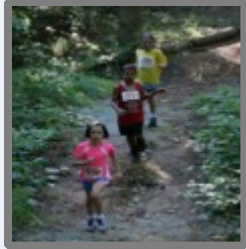


Physical Activity among Native Youth: A Systematic Review



Ricky Camplain, MSPH

PhD Student

Department of Epidemiology

Gillings School of Global Public Health

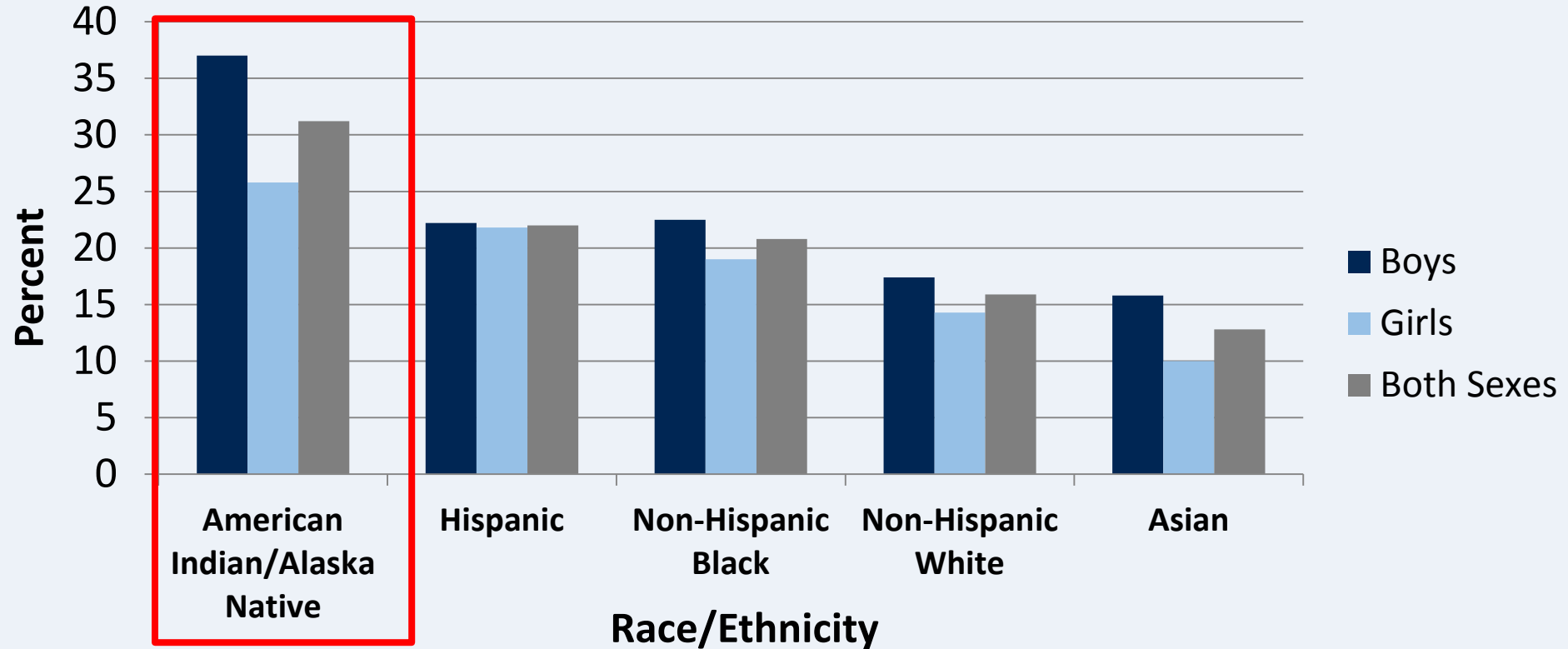
University of North Carolina at Chapel Hill



UNC
GILLINGS SCHOOL OF
GLOBAL PUBLIC HEALTH

- **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 $\geq 95^{\text{th}}$ percentile in US Preschool Children



