Abstract

Physical fitness levels of children in the United States have been decreasing across the board at an alarming rate. However, some areas of the country are noticing an increase in female performance levels on the physical fitness tests given in schools. As a result, there is a decrease in the gender gap achievement level. This paper examines whether or not social influences are the cause for this increase in female achievement (and decrease in the achievement gap between genders) for early years. For the purpose of this paper, early years entails ages 8-16 years of age. The social influences that are examined come from varied aspects of society: education, advertisements, sporting opportunities, and legislature. Overall, the greatest social influence was seen within the physical education classes. The expectations set by teachers for the genders seemed to be a high determinant of their performance and female perceived efficacy.

Background

In my third year teaching physical education I noticed a definite trend in physical fitness activity among my students. When the students were all together, the females were resistant to putting forth their best effort. However, get them alone, and they would leave the courts sweating more than ever.

Similar behavior was also seen while taking the Virginia Wellness-Related Fitness Test. On this test, there is an “upper range” and a “lower range”. Following tradition, there is a difference between the genders for these ranges. During testing, females would ask what composed their “upper range” and “lower range”, they’d try for it, and then stop once they got there (if they even hit it). Meanwhile, the males were extremely competitive and showed less concern over the “range” and went for best scores in the class. Low achievement levels from the females was the result. From this came my drive to research whether or not social influences were the cause of the physical fitness achievement gap between genders. I needed to find out if I myself could help alter the environment in which my students performed in order to see their true abilities.

Focus

In effort to narrow down specific social influences I focused in on four portions of the sport society: physical education classes, sporting opportunities, literature, and legislature. Physical education classes’ fitness scores were reviewed from different locations in the nation. Sporting opportunities were observed in a time line perspective. This timeline included the dates in which major sporting organizations developed (WUSA, WPFS, WNBA, etc.). The
legislature that was inspected was Title IX. Literature that was reviewed included articles from Journal of Physical Education, Recreating and Dance, the Journal of School Health and the Journal of Sport and Exercise Psychology.

In order to view the effects these organizations, legislature, literature, and classes, I made contact with the Department of Health and Human Services. Specifically, I spoke with members of the President’s Council on Physical Fitness and Sports. They were able to provide data from previous years’ fitness surveys. This data gave comparisons of male and female performance in 1958, 1965, 1975, and 1985. In order to get more recent information I used the data collected from the Virginia Wellness-Related Fitness Test from 1999 and 2000. It was the data collected from those six years combined with the timeline that was used as a guide to see the effects the organizations, literature, legislature, and classes had on the gender gap on physical fitness levels.

Literature Review

This portion of the research was the most difficult. There has been an abundance of literature on the effects of exercise on females, eating disorders and exercise among females, and the lack of exercise among females. However, the research on the actual differences between the genders and their physical performance is scarce. Further, methods used between the two genders in order to improve success is almost nonexistent. For the majority, the research that I was able to uncover all had a main focus on the physical education classes.

Kay M. Williamson pointed out the importance in considering the factors of socialization and discrimination. She analyzed the background to old beliefs such as girls not being able to throw. What she pointed out was that the ability had nothing to do with gender but with appropriate practice opportunities (Williamson, 1993). Historically, Williamson points out that sports programs were originally designed for boys, and that, “…at the beginning of this century it was inappropriate for women to participate in such activities”, (Williamson, 1993). Also highlighted was the fact that girls that did show levels of success were riddled by labels such as “tomboy” (and boys that were not as successful as the girl participants were labeled as “sissy”). In order to help rid this labeling, Williamson suggested that the physical education teachers pay careful attention to the organization and communication with their classes. She emphasized the need for a variety of learning opportunities and the use of heterogenous grouping to work on collaboration skills early on. The manner by which a teacher interacts with the students can by key (equal representation for demonstrations, equal interaction time with both genders).

Several years prior to Williamson there was similar research findings by Dunbar and O’Sullivan. After observing physical education classes, the teachers were noticed giving more praise, opportunities to respond, and constructive feedback to the boys rather than a balance between the genders. The researchers linked this with the decreased involvement of the females as opposed to the males in the class. One group of students that were interviewed had responses from boys and girls such as “the girls get to do the easy ones and
the boys have to do the hard ones”. The teacher in this situation was setting two different expectancies in a game of basketball. Boys had to hit the regulation net while the girls were shooting at a net that was balanced on a chair.

