**THE ASSOCIATION BETWEEN PHYSICAL EDUCATION, RECESS,**

**AFTER SCHOOL SPORTS IN ACADEMIC PERFORMANCE**

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Education has a huge undertaking in nurturing our youth, with 56 million individuals seeking quality education daily (CDC 2010).   For years the educational system has debated whether the length of school hours, classes, and academic time relates to academic achievement; however, many studies find that student learning depends on how the available time is utilized, not necessarily the amount of time allocated (Taras, H. 2005).   During the debate regarding academic performance, standardized testing became a popular threshold for academic success along with college acceptance; and advanced classes were created starting as early as elementary school to increase student learning outcome.  While trying to create the “super human,” we as a society have potentially assisted in the creation of anxiety disorders, depression, obesity, and other cognitive disabilities such as ADHD as well as limited social interactions and increased risk-taking behaviors due to academic pressures (Taras, H. 2005).  As a result, classes such as physical education and academic breaks such as recess have been cut from schools to increase time in common core subjects such as English, math, and science; and extracurricular activities like after school programs and athletics have been deemed insignificant to academic success (CDC 2010). The purpose of this analysis is to determine a positive correlation between increased student academic performance and school-based physical activity, such as physical education, recess and after school extracurricular programs, through recent studies.

Physical education in schools, as defined by the National Association for Sport and Physical Education (NASPE), provides students with instruction on physical activity, health-related fitness and physical competence to enable them to participate in lifelong movement and responsible personal and social behaviors (CDC 2010).  The interventions used in some studies to increase academic performance were; increasing the amount of time in physical education with a qualified professional; performing various aerobic activities to elevate heart rate and participating in coordinative games that stimulate reaction time and locomotor skills during physical education (CDC 2010).  Also, studies performed by CDC (2010) reported positive connections, in school aged students from 5-18 years old, between increased time in physical education and academic performance.  These positive impacts included increased standardized test scores in math, reading, and writing, higher attention span in academic classes and appropriate behavior during teacher instruction.

Similarly, in another study by Trudeau and Shephard (2008), students who were taught by a professional physical education instructor with increased time in P.E., exhibited smaller declines in academic performance despite loss of time in regular education classes.   This study required students to spend an additional 1.25 hours per day participating in endurance fitness exercise (aerobic moderate-to vigorous exercise).  The students results from this study indicated improved math and reading grades as well as higher ratings in classroom behavior (Trudeau, F., & Shephard, R. J 2008).  Trudeau and Shepard’s evidence regarding behavior suggests that there are benefits from physical education as the rates of inappropriate talking among emotionally, or behaviorally disturbed students, who participated in the study, decreased. (Trudeau, F. et al. 2008).  Therefore, these examinations concluded that exercise interventions have significant reduction effects in disruptive behaviors from students with emotional disorders.

Likewise, recent data from the Youth Risk Behavior Survey revealed that no involvement in physical activity was associated with a perception of low academic performance (Trudeau, F., & Shephard, R. J 2008).  Other studies have also found that physical education teachers, who provided positive, general feedback routinely and appropriately, promoted higher levels of participation (Koka, A., & Hein, V. 2003).  Koka and Hein found that the reason students were invested more in the program was due to the non threatening and welcoming environment.   By the instructor creating this warm and safe atmosphere, students felt less judged for their abilities or inabilities in performing the activity based skills (Koka, A., & Hein, V. 2003).  In addition, students, who had little to no experience in athletics, greatly benefited not only from the nonjudgmental setting, but also through physical achievement in their competency to succeed at performing the physical skills, which in turn lead to an improvement in their self-esteem and communication skills (Koka, A., & Hein, V. 2003).  As a result, Koka  and Hein.’s study concluded that Physical Education in schools not only has physical health benefits, but also has a positive impact on mental health for students of all ages and levels of abilities.

Studies have found that cognitive, social, emotional, and physical functions emerged not only from Physical Education, but on the effects of recess in school aged children as well.    It is important to note, according to Ramstetter, Murray and Garner (2010),  these effects were dependent on the representation of supervising staff, equipment available, safety measures taken, and well-maintained playground area.  One study aimed to investigate the effects of providing game materials, such as flying discs, assorted playground balls, and jump ropes, for children during recess. Seven schools were used for this study; four schools received the intervention of playground equipment and the other three schools received no equipment (Verstraete, S. J., Cardon, G. M., De Clercq, D. L., & De Bourdeaudhuij, I. M. 2006).  In addition, students were given pedometers to measure their physical activity, and each student was required to turn in their pedometers for recording over a span of three months.  Researchers found that providing game equipment did increase each child’s level of participation in physical activity from 41%-45%, while the control groups dropped from 41%-34% (Verstraete, S. J. 2006). Therefore, it is evident that increasing the active time of each participant with appropriate equipment had a significant impact on students physical well being and meet the need for 45-60 minutes of moderate to vigorous physical daily activity (Verstraete, S. J. 2006).    Furthermore, Verstraete (2006) research also indicated that recess was greatly affected by the supervising staff.  The staff members who encouraged or implemented game based curriculum during recess had students actively participating in moderate to vigorous activity throughout the duration of recess. As a result of the data collected from the studies, the findings suggested that both boys and girls at a school aged population benefited physically, cognitively, emotionally, and academically when opportunities like these occurred more often and routinely (Verstraete, S. J. 2006). Therefore, rather than decreasing recess in school aged children to reallocate more time for academic opportunities, a time should be dedicating to halt academic pressures and provide an atmosphere similar to recess to students as it has been proven to be essential in students social development, satisfaction and alertness.  (Ramstetter, C. L., Murray, R., & Garner, A. S. 2010).

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