- 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

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)

Study Sample Age (N=19)

	N (%)
Early Infancy (0-2 years)	3 (16)
Preschool-Aged (2-5 years)	3 (16)
Elementary School-Aged	9 (47)
High School-Aged	2 (11)
Multiple Age Groups	2 (11)

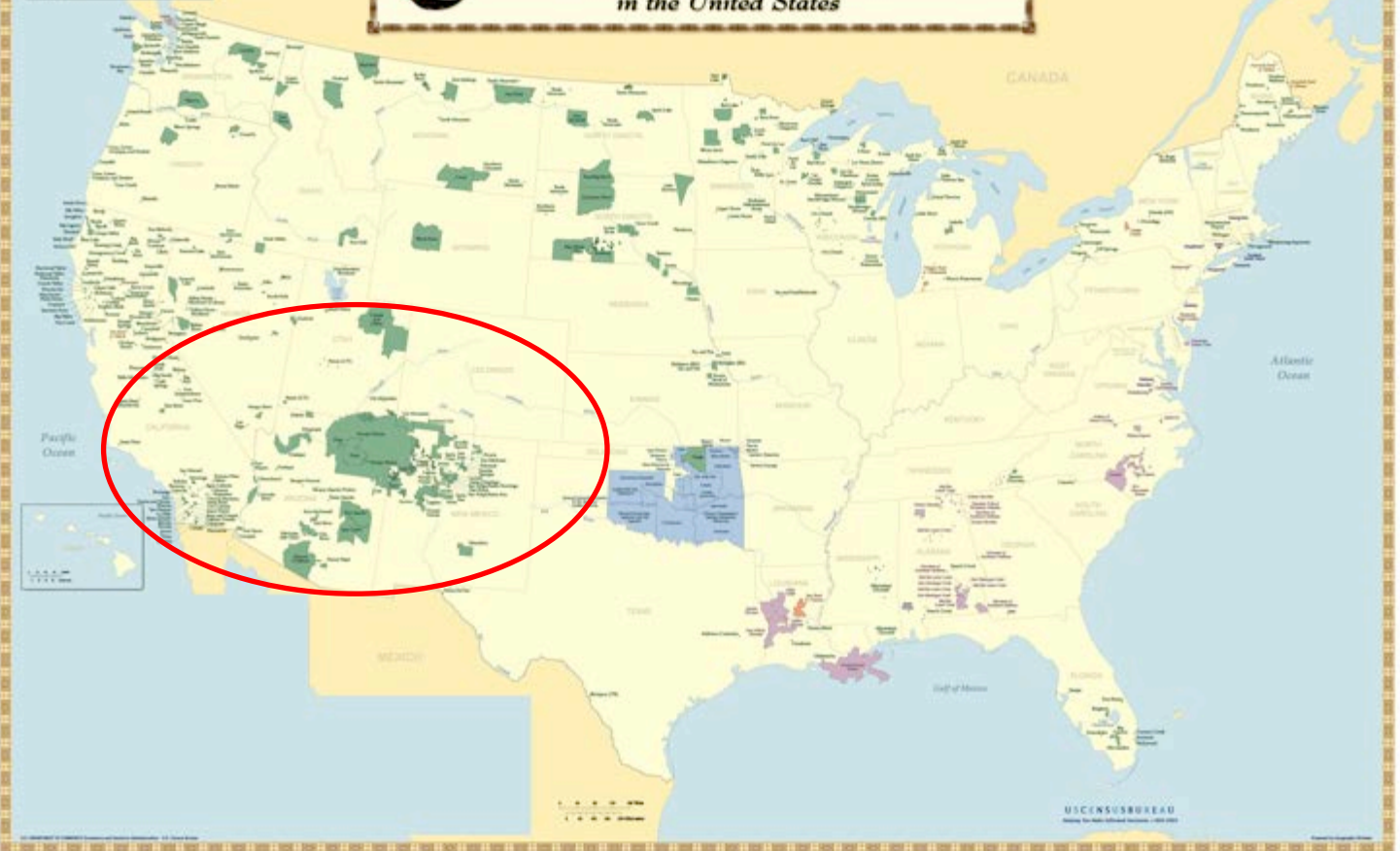
American Indians and Alaska Natives