Some of the literature analyzed the effects of fitness testing methods. There has always been a discrepancy between the expectations of females and that of males. To see if this helped guide the students in their performance, one researcher had 215 children re-tested after they had taken the Physical Best fitness test. When re-tested, all students were given the standards that were set for the boys. The results of this re-test showed a greater percentage of 10-year-old girls met the boys’ standard than the boys of the same age in the one-mile walk/run and sit-up tests. These results stayed the same for both Fall and Spring. In fact, a greater percentage of 11-year-old girls met the boys’ standard than the boys of the same age group in the sit-up test. An important question posed here was whether or not teachers were creating a self-fulfilling prophecy for females.

Two researchers, Beveridge and Scruggs, focused in on the fact that a lack of successful physical activity in early years will contribute to a person’s lack of interest. This further emphasizes the important role of the teacher and providing an equal learning opportunity in the physical education classes for both males and females. The researchers also pointed out how females that are exposed to similar androgen levels during fetal development are labeled with a “defect” (congenital adrenal hyperplasia). This defect isn’t anything but a display of more “rough-and-tumble play and more physical activity”. There is no dangerous altercation of the female, no hazardous violent behavior, but it is still labeled a defect if the female displays this behavior (Beveridge, 2000).

Anne W. Garcia et al described the rapid decline of physical activity once kids begin adolescence. Specifically, she points out the fact that females become more sedentary than males. The fact that women do have a greater fat mass and less muscle mass than boys is not her concern. Rather, she looks at the social and environmental influences. For example, more active parents have more active children. Children with one active parent were 2 to 3 times more likely to be active themselves. Children that had both parents active were as high as 6 times more likely to be active. What they are seeing at home is having a great impact on their behavior themselves.

Lastly, one of the researchers focused in on the correlation between fitness and self-concept of females. There was a direct relation between the two, causing one to think that physical fitness among females would be a high priority at the adolescent age. Unfortunately, this was still not the case as observed by Marsh and Redmayne.

**Timeline**

Before I looked at the data provided by the Department of Health and Human Services I needed to create a timeline. This timeline included dates that women’s sports organizations were born and legislation was set in place. The purpose behind the timeline was to see once again if social influences have been the cause of the fitness achievement gap between genders. If this were true, I
expected the results to show that as more organizations evolved, and after Title IX was implemented, that females began to close the gap.

Dates that I focused on in the timeline included: premieres of women’s professional sports (such as Women’s United Soccer Association, Women’s National Basketball Association, Olympic Ice Hockey for women, Women’s Professional Fastpitch Softball, and the Women’s World Cup Champions in soccer) and legislature (Title IX).
After reviewing the literature, establishing the key points in sporting opportunities with the timeline (including the legislature with Title IX established in 1972), next to look at are the actual physical education classes. Continuously, as you view schools and their profiles, you notice that they are using the President’s Challenge and the Presidential Fitness Awards programs. Both of these programs set forth standards that are different for males and females. Are these differences necessary or are we setting the precedence for females to score lower?

If we look at early years, test scores show that females have surpassed the males in activities such as abdominal strength and aerobic capacity (Wellness-Related Fitness Data, 1999). However, this is within their first three years of being tested. Once the students have had greater exposure to the “norms”, the reiteration of males given higher expectations, we slowly see the males having greater success on the tests than the females. These differences were observed at ages 13, yet the Presidential Fitness Test already starts to discriminate between the two sexes as early as 10 years old. Females and males are constantly seeing each other compared and the females are repeatedly receiving messages that they are not equal, that they are not expected to be able to compete with the males.

So what if we look at the females separately? If we go along with the timeline, and look at the rate of success on the Wellness-Related Fitness Test strictly with the females, here is what we find:
<table>
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<th>YEAR</th>
<th>TEST</th>
<th>GRADE</th>
<th>% Meeting Criteria</th>
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<td>82.07%</td>
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<tr>
<td>2002</td>
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<td>4</td>
<td>83.64%</td>
</tr>
<tr>
<td>1999</td>
<td>Aerobic Capacity</td>
<td>4</td>
<td>66.71%</td>
</tr>
<tr>
<td>2002</td>
<td>(same)</td>
<td>4</td>
<td>70.25%</td>
</tr>
<tr>
<td>1999</td>
<td>Upper Body Strength</td>
<td>4</td>
<td>70.39%</td>
</tr>
<tr>
<td>2002</td>
<td>(same)</td>
<td>4</td>
<td>74.05%</td>
</tr>
</tbody>
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Source: Wellness-Related Fitness Data, Virginia 1999 and 2002

