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Physical Activity in the School and its Role in Child Cognition

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Introduction

Participation in physical activity has many health benefits in children, including improvements in neurocognitive functioning. Unfortunately, only 42% of 6-11 year old and 8% of 12-19 year old U.S. children meet recommended physical activity guidelines. Schools provide a safe environment in which to increase physical activity, but many schools have decreased the amount of time dedicated to physical education. The purpose of this study was to examine the effects of physical activity on cognition in children. A secondary purpose was to survey schools in Rhode Island to measure how many weekly minutes of physical activity were available to students.

Methods

- A review of literature on the effects of physical activity on neurocognitive functioning in youth was conducted.
- Physical Education teachers or other school officials in elementary and secondary schools in Rhode Island were contacted by phone or by e-mail to determine the number of minutes that children spend in physical education class and in recess each week.
- The percentage of schools that met national youth physical activity guidelines was determined.
- The percentage of schools that meet the Rhode Island mandate of 100 minutes of physical education per week was determined.

Results

Review of Literature Highlights

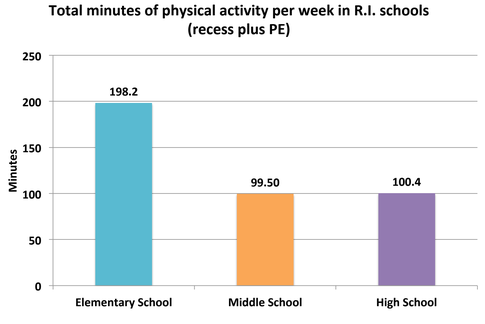
•Higher levels of cardiorespiratory fitness in pre-adolescents was associated with enhanced executive function including self-control, selective attention, working memory and creative thinking (Hillman et al., 2009)

•Activity breaks of as little as 5 minutes improved behavior and math fluency in children (Maeda & Randall, 2003)

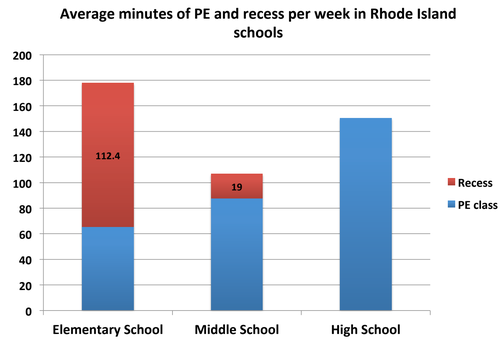
•Students spent less time off-task and math, reading, and spelling scores improved when physical activity was integrated into the classroom (Donnelly & Lambourne, 2011)

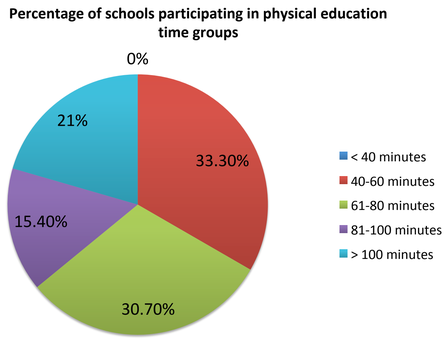
•Physical activity changes the anatomy, physiology and function of the brain (Suzuki, 2017)

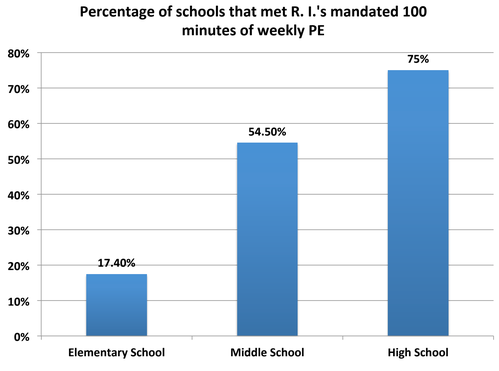
Rhode Island Schools – Physical Activity Report Card



Results







Discussion

•Despite the cognitive and health benefits of physical activity, U.S. children are less active than past generations. Schools create an ideal environment to foster movement, but this opportunity is often neglected. In fact, the time dedicated to physical education has been declining for many years.

•According to federal guidelines children aged 6-17 years should participate in a minimum of 60 minutes of physical activity each day. R.I elementary schools provide students with 64% of the recommended amount of daily physical activity, while secondary schools provide students with only 33%.

•Schools should increase opportunities for students to be active throughout the school day. Introducing shorter (15 minute) activity breaks multiple times a day is an effective strategy for increasing activity. Teachers in schools that have implemented this strategy report improved behavior, higher academic achievement and increased standardized test scores (Connolly, 2016).

•Schools should reconsider the importance of physical activity. Changing the culture to allow for greater amounts of movement is crucial to health and academic success.

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