



A study on the importance of physical education and its effect on academic performance

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Abstract:

Health is a vital moderating factor in a child's ability to learn. The idea that healthy children learn better is empirically supported and well accepted (Basch, 2010). Many factors influence the academic performance of a child. Some of them are socio-economic status (Sirin, 2005), parental involvement (Fan and Chen, 2001) and a host of other demographic factors. Multiple studies have confirmed that health benefits are associated with physical activity, including cardiovascular and muscular fitness, bone health, psychosocial outcomes and cognitive and brain health (Strong et al., 2005). Brain health is important across the life span, as brain is responsible for both mental processes and physical actions of human body. In adults, brain health, representing absence of disease and optimal structure and function, is measured in terms of quality of life and effective functioning of activities in daily living. In children, brain health is measured in terms of successful development of attention, on-task behaviour, memory and academic performance in an educational setting.

Physical activity and fitness plays a vital role in developing the brain during childhood. Children respond faster and with greater accuracy to a variety of cognitive tasks after participating in a session of physical activity. Participating in moderate physical activity is found to increase neural and behavioural concomitants associated with the allocation of attention to a specific cognitive task. In some experimental study, children who participated in 30 minutes of aerobic physical activity outperformed those children who watched television for the same amount of time. Physical activity which is generally used as a break from academic learning time, post engagement effects of it includes better attention, increased on-task behaviours and improved academic performance. Teachers can offer physical activity breaks as part of a supplemental curriculum or simply as a way to reset student attention during a lesson. After-school physical activity programs have demonstrated the ability to improve cardiovascular endurance and this increase in aerobic fitness has been shown to mediate improvements in academic performance as well as the allocation of neural resources underlying performance on a working memory task.

Keywords: Brain Health, Physical activity, Academic performance, Responsive, Psychology.

Introduction:

The popular adage 'health is wealth' throws light on the need to maintain good health for the overall well-being of individuals and societies. 'All work and no play makes Jack a dull boy' is an oft quoted proverb. Here, the emphasis is actually on the need to do regular physical exercise. Our perception of health is so ill-conceived that we tend to go for healthy foods instead of following a strict exercise regimen and good eating habits. No wonder, several people turn obese in their mid-twenties! 'A sound mind in a sound body' is the English translation of a Latin proverb quoted in academic circles everywhere. Our forefathers were ever mindful of the attributes of good health and were practitioners of regular physical activities. It is, therefore, very apt to go deep into the attitude of college students towards physical activity in general. Sports can be used to work towards a number of developmental goals in humans that ensure their total well-being. Sport improves public health, promotes academic activities, enhances social development and above all supports community life.

Review of Literature:

Joseph (2011) emphasizes the fact that the potential for physical activity behaviours that are learned in childhood, if carried over to adulthood, which positively affect health coupled with the age-related decline in physical activity from childhood to adolescence, makes for a critical need for understanding the predictors and antecedents. A child or a group of children could be identified accurately as a target for intervention.

Zeng & Raymond (2011) investigated the attitudes of high school students toward physical education and their sport activity preferences. The investigators were of the opinion that identifying and understanding correlates of school children's physical education activity participation are critical to promoting current and lifelong physical activity participation of children. Among other factors, children's attitudes are considered to be a key element influencing physical activity participation. Children who have more positive attitudes toward physical activity are reported to be more likely to participate in physical activity outside of school and demonstrate higher physical activity amounts than those with less positive attitudes. Fostering children's positive attitudes toward physical activity would be conducive to the promotion of current and lifelong physical activity participation of children.

Broman (2005) refers to recent studies which indicate that college students experience distinctive stressors and this stress is linked to substance abuse, lower self-esteem, academic problems, depression, and many other ailments. In addition, during college days, a shift occurs from parental supervision to a more independent life style. Students always find problems with time management, work issues, as well as learning to cope with a variety of social role changes as new friendships and relationships are developed. For many, new challenges arise as they have their first opportunity to develop their own daytime patterns and sleep schedules. In addition, new financial changes as well as pressure for academic success occur. These unique stressors have been associated with anxiety and may ultimately have a negative impact on a students' learning ability.

Carlson (1995) carried out a study of a cross section of students and their attitude towards physical education is now in the public domain. The study demonstrated that a majority of students did not regard physical education in the same way as they did many of their subjects such as Math or Geography. However, researches on adolescents with negative attitudes toward physical education are very limited.

Carlson (1995); Portman (1995) & Smith (1995) focused on special populations of students such as those of low ability or those socially isolated or alienated. However, there has been very little indepth examination of competent students and their attitude towards physical education. Teachers tend to recognize the students who are talented and try to encourage and stimulate those students to reach their full potential. The assumption of most teachers is that competent students enjoy and like physical education. However, Bain (1980) found that students needed to be positively socialized into physical education to have a positive attitude towards it.

Onifade (1985) states that, given the many benefits of vigorous physical activity and the resultant improvement in the general health of the people it is imperative that early intervention on the part of the authorities is ensured. Fitness programmes need to be designed keeping in mind the requirements of individual trainees. The general physical activity recommended to enhance physical fitness is 30 minutes of moderate-intensity physical activity on a daily basis. The physiological benefits of physical activity and fitness exercise are very important since they enhance energy, strength, endurance, bone mass and the ability to participate in sports.

