participation (see Figure 6). For both “low social” and “high social” individuals, the extremes of the cubic are muted. Benefit was clearest for individuals who started adolescence with relatively high social self-concept.

School involvement activities predicted self-esteem patterns across time; there was a significant interactive effect between time, social self-concept, and activity on the quadratic component of the data (see Figure 7). Though participants had lower self-esteem levels than non-participants, “low social”

participants experienced gains in self-esteem between age 16 and 18, presumably during their school involvement or promotion “careers”.

A significant social self-concept by activity interaction on level emerged. This effect indicates that participation in performing arts was associated with self-esteem benefits only for students who felt at social disadvantage in 6th grade (see Figure 8).

Summary and Conclusions

Participation on school teams was associated with lower sense of social isolation and those at greatest advantage were those who enjoyed both team associations and a history of perceived social skill.

Participation in academic clubs (debate, foreign language, math club, chess club, science fair, or tutoring) was most clearly associated with self-esteem. For girls, participation at grade 10 was associated with self-esteem advantage and gain during the high school years; participating girls experienced some self-esteem set-back between age 18 and 21, but then rebounded between 21 and 24. For boys who participated in academic clubs at age 16, the pattern was reversed. Self-esteem decline was apparent between age 16 and age 18, with gains apparent during the college years and then another decline between age 21 and age 24.

School Involvement activities (student government, pep club, and/or cheerleading) were associated with gains in self-esteem during the high school years for those students who participated and had had relatively low social self-concept in middle school. It may disappoint us to see that gains were not fully retained beyond the high school years, and that these participants at 24 were almost as far behind in self-esteem as they had been at age 16. We are also puzzled to note that not participating in school involvement activities was consistently associated with higher self-esteem—for both lower and higher social self-concept individuals. However, “low social” participants caught up with “high social” participants between age 16 and age 18, and the net gain in their self-esteem from age 16 to age 24 was greater than the net gain of any other group. Findings regarding school involvement activities may be our clearest example of “felt need” and the pro-active effort of students to repair a sense of social disadvantage through activities.

Participation in school band, drama, and/or dance was most clearly associated with self-esteem. Performing artists who began adolescence with both relatively low and relatively high social self-concept experienced more fluctuations in self-esteem than non-performers. They experienced steeper increases between age 16 (when they indicated their performing arts participation) and age 18. Those who started adolescence with relatively low social self-concept maintained this improved level through age 21 and then suffered a setback. The “high socials” experienced decline from age 18 to age 21 and then rebounded. High social non-performers had the smoothest and highest trajectory across time in self-esteem, but performers of both levels of social self-concept experienced considerable advantage relative to the low social non-performers during most of the developmental period covered by our longitudinal study. These fluctuations and the fact that logistic regression analysis indicated that among the activities only performing arts participation was associated with having visited a psychologist by age 24 (Wald statistic = 8.13, $p < .01$), suggest that students who opt for performing arts represent a more troubled segment of our adolescent population.

Perhaps performing art is considered a more non-conformist activity, and marginalized youth may find a place for themselves in a performance art that would not be open to them in the more traditional activities of sports, cheerleading, or student government. Performing arts may be seen as an opportunity for the expression of individuality, or even an opportunity to express unconventional ideas.

In the semi-structured forum of the extra-curricular activity, adults and peers may become friends to adolescents who would otherwise be isolated. Getting to know each other in such circumstances may provide an opportunity for more personal relationships with coaches and sponsors than are available with teachers during the formal school day. It seems quite plausible that a teacher involved with the drama club or band may be the one who noticed distress and encouraged counseling. The opposite is also

possible: that a counselor suggested participating in performing arts. Or perhaps a youngster pursued improvements in her life on her own, by getting counseling and joining drama club. These and further explorations of such issues are needed and may inform decisions about how schools and communities might contribute to national efforts for the improvement of mental health.

Our findings suggest that the benefits of extracurricular activity participation may be contingent upon individual differences in adolescents and in the content of activities. In our continuing analysis, we must endeavor to explore selection effects. How might students who decide to participate differ from those who do not? Though we have made a first effort at refining analysis correlating adjustment benefits with participation by examining groups of individuals who have relatively more or less pre-existing levels of social integration, there is more to learn about how participants differ from non-participants—besides the participation experience itself.

