

Improving survey response formats for use with Latino construction workers

- Madeleine J. Kerr, PhD, RN
 - Eve Halterman, MBA
- Cheryl Robertson, PhD, RN



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Purpose

To develop a valid hearing protection survey for use with Latino construction workers



Background

Effective hearing loss prevention is needed for 2.5 million U.S. Latino construction workers (23% U.S. construction workforce, CPWR)



Center to Protect Workers' Rights. (in press). The Construction Chart Book: The U.S. construction industry and its workers. (4th ed.)



NIOSH Guidelines

1. Noise exposure monitoring
2. Engineering and administrative controls
3. Audiometric evaluation
- 4. Use of hearing protection devices**
- 5. Education and motivation**
6. Record keeping
7. Program evaluation

NIOSH (1996). Preventing Occupational Hearing Loss: A Practical Guide.
Available <http://www.cdc.gov/niosh/96-110.html>



NIOSH Guidelines

Tailor education to company's particular hearing loss prevention needs (NIOSH, 1996, p. 41)

NIOSH (1996). Preventing Occupational Hearing Loss: A Practical Guide.
Available <http://www.cdc.gov/niosh/96-110.html>



Problem


Survey instruments for needs assessment have been developed for primarily non-Latino, English-speaking populations of workers



Prior research

Prior focus group research discovered themes related to Latino construction workers' use of hearing protection

Robertson, C., Kerr, M.J., Garcia, C., & Halterman, E. (2007). Noise and hearing protection: Latino construction workers' experiences. AAOHN Journal, 55(4), 153-160.



Themes were consistent with concepts in the existing survey:

- Why we use it
- Why we don't use it



Methods

Preliminary Spanish language version of a hearing protection survey

- “Transcultured” from English version
- Decentered when discrepancies arose to enhance clarity in both languages



Intervention Pilots

- 1. Focus group with Latino construction workers (n=8)**
2. Usability pilot (n=18)
3. Usability and alternate forms of complete survey (paper and computer) (n=17)



Focus group


Latino construction workers (n=8) were recruited through union apprenticeship and training programs

- average age 35, worked in construction average of 8 years
- 6 born outside the U.S., average of 11 years in U.S.

Data Collection

Pilot test of a bilingual interactive computer-based hearing protection training program included the survey



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- Focus group method was used to elicit reactions to the survey response formats
 - Reactions provided data to guide the researchers in developing the revised survey



Results

Concurrent visual and audio was of benefit:


“To be able to read and listen at the same time captures your attention more about what you are seeing”



Add a Switch to English/ Spanish button

“There are people who came here as kids, they speak Spanish but they can’t write Spanish... it’s easier to read in English even though they can speak Spanish.”

Solution- a new button

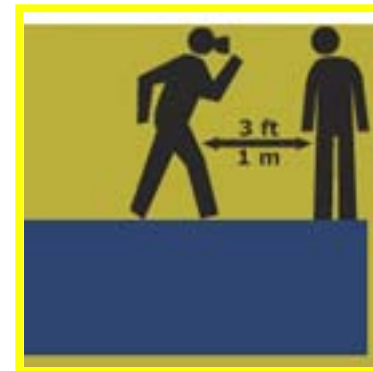



Cambiar a Inglés/English

Illustrate noise levels and the effects of noise on hearing

“How do we know what amount of noise is okay for our ears and what amount is bad for our ears?”

Solution- an icon reminder of the 3 ft. rule



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- General desire to keep response scales simple and clear
 - Numerical scale (0 to 100) was a success

“I like this scale better than words... everybody understands what percentages are.”

Numerical scale

17 - 17 8 - 65 0 - 82 [Cambiar a Inglés/English](#)

Trabajando en Ruido Fuerte

Mientras trabajaba en ruido fuerte en los últimos 12 meses:
¿Qué porcentaje del tiempo usó tapones, orejeras o tapones con banda?

Mueva la flecha por encima del porcentaje de la barra que mejor refleja su respuesta


Oprima el botón del deslizador para hacer su selección

El número escogido aparecerá debajo de la barra

Si está satisfecho con su respuesta, seleccione el botón "Continuar"

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Usted seleccionó % [Continuar](#)





Likert Scales

- Confusion over the Likert-style response scales:
 - Strongly agree to strongly disagree (6-point)
 - *“just give me good, bad or false. Give me 3 and that’s it”.*
 - Never to always (5-point)
 - *I find it a little confusing that after “never” we have usually not ‘what does usually not mean, exactly?’*



Likert Solutions

- Replace 'usually/usualmente' with 'frequently/frecuentemente'
- Avoid 'agree' and 'disagree', replace with 'never/nunca to always/siempre'
- Reduce 6-point to 4-point scale



Discussion

- No assumptions can be made about the validity of response formats when adapting surveys for use with Latinos



Discussion

- Participants were able to articulate issues and suggest some improvements for response formats
- We recommend several pilots before finalizing surveys for research and practice

Questions?

- e-mail kerrx010@umn.edu