Pathan & Iqbal (2010) examined the relationship between sport activities, academic achievements and personality dynamics of high school students in Sindh. The study analyses the relationship between educational performance of a person and his grooming in the society with sports activities especially at early education levels of schooling. Some valid inferences have been drawn to indicate that sports activities in the early schooling age has significant impact on personality traits in later professional life of an individual.

Detailed studies have been carried out in several countries to assess the relationship between attitude towards physical activity and achievement in academics at various levels. Regular physical activity is known to have positive effects on health and can help minimize the harmful effects of many illnesses. These positive effects also displayed an improvement in other areas. Recent studies in children have shown that physical activity can improve cognitive functioning, particularly academic or learning process.

Over the last few decades, studies have indicated that academic performance can be improved with physical activity. Although the majority of these studies have examined children and youth, a few studies have examined the relationship between physical activity and academic performance in children. These effects, whether occurring from physiological or psychological changes, is providing the same results: improvement in academic performance. Numerous studies have examined physical activity, stress and their relationship with academic performance in children. Physical activity may be a cost-effective way to promote stress relief

and enhance academic performance. If students can experience the positive benefits of physical activity, both physiologically and psychologically, their academic experience may be enhanced.

Objectives of the study:

1. To understand the importance of physical education for school children.
2. To ascertain the relationship between physical fitness and its impact on academic performance of children.
3. To suggest measures to further strengthen the concept of including physical education as a part of curriculum at school level itself.

Research Methodology:

Type of research: It is a descriptive study in nature.

Sample size: 500 respondents.

Respondents: School children studying in various schools across Bangalore South.

Type of Data: Primary data has been collected using well designed questionnaire, direct personal interview and observation methods.

Secondary data has been collected by referring to articles and research papers published in various national and international journals, magazines, reports etc.,

Analysis: Such collected data was tested using SPSS software, Analysis of Variance was performed to understand the co-relationship between the dependent and independent variables.

Findings of the study:

- Physical activity has a positive impact on cognitive skills such as concentration and attention and it also enhances classroom attitudes and behaviours, all of which are important components of improved academic performance.
- A study from the University of Illinois showed that children who are physically fit are more likely to perform better in school and achieve higher grades. Children participating in the study were given electroencephalograms (EEGs) to measure brain waves and how fast the brain responds to certain stimuli. Researchers found that the brain synapses of physically fit children fired faster and stronger, and as a result those children had better language skills.
- The more physically fit children were not only better at reading, they were also better at reading passages with several grammatical errors. The researchers looked at the brainwave patterns that deal

with language and the ability to spot errors in grammar. The fit children had strong results with both brain wave groups and a better understanding of nonsensical or error-filled sentences.

- Study also found positive associations between physical activity, fitness, cognitive function and academic achievement. The evidence indicated that physical activity has a relationship to parts of the brain that support complex cognitive processes during laboratory tasks. It also showed that physical activity is important for growth, development and general health.
- Just one session of moderate physical activity instantly boosts kids' brain function, cognition and academic performance.
- Mastering fundamental movement skills boosts brainpower and academic performance. Time away from lessons in favour of physical activity doesn't come at the cost of good grades.
- Research proves that students need adequate amounts of physical activity throughout the school day not only does it prevent obesity and obesity-related issues, but students also perform better academically.
- Physical exercise directly impacts the behaviour and development of the brain. "It is likely that the effects of physical activity on cognition would be particularly important in the developing brains of youth," according to a 2010 essay by Charles Basch of Columbia University.
- Drop-out rates were lower for youth who consistently participated in inter-scholastic sports. Though sports won't solve the drop-out problem that plagues many inner city schools, it simply may foster an environment of connectedness that could keep at-risk students attending school.

Suggestions:

Since, Physical education is guaranteed to reach all children, physical education is the only sure opportunity for nearly all school-age children to access health-enhancing physical activities. Students are more physically active on days on which they have physical education. Therefore, more thrust must be given on providing physical education as a part of the syllabus.

Quality physical education has strong support from both parents and child health professional organizations. Therefore, measures must be taken for its compulsory implementation.

Several models and examples demonstrate that physical education scheduled during the school day is feasible on a daily basis. Therefore, considering it as a part of curriculum is the need.

The concerned authorities should provide high-quality curricular physical education during which students should spend at least half (>50 percent) of the class time engaged in vigorous- or moderate-intensity physical activity. All elementary school students should spend an average of 30 minutes per day and all middle and high school students an average of 45 minutes per day in physical education class.

To allow for flexibility in curriculum scheduling, with atleast 150 minutes per week for elementary school students and 225 minutes per week for middle and high school students.

Students should engage in additional vigorous or moderate-intensity physical activity throughout the school day through recess, dedicated classroom physical activity time and other opportunities. Since, physical activity promotes health and learning, it follows that physical activity should be a priority for all schools, particularly if there is an opportunity to improve academic achievement.

Schools are being underutilized in the ways in which they provide opportunities for physical activity for children and adolescents. Therefore, a whole-of-school approach to increase physical activity for children and adolescents is needed. Under such an approach, all of a school's components and resources operate in a coordinated and dynamic manner to provide access, encouragement and programs that enable all students to engage in vigorous-or moderate-intensity physical activity 60 minutes or more each day.

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