in the United States

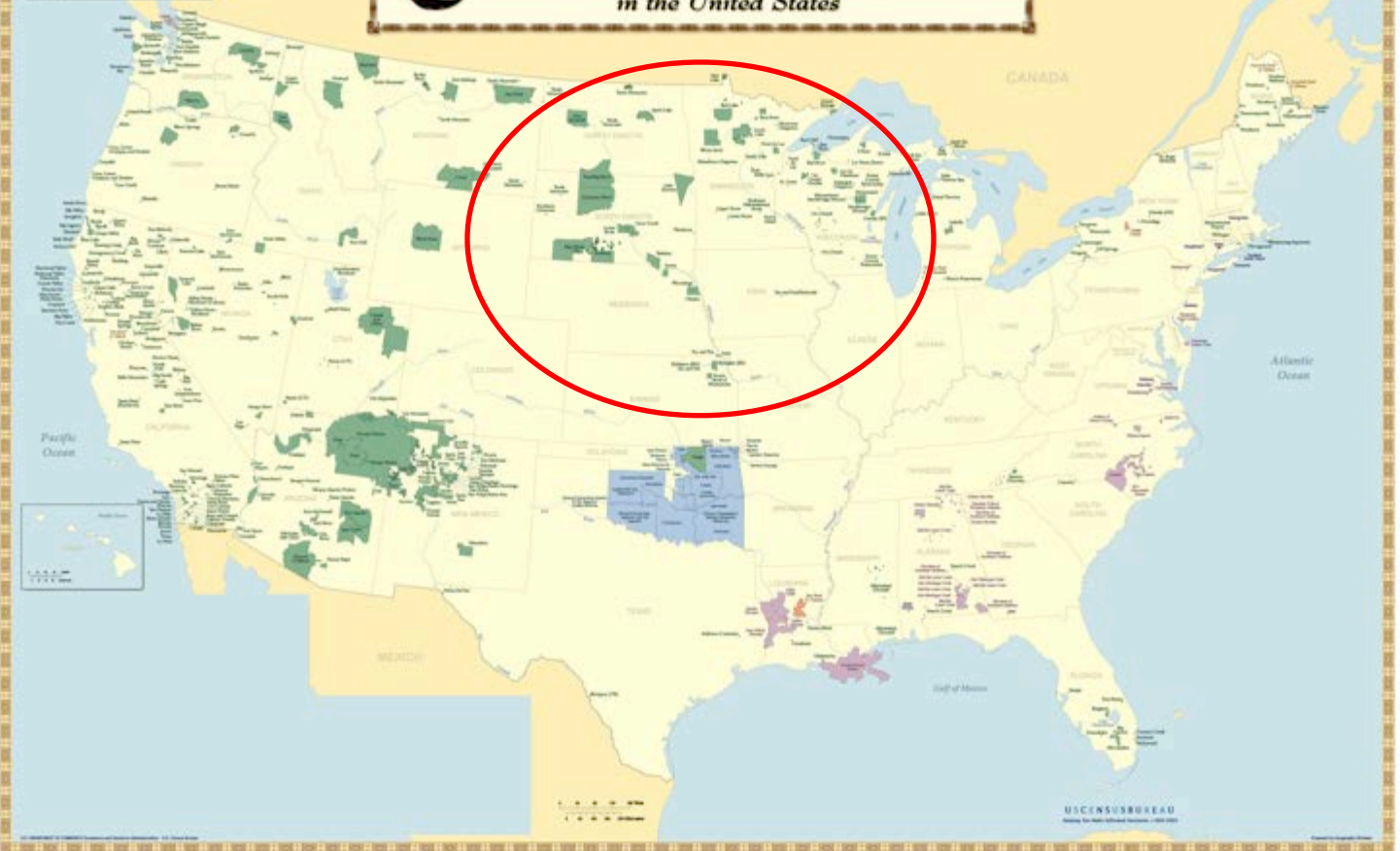
2000
Census
2000



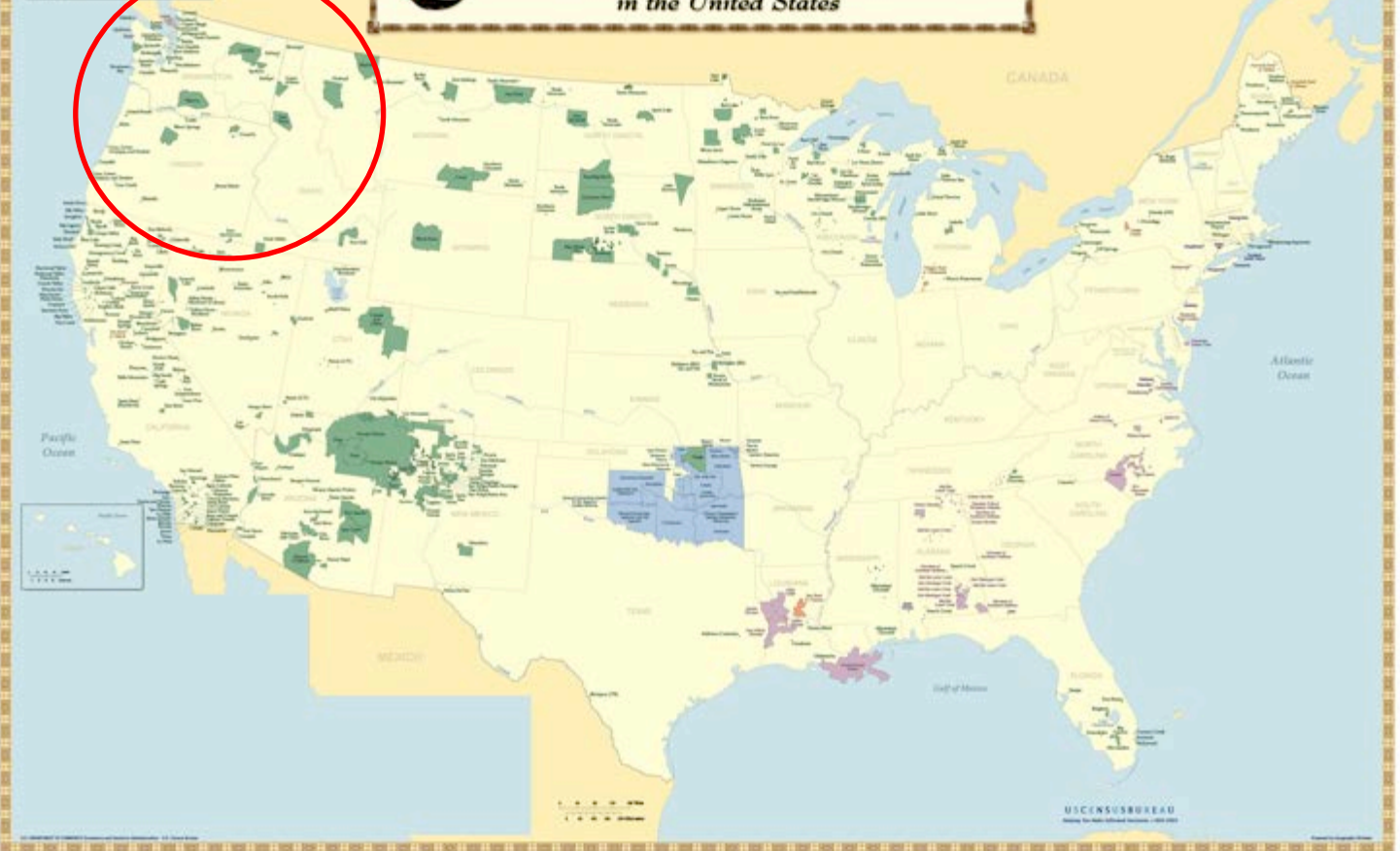
American Indians and Alaska Natives *in the United States*



