

## Yoga, Physical Education, and Self-Esteem: Off the Court and Onto the Mat for Mental Health

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### Abstract

Researchers studied increases in self-esteem of eighth-grade students after participation in regular physical education and yoga-enhanced physical education classes. Self-esteem was measured by the Coopersmith Self-Esteem Inventory. The Coopersmith Self-Esteem Inventory was given pre, mid, and post test in both the experimental and control group. The results showed that over the course of the eight-week intervention, self-esteem did increase in both the experimental and control groups. There was no significant difference in self-esteem between regular physical education activities and yoga. The study revealed the importance of physical activity, including yoga, for enhancing self-esteem. Theories for why self-esteem increased over time are discussed in the study.

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### Introduction

Low self-esteem contributes to higher suicide rates, depression, teen pregnancy and other health related problems especially during critical adolescent years. Teenagers face so many mental, social and emotional issues in society today; and as physical educators we have the opportunity to help them cope with their changing life. Teenagers need to feel good about themselves; this will contribute toward the confidence to help live a healthy and safe life. Without a strong self-esteem, teenagers may head down the wrong path in life (Coopersmith, 1967).

One way to help young people cope with the challenges of being a teenager is with the positive exercise habits they learn in physical education. Exercise in physical education classes can help students learn ways to handle the emotional, social, and mental stresses they face as teenagers (Centers for Disease Control and Prevention [CDC], 2002). Such activity may improve the self-esteem of these students. By creating a strong self-esteem, these young adults may be able to overcome the obstacles that they may face in this emotional growing period (Coopersmith, 1967).

Exercise is a proven way to increase self-esteem (Myers, Sweeney, & Zitmer, 2000). Being involved in physical activity is one way for teenagers to cope with this changing time in their life. Adolescents and young adults, both male and female, benefit from physical activity (Myers et al.). Researchers from the CDC (2002) found that benefits of regular physical activity produces strong healthy bones and muscles, reduces the risk of obesity and chronic diseases, and reduces feelings of depression and anxiety promoting psychological well-being. These researchers also state that nearly half of American youths aged 12 to 21 years are not physically active on a regular basis and about 14% of young people report no physical activity. Furthermore, participation in all types of physical activity declines as age or grade in school increases. Among children and teens aged six to nineteen years, 16% (over nine million) are overweight according to the 1999-2002 data (CDC). Physical Education is but one tool that can be used to combat this growing problem.

Research has provided significant findings related to physical activity such as sport and

exercise in improving areas of mental health and well-being (Greenberg & Oglesby, 1996). Engaging in physical activity has a positive impact on increasing mood and self-esteem. Physical activity can improve self-image, self-confidence, mood, relieve stress tension and premenstrual tension, increased alertness, increased energy and increased ability to cope with stress (Greenberg & Oglesby). Page and Tucker (1994) stated, "Physically active adolescents tend to feel less lonely, shy and hopeless" (p. 184). Horn and Claytor (1993) "found exercise as a therapeutic intervention had the greatest positive impact on the self-esteem of emotionally disturbed youth" (p. 231). But can one expect the same gains in self-esteem in a physical education class that includes yoga as an integral part of its curriculum?

The psychological benefits of yoga include an increase in somatic and kinesthetic awareness, positive mood, subject well-being, self-acceptance, self-actualization, social adjustment, decrease in anxiety, depression and hostility (Arpita, 1990). Temmi Sears, director of YogaBuds, states, "The primary benefit of yoga is enhanced self-esteem. You can't do yoga and not improve at it" (as cited in Peters, 2003, p. 110). Yoga also has physical benefits in improving strength and flexibility.

Yoga may help teenagers learn about their body and discover what their strengths and limitations are. Yoga encourages youth to explore their natural flexibility and to become stronger through natural and functional physical movement using their own body weight. Yoga allows teenagers to focus on the within time which is time focusing on themselves, visualization, relaxation and enter a noncompetitive environment. One important area of inquiry, therefore, is to identify if gains in self-esteem are the same in regular physical education classes vs. a physical education class that includes yoga as an integral part of its curriculum.

## **Method**

### **Participants and Procedures**

The study took place in a predominately rural middle class community located in the Puget

Sound area of Washington State. Participants were both females and males, ranging from 13 to 14 years of age. Participants were selected through convenience sampling (i.e., students were assigned to classes by the registration process).

The study took place from January 2006 through June 2006, a total of 16 weeks during winter and spring trimesters. Students (26) were assigned to the experimental group and control group by convenience sampling (i.e., students were assigned to classes by the registration process). The students (27) who were in Health class second trimester and students who were in the non-yoga group second trimester served as the control group.

The experimental group performed yoga two days per week for 40-min sessions during the winter trimester. The control group performed traditional physical education activities twice per week for 40-min sessions during the spring trimester. Both groups performed their activity at the same time every day. The other three days of the week both groups engaged in cardio-respiratory endurance activities such as team basketball. During both trimesters of the study, the students took the SEI before, during, and after the study. The timeline for winter and spring trimesters was: (a) Week 1- the pre-inventory was given, (b) Week 5- the inventory was given again, and (c) Week 8- the final inventory was given.

The SEI scores were analyzed to examine the effects of yoga participation on self-esteem scores within and between groups: the yoga group (experimental) and the traditional physical activity group (control). The data was analyzed using analysis of variance with repeated measures.

