

Health Literacy in the Manufacturing Workplace

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Research Team

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Outline

- ▶ Background
- ▶ Objectives of HLW study
- ▶ Phases
- ▶ Main findings
- ▶ Future directions
 - Worksite health promotion program

South Texas Border Health Disparities Center

- ▶ Our mission is to promote research related to health disparities along the Texas–Mexico border.
- ▶ Health disparities are “differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups in the United States.”

Objectives of HLW Study

- ▶ To explore the
 - Health status/behaviors
 - Health information needs
 - Health literacyof workers in the manufacturing sector in South Texas

- ▶ To design a worksite program to improve the health and health literacy of this group

Methods

- ▶ Phase I: Summer 2010
 - Surveys
 - Clinical and anthropometric measures
- ▶ Phase II: February 2011
 - Focus groups (employees)
- ▶ Phase III: March 2011
 - Key informant interviews (employers)

Phase I: Surveys

- ▶ **Sample**
 - 228 employees from 8 manufacturing plants in Hidalgo County
- ▶ **Cross sectional surveys**
 - Interviewer-administered
 - Language: English or Spanish
 - Survey administration time: approx. one hour
 - Incentives: \$25 HEB gift card and free blood tests

Phase I: Surveys

- ▶ Survey
 - Socio–demographics (e.g., age, education, gender, income)
 - Health status
 - Health care coverage
 - Prevention and screening services (e.g., mammogram)
 - Health information
 - Health literacy
 - Health behaviors (e.g., physical activity, diet, smoking)

- ▶ Clinical and anthropometric measures
 - Blood tests (HbA1c and cholesterol)
 - Blood pressure
 - Height and weight measurements

Demographic Characteristics

	Texas	Hidalgo County	Sample
Age (years)	33	27	39
Female (%)	50	51	29
Hispanic (%)	36	89	96
Spanish speaking (%)	29	82	95 ¹
High school graduate or higher (%)	79	60	56
Individuals below poverty level (%)	17	36	34
Uninsured (%)	27	32	54

¹Percent who answered that they speak some level of Spanish in response to the question “In general, what language do you read and speak?”

Source: U.S. Census Bureau: 2005-2009 American Community Survey, 5-Year Estimates, 2007 Small Area Health Insurance Estimates (SAHIE)

Demographic Characteristics

	Texas	Hidalgo County	Sample
Mammogram ¹ (%)	72.6	n/a§	48.6*
Pap Smear ² (%)	81.5	n/a§	63.0*
Prostate Cancer Screening ³ (%)	52.8	n/a§	23.6*
Colorectal Cancer Screening ⁴ (%)	56.2	n/a§	22.0*

*p<.01 for comparison between Texas and study sample rates

§data not available

¹Women aged 40+ who have had a mammogram within the past two years

²Women aged 18+ who have had a pap test within the past three years

³Men aged 40+ who have had a PSA test within the past two years

⁴Adults aged 50+ who have ever had a colonoscopy

Source: CDC: BRFSS Prevalence and Trends Data Texas, 2008

Health Behaviors

	Texas	Hidalgo County	Sample
Consumes 5+ fruits & vegetables/day (%)	23.8	19.7	5.3*,†
Participates in any physical activity (%)	72.7	59.8	55.2*
Current smoker (%)	17.9	14.7	25.4*,†
Obese (Body Mass Index > 30) (%)	29.5	35.5	44.2*,†
Fair or poor health (%)	16	24	26*

*p<.01 for comparison between Texas and study sample rates

†p<.01 for comparison between Hidalgo County and study sample rates

Source: Centers for Disease Control and Prevention, 2009 Behavioral Risk Factor Surveillance System

Obesity: A Public Health Problem

- ▶ “Gateway condition”: risk factor for
 - Overall mortality
 - Heart disease
 - Diabetes
 - Cancer
 - Hypertension
- ▶ Economic costs are substantial
 - Obese individuals
 - Employers
 - Society

Costs of Obesity in the Workplace

- ▶ Lower productivity
 - Absenteeism
 - Presenteeism: The problem of workers being on the job, but because of medical conditions, not performing to full potential.
- ▶ Higher health care costs
- ▶ Cost to U.S. private employers is estimated at \$45 billion a year (The Conference Board, 2008).

