Advocacy Research Paper
Cognitive Benefits of Physical Education and Physical Activity

Though benefits of physical activity are acknowledged by society; physical education as well as opportunities for physical activity in public schools are being minimized or cut out due to budget cuts across the country. Schools feel the pressure of *No Child Left Behind* and are constantly trying to improve test scores. In making an effort to improve scores, schools are questioning the value of unified classes, ultimately cutting these classes and its teachers. It's ironic however that schools are cutting a class that intern can benefit students more so than perhaps any other. Physical education not only provides students with time for activity but teaches students what opportunities there are outside of the classroom. In the research and reliable studies that I have looked over, I have found no study concluding physical education or physical activity having adverse effects on academic performance, only improvements in academic achievements.

There are two domains of benefits of physical activity and cognition: physiological and learning/developmental. Physiological is the physical, how the body functions from physical activity that enables it to benefit; "Increase cerebral blood flow, alterations in brain transmitters, structural changes in the central nervous system, modified arousal levels that are based from physical changes in the body. Learning/Developmental changes that suggest movement and physical activity provide learning experiences that aid, and may even be necessary for proper cognitive development. Educators have suggested that movement, particularly among young children, stimulated cognitive development (Sibley and Ethier, 2003 p. 244)." According to the School Health Policies and Programs Study the percentage of schools that require physical education in each grade declines from around 50% in grades 1 through 5, to 25% in grade 8, to

only 5% in grade 12 (Trost, 2007). So if students are not having the opportunity to be active in school, they are not having the opportunity to receive the benefits.

Many studies have shown positive relationships between academic achievement and physical activity. It must be noted that though physical education class does help, often students do not receive the proper amount of moderate or vigorous activity in a physical education class setting due to time constraints and the number of classes a week. It was determined in one of the studies researched that on average in a 55 minute class period that an average of 19 minutes was spent in moderate to vigorous activity (Coe, 2006). From my experience observing physical education classes I would agree with this activity: time ratio. This is something that varies class to class, district to district, and state to state. However, I feel that the encouragement given by the physical education teacher to the students to be physically active and opportunities for learning that they provide students can attain the proper amount of moderate or vigorous activity.

According to the Surgeon General children should engage 60 minutes of moderate physical activity most days of the week (Trost, 2007). In 2006 it was found that 3.8% of elementary schools provide daily physical activity, 7.9% of middle schools, and 2.1% of high schools (Trost, 2007). It's estimated by the Centers for Disease Control and Prevention that 36% of high school students meet the current recommended levels of physical activity in 2005 (Coe, 2006).

Shephard (Coe, 2006) suggested that increased physical activity during school day may induce arousal (physiological benefit) and reduce boredom, which can lead to increased attention span and concentration. Shephard also suggested that increased activity levels might be related to self-esteem (physiological benefit, exercise can produce endorphins), which would improve

classroom behavior as well as performance (Coe, 2006). However, there is no exact threshold for how much activity a student needs in order to attain these effects. Coe discusses in her study how this could explain why she did not find increases in academic performance due to the moderate physical activity she investigated. There needed to be more vigorous levels of activity. This could also correlate to the common theory of student athletes who participate in regular vigorous activity and achieve academic success.

I believe that a noteworthy relationship between physical activity and cognition has been established. Though some research conflicts, when analyzing numerous studies I found more benefits than anything. A benefit is a benefit, who should decide what is significant? I have gathered from my readings that elementary and middle school level students perhaps benefit most from participating in physical education as well as physical activity when comparing it to how they are affected cognitively. Students at the elementary level are very active learners and learn from experience. Things that are learned in class can often be reinforced in a physical education setting, such as colors and numbers. Also, at this age, giving students optimal time to run and play will allow them to use energy, enabling them to better focus in the classroom, leading to improved academic performance.

At the middle school level I have gathered that it is vital for students to be getting the exercise from a health stand point, but it is also important for students to have a mental break. At the middle school level students are going through much social anxiety and physical activity can allow the students to decrease their anxiety and be able to become more engaged in the classroom and therefore better equipped when testing comes around because they were actually listening in class. However, this will also still apply to students at the secondary level, where activity levels among students decrease even more.

The evidence I have seen leads me to support more physical education and opportunities for physical activity at all levels. Dating back to the Greeks who believed in a sound mind and a sound body, “Mind and body are one entity and that anything that happens to one will affect the other…” (Sibley and Ethier, 2003 p. 243). This means that if an individual is ignoring his/her bodies needs (being active) then the mind will not be able to function. I honestly believe that activity makes a persons’ body the best it can be and therefore the best mind and whole person they can be.

References:

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