The strongest effects of participation run concurrent with the years when such participation is available through school organizations. However, some long-term associations are apparent. Students may, as popular opinion suggests, learn about themselves and develop new capacities in extra-curricular activities. They may counter-act shyness or insecurity by being nudged upon the stages of our high school auditoriums. They may benefit from the structure and scaffolding that adults provide for self-discipline, setting high goals, and dealing with competition and disappointment. They may benefit from the identity sculpting and repair opportunities that activities provide. Becoming known for achievements that communities sanction may be more helpful than becoming known for self-expression in the informal arenas that adolescents create for themselves.

Adolescents may gain opportunities to be parented “by the village” through having a common ground with others who have enjoyed athletic or performing traditions. This may be especially important for individuals who lack adult support otherwise. Playing one on one with coaches and band directors may provide a rare opportunity for adolescents to interact on an equal footing with adults and may thus provide rite of passage experience for them. It is also rare in a community for adults to gather for a day of concentrating on adolescents—but this happens at swim meets, track meets, and tournaments for volleyball or wrestling that are enacted every Saturday across the nation. Large numbers of adults (not all of them parents of players) also build their social week around evening wrestling meets, band concerts, school plays, or basketball and football games. Fire departments are deployed to raise the flag before homecoming games. This kind of attention from (mostly) caring adults cannot but gratify, and it is not hard to see why such experiences are cherished memories for many adults. We are convinced that these moments of glory are potent experiences for adolescents and that it is worthwhile for us to maintain and fine-tune the opportunities for development and learning that extra-curricular activities provide.

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Table 1. Longitudinal Relations between Adjustment, Participation in Extracurricular Activities, and Gender. Multiple Analysis of Variance Summary: F Values and Significance Levels for Main Effects and Interactions Assessed through Repeated Measures Tests of Between Subjects Effects and Within-Subjects Contrasts with Time Nested Within Subjects

	Between Subject Effects				Within Subjects Contrasts with Time Nested within Subjects					
	Gender	Activity	Gender by Activity	Time Effect: Linear	Time Effect: Quadratic	Time Effect: Cubic	Time by Gender	Time by Activity	Time by Gender by Activity	
Sports Teams										
Depression	7.911 **			85.102 ***	20.904 ***	17.268 ***	24.718 *** lin			
Worry	9.295 **			42.123 ***		109.929 ***				
Social isolation		7.366 **		110.510 ***	6.530 *	4.655 *	5.789 * lin			
Self-esteem	10.042 **			34.170 ***						
Performing Arts										
Depression	5.353 *			77.407 ***	17.158 ***	17.123 ***	16.187 *** lin			
Worry	6.206 *			28.542 ***		87.514 ***			5.047 * qu	
Social isolation				100.781 ***	4.953 *					
Self-esteem	7.972 **			32.592 ***						
School Involvement										
Depression				56.923 ***	8.200 **	16.568 ***	7.357 ** lin			
Worry	4.710 *			7.902 **		57.575 ***		5.872 * lin		
Social isolation				74.695 ***						
Self-esteem	7.116 **			16.873 ***						
Academic Club										
Depression				53.923 ***	12.071 **	11.599 **	10.116 ** lin			
Worry				11.558 **		64.327 ***				
Social isolation				57.991 ***	6.213 *					
Self-esteem	4.513 *			13.374 ***					4.291 * cu	

Note: lin = linear effect; qu = quadratic effect; cu = cubic effect * p < .05; ** p < .01; *** p < .001; tr p < .1

Table 2. Longitudinal Relations between Adjustment, Participation in 10th Grade Extracurricular Activities, and 6th Grade Social Self-concept, with Gender Controlled. Multiple Analysis of Covariance Summary: F Values and Significance Levels for Main Effects and Interactions Assessed through Repeated Measures Tests of Between Subjects Effects and Within-Subjects Contrasts with Time Nested Within Subjects