Company X: Obesity Costs

- ▶ Manufacturing in Texas
- ▶ 228 employees
 - 34 Normal weight
 - 91 Overweight
 - 64 Obese Class I
 - 18 Obese Class II
 - 18 Obese Class III
- ▶ Average hourly wage
 - \$12 (no benefits)
 - \$18 (with benefits)
- ▶ 47% receive health benefits

Company X: Obesity Costs*

Total costs attributable to high BMI	\$73,300
Total annual medical costs attributable to high BMI	\$49,500
Total annual work loss costs attributable to high BMI	\$23,900
Number of employees with high BMI	191
Average attributable cost per high BMI employee	\$384
Medical cost	\$259
Work loss cost	\$125

*Costs are calculated based on CDC's Obesity Cost Calculator.

Results: Health Information

Sources of health information	Very likely source	Very high trust
Health care provider	27.2%	32.0%
Family and friends	18.9%	18.4%
TV/radio	15.8%	7.5%
Internet	12.7%	11.0%
Obstacles	Very relevant	
Don't understand English	14.9%	
Complex medical language	10.5%	
Spelling/pronunciation	9.7%	
Shy to ask	9.2%	

Results: Health Information

	Percent
Not confident filling out forms alone	78.5%
Needs assistance reading hospital materials	55.3%
Has problems learning about own medical condition	50.0%

Summary of Health Challenges

- ▶ Health disparities are evident in the following areas:
 - Utilization of preventive services
 - Health behaviors
 - Obesity rates
 - Health care coverage
- ▶ Lower levels of health literacy are associated with a higher likelihood of reporting fair/poor health and of being obese.
- ▶ Health care coverage is an important predictor of health care access and use as well as the utilization of prevention and screening services.

Phase II: Focus Groups

- ▶ A focus group is
 - a discussion among homogeneous individuals on a specific topic(s).
 - moderated by a trained professional
 - used to collect qualitative information
- ▶ Objective
 - To explore the health information needs, challenges to staying health, and feedback on potential worksite health promotion program
- ▶ Five focus groups
 - 19 males and 7 females
 - 3 English and 2 Spanish

Qualitative Findings: Focus Groups

- ▶ Challenges to staying healthy
 - Low income
 - Neighborhood safety
 - Work schedule structures (short breaks, shifts)

- ▶ Health information
 - Difficulty understanding lab results
 - Insufficient interpretation of results by physicians

Phase III: Key Informant Interviews

- ▶ Objective
 - To explore the feasibility of introducing a health promotion program within the workplace
- ▶ 20 interviews with employers/managers of manufacturing companies

Qualitative Findings: Key Informant Interviews

- ▶ 5 of the 20 companies had a health initiative, ranging from providing nutrition information to having a worksite gym. Larger companies were more likely to have a wellness program; cost and time were major constraints for smaller companies.
- ▶ Monthly program sessions with additional support throughout the month were recommended.
- ▶ Having upper management support and a health advocate within the company are essential for the adoption and success of a worksite health promotion intervention.

Health Promotion Program

- ▶ 6-month program, 1-hour session/month
- ▶ Sessions led by Community Health Workers
- ▶ Session topics
 - Understanding key numbers: e.g., BMI, HbA1c
 - Understanding obesity: risks, strategies for success
 - Physical activity
 - Nutrition
 - Navigating the health care system
 - Patient-provider communication
 - Community health resources
 - Understanding health insurance plan, eligibility requirements (Medicaid, federally qualified health centers)
- ▶ Reinforcement/support messages

Timeframe

- ▶ Free
- ▶ Eligibility
 - Manufacturing sector
 - 50 or more employees
- ▶ Timeline



- ▶ If you are interested: **Letter of Support**

Questions / Feedback

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