As we can see, there is a direct correlation with the years on the timeline for professional sports and women’s success in Olympic sports, and the success of our female students in physical fitness testing. Females increased as much as 3.34% in just three years. The three years of increased performance were also the same three years in which the WNBA gained its greatest recognition (after premiering in 1997), the USA Women’s World Cup Soccer team won the Championship, the Women’s United Soccer Association was formed, WUSA held its first game and gained television recognition, and then the USA Women’s Olympic Ice Hockey team wins the gold medal in the 2002 Olympics. The effect that these social events had on female fitness performance cannot be dismissed. Also, for the first time in history, females were able to go to a store and pick up a shirt with a female’s name on it (Rebecca Lobo WNBA jersey, Mia Hamm WUSA jersey). Also, athletic equipment started to carry female names on it (Lisa Fernandez bats, Dot Richardson bats and gloves, both women were USA gold medallists for the Olympic Softball team). As we look further up the line in age, similar results of increased performance were found with females from grades 5 through 12.
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<td>5</td>
<td>85.58%</td>
<td>85.52%</td>
<td>74.27%</td>
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<td>66.51%</td>
<td>74.55%</td>
<td>70.64%</td>
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With these results, I found it important to go further back in time. I was expecting to see similar results, if not more drastic. I went as far back as 1958 with the national fitness testing results of females. On data from the standing long jump, the 50-yard dash, and the shuttle run the females from 1958 all tested significantly lower than tested in 1985. In the 50-yard dash there was as much as an 11% increase in the female performance from 1958 to 1985. In the shuttle run, an increase of as much as 9% was seen (President’s Council on Physical Fitness and Sports School Population Fitness Survey, 1985). The following graphs display the great difference between the fitness results of females in 1958 as compared to the success in 1985:
Source: 1985 President’s Council on Physical Fitness and Sports School Population Fitness Survey
In a 1997 report on Physical Activity and Sport in the Lives of Girls (President’s Council on Physical Fitness and Sports, 1997), there were several key findings relevant to the investigation of social influences on women’s fitness. These key findings included:

- More girls participating in a wider array of physical activities and sports than ever before in American history
- The potential for some girls to derive positive experiences from physical activity and sport is marred by lack of opportunity, gender stereotypes and homophobia
- Involvement in sport and physical activity has tremendous potential to enhance a girl’s sense of competence and control
- Prior to Title IX in 1972, 300,000 young women participated in interscholastic athletics nationwide; in 1997 that figure went up to approximately 2.25 million participants

Reflections

At the outset of this project I had felt that social influences were key in the cause of the physical fitness achievement gap between genders. With the historical events such as Title IX, the premiere of several professional sports teams and women’s Olympic success, I expected the fitness scores to increase. My feelings for this were based on the thoughts that society was holding women back from their potential. Physical education classes were (and are) setting females up for lower achievement. The events on the timeline and the impact on female success on the fitness tests supports this belief.

As females see more and more females experiencing success, others rise to the occasion. However, for those that are in situations where the boys get to shoot at the hard net and they are left to shoot at the basketball net balanced on the chair, we see no increase in their fitness scores. As a result, my thoughts have not changed. Females did not surpass the males in all of the categories but what they did do was surpass themselves as they saw others succeed.

Implications

The findings of this research will lead me to alter the manner in which I present the Wellness-Related Fitness Test to my students. In order to help eliminate the poor self-fulfilling prophecy of females performing lower than males, I will be introducing the “ranges” as the same. I feel it is also necessary to give a wide variety of sport exposure to the students and let them see their own gender as a role model. The fitness scores didn’t start going up drastically until women had the chance to see others participating at competitive levels. I expect that as we look at the findings of the next few years (with the inclusion of the Women’s Professional Football league, the continuous television coverage of the Women’s United Soccer Association, and the television coverage of the Women’s Professional Fastpitch Softball) we will only find increases in female performance.
As a result of the difficulty in finding specific information on the social influences on female fitness performance, I aim to take steps at continuing this research in order to improve the literature available and encourage others to do the same. I feel it is a professional responsibility as a physical education teacher to provide equal growth opportunities to both genders.

References