Physical Activity among Native Youth: A Systematic Review

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Objectives

- Native health background
- Systematic review
  - Methodology
  - Preliminary findings
- Promising strategies and research opportunities project
  - Healthy Native North Carolinians Network
  - *Let’s Move! in Indian Country*
Prevalence of BMI ≥95th percentile in US Preschool Children

Objectives

- Native health background
- **Systematic review**
  - Methodology
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Systematic Review Goals

To respond to tribal leaders’ requests and to advance the state of the science:

- Examine methodology and current evidence
- Provide guidance on promising strategies and research opportunities
Methods

- Search strategy
- Inclusion/exclusion criteria
- Information gathered
- Inter-rater reliability
Results - Study Selection

Articles reviewed
(N = 675)

Articles included meeting study criteria
(N = 124)

Interventions
(N = 19, 73 articles)

Initiatives
(N = 12, 14 articles)

Descriptive
(N = 37)
Results - Study Selection

- Articles reviewed (N = 675)
- Articles included meeting study criteria (N = 124)
  - Interventions (N = 19, 73 articles)
  - Initiatives (N = 12, 14 articles)
  - Descriptive (N = 37)
<table>
<thead>
<tr>
<th>Age Group</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Infancy (0-2 years)</td>
<td>3 (16)</td>
</tr>
<tr>
<td>Preschool-Aged (2-5 years)</td>
<td>3 (16)</td>
</tr>
<tr>
<td>Elementary School-Aged</td>
<td>9 (47)</td>
</tr>
<tr>
<td>High School-Aged</td>
<td>2 (11)</td>
</tr>
<tr>
<td>Multiple Age Groups</td>
<td>2 (11)</td>
</tr>
</tbody>
</table>
American Indians and Alaska Natives in the United States
## Intervention Sample Size (N=19)

<table>
<thead>
<tr>
<th>Sample Size</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;100</td>
<td>7 (37)</td>
</tr>
<tr>
<td>&gt;100 but ≤500</td>
<td>6 (32)</td>
</tr>
<tr>
<td>&gt;500</td>
<td>4 (21)</td>
</tr>
<tr>
<td>Not Reported</td>
<td>2 (10)</td>
</tr>
</tbody>
</table>
TRIBAL-ACADEMIC PARTNERSHIPS

COMMUNITY BASED PARTICIPATORY RESEARCH (CBPR)

CULTURALLY-CENTERED & EVIDENCE-BASED INTERVENTIONS

http://cpr.unm.edu/research-projects/index.html
Formative Assessment and Research (N=8)

- Mixed methods approach
- Qualitative methods
  - Key informant interviews
  - Focus groups
  - Direct observation
- Environmental assessments
- Positive outcomes for intervention implementation
# Theory Use (N=19)

<table>
<thead>
<tr>
<th>Mentioned Theory Use</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mentioned Theory Use</strong></td>
<td>13 (69)</td>
</tr>
<tr>
<td>Social Learning Theory</td>
<td>3 (16)</td>
</tr>
<tr>
<td>Social Cognitive Theory</td>
<td>2 (11)</td>
</tr>
<tr>
<td>Grounded Theory</td>
<td>2 (11)</td>
</tr>
<tr>
<td>Other or Not specified</td>
<td>6 (31)</td>
</tr>
<tr>
<td><strong>No Explicit Mention of Theory</strong></td>
<td>6 (31)</td>
</tr>
<tr>
<td>Study Design (N=19)</td>
<td>N (%)</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>Randomized Control Trial (RCT)</td>
<td>7 (37)</td>
</tr>
<tr>
<td>Non-RCT</td>
<td>5 (26)</td>
</tr>
<tr>
<td>Pilot or Feasibility Study</td>
<td>7 (37)</td>
</tr>
</tbody>
</table>
## Intervention Setting (N=19)

<table>
<thead>
<tr>
<th>Setting</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>School-based</td>
<td>8 (42)</td>
</tr>
<tr>
<td>Family-based</td>
<td>6 (32)</td>
</tr>
<tr>
<td>Childcare-based</td>
<td>1 (5 )</td>
</tr>
<tr>
<td>Summer Day Camp</td>
<td>1 (5 )</td>
</tr>
<tr>
<td>Workshop</td>
<td>1 (5 )</td>
</tr>
<tr>
<td>Supervised Classes</td>
<td>2 (11)</td>
</tr>
</tbody>
</table>
## Intervening Strategies (N=19)

