

## The Women's Sports Foundation Report Brief: Her Life Depends On It III & Academic Progress and Physical Activity and Sports

Among the 83 recipients selected from around the world for the 2015 Rhodes Scholarships, two were female cross country and track athletes who competed for National Collegiate Athletic Association (NCAA) institutions. Earning an opportunity to attend prestigious Oxford University in England with the support of a \$50,000 award, future astronaut Rebecca Esselstein, an aeronautical engineering major at the U.S. Air Force Academy intends to pursue a doctorate in astrophysics while French major from Princeton University, Rachel Skokowski envisions a career as an art curator (Schwarb, 2014).

The stories of these two Rhodes Scholars illustrate the connections between academic success and participation in physical activity and sports for both male and female students. Research over more than three decades has typically found that participation in sports is positively associated with many different educational outcomes (Farb & Matjasko, 2012; Feldman & Matjasko, 2005; Holland & Andre, 1987). Students who are involved in sport and are more physically active are more likely to have better attendance at school, fewer disciplinary issues, a greater desire to go to college, and better grades. Generally speaking, girls who participate in sport may realize even greater academic gains when compared to boys (Pearson, Crissey, & Riegle-Crumb, 2009; Veliz & Shakib, 2014). Both athletic participation and academic performance are influenced by many factors, including socioeconomic background, race and ethnicity, the quality of a school system, and family encouragement. Overall findings show that sports are an asset for both girls and boys across diverse racial/ethnic and economic backgrounds.



### Facts and Research Findings for Girls and Boys

- A national study of U.S. public high schools found that schools with higher sport participation rates for girls and boys reported significantly fewer crimes (on school grounds) and suspensions during the school year (Veliz & Shakib, 2012).
- Moreover, higher sports participation rates for girls and boys across U.S. high schools has been found to be associated with higher AP (Advanced Placement) math, AP science, AP foreign language, and overall AP enrollment rates (Veliz & Shakib, 2014).
- The positive effect of sports on academics appears to be similar, if not stronger, in girls than in boys (Pearson, Crissey, & Riegle-Crumb, 2009; Veliz & Shakib, 2014). Positive effects may vary, however, depending on sport, and may be mediated out by racial and ethnic group (Sabo, Veliz, & Rafalson, 2013).
- With respect to the differences in academic outcomes across specific types of sports, a nationwide study of eighth-, 10th-, and 12th-graders found that participants in tennis and soccer were more likely to report an A as their average grade, study for 10 or more hours during a typical week, and have strong aspirations to graduate from college than their peers who did not participate in these sports (Sabo, Veliz, & Rafalson, 2013). However, the same report found that participants in wrestling were less likely to report an A as their average grade, less likely to study for 10 or more hours during a typical week, and less likely to have strong aspirations to graduate from college than their peers who did not participate in this sport (Sabo, Veliz, & Rafalson, 2013).



- With regard to educational success, interscholastic athletics have a similar positive effect to endeavors, such as band, debate, music, and art, which are commonly considered more “intellectual” (Darling, Caldwell, & Smith, 2005).

### Sport and Academic Gains among Girls Only

For many years girls were pushed away from traditionally “masculine” disciplines, such as math and science (Sax et al., 2009), due to a belief that boys had an “innate ability” for math and science while girls possessed a “natural dislike” for these subjects (Hyde & Mertz, 2009; Kiefer & Sekaquaptewa, 2007). For many girls, this meant that the educational doors leading to technical and scientific careers were closed in their faces.

It is increasingly evident that the gender disparity in math performance between boys and girls is a reflection of cultural expectations rather than hardwired differences between the sexes (Halpern et al., 2007; Hyde & Mertz, 2009). Despite what some have characterized as a general aversion to math and science, a significant number of young girls are beginning to enroll in honors courses and girls’ performance on the math portion of the SAT has improved. Further, as Halpern et al. (2007) point out, the differences between women’s and men’s math- and science-related abilities and choices are far more subtle and complex than the oft-stated, oversimplified perception that men are “better” than women in math and science.

Studies focusing on the question of why females in sport perform better academically in male-dominated educational domains have argued that participating in sport, a “male-dominated” domain, not only teaches female athletes skills and values necessary for success in academics, but also provides a social environment that challenges gender stereotypes about female limitations in other primarily “masculine domains” such as math and science (Pearson, Crissey, & Riegler-Crumb, 2009; Veliz & Shakib, 2014). In other words, these studies theorize that sports participation provides a unique cultural environment for female athletes to challenge stereotypical assumptions about femininity (e.g., men are innately better at math than women).

### Facts and Findings for Academic Success and Sport Participation, among Girls Only

- A recent study of a nationally representative sample of 4,644 public high schools (2009-10 school year) found that AP enrollment rates in math (4.32% versus 4.22%), science (4.91% versus 4.09%), and foreign language (3.29% versus 1.93%), as well as enrollment in at least one AP course (18.97% versus 13.53%) were higher for girls than boys. Interestingly, this study also found that schools with increased female representation in sports (e.g., a 1-to-1 gender equity ratio with respect to sports



participation) also had higher female representation in AP science courses (but not math or foreign language) (Veliz & Shakib, 2014).

- High school girls who play sports are more likely to do well in science (Hanson & Kraus, 1998, 1999). Research on the relationship of sport type to academic success in science suggests that females involved in sports that challenge gender stereotypes may manifest better academic success in science classes compared with girls who participate in more “feminine” sports (Crissey, Pearson, & Riegler-Crumb, 2005).
- Using National Educational Longitudinal Survey data, Eitle (2005) found that for female students in grades 8 and 10, the academic achievement benefits in math, science, and history may be greater, and more consistent, for white girls who participate in team and individual sports (with the exception of softball or basketball) than girls from other racial and ethnic groups.
- One study followed a nationwide sample of 11,683 high school students between their sophomore (1980) and senior years (1982). Compared to female non-athletes, female athletes reported greater access to, and more positive attitudes toward, science and math courses. These findings were especially marked among white females from higher socioeconomic backgrounds (Hanson & Kraus, 1998).

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Adapted from Staurowsky, E. J., DeSousa, M. J., Miller, K. E., Sabo, D., Shakib, S., Theberge, N., Veliz, P., Weaver, A., & Williams, N. (2015). *Her Life Depends On It III: Sport, Physical Activity, and the Health and Well-Being of American Girls and Women*. East Meadow, NY: Women’s Sports Foundation.

The full report can be accessed online at:  
[www.WomensSportsFoundation.org/HerLifeDependsOnIt3](http://www.WomensSportsFoundation.org/HerLifeDependsOnIt3)

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