Thinking Outside the Box: How the AACORN Paradigm Can Influence Community-Based Physical Activity Interventions in Diverse Communities

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Using Multiple Types of Information to Obtain Insights

*Focus of traditional obesity research*
Using Multiple Types of Information to Obtain Insights

- Historical legacy
- Social processes in families and heterogeneity in communities

Historical & Social Contexts
Using Multiple Types of Information to Obtain Insights

- Aesthetic, moral, religious and social values
- Collective psychology
- Literary expressions

- Historical legacy
- Social processes in families and heterogeneity in communities

Cultural & Psychosocial Processes

Historical & Social Contexts
Expanded Knowledge Domains

**Cultural & Psychosocial Processes**
- Moral, religious, and social values
- Collective psychology
- Literary expressions

**Physical & Economic Environments**
- Media & marketing
- Built environment

**Historical & Social Contexts**
- Historical legacy
- Social processes in families and heterogeneity in communities

What are our social values?
What gives us pleasure?
What gives us comfort?

What is our history?
How does it affect the way we live now?
What kinds of social institutions do we have?
What are our community strengths?

*Focus of traditional obesity research

Where are there opportunities for recreation and outdoor activities?
AACORN’s Expanded Obesity Research Paradigm

Research Lenses
- African Americans in researched communities
- African American researchers
- Researchers in general and research sponsors

Research Focus
- Interventions on eating, physical activity, and weight in African Americans

Expanded Knowledge Domains
- Cultural and psychosocial processes
- Energy balance
- Historical and social contexts
- Physical and economic environments

Research Content and Methods
- Community and family life (content)
- Historical legacy and core values (content)
- Ethnographic and literary content analysis (methods)
- Engaging communities (methods)
- Leveraging insider status (methods)

Focus of traditional obesity research
Progression toward more effective research to improve weight and quality of life in African American communities

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PHYSICALLY ACTIVE RESIDENTIAL COMMUNITIES AND SCHOOLS

INDIANA UNIVERSITY
School of Physical Education and Tourism Management

NiCole R. Keith, Ph.D.
PARCS Purpose

Goals
• Provide exercise opportunities where previously limited
• Create a healthy learning environment
• Expose IUPUI students to special populations
PARCS Activities

Goals

- Health and fitness assessments
- Exercise prescription
- Exercise programming
- Personal Training
- Group fitness instruction
Courses

1. Rhythmic Aerobic Training
2. P156 Teaching Team Activities
3. P133 Teaching Individual & Dual Activities classes
5. H464 Coordinated School Health Program
6. P245 P & T of Resistance Training
7. N220 Sports Nutrition
8. R100 Intro to Sociology
9. P420 Exercise Leadership & Program Design
Unknowns

• Representativeness of membership to the surrounding community

• Interest among stakeholders and membership in an integrated diabetes & depression intervention

• Reasons for stakeholder investment

• Anecdotal evidence of satisfaction among adult members:
  • What do they like/dislike about the program?
  • Why choose this option for exercise?
Gloria Duncan, age 66, had a heart attack three years ago.

“My doctor said to get a new lease on life and do something about it, or join the angels! I decided to exercise. It’s been a blessing. It reduces my stress, I’m in good shape, and my blood pressure and diabetes are getting better.”

Gloria works out at PARCS with her two sisters and daughter. You can work out for $20 a year, too!


www.iuparcs.org  /  274-7681

Research Design
Preliminary Outcomes
Lessons Learned
Measures

• Physical test data
• Demographic characteristics consistent with U.S. Census survey items
• SF-36 Quality of Life
• Exercise Self-Efficacy Scale
• Yale Physical Activity Scale (YPAS)
• Resting Blood Pressures
• Peak Blood Pressures
• Anthropometric Measurements
Measures

Contextual Comparison

• Collaboration with Polis Center
• SAVI database; 2000 U.S. Census data
• Study participants matched by address to census block groups to define participant neighborhoods
• Summary data from geocoding compared to demographic data from members to assess membership representativeness to area
Study Design

Qualitative Data Collection

• Key Informant Interviews PARCS Program Stakeholders
  • IPS
  • IU School of Nursing
  • IUPUI PETM
  • IUPUI CSL
  • Wishard staff (Take Charge Lite)
• Community Focus Groups
• Student Focus Groups Stratified by gender
Qualitative Interviews

Topics:

• History of development of the PARCS program
• Perceived benefits of the program (personal, neighborhood, school, community)
• Ways the program could be improved
• Perceived burden of diabetes in the community
• Perceptions of depression
  • Etiology
  • Acceptable avenues for treatment
• Stigma Acceptability of this venue to attend treatment
Assessment

• History of institutional knowledge

• Role and development of the creation and implementation of the program

• Purpose of the program Benefits and consequences of program existence

• Appraisal of leadership and IUPUI student staff
Summary

• Data presented are preliminary

• Baseline data collection ended December 2011

• Follow-ups continue through June 2012

• Mixed methodology affords a 360-degree view of the PARCS program

• N=12 PETM and other students have received research experience

• Overall satisfaction with the program

• Data represent a baseline against which future growth and change can be measured.
PARCS and the AACORN Paradigm