American Indians and Alaska Natives *in the United States*

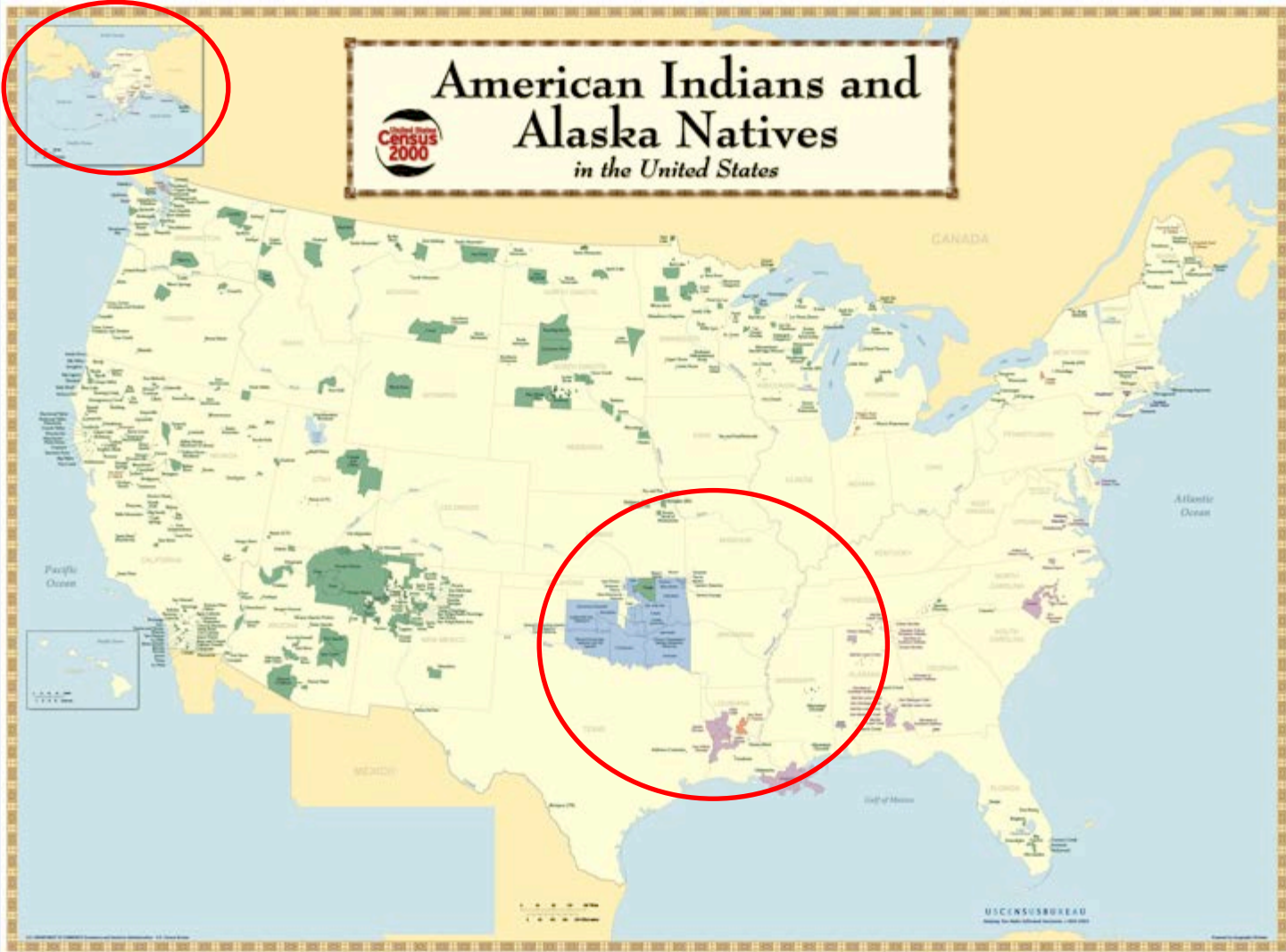


American Indians and Alaska Natives in the United States





American Indians and Alaska Natives in the United States



Intervention Sample Size (N=19)

