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A School Nurse-Delivered Intervention for Overweight and Obese Adolescents: Lessons Learned

Lori Pbert
University of Massachusetts Medical School

Stavroula K. Osganian
University of Massachusetts Medical School

Kristin L. Schneider
University of Massachusetts Medical School

See next page for additional authors

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School Nurse-Delivered Intervention for Overweight and Obese Adolescents: Lessons Learned

Lori Pbert, PhD
Stravoula Osganian, MD, ScD, Kristin Schneider, PhD, Susan Druker, MA, Robert Magner, MPH, George Reed, PhD, Lauren Gellar, PhD, Mary Ann Gapinski, RN, MSN, NCSN, Anne Sheetz, RN, BSN, MPH
Academic and Community Partnership

- UMMS, Division of Preventive and Behavioral Medicine
- MA Dept Public Health/School Health Unit
- Children’s Hospital Boston
- School Health Settings: School Nurses Administrators
Feasible, accessible weight loss treatment approaches for OW/OB adolescents are needed

Systematic review for USPSTF (Whitlock et al, 2010) found moderate/high intensity interventions can ↓ weight, BUT GAPS:

- targeted younger children
- conducted in specialty health care settings with limited reach (accessibility, cost) and public health impact
School nurses in the school health setting have tremendous potential for public health impact on adolescent obesity

- Primary health professional in school setting
- Accessible and continuous care
- Professional organization (NASN) cites role of school nurse is to assist regarding diet, physical activity and weight and provide obesity treatment
Methods to test feasibility of 6-session school nurse-delivered intervention

Pair-matched cluster RCT
(6 high-schools, n=84 OW/OB teens)

Counseling Intervention (LGFG)
5-3-2-1-0; SCT

Information and Contact Control

2-month follow-up
(100% retention)

6-month follow-up
(100% retention)
The intervention was feasible for nurses to deliver

Protocol content covered: 97%
Protocol and materials very helpful: 100%
Not at all difficult to incorporate into daily work: 75%
Ability to Counsel:
- Effectiveness: 3.5
- Confidence: 3.5
The intervention engaged teens and had high acceptability

- Very Helpful: Intervention 98%, Control 71%
- Very Comfortable: Intervention 88%, Control 62%
- Nurse perceived teens very receptive: Intervention 75%
The 6-session intervention improved selected self-reported behaviors but not BMI.
Lessons learned.....

- Childhood obesity. Don’t take it lightly.
  - Food Stamps can help. Call 1-888-328-3483 to see if you qualify.

- my kinda shoppin’ spree
  - I’m lovin’ it

-FRIENDS OF IRONY
Establishing and nurturing personal relationships, trust, and shared goals with community partners is key.

- Identified their adolescent health concerns/priorities:
  - ↓ OW/OB among teens
  - Fit their mission and responsibilities
- Engaged administrators to support nurse in this role
Adaptation of intervention to setting and population requires close collaboration and mutual respect of unique contributions.

**School Health Unit/School nurses**
- Experience caring for OW/OB teens
- Understand work flow, feasibility in school setting
- Current practice/style
- Skills and credibility to deliver health-related counseling

**UMMS researchers and nutritionists**
- Empirical evidence, treatment recommendations (CDC)
- Theoretical frameworks
- Intervention design expertise
- Evaluation skills

**Focus groups** with OW/OB teens, their parents, school nurses, school staff and administrators

**JOINT INTERVENTION DESIGN WORKING GROUP: LGFG**

Pilot testing – work out kinks
Train community interventionists based on core competencies needed; conduct with community partners

Knowledge
• Scope of problem
• Recommendations (diet, PA, SB)
• Theoretical framework, counseling approach

Skills/confidence
• Protocol review and demonstration
• Practice with feedback
• Implementation “tips from the field” (barriers and tested strategies), brainstorm

Motivation
• Compatibility with mission, job responsibilities
• Evidence underlying protocol
Factors facilitating implementation and sustainability occur at multiple levels

**School Administration**
Fit mission (education/health of students)
Did not interfere with academic classes
See as school nurse role/job

**School Nurse**
Compatible with role/mission
Confident in ability to conduct intervention
Intervention protocol and materials clear, easy to use (high fidelity)
Teen comfort/acceptability reinforced delivery

**OW/OB Teens**
High acceptability- very comfortable talking with nurse re: weight
Perceived helpfulness
Non-interference with academic classes facilitated session adherence
Easily access nurse without parental involvement, transportation or cost
<table>
<thead>
<tr>
<th>BARRIER</th>
<th>SOLUTIONS/RESEARCH DIRECTIONS</th>
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<tbody>
<tr>
<td><strong>School</strong></td>
<td></td>
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<tr>
<td>Sustaining institutional support</td>
<td>• Reinforce benefits (improved health → academics), address concerns</td>
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<tr>
<td></td>
<td>• Engage school staff to support efforts</td>
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<tr>
<td><strong>Lack of PA opportunities</strong></td>
<td>• After school exercise program – LGFG-E</td>
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<tr>
<td><strong>School Nurse</strong></td>
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<tr>
<td>Time/conflict with other duties</td>
<td>• Resources to protect time for intervention delivery (e.g., floating nurse)</td>
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<td></td>
<td>• Group format, maximize nurse time – LGFG-G</td>
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<tr>
<td><strong>Ongoing delivery</strong></td>
<td>• Incorporate into performance evaluation</td>
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<tr>
<td><strong>OW/OB Adolescent</strong></td>
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<tr>
<td>Participation</td>
<td>• Process to let students know of program</td>
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<td></td>
<td>• Identify and address barriers to participation</td>
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<td><strong>Lack of social support for weight loss efforts</strong></td>
<td>• Group format – LGFG-G</td>
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<td>• Social networking technology – LGFG-G</td>
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“Snow White was poisoned by an apple, Jack found a giant in his beanstalk, and look what happened to Alice when she ate the mushroom! And you wonder why I won’t eat fruit and vegetables?!”
Theoretical Framework for Intervention

Counseling Intervention
- 1:1 Sessions

Instruction and Guidance
- Dietary, PA and SB recommendations
- Strategies for self control

Social Support
- Encouragement from school nurse

Social Modeling
- Strategies used by other teens in Student Booklet

SCT Constructs
Fostering Behavior Change

- Self-Efficacy
- Knowledge
- Behavioral Capability
- Self-Control
- Outcome Expectations

Weight-Related Behavior Changes

- Improved dietary quality
- Increased PA
- Decreased sedentary behavior

Decreased BMI/Weight