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The Santa Bárbara/Martineztown Study: A Community-Based Health Literacy Intervention

Carla Roybal, Research Specialist
Francisco Soto Mas, Principal Investigator
Deborah Helitzer, Co-Investigator

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Title: Health Literacy and Self-Efficacy in Hispanic Adults
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University of New Mexico School of Medicine
Family & Community Medicine
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- Santa Bárbara/Martineztown
- Participants
- Community liaison (HERO):
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  - Gaby Lozano
- MPH students:
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  - Robert Hobbs
  - Clarissa Hoover
  - Orlando Romero
Health Literacy

• Health literacy is the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions (Ratzan & Parker, 2004).

• Health literacy relates to both the individual and the system:
  – Communication skills of lay people and professionals
  – Knowledge of health topics in lay people and healthcare professionals
  – Culture (of both lay people and providers)
  – Demands of the healthcare and public health systems (time, compensation, emergency, etc.)
  – Demands of the situation/context/encounter
Importance of HL

• Health literacy affects people’s ability to:
  – Adopt health-promoting behaviors
  – Understand and act on health and emergency-related information
  – Access health education information and healthcare services
  – Navigate the healthcare system
  – Communicate personal health information and follow instructions
  – Engage in self-care and disease management

• These situations impact:
  – Health outcomes
  – Healthcare costs
  – Quality of care
  – Quality of life
Health Literacy & Self-Efficacy

- An important limitation to the current literature is the lack of research on the variables that may exist on a causal pathway between health literacy and health outcomes.

- It appears that health literacy impacts health outcomes, such as health care service use or health status, by affecting intermediate factors (e.g. increasing knowledge or self-efficacy).

- Self-efficacy is a person’s confidence in his or her ability to carry out a health behavior.

- Self-efficacy is an important intermediate outcome in many behavioral theoretical models. It is a predictor of behavioral intent, and ultimately health-related behaviors.
Populations at Risk of Low Health Literacy

- Older adults
- Those who are poor
- People with limited education
- Minority populations
- Persons with limited English proficiency (LEP)
HL Level of Hispanic Adults
(Prose literacy)

- **Below Basic:**
  - No more than the most simple and concrete literacy skills
- **Basic:**
  - can perform simple and everyday literacy activities
- **Intermediate:**
  - Can perform moderately challenging literacy activities
- **Proficient:**
  - Can perform complex and challenging literacy activities
National Action Plan to Improve Health Literacy (HHS, 2010)

1. Develop and disseminate health and safety information that is accurate, accessible, and actionable.

2. Promote changes in the health care system that improve health information, communication, informed decision making, and access to health services.

3. Incorporate accurate, standards-based, and developmentally appropriate health and science information and curricula in child care and education through the university level.

4. Support and expand local efforts to provide adult education, English language instruction, and culturally and linguistically appropriate health information services in the community.

5. Build partnerships, develop guidance, and change policies.

6. Increase basic research and the development, implementation, and evaluation of practices and interventions to improve health literacy.

7. Increase the dissemination and use of evidence-based health literacy practices and interventions.
Health Literacy Interventions

• Many approaches have been proposed to educate the public in three basic components of health literacy: prose, document, and numerical skills.

• Most interventions are clinical-based, disease-specific, intended to mitigate the negative effects of health literacy rather than to improve it.

• One approach that warrants further research is the use of English as a Second Language (ESL) instruction for improving health literacy. This is an approach which has the potential for benefitting the Hispanic population in the U.S.:
  • The Hispanic population is rapidly growing
  • For Hispanics, improving English proficiency is often deemed necessary to function in U.S. society
  • Hispanics are overrepresented in ESL programs
Santa Bárbara/Martineztown

- SB/Martineztown has overcome economic marginalization and transformed itself through advocacy and civil engagement.

- The community experiences significant disparities related to adult education and health outcomes.

- SB/Martineztown negatively compares to Bernalillo County in every indicator, including overall mortality, infant deaths, HIV/AIDS cases, asthma hospitalizations, and hepatitis.
### Social Indicators
#### 2000 Census

<table>
<thead>
<tr>
<th>Indicator</th>
<th>87102</th>
<th>Bernalillo Co overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Started high school</td>
<td>78%</td>
<td>94%</td>
</tr>
<tr>
<td>Finished high school</td>
<td>60%</td>
<td>84%</td>
</tr>
<tr>
<td>Finished college</td>
<td>19%</td>
<td>31%</td>
</tr>
<tr>
<td>Families below poverty level</td>
<td>26%</td>
<td>10%</td>
</tr>
<tr>
<td>Spanish spoken at home</td>
<td>52%</td>
<td>25%</td>
</tr>
<tr>
<td>Speak English less than “very well”</td>
<td>25%</td>
<td>9%</td>
</tr>
<tr>
<td>Per capita income</td>
<td>$12,715</td>
<td>$20,790</td>
</tr>
</tbody>
</table>
## Leading Causes of Death, 2005-2009