	Between Subject Effects				Within Subjects Contrasts with Time Nested within Subjects				
	Activity	Social Self-concept	Activity by Social Self-concept	Time Effect: Linear	Time Effect: Quadratic	Time Effect: Cubic	Time by Activity	Time by Social Self-concept	Time by Activity by Social Self-concept
Sports Teams									
Depression		5.166**		71.811***	5.457*				
Worry						15.686***			7.195** cu
Social Isolation		14.753***		36.686***					3.515* lin
Self-esteem		7.039**		6.612*	4.437*				
Performing Arts									
Depression		4.728**		73.535***	5.812*				
Worry						18.177***			
Social Isolation		15.426***		34.737					
Self-esteem			4.479*	7.594**	4.800*				
School Involvement									
Depression		3.892*		75.864***	4.711*				
Worry	13.23***	6.212**				14.281***			
Social Isolation		6.305**							
Self-esteem		6.419		7.934**	6.453*				3.166* qu
Academic Club									
Depression		4.373*		71.489***	7.068**				
Worry		5.103**				18.487***			
Social Isolation		11.174***		34.736***					
Self-esteem		3.619*		6.098*	5.825*				

Note: lin = linear effect; qu = quadratic effect; cu = cubic effect

* p < .05; ** p < .01; *** p < .001; tr p < .1

Figure 1.

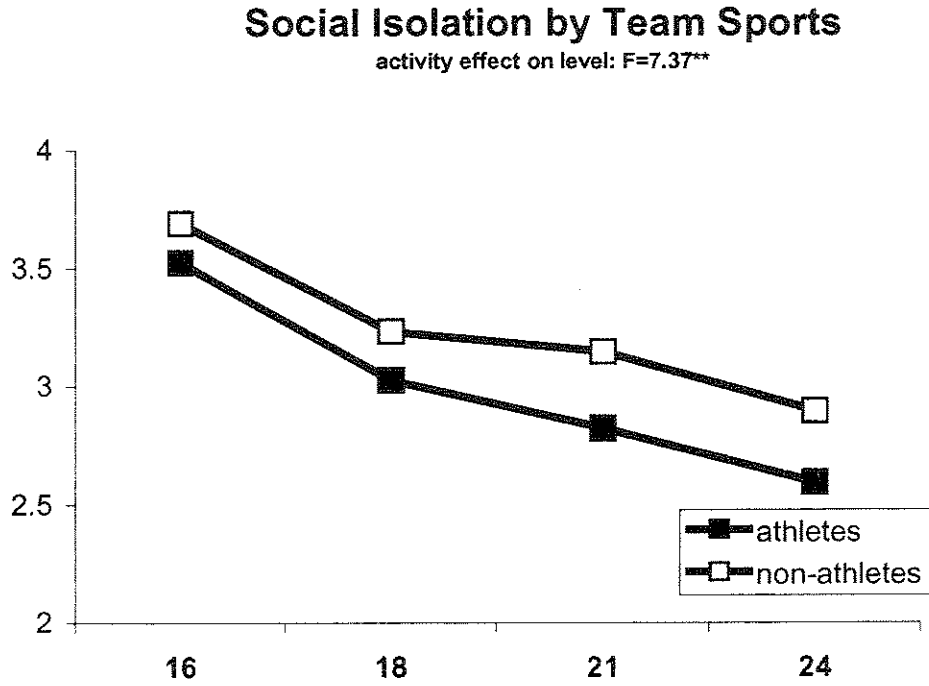


Figure 2.

