

1079 Board #205 May 27 2:30 PM - 4:00 PM
Physical Activity And Cognitive Characteristics Of 5th Grade Student Participants In The Power Program

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High volumes of sedentary instructional time during the school day contradicts research supporting the role of physical activity (PA) in enhancing students' attention, academic achievement and executive function (EF).

PURPOSE: To describe PA, EF and academic performance in 5th grade student participants prior to a multimodal classroom curriculum called POWER that incorporates both PA and the teaching of EF skills.

METHODS:

A convenience sample of six 5th grade classes in two diverse schools in New Jersey were studied. Three classes in one school received POWER starting September 2019 (POW); 3 waitlist control classes in the other school (CON) will begin POWER in January 2020. Students wore wrist-worn accelerometers for a full school week and completed the Youth Activity Profile (YAP). EF was assessed by 3 cognitive tests from the NIH Toolbox (NIHTB). Academic performance was assessed via STAR math tests. Data are reports as mean (standard deviation). Groups comparisons were made by independent samples t-test.

RESULTS:

86 students (POW n = 49; CON n = 37; mean age = 10 (0.2) years) completed the YAP and NIHTB cognitive tests at baseline. A subset of 70 students (n = 35 in each group) wore accelerometers. POW spent 77.4% (2.6%) of the school day in sedentary behavior and 20.2% (2.6%) in MVPA, while CON spent 87.2% (1.4%) and 11.39% (1.3%) respectively in sedentary and MVPA. The YAP activity score at school was 3.5/5 for POW and 3.2/5 for CON. The age-corrected composite score for NIHTB was 94.1 (10.8) for POW, and 97.4 (9.5) for CON (national average=100). Students' scaled score for the STAR math assessment was 735 (86.3) and 730.5 (78.7) (~70th percentile) for POW and CON, respectively.

CONCLUSIONS:

POW PA was significantly higher than CON ($p = .001$), possibly due to intervention teachers' implementing some aspects of POWER earlier than instructed. Students tested below age-corrected national averages on both the NIHTB and academic tests; there were no significant differences between groups ($p = .15$ and $p = .81$).

1080 Board #206 May 27 2:30 PM - 4:00 PM
Effects Of An 8-week Crossfit Program On Psychophysical Well-being In Healthy Adolescents

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It is well known that High-Intensity Interval Training, such as CrossFit, positively influences physical and mental well-being. However, few rigorous studies evaluated both psychological and physical fitness variables in young people.

PURPOSE: To investigate if 8 weeks of CrossFit training program could positively influence the psychophysical well-being in adolescents.

METHODS: 30 healthy participants ($n = 18$ males and 12 females) were matched into pairs based on gender and randomly allocated into an intervention group ($n = 15$; 18.2 ± 0.8 years) that performed the 8 weeks CrossFit training program or control group ($n = 15$; 18.3 ± 0.8 years). At baseline and after 8 weeks, physical fitness tests (i.e. squat, push-up, lunge, and 20-meter run) and psychological measures (PCS and MCS indexes of the Short Form-12, and Regulatory Emotional Self-Efficacy scale (RESE, negative and positive)) were performed.

RESULTS: After 8 weeks, the intervention group showed significant improvements in the number both of maximal repetitions for the squat test ($\Delta 6.66 \pm 2.58$, $p < 0.001$), push-up test ($\Delta 5.87 \pm 4.23$, $p < 0.05$), and lunge test ($\Delta 7.89 \pm 3.11$, $p < 0.001$) and of maximal laps for the 20-m run test ($\Delta 3.60 \pm 2.27$, $p < 0.01$). Also, higher scores for the PCS ($\Delta 4.7 \pm 1.3$, $p < 0.01$) and MCS ($\Delta 5.2 \pm 0.9$, $p < 0.001$) indexes, and the RESE negative ($\Delta 6.0 \pm 3.9$, $p < 0.001$) and RESE positive ($\Delta 4.0 \pm 2.7$, $p < 0.001$) scales were found in the intervention group. No statistical differences were detected in the control group for all dependent variables.

