USING QUANTITATIVE AND QUALITATIVE DATA TO INFORM THE DESIGN OF A TAILORED HEALTH LITERACY INTERVENTION: TRABAJANDO JUNTOS/WORKING TOGETHER PROGRAM

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The authors have no financial or other conflicts to disclose.
Overview

Background
Study Aims
Methods
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Summary
Background: Health Literacy and Obesity

• Health disparities disproportionately impact Hispanic groups in the US.
• Obesity and limited health literacy are major public health problems.
• More than one-third of US adults are obese resulting in an estimated annual costs of $147 billion.
• A large proportion of the US adult population has limited health literacy with estimated costs of $106-236 billion annually.
• Paucity of tailored interventions to address health literacy and obesity in Latino adults.
Study Aims

• To design a tailored behavioral intervention focused on promoting health literacy as a strategy for obesity control and prevention.

• To address individual- and structural-level factors influencing obesity in the Hispanic manufacturing worker population through a culturally-tailored intervention: Trabajando Juntos/Working Together.
Designing a Health Literacy Intervention

- 3-Phase study design approach
  - Phase I assessing the needs of the population
  - Phase II elucidating needs and program feasibility
  - Phase III exploring manufacturing employer support and feasibility

- Theoretical Underpinnings
  - Health Literacy
  - Social Cognitive Theory
  - Theory of Reasoned Action

- Approach
  - Cultural Tailoring and Adult Education strategies
Designing a Health Literacy Intervention

**Worksite Factors**
- Insurance status
- Paid time off and Break Policies
- Shift work
- Worksite Facilities (e.g., availability of health information and healthy foods)

**Individual Background Factors**
- Demographic factors
- Personal experience with chronic illness (diagnosis)
- Family history
- General health status (e.g., BMI, blood pressure, cholesterol, overall health status)
- Functional Health Literacy
- Health seeking behaviors

- Causal beliefs and attitudes (obesity specific)
- Understanding of obesity related risk
- Perceived threat of obesity
  - Perceived risk
  - Concern about
  - Perceived seriousness

- Perceived control of obesity
- Perceived effectiveness of preventive behaviors
- Obesity self-efficacy

**Outcomes**
- Preventive behaviors: (i.e., diet, physical activity) (Specific Aim 1)
- BMI, cholesterol, blood pressure (Specific Aim 1)
- Functional Health Literacy (Specific Aim 1)

**Family Influence**
Methods

• Partnership building
  • South Texas Manufacturers Association (STMA)
  • Texas Manufacturing Assistance Center (TMAC)
  • Interdisciplinary group

• Mixed methods approach
  • Phase I: Quantitative
  • Phases II and III: Qualitative

• Data Analysis
  • Phase I: Descriptive and Logistic Regressions
  • Phases II and III: Grounded Theory
Phase I: Assessing the needs of the population

- 228 one-on-one interviews (English and Spanish) at eight manufacturing plants
- Measures based on Behavioral Risk Factor Surveillance System and the National Health Interview Survey
- Short Test of Functional Health Literacy in Adults (S-TOFHLA)
- Body mass index (BMI) was calculated based on objective weight and height measurements
- Point-of-care blood tests and measures (Hemoglobin A1c, cholesterol, and blood pressure)
Phase I: Assessing the needs of the population

- Significantly higher rates of obesity and lower rates of healthy behaviors, health care coverage, and utilization of health screening services.

- Higher levels of health literacy were significantly associated with decreased odds of obesity.

- Health care coverage significantly predicted health care access, utilization, and uptake of prevention and screening services.
Phase II: Elucidating needs and program feasibility

- Purpose
  - To identify health-related issues and practices at the personal, work, and community levels
  - To identify worksite health promotion intervention components
- Five focus groups were conducted (19 males and 7 females)
- 3 English and 2 Spanish groups
- Discussion guide was used
- Grounded theory approach guided the analysis of data
Phase II: Elucidating needs and program feasibility

Dominant themes:

• Structural factors (e.g., shift and break schedules, sick leave policies) were perceived as a challenge to maintaining a healthy lifestyle.

