

## Pediatric Adapted Liking Survey (PALS) with Tailored Health Messages: Application to Schools and Aligned with the School Meals

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**Background**—Previously, we tested an online behavioral screener, PALS, with a tailored health promotion message program, and established its feasibility and usefulness for studying child/parent dyads in an outpatient clinical setting. We adapted this program to a school setting to examine: health promotion needs; children’s program acceptance, usability, and willingness to change target behaviors; and message responses by child characteristic.

**Methods**—Two middle schools participated (1 suburban, 1 urban Title 1) in the study, following research team-stakeholder collaboration to adapt the program to student needs and align the PALS and messages with the school meals. Students were asked to self-assess the PALS, school meal acceptance, perceived food security, and sleep behaviors online. Aligned with the elaboration likelihood and transtheoretical models, students would receive tailored motivational or reinforcing messages, and for each, report willingness to improve their behaviors. Using this online program, students were asked questions about acceptability and usefulness.

**Results**—The PALS showed the need for nutrition education and informed a school-wide message campaign. The 202 suburban and 310 urban students reported high liking of less healthy (screen time, sweets/sugary beverages, salty snacks) and low liking of healthier (vegetables, whole grains) foods and behaviors. Although urban children reported significantly less healthy PALS-generated behavioral indexes, 40-45% of children in both schools reported food security concerns. Sleep also was a concern—37% of suburban children reported <8 hours sleep/night and 22% of urban children reported significant daytime sleepiness. Across both schools, the PALS showed strong feasibility (>85% agreement to answering questions quickly and completion without help) and usefulness (>70% agreed the survey got them thinking about what they eat or do). Students in both schools received an average of 3 tailored messages and 1 general message (promoting school meals), with high acceptability (≥73% reported the messages were helpful, they learned new information, and wanted to receive more messages). Nearly all students reported “like” to trying one behavioral improvement. Neither message type nor response varied significantly by food security or sleep measures.

**Conclusions**—This mhealth program identified school-wide needs and delivered students acceptable and useful messages to encourage healthy behaviors for obesity prevention without targeting children with food insecurity concerns.