The WAVE~Ripples for Change: Obesity Prevention in High-School Soccer Players (Year 3 of 5)

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Abstract

Objective: Test a 2-year mixed-reality obesity prevention intervention among soccer players (14-19y).

Description: In Oregon, 50 soccer teams were recruited and 48 teams (n=612 soccer players, 46.9% varsity team, 3% both varsity and junior varsity) from 13 schools were enrolled in August 2015. There were 33 teams (n=451) in the intervention group (IG) and 15 teams (n=161) in the comparison group (CG). At baseline/Phase 1, all participants were assessed for body composition, and nutrition and physical activity (PA) behaviors and knowledge. At school-based minicamps (total of 80h over 2-weeks), the IG received four face-to-face (F2F) lessons about sports nutrition with recipe tasting, and orientations to Rippleville - the virtual learning environment designed to reinforce F2F learning objectives. In addition, the IG received a 2-h grocery shopping and meal planning workshop (Phase 2). During Phase 3, IG and CG tracked PA (Fitbits), in addition to food intake, sleep, injury, and bowel health for 7 consecutive days.

Evaluation: High school soccer players (n=567) completed baseline assessments (56.6% females, 46.2% White, 37.9% Hispanic/Latin, 4.5% Asian/Pacific Islander, 1.9% African American, 0.8% American Indian/Alaskan Native). Mean age=15.3±1.2y and mean BMI=22.1±3.6 kg/m². Comparing IG and CG, baseline age, BMI and MVPA differed significantly in males; BMI, steps, sleep, grain, vegetable, and protein intakes differed significantly in females.

Conclusions and Implications: Key findings from the evaluation of operational feasibility and fidelity include greater needs for frequent incentives for the participants and strategies to utilize Rippleville to engage participants in virtual experiential learning.

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