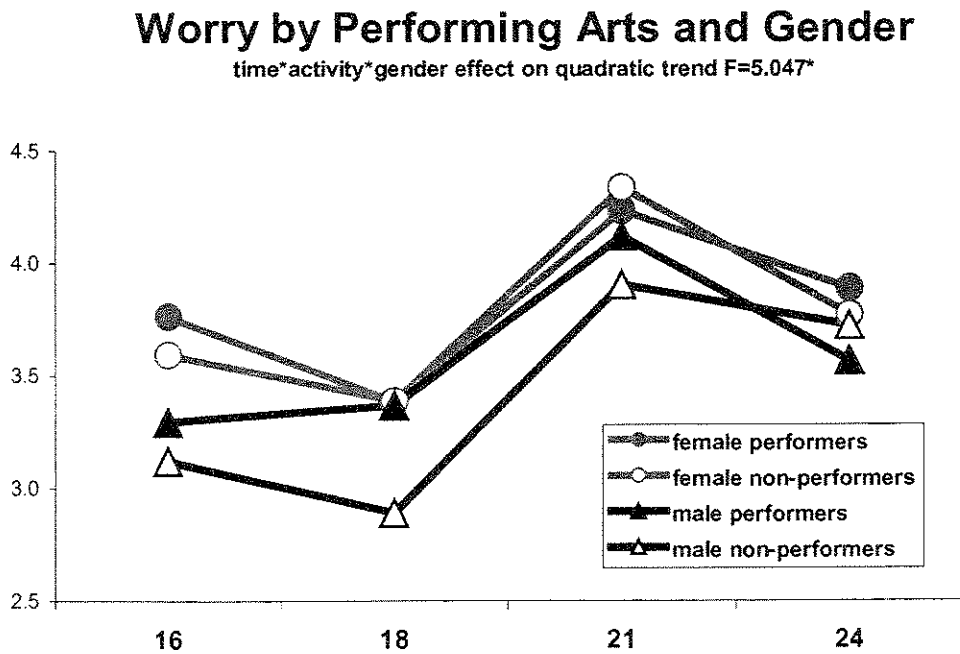


Figure 3.

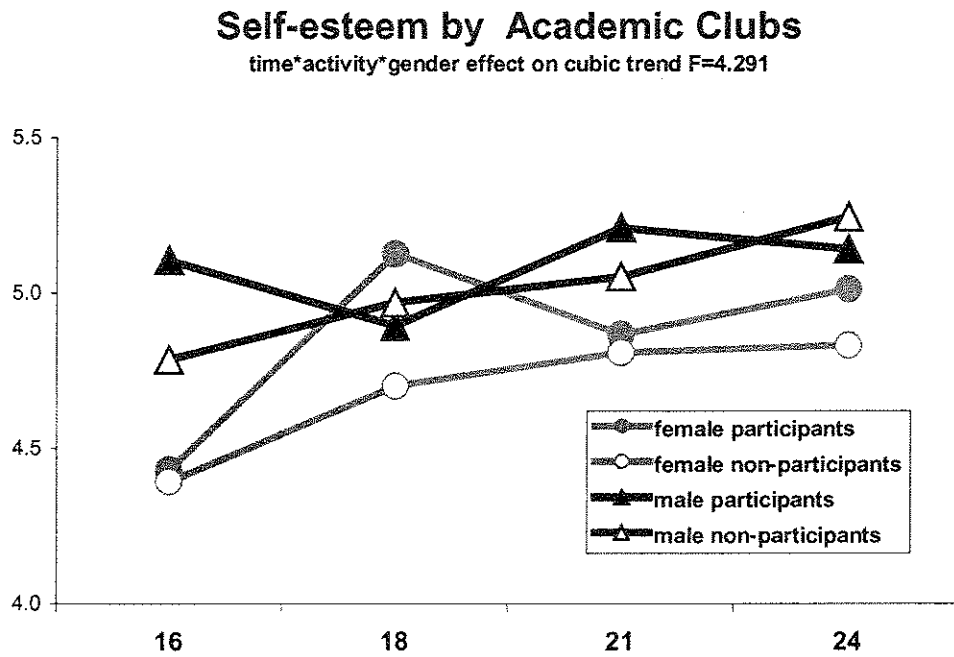


Figure 4.