<table>
<thead>
<tr>
<th>Strategy</th>
<th>N</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational Training</td>
<td>19</td>
<td>100</td>
</tr>
<tr>
<td>Family- or household-based</td>
<td>12</td>
<td>63</td>
</tr>
<tr>
<td>Enhanced Opportunities</td>
<td>11</td>
<td>58</td>
</tr>
<tr>
<td>Integrated Other Sectors</td>
<td>4</td>
<td>21</td>
</tr>
<tr>
<td>Media-based</td>
<td>4</td>
<td>21</td>
</tr>
</tbody>
</table>
Outcomes (N=19)

- Improved knowledge
  - Physical activity
  - Diabetes and other chronic conditions
- Health-related changes
  - Mixed results across and within the interventions
Physical Activity Outcomes (N=19)

- Most studies did not measure changes in physical activity
- Physical activity changes
  - Little use of accelerometers (N=3)
  - Significant increase in physical activity (N=1)
Policy and System Outcomes (N=19)

- Sustained physical activity related policy and system changes (N=2)
  - Instituted dog control regulations
  - Built environmentally friendly playground
  - Access to recreational facilities
Summary

- Interventions not only physical activity based
  - Food and nutrition components
- Observed changes in knowledge, few in physical activity
- Limited work on environmental or policy strategies
Discussion – Future Research

- Call for psychometric properties particular to Native study sample
- More rigorous assessments of the built environment particular to active living
- Increased emphasis on and evaluation of tribally-led environmental and policy strategies
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Promising Strategies and Research Opportunities

- Community ownership and collaboration
- Health, economics, and community development
- Honor traditional values and knowledge
- Accurate evaluation of impacts
- Multi-generational engagement
- Specialized training and funding
- Leveraging assets and opportunities
- Mobilizing “spark plugs”
- Provided direct support
- Fostered self-determined plans of action
- Increased civic engagement
- Offered tailored capacity building consultation and workshops
- Facilitated cross-community collaborations
- Enhanced statewide recognition

http://americanindianhealthyeating.unc.edu
SAPPONY

5K Trail Run
and 1 mile Fun Run

June 14, 2014 • Mayo Lake • Roxboro, NC

www.sapponytrailrun.org
Let's Move! in Indian Country
Become A Partner. Share Your Successes.

National Institutes of Health (NIH)

As the nation's medical research agency, the National Institutes of Health (NIH) contributes to advancing Native health by:

- Identifying factors influencing health and health disparities in the US population;
- Evaluating promising strategies for prevention and treatment in real-world settings and diverse populations;
- Harnessing technology and tools to advance prevention and treatment;
- Seeking expert input on research gaps;
- Training the next generation of scientists; and
- Fostering collaborations to maximize translation and dissemination.

Similar to our Federal Partners in Let's Move! in Indian Country, the following webpage highlights selected funding announcements that were identified as relevant to Native health research and childhood obesity research, along with NIH supported research and resources that have potential to advance efforts striving to raise the next generation of healthy Native children and adolescents.

Resources & Links:

- [Selected NIH supported Native American health and childhood obesity research](#) [PDF - 370 KB]
- [Selected NIH supported Native American health and childhood obesity resources](#) [PDF - 549 KB]
- [Selected NIH training opportunities for American Indian and Alaska Native students and researchers](#)

Selected NIH funding opportunities:

- [Interventions for Health Promotion and Disease Prevention in Native American Populations (R01)](#) (Reissue of PAR-11-346)
- [Time-Sensitive Obesity Policy and Program Evaluation Research (R01) (PAR-12-257)](#)
- [Obesity Policy Evaluation Research (R01)](#)
- [School Nutrition and Physical Activity Policies, Obesogenic Behaviors and Weight Outcomes (R01) (PA-13-100)](#)
Research Team

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Native American obesity intervention expert
Physical Activity among Native Youth: A Systematic Review

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