Deaths per 100,000 population (age-adjusted)

<table>
<thead>
<tr>
<th>Cause</th>
<th>Lomas-Broadway area</th>
<th>Bernalillo Co</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neoplasm, malignant</td>
<td>197.6 (170.5-224.7)</td>
<td>155.5 (151.1-159.8)</td>
</tr>
<tr>
<td>Heart disease</td>
<td>190.2 (163.8-216.6)</td>
<td>162 (157.6-166.5)</td>
</tr>
<tr>
<td>Unintentional injuries</td>
<td>117.8 (96.8-138.7)</td>
<td>62.4 (35.0-39.2)</td>
</tr>
<tr>
<td>Cerebrovascular diseases</td>
<td>42.5 (29.9-55.2)</td>
<td>37.1 (43.2-48.0)</td>
</tr>
<tr>
<td>Chronic lower respiratory diseases</td>
<td>41.6 (29.1-54.1)</td>
<td>45.6 (43.2-48.0)</td>
</tr>
<tr>
<td>Chronic liver disease and cirrhosis</td>
<td>32.5 (21.5-43.6)</td>
<td>15.5 (14.2-16.9)</td>
</tr>
<tr>
<td>Respiratory, Influenza and pneumonia</td>
<td>29.6 (19.0-40.3)</td>
<td>17.9 (16.4-19.4)</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>27.8 (17.6-38.0)</td>
<td>25 (23.2-26.7)</td>
</tr>
<tr>
<td>Intentional self-harm (suicide)</td>
<td>23.4 (14.3-32.6)</td>
<td>18.2 (16.7-19.6)</td>
</tr>
<tr>
<td>Homicide</td>
<td>23.2 (14.1-32.3)</td>
<td>8.4 (7.3-9.4)</td>
</tr>
</tbody>
</table>

Health Literacy and Self-Efficacy in Hispanic Adults

- **Justification:**
  - More research is needed on the analytic pathway between health literacy and health outcomes and the variables that mediate the relationship between the two—including self-efficacy.

- **Purpose:**
  - The purpose of this project is to explore the relationship between self-efficacy and health literacy among Spanish speaking adults.

- **Design:**
  - A nonexperimental, single arm pretest-posttest design.

- **Participants:**
  - A minimum of 40 participants will be recruited from SB/Martineztown with the assistance of the CTSC Community Engagement Core.
  - Participation criteria: a) ethnicity Hispanic/Latino; b) ability to read and write in Spanish; and c) age 18 years or older.
Intervention

• Implementation of the Health Literacy & ESL Curriculum.

• Consists of 12 units (approximately 45 hours) to be implemented in 6 weeks.

• Combines English language and health literacy content.

• Specifically designed for Spanish-speaking Hispanic adults.

• The curriculum has shown to be effective in improving both health literacy and English proficiency among Hispanic adults.

Health Literacy & ESL Curriculum

• Theory-based curriculum:
  – Content and format was informed by health behavior, literacy learning & communication theory
  – Self-efficacy, use of authentic texts, multiple literacies, and principles of adult learning

• Audience-centered:
  – To be effective, health literacy education must meet the cultural and social expectations of the intended audience
  – Combines English proficiency and better health

• Community structures:
  – Existing community settings (rather than healthcare/clinical)
  – Promotor (community health worker)
  – ESL teacher with experience in bilingual education
Theoretical Model

ESL
- Listening
- Speaking
- Reading

Health Literacy
- Prose
- Document
- Numeracy

Self-Efficacy
- Information
- Behavior
- Healthcare

Individual & Collective
Health Actions and Outcomes
Measurements

• **Spanish Test of Functional Health Literacy in Adults (S-TOFHLA):**
  – measures adult functional health literacy - both numeracy and reading comprehension - using actual health-related materials such as prescription bottle labels and appointment slips
  – It consists of a 50-item reading comprehension and 17-item numerical ability test
  – score is categorized into three levels:
    • inadequate functional health literacy (0–59), unable to read and interpret health texts
    • marginal functional health literacy (60–74), difficulty reading and interpreting health texts
    • adequate functional health literacy (75–100), can read and interpret most health texts

• **Spanish Health Literacy & Self-Efficacy Scale:**
  – developed by the research team for a previous project
  – consists of five domain-specific items:
    1. completing medical forms
    2. reading labels and doing basic calculations
    3. seeking and understanding health-related information
    4. Using computers for obtaining health-related information
    5. communicating with health care providers
Project’s Strengths

• Includes populations at risk:
  – Minority populations
  – Persons with limited English proficiency (LEP)

• Consistent with national goals:
  – Support and expand local efforts to provide adult education and English language instruction
  – Build partnerships
  – Increase basic research and the development, implementation, and evaluation of practices and interventions to improve health literacy