CONCLUSION: Findings suggest that an 8-week CrossFit intervention program could positively affect the general physical well-being and mental attitude and improve the emotional perceived self-efficacy in managing negative affect and in expressing positive emotions in healthy adolescents.

1081 Board #207 May 27 2:30 PM - 4:00 PM
Motivation, Segmented Physical Activity, Sedentary Behavior, And Weight Status In Adolescents: A Path Analysis

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PURPOSE: The purpose of this study was to examine the relationships linking motivational variables with BMI percentile (BMI%) via segmented physical activity (PA) and sedentary behavior (SB) in adolescents using path analysis.

METHODS: Secondary data analysis was performed using participants from the Family, Life, Activity, Sun, Health, and Eating (FLASHE) study. A non-probability panel balanced to the US population on sex, Census division, household income and size, and race/ethnicity were screened for eligibility. The final sample consisted of 1,643 adolescents (822 girls, 821 boys). Motivational variables consisted of PA enjoyment, self-efficacy, and peer social support. Mediator variables consisted of segmented weekly PA and SB assessed using the Youth Activity Profile (YAP). BMI% was the outcome. A recursive bootstrapped path analysis was conducted to examine the relationships between motivational variables, segmented PA and SB, and BMI% with indirect effects calculated via bootstrapped mediation analyses.

RESULTS: The relationships between motivational variables and segmented PA and SB were stronger than relationships between segmented PA and SB and BMI%. Three mediated paths were observed: self-efficacy and BMI% using sedentary YAP as the mediator (IE = -0.38, 95%CI: -0.65, -0.18), enjoyment and BMI% using weekend YAP as the mediator (IE = -0.62, 95%CI: -1.14, -0.12) and social support and BMI% using weekend YAP as the mediator (IE = -0.53, 95%CI: -1.00, -0.07).

CONCLUSIONS: The relationship between adolescent motivational variables and segmented PA and SB is relatively strong and specific motivational variables' relationships with BMI% is mediated through segmented PA and SB. This is one of the few studies to examine these relationships using a large U.S. sample of adolescents, supporting strong external validity evidence to the U.S. adolescent population. It also adds to the knowledge base regarding the relative strength of the inter-relationships among the observed variables. The relationships among motivation, PA, and health outcomes are complex and this study provides some new information that can be used to promote PA and reduce SB in the adolescent population.

1082 Board #208 May 27 2:30 PM - 4:00 PM
Perceptions And Use Of Internet-based Physical Activity And Health Resources Among Postmenopausal Women: A Qualitative Analysis.

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PURPOSE: With about 80% of women over age 50 reporting little/no regular physical activity (PA), this group is the most sedentary population in the U.S. Social media and new technologies provide an opportunity for home-based health promotion and behavioral interventions. **Purpose:** Use a qualitative approach to explore how women over age 50 use social media and online activities to access health information and participate in PA.

METHODS: Telephone interviews were conducted on a sample of healthy women over the age 50 years. A semistructured interview guide was used to acquire information on common internet use, online health information search history, and history of accessing physical activity programming. Responses were transcribed and examined for recurring themes and language-based sentiments using established qualitative content analytic procedures.

RESULTS: All women were in their mid-50's with a mean age was 55.5 years (range 53-56 years). All women were peri- or post-menopausal, and were either married or widowed. Facebook was the most commonly used online social app and was used to "keep up" with family and friends, to access support groups and read health articles. Fitbit was used by the majority of interviewees to track daily steps, sleep patterns, and calories burned during workouts. The participants also liked the goal-setting, self-monitoring, and social component (competition/social comparison) provided by Fitbit. MyFitnessPal was a commonly used app to track activity and monitor the relationship between calories consumed and calories expended. A number of women, particularly those with health conditions, accessed online sources to research medications/drug interactions and learn more about their condition. Participants reported that they were distrustful of much online information and were skeptical of many health web sites. Additionally, the women indicated that they would like to see more age-related content and access to communities of women of similar age.