### **Instrumentation**

Students were required to complete the Coopersmith Self Esteem Inventory (SEI) (Coopersmith, 1981) form for schools. The SEI was developed to assess attitude toward one's self in general, and specifically: peers, parents, school and personal interest. The SEI is comprised of 58 questions and the student was

asked to answer “like me” or “unlike me” regarding attitudes toward one’s self in general. This inventory took approximately 20 min to complete and was given before, during, and after the eight-week sessions of the study.

**Results**

The experimental group consisted of 26 participants (13 males and 13 females). The control group consisted of 27 participants, 16 males and 11 females. The study was conducted for eight weeks from January 2006 through May 2006. Two male and 2 female students dropped out of the yoga experimental group because they

wanted to do the more vigorous exercise of jogging and team sports. There were no drop-outs from the physical education activity control group.

**Analyses of Variance**

The first analysis of variance with repeated measures examined groups by time. There were no significant differences in self-esteem scores between the groups ( $p > .95$ ). There was a statistically significant effect for time ( $p < .023$ ) (see Table 1 and Figure 1). The interaction between groups and time was not statistically significant ( $p > .246$ ).

Table 1  
Mean self-esteem scores by time and group

Group	Pre-test	Mid-test	Post-test
Control (Physical Education)	73.38	77.19	80.69
Experimental (Yoga)	76.69	77.85	78.00

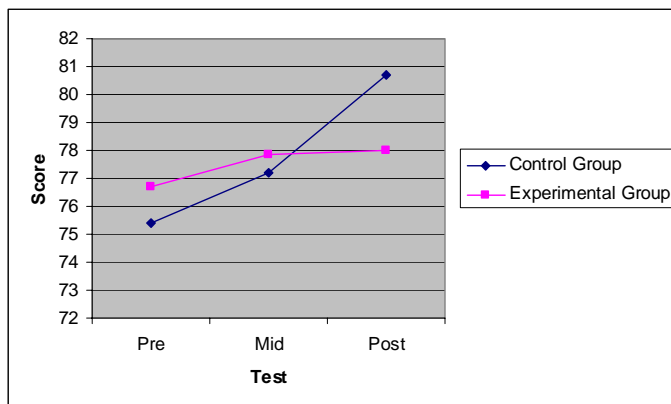


Figure 1  
Mean self-esteem scores of the control and experimental groups, representing the increase of self-esteem over time, with both the control and experimental groups.

The second analysis of variance with repeated measures examined gender by time. There were no significant differences between the groups (male, female) ( $p > .426$ ). There was a statistical

significant effect for time ( $p < .047$ ). The interaction between groups (gender) and time (pre, mid, post) was not statistically significant ( $p < .563$ ).

The third analysis of variance with repeated measures examined gender by groups by time. There were no significant differences between the gender (male, female) ( $p > .531$ ). There were no significant differences between the groups (experimental, control) ( $p > .983$ ). There was a statistical significant effect for time ( $p < .028$ ). The interaction between gender groups and time (pre, mid, post) was not statistically significant ( $p > .448$ ). The interaction between groups (control, experimental) and time (pre, mid, post) was not statistically significant ( $p > .243$ ). The interaction between groups (control, experimental), gender groups (males, females) and time (pre, mid, post) was not statistically significant ( $p > .274$ ).

There were no statistically significant differences in self-esteem scores between the control group and the experimental group. Self-esteem increased significantly across time in both the yoga and control group.

### **Discussion**

The findings in this study support past research that has suggested that physical education is important for adolescents (Myers et al., 2000). This study also supports earlier studies that demonstrated that increases in physical activity were associated with increases in self-esteem scores (USDHHS, 1996).

In the current study, self-esteem scores increased in both groups of students. These results suggest that both the students who participate in physical activity alone and students who participated in physical activity with yoga as an integral part of the curriculum increased their self-esteem over time. It appears that physical activity in all forms is beneficial for adolescence. This study demonstrated that self-esteem can be increased through alternative physical education activities including yoga.

The results showed that over time traditional physical education and physical education with yoga increased self-esteem. Yoga did not produce higher self-esteem scores than regular physical education activities. Both the experimental and control group showed a

significant increase in self-esteem from pre- to post-analysis over time.

The following points are recommendations for further study. First, increase the sample size in both control and experimental groups to a minimum of 100 which will improve the effectiveness of the study. Second, the study needs to take place over a longer duration, such as studying yoga's self-esteem benefits from the beginning of the school year until the end, and taking into consideration seasonal affective disorder. A longer duration of the study would also show how long yoga should be done for a person to experience self-esteem benefits. Third, together with a longer duration of study, one could also include studying yoga in all grade areas such as elementary, middle, and high school to help clarify when yoga begins to increase self-esteem. Fourth, by increasing the number of participants and the age range, the researcher could explore the self-maturation rate of adolescents and further explain if adolescents do increase self-esteem as they get older because of normal mental development.

Developing a study that tests students participating in nonphysical education activities compared to students who do participate in physical education activities may be another area to study. This type of study would represent if physical activity alone can improve self-esteem in adolescents. Studying the gender impact of yoga on eighth-grade male and female students' self-esteem could be another venue to pursue. Lastly, studying self-esteem in more specific sport combinations such as basketball or soccer in physical education class compared to alternative relaxing activities such as yoga could be pursued.

This study is a starting point, beginning to explore the effects of Yoga. Yoga and other forms of mind-body activity are becoming mainstream forms of alternative activity for adults in the U. S.. This study examined the effects of yoga on the self-esteem of eighth-grade students. The study revealed that self-esteem did significantly increase over time in both yoga and regular physical education activities. Physical educators can include Yoga

in the curriculum without compromising the self-esteem gains shown in more traditional forms of activity.

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