Percentage of Low and High Social Self-concept Individuals in Each Activity Type

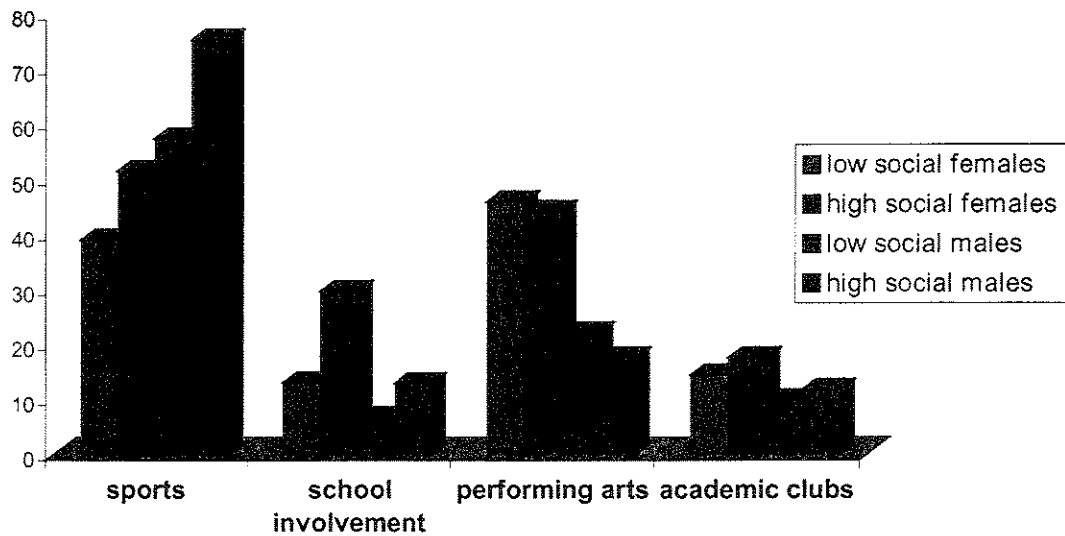


Figure 5.

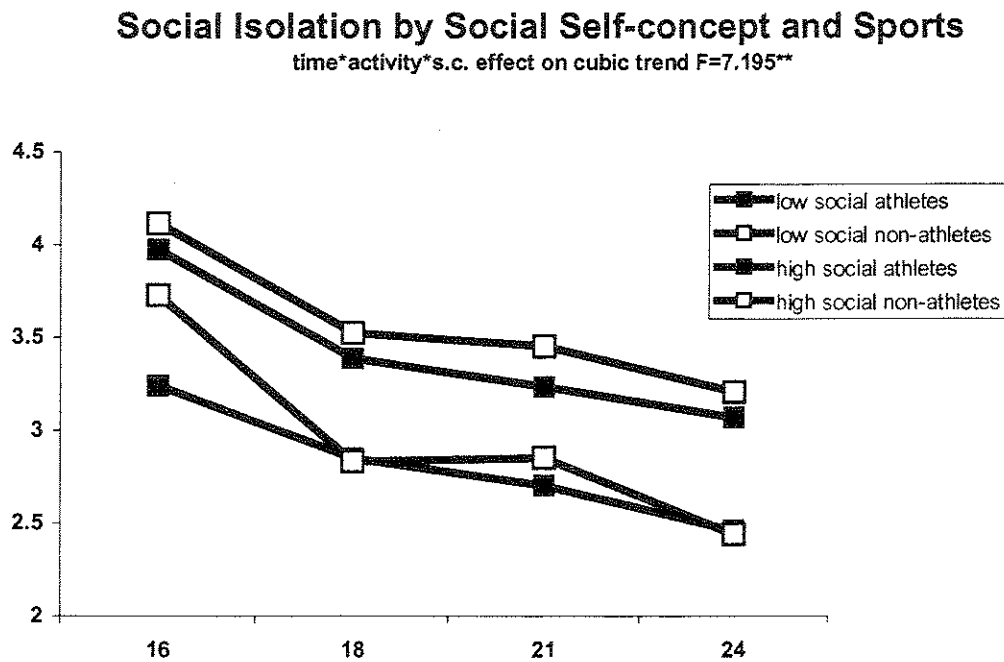


Figure 6.

