

A Coordinated School Health Program Effect on Cardiorespiratory Fitness in Preschool Children

Authors : Zasha Romero, Roberto Trevino, Lin Wang, Elizabeth Alanis, Jesus Cuellar

Abstract : Background: There is a strong relationship between low cardiorespiratory fitness (CRF) and high adiposity levels. The purpose of this study was to assess the effects of the Bienestar/Neema Coordinated School Health Program (BN CSHP) on the CRF of preschool children. Methods: This is a randomized cluster trial conducted in preschools of two school districts located along the Texas-Mexico border. Of 48 eligible schools, 28 were randomly selected (intervention, n=14; control, n=14). Family demographics and household health characteristics were collected from parents. CRF, as measured by the Progressive Anaerobic Capacity Endurance Run (PACER) fitness test, was collected from the children. A generalized linear mixed model (GLMM) was used to analyze the data. Results: Family demographics, household health characteristics, and children's weight, obesity prevalence, and sedentary activity were similar among both treatment groups. After adjusting for covariates, the number of laps run by children in the control group increased by 23% (CI: -5% to 60%) per each data collection period compared with 53% (CI: 7% to 119%) in the intervention group. Conclusions: Children in the BN CSHP, compared to those in the control group, had a significantly higher increase in their CRF. This finding is important because of the health benefits of CRF in children.

Keywords : coordinated school health program, cardiorespiratory fitness, obesity, border health, preschool, physical education, movement

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