N (%)

<100

7 (37)

>100 but \leq 500

6 (32)

>500

4 (21)

Not Reported

2 (10)

TRIBAL-ACADEMIC PARTNERSHIPS



COMMUNITY BASED
PARTICIPATORY
RESEARCH
(CBPR)

CULTURALLY-CENTERED
& EVIDENCE-BASED
INTERVENTIONS

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)

	N (%)
Mentioned Theory Use	13 (69)
Social Learning Theory	3 (16)
Social Cognitive Theory	2 (11)
Grounded Theory	2 (11)
Other or Not specified	6 (31)
No Explicit Mention of Theory	6 (31)

Study Design (N=19)

	N (%)
Randomized Control Trial (RCT)	7 (37)
Non-RCT	5 (26)
Pilot or Feasibility Study	7 (37)

Intervention Setting (N=19)

	N (%)
School-based	8 (42)
Family-based	6 (32)
Childcare-based	1 (5)
Summer Day Camp	1 (5)
Workshop	1 (5)
Supervised Classes	2 (11)

Intervening Strategies (N=19)

	N (%)
Educational	19 (100)
Training	16 (84)
Family- or household-based	12 (63)
Enhanced Opportunities	11 (58)
Integrated Other Sectors	4 (21)
Media-based	4 (21)

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

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**

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”**

Participants
Coharie Indian Tribe
Cumberland County Association
for Indian People
Guilford Native American
Association
Haliwa-Saponi Indian Tribe
Lumbee Tribe of
North Carolina
Meherrin Indian Nation
Occaneechi Band of
the Saponi Nation
Sappony
Triangle Native American
Society
Waccamaw Siouan Tribe

Grant Administrator
North Carolina
Commission of Indian Affairs

Capacity Building Team
American Indian Center &
Center for Health Promotion and
Disease Prevention,
both at the University of North
Carolina-Chapel Hill

Supported by
Kate B. Reynolds
Charitable Trust



- **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://americanindianhealthyating.unc.edu>

SAPPONY



5K Trail Run and 1 mile Fun Run

June 14, 2014 • Mayo Lake • Roxboro, NC

www.sapponytrailrun.org



<http://lmic.ihs.gov/federalpartners/fedpartnersnih/>

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



FEDERAL PARTNERS

COMMUNITY NETWORK

RESOURCES BANK

BECOME A PARTNER.
SHARE YOUR SUCCESSSES.

WEBINARS & EVENTS

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](#)



National Institutes of Health

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 \(R01\) \(PAR-12-257\)](#) [↗]
- [Obesity Policy Evaluation Research \(R01\)](#) [↗]
- School Nutrition and Physical Activity Policies, Obesogenic Behaviors and Weight Outcomes
 - [\(R01\) \(PA-13-100\)](#) [↗]

Research Team



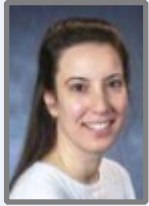
Sheila Fleischhacker, National Institutes of Health

Lead author, mentor



Erica Roberts, University of Maryland (Lumbee)

PhD student, mentored research



Kelly Evenson, University of North Carolina

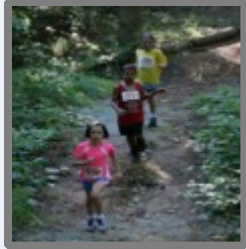
Physical activity expert, mentor



Joel Gittelsohn, Johns Hopkins University

Native American obesity intervention expert

Physical Activity among Native Youth: A Systematic Review



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camplain@email.unc.edu