GNYACSM Abstract

Feasibility of an Exercise Program to Improve Well-Being in a Middle School Setting: A Pilot Study

JESSIE HIRSCH[1], YANA KOSTOVA[2], MELISSA DIMARTINO[2], ALEXANDER ROTHSTEIN[3], AMERIGO ROSSI[3] FACSM

[1]Department of Allied Health and Kinesiology; Hofstra University; Hempstead, NY
[2]Department of Psychology and Counseling; New York Institute of Technology; New York, NY
[3]Department of Interdisciplinary Health Science; New York Institute of Technology; Old Westbury, NY

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Advisor / Mentor: Rossi, Amerigo (arossi01@nyit.edu)

ABSTRACT

Physical inactivity has become a major public health concern. Regular physical activity (PA) has been shown to improve health outcomes and well-being among adolescents, but more research is necessary to understand the feasibility of a physical activity program in a school setting. **PURPOSE**: This pilot study examined the effects of a two-week daily PA program compared to a stretching program and a washout period. **METHODS**: 40 middle-school students participated in this randomized counter-balanced study (Age: 12.2 $\pm$ 0.9 yrs, BMI: 20.1 $\pm$ 4.3 kg/m^2). Participants were randomized into 2 groups: two weeks of daily 40 minutes of moderate to vigorous-intensity PA or an attention-control group that mostly stretched. In between the two conditions, participants had two weeks of washout. All participants were given a Fitbit Inspire 3 to wear throughout the duration of the study. Physical Activity Questionnaire-Children (PAQ-C) was administered at baseline. One of five well-being questionnaires was administered digitally at the end of each school day, in randomized order each week. The average of two scores over two weeks was used for data analysis. Pearson correlation coefficients (r) were analyzed for correlations between baseline PA and well-being scores during the exercise condition. Paired samples t-tests were analyzed to compare activity intensity and well-being between conditions. **RESULTS**: Baseline PAQ-C was significantly correlated to EPOCH Measure of Adolescent Well-Being Happiness subscale (r=0.50, p=0.004), Attentional Control Scale for Children (r=0.58, p<0.001), Rosenberg Self-Esteem Inventory (r=0.43, p=0.008), and Brief Scale of Psychological Well-Being (r=0.42, p=0.01). A negative correlation with the Generalized Anxiety and Depression Questionnaire (r=-0.28, p=0.09) was not significant. Compared to the control group, the PA condition elicited higher heart rate (difference = 11.8 bpm, p=<.001) and total intensity (difference = 21.9 units, p=<.001) during the class hour. **CONCLUSION**: Exercise interventions in school settings are a feasible way to increase PA in adolescents. More research should be done to investigate the long-term effects of in-school exercise programming on adolescent well-being and physical fitness.