



Physical Activity as an Avenue to Addressing Health Disparities

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Overview

- Rural & Latino Community
- Physical Activity
- Go Active
- Strong Women Health Hearts/Mujeres Fuertes y Corazones Saludables



Rural America

- 15% of US population lives in rural area
- 65% US counties designated rural
- Lower Life Expectancy
- Higher rate of premature death
- Higher rates obesity and heart disease

Rural America, USDA (EIB-162). 2016; 2014 Chartbook on Rural Health Care



Latinos In America

- In 2015 56.6 million Latinos in US, 17.6 % of US population
- 63.4% Latinos from Mexico
- Projected population to reach 119 million by 2060, 28.6% US population
- Higher rates obesity and diabetes

Us Census, 2016



Physical Inactivity

- Worldwide estimated to cause 5.3 million deaths/year (smoking 5.1 million)
- In US estimated 10% all cause mortality attributable to physical inactivity
- In US estimated 12.4% breast cancer , 12.0% colon cancer, 6.7% heart disease & 8.3% diabetes attributed to physical inactivity

Danaei et al, PLOS Med, 2009, Danaei et al, PLOS Med, 2010, Lee et al, Lancet 2012



Disparities In Physical Activity

- 16% rural residents compared with 22% urban residents meet guidelines
- 17.9% women compared with 25.3% men meet guidelines
- 16% Latinos compared with 23% Whites meet guidelines
- Latinas are less active than non-Hispanic White women

Summary Health Statistics: National Health Interview Survey, 2015



Disparities in Youth Physical Activity

- By age 12-14 only 4% girls & 7% boys meet guidelines
- Urban youth are three times more active than rural
- Suburban youth are twice as active as rural youth
- Mexican American youth are 9% less active than white non-Hispanic youth

Rainham et al, Am J Prev Med, 2012, Collins et al, Int J Environ Res Public Health. 2012, Gortmaker, MSSE, 2012



Rural Community- Washington

- Population just under 16,000
- 82% Latino and 32% foreign born (Mexico)
- Median Household income \$35, 699
- 49% not earned high school diploma
- 23% families living below federal poverty level
- 100% children on free lunch in school district

US Census, 2010

Community Academic Partnership



- Community Advisory Board
- Initially worked to promote physical activity in middle school youth
 - After school & summer physical activity program
- Next physical activity and nutrition program for Latinas
 - Adapting evidence-based program

Community Assessment: Park Use

- Low quality parks and school yards
 - Range park scores 76-466 (max score=1906)
- At least half trips to park by active transport (walk, bike)
- 88% reported going to the park
 - 63% girls and 42% boys sedentary at parks





Community Assessment: Physical Activity

- Associated with Meeting physical activity Recommendations
 - Attending PE 5 days a week (OR= 3.59)
 - Participating in after school activities (OR= 1.44)
- For Girls
 - Family as motivator of physical activity (OR=1.70)
 - Team as motivator for physical activity (OR=2.77)

Go Active: After School & Summer Program



- 90 minutes
- 8-week cycles
- Family Night
- Focus on fun, building peer connectedness & self-efficacy

Program Outcomes



- 70% retention rate
- Over 50% signed up for more than one cycle
- Peer bonding & relatedness
- Engaging, fun, & improved mood
- Accepted by community
- Decrease TV viewing 60-90 minutes ($p=.048$)

Community Outcomes

Change Community Norms



- Importance of physical activity
- High School Queen and Court program
- Used results to advocate for reopening community center
- School based clinic with space for physical activity



Intervention Mapping Process to Adapt Evidence- based Program

- Step 1: Needs Assessment
- Steps 2: Logic Models
- Step 3: Theoretical Methods & Practical Applications
- Step 4: Structural & Contextual Elements
- Step 5: Program Implementation Planning
- Step 6: Evaluation



Step 1: Needs Assessment: Focus Groups

- Group motivator to engage in physical activity
- Uncomfortable walking for exercise in public places
- Lack opportunities to be active
- Language barrier to using exercise facilities
- Lack confidence could start and keep regular routine
- Lack knowledge in preparing healthy foods

Steps 2: Logic Models

- Problem: identifying pathway from personal determinants of the behavior and behavior and environmental factors TO the health problem
- Change: identifying pathway from program objectives designed to invoke behavioral and environmental changes TO the change in behavior and the environment TO the desired health outcomes
- Compare logic models





Strong Women Healthy Hearts

- One hour twice a week for 12 weeks
- 30 minutes physical activity followed by 30 minutes healthy cooking and discussion of nutrition
- RCT showed increase in steps per day, decrease in saturated fat intake, decrease in weight, improved fitness
- Despite wide spread dissemination did not attract Latinas



Step 3: Theoretical Methods and Practical Applications

- Family Engagement
 - Added family potluck at end of the 12-week class
 - Added information regarding how to respond to family
- Importance Group Support
 - Added 6-week informal program after formal 12-week program
 - Focus on building group cohesion

Step 4: Structural & Contextual Elements

Adaptation Domain	Goal of Adaptation	Specific Adaptation Examples
Accessibility	Improve program accessibility and inclusiveness	<ul style="list-style-type: none"> All participant materials were translated to Spanish. New and updated images within participant materials were added. Community members lead the classes and facilitate recruitment.
Nutrition Knowledge	Increase nutrition knowledge and fill potential gaps in knowledge base	<p>Developed and integrated new handouts (informational sheets) on topics related to healthy foods and foods commonly found in cultural cuisine; examples of topics include:</p> <ul style="list-style-type: none"> The five subgroups of fruits and vegetables Nutrition information on familiar meats and cheeses Sugar sweetened beverages and healthy alternatives
Health Knowledge	Provide information about health risks that affect Latinas disproportionately	<ul style="list-style-type: none"> Provided additional information on heart disease risk factors Developed and integrated a handout on Type 2 Diabetes
Skills and Strategies	Increase skills and strategies related to making healthy choices	<p>Provided additional or new information on the following skill-based topics:</p> <ul style="list-style-type: none"> Selecting lean protein sources Comparing and selecting grains Storage of fruits and vegetables Reading and comparing nutrition labels
Address Barriers	Address potential barriers to nutrition and exercise through skill-building	<p>Developed and integrated skill building information to overcome potential barriers:</p> <ul style="list-style-type: none"> Healthy eating on a budget (guidance on planning, shopping, and meal preparation) Getting support from family and friends Managing without sufficient social support
Cultural Relevance	Increase cultural relevance and appeal of the program's recipes and exercises	<ul style="list-style-type: none"> Replacing guidance on culturally unfamiliar or potentially unappealing foods with guidance on more culturally relevant foods. Adding guidance on selecting and preparing familiar food items (e.g. Tips on selecting and preparing chicken in heart-healthy ways) Introducing new healthy recipes that use familiar ingredients Providing recipes for healthier versions of foods commonly found in cultural cuisine Adding Latin dancing as exercise options



Step 5: Program Implementation Planning

- Location
- Class Leaders
 - Community members trained as program leaders
 - Completed original program training & supplemental training
- Recruitment
- Data Collection
 - Pre program, post program

Step 6: Evaluation

- Main Outcomes
 - Weight
 - Physical activity: accelerometers wear for 7 days
 - Fitness: 6 minute walk test
 - Dietary Behavior: food frequency questionnaire
- Process
 - Fidelity
 - Feasibility



Mujeres Fuertes y Corazones Saludables



It's wonderful seeing the women finding the value of exercising and their progress each week.





Thank You