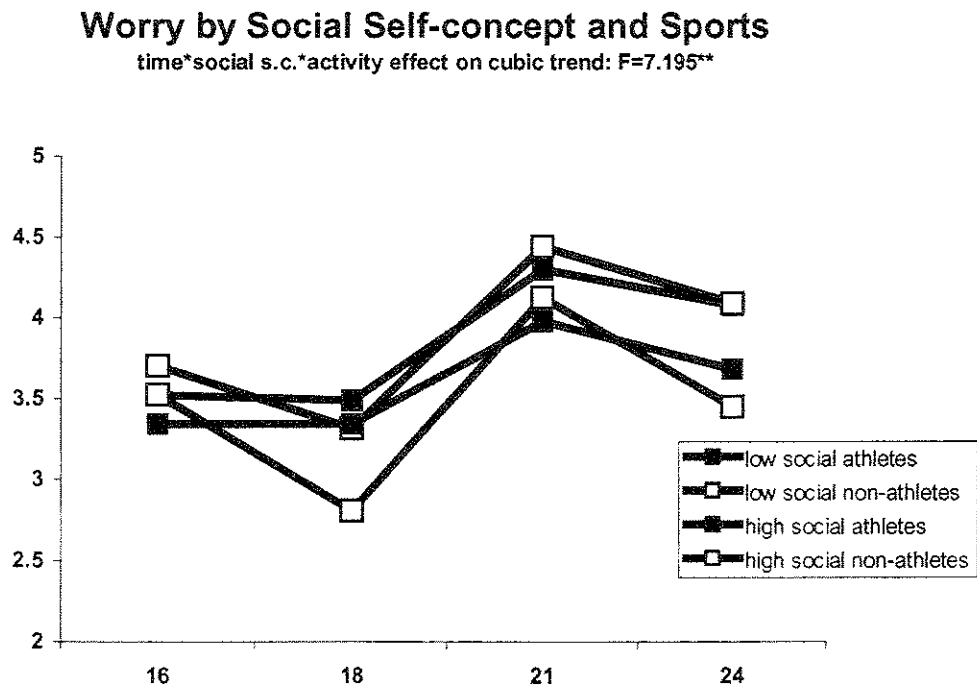


Figure 7.

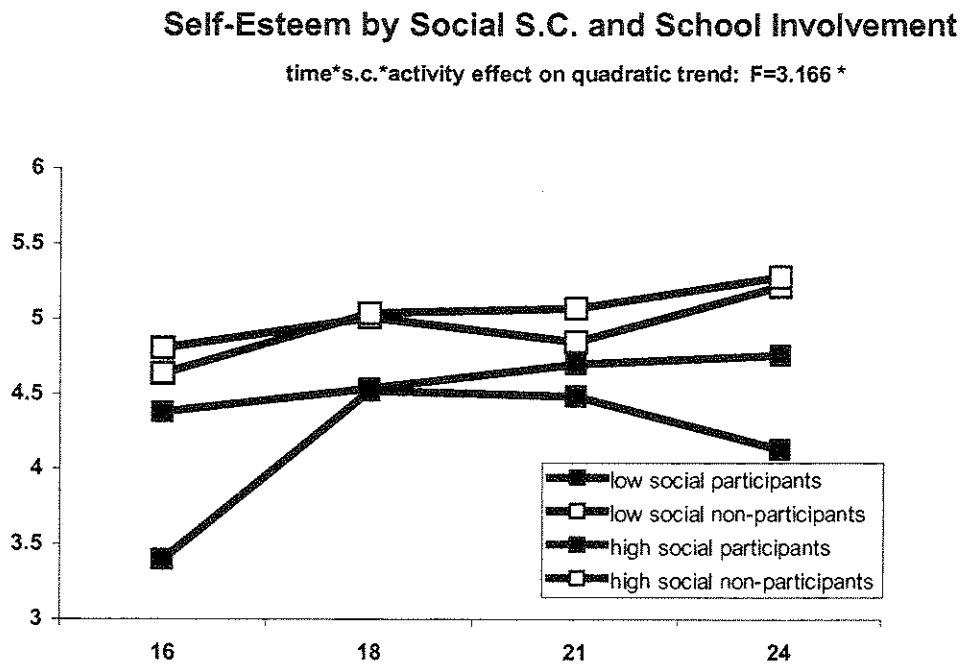


Figure 8.