- Understanding the needs of all involved partners
- Community identified needs
- Teacher and learning service learning requirements
- Research components of partnerships

Opportunities lead to participation

Being present in the community

Refusal rate was high

Standard fitness tests difficult
Student Staff Research Team

Educational Backgrounds & Interests

- Exercise Science
- Health & Rehabilitation Sciences
- Physical Therapy
- Public Health
Shape: Obesity Prevention in Primary Care

THE AACORN PARDIGM

GARY G. BENNETT PH.D.
Associate Professor of Psychology, Global Health & Medicine
Director, Duke Obesity Prevention Program
Duke University

Thursday, April 5, 12
Presented at the 2012 Active Living Research meeting

Please note that slides with insecure copyrights and non-published data have been redacted. Please contact info@bennettlab.org with any questions.
How do we better treat obesity among Blacks in the community health center setting?

(Bennett 2009, 2012)
## Weight loss among Blacks in the Diabetes Prevention Program (Wing et al 2004)

Blacks less likely, compared to Whites, to meet the 7% weight loss goal

<table>
<thead>
<tr>
<th></th>
<th>End of Core OR (95%CI)</th>
<th>Final Visit OR (95%CI)</th>
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</thead>
<tbody>
<tr>
<td>Black</td>
<td>0.43 (.30-.65)</td>
<td>.39 (.27-.91)</td>
</tr>
<tr>
<td>White</td>
<td>ref</td>
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</tr>
</tbody>
</table>

Adjusted for age, gender, BMI, employment status, meeting exercise goal, number of self-monitoring records, income, marital status, number living in the household, and depression.
Primary care obesity counseling less frequent among highest risk
(Pollak 2008, Felix 2008, Sciamanna et al., 2000; McAlpine and Wilson, 2007; Stafford et al., 2000)

- Ethnic minorities
- Low SES patients
- Un/underinsured patients
- Patients with less severe comorbidities
- Overweight and Class 1 obese patients
Obesity prevention in community health centers

bennettlab.org
Years of life lost to obesity in **White** women

Fontaine et al., JAMA, 2003 Jan 8;289(2):187-93.

Years of life lost to obesity in **Black** women

Fontaine et al., JAMA, 2003 Jan 8;289(2):187-93.

Obese
New prevention paradigm

Maintain Weight
(when healthy with no diabetes Hx)

Overweight
25

Obese C1
30

Obese C2
35

Lose weight
Use of the AACORN paradigm

- Considering the impact of historical legacies and sociocultural norms as drivers of dietary and physical activity behaviors.

- Consideration of the adaptive and normative aspects of obesity among Black women.
Blacks have distinct weight-related attitudes

- Social acceptance of heavier body weights
- Fewer social pressures to lose weight
- High rates of body image satisfaction
- 2-3x more likely to misperceive weight

Bennett 2006; Smith, 1999; Altabe, 1998; Flynn, 1998; Kumanyika, 1993; Stevens, 1994
Confluence of obesogenic & sociocultural influences (Adapted from Ard 2007)

Obesogenic Environment

Black Sociocultural Influences

Normal Weight  Overweight  Obese

Intervention
Use of the AACORN paradigm

- Using qualitative research methods to inform intervention content.
The Top Ten Reasons to Join Shape:

10. It's time to finally start listening to your body.
9. You're sick of always feeling stressed out or run-down.
8. It's the chance to change your life – in just minutes a day.
7. The energy you had in high school can be more than a memory.
6. Your butt will look better in your jeans.
5. $200!
4. Because life doesn't wait, so why should you?
3. You want your very own set of Michelle Obama arms!
2. How often do you get to do something just for you?
1. . . . And you deserve it!

So let's get started!
We've designed a research program that can help you become more fit, reduce stress, stay healthy, and maybe even lose a few pounds. Your body is talking to you, and we want to help you listen. Embrace your Shape today!

Contact us today!
Toll-free: 1-877-703-5171
www.theshapeprogram.com
info@theshapeprogram.com
Intervention

- Self-monitoring via weekly interactive voice response (IVR) call
- Tailored materials and tracking logs
- 12 monthly coaching calls
- PCP integration
Use of the AACORN paradigm

- Engaging community organizations in the design and conduct of the intervention.
- Directly benefitting the partnering community organizations.
Study setting

- Piedmont Health Services (network of 6 community health centers in Eastern North Carolina)
- 40,000 patients with over 123,900 visits in 2010
- 98% are <200% of the federal poverty level
- 59% uninsured, 31% Medicaid/Medicare
35 years

70% employed

74% ≤$29,999/yr

7% college degree

46% hypertension

30% current smoker

20% depression

96% retention at 6 and 12-month followup (n=194)
Shape weekly IVR call completion
Shape counseling call participation

Percent complete

Trial month

dukeobesity.org
Summary

The AACORN paradigm can facilitate planning, implementation, and evaluation of innovative obesity interventions in Black populations.
dukeobesity.org
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