

The relationship of elementary physical education quantity to class size and weekly recess offering

Ben D. Kern, University of Wyoming
Chad Killian, University of New Hampshire
Hans van Der Mars, Arizona State University
Wesley J. Wilson, University of Illinois

The quantity of physical education (PE) provided to children in the US fails to meet the national recommendation of 150 min/week, and PE class sizes are on average larger than non-PE classes. In some elementary schools, recess time may be provided to replace PE instructional time. This study was conducted to examine the relationship of class sizes and weekly recess offerings with PE quantity in a 25-states sample of US elementary physical educators. A 19-item policy implementation survey was completed by 2,184 public elementary school physical educators, with 1,931 providing complete data. Survey items related to the: (a) scheduled quantity of physical education (class length x number of classes per week) in pre-Kindergarten to 5th grade, (b) number of students per physical education class, (c) quantity of recess as a product of number of daily offerings x recess length in minutes x days per week school is in session (4 or 5 days). Descriptive statistics and correlations were calculated on selected variables in aggregate and for each state individually. Spearman's Rho non-parametric correlation was used to assess the relationship between weekly minutes of PE and PE days per week with average PE class size and weekly minutes of recess. Aggregate results showed a small but significant positive correlation between PE days/week and PE class size, $r(2135) = .127, p < .001$. Additionally, PE min/week were positively correlated with class size, $r(2133) = .203, p < .001$, and negatively correlated with recess min/week, $r(1938) = -.164, p < .001$. Increases in PE quantity are accompanied by corresponding increases in class sizes, thereby reducing student access to quality instruction. Additionally, higher weekly offerings of recess correlate to lower weekly minutes of PE, suggesting that schools supplant PE time with recess time. Further study of this phenomenon is warranted.