• Although physicians were among the most trusted sources of health information, participants reported difficulty understanding lab results due to inadequate communication with their health care providers.

• Program content and delivery should account for the worksite structure and personal family constraints.
Phase II: Elucidating needs and program feasibility

• Recommendations for intervention characteristics included:
  • Scheduling of brief health sessions during work hours
  • Inclusion of incentives such as free clinical lab tests
  • Use of text messaging to inform participants of community health events and to deliver brief health messages
Phase III: Exploring employer support and feasibility

- Purpose: to assess the feasibility of introducing worksite health promotion interventions from the employers' perspective
- Key informant interviews with 20 manufacturing managerial-level personnel were conducted
- Discussion guide was used
- Grounded theory approach guided the analysis of data
Phase III: Exploring employer support and feasibility

- 25% of the companies reported offering or previously offering on-site health initiatives.
- Seventeen of the 20 employers interviewed expressed an interest in partnering.
- Motivation for company participation included access to expertise and materials in health promotion and the potential for healthier employees and improved productivity.
- Monthly group sessions were identified as most conducive to worksite schedules and needs and as the preferred mode of delivery.
Design of the TJJWT Program

Phase I: Needs of Population

Phase II: Approach, Priority and Feasibility

Phase III: Employer Perspectives

Tailored health literacy intervention
Key Design Elements: TJWT Program

- Focused on building of health literacy skills
  - Navigation of the health care system
  - Numeracy
- Theoretically informed
- Culturally tailored
  - Addressing beliefs and values
  - Lotería imagery
  - Language
  - Promotion of local foods and physical activities
  - Working within the worksite needs
## Key Design Elements: TJJWT Program

### Trabajando Juntos/Working Together to Address Obesity through Health Literacy

<table>
<thead>
<tr>
<th>Module</th>
<th>Tailored to Inform Gaps</th>
<th>Topic</th>
<th>Teaching Methods</th>
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</table>
| INTRO  | Racial/ethnic disparities in health literacy and obesity rates at the national and local levels | Introduction to the Program | • Promote Buy-in  
• Overview of program content  
• Goal setting: overarching goal for program – review at each session |
| 1      | Focus group (FG) findings indicating a need to understand lab results and issues of numeracy | Know Your Numbers (Conozca Sus Números) | • Didactic  
• Tailored review of lab results  
• Feedback on acquired knowledge |
| 2      | Survey results indicating significantly higher rates of obesity in sample relative to county and state rates | Understanding Obesity | • Didactic  
• Eliciting experiences  
• Problem solving through review of tailored testimonials  
• Feedback on acquired knowledge |
| 3      | Survey findings indicating low levels of physical activity and qualitative findings indicating need for physical activity and introduction of strategies to engage in physical activity given worksite environment | Physical Activity (Indoor) | • Didactic  
• Eliciting experiences  
• Problem solving with case study  
• Feedback on acquired knowledge |
| 4      | Survey findings indicating low intake of fruits and vegetables and FG findings showing employees' interest in nutrition components | Food and Nutrition | • Didactic  
• Eliciting experiences  
• Problem solving with case study  
• Feedback on acquired knowledge |
| 5      | Challenges identified in employee focus groups and by Healthy People 2020 objectives | Navigating the Health Care System | • Didactic  
• Eliciting experiences  
• Role playing  
• Feedback on acquired knowledge |
| 6      | Qualitative findings indicating worry and need to address intergenerational health needs | Program Review | • Program Summary  
• Review of Key Strategies |
|        | Qualitative and quantitative findings indicating lack of information of community based resources | At each session: Useful Resources | • Resources |

Note: Theoretical frameworks guiding intervention design include social cognitive theory, adult learning theory, theory of reasoned action, self-regulation (self-efficacy and outcome expectations), and empowerment theory. Sessions will be conducted by community health workers.
Summary

• Health literacy interventions should incorporate assessment of population needs and priorities.
• Cultural tailoring will assist in design of more appropriate health literacy interventions.
• Theoretically driven interventions will allow for identification of the association between health literacy and illness prevention over time.
• TJWT intervention was designed to address multiple determinants of health for the elimination of obesity and health literacy disparities.
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