The Role of Health Literacy in Vaccination Disparities: Do Patients Understand the Health Messages?

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Abstract

- **Background:** Numerous public health campaigns are organized with the goal of improving immunization rates. However, vaccination uptake remains low among certain racial/ethnic minority groups. We hypothesized that the level of health literacy (HL), ability to recognize the words used, may have significant impact on patients' understanding of health-related messages and consequently health behavior and vaccination.

- **Methods:** We conducted a HL survey among adult attendees of a Los Angeles County Back to School and Health Fair in an underserved area of Southern California. The respondents were asked whether they are "very familiar or not familiar at all" with specific words: measles, shingles, pertussis, hepatitis, meningitis, stroke, diabetes, pneumonia, and human papilloma virus (HPV). Comparisons were analyzed using chi-squared tests.

- **Results:** Forty-three women (n=28 Hispanic; n=15 Non-Hispanic) completed the survey. A significantly lower percentage of Hispanic vs. Non-Hispanic women reported recognition of words associated with vaccine-preventable diseases: "meningitis" (15% vs. 60%, p<.01), "hepatitis" (18% vs. 69%, p<.01), and "HPV" (33% vs 67%, p<.05). Lower level of recognition was also reported for "pneumonia", although this did not reach statistical significance (46% vs 77%, p=.06). By contrast, the percentage reporting recognition of "diabetes" was similar between groups (68% vs 60%, p=0.43).

- **Conclusions:** Immunization campaigns often use words that patients may not understand. This may impact the patients' relationship with the healthcare system and health behavior change. We found a lower level of recognition (health literacy) of words associated with vaccine-preventable diseases among Hispanic women attending an LA County community health fair compared to Non-Hispanic female attendees. These findings have implications for developing communication tools and educational strategies using a language easily recognized by a specific community to reduce vaccination disparities.

Background

- Despite public health campaigns focusing on improving immunization rates, vaccination uptake remains low within the Hispanic community. One reason for this may be differences in the level of health literacy (HL), or the ability to recognize words used in health-related messages.

- HL has been associated with overall health status, hospitalization, mortality and engagement in preventive health activities. Hence, understanding differences in HL is important to help inform health education strategies to reduce disparities in vaccination uptake.

Methods

- We conducted a HL survey among 43 women (n=28 Hispanic; n=15 Non-Hispanic) who attended an LA County health fair in an underserved area.

- All of the attendees visiting a youth educational booth were surveyed face-to-face, using an electronic tool.

- Respondents self reported their familiarity with specific terms that are often used in health-related educational campaigns: measles, shingles, pertussis, hepatitis, meningitis, stroke, diabetes, pneumonia, and human papilloma virus (HPV).

- Comparisons were analyzed using chi-squared tests.

Figure 1. Percentage of Hispanic and non-Hispanic Respondents Reporting Recognition (Health Literacy) of Words Associated with Vaccine-Preventable Diseases

*p<0.01; **p<0.05; ^p=0.06   ■ Hispanic   ■ Non-Hispanic
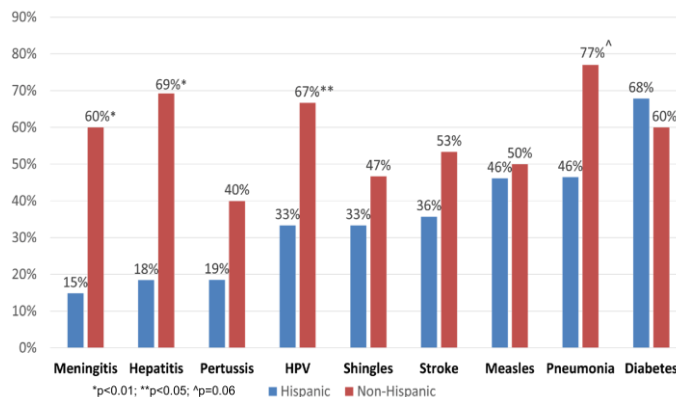
Results

- The mean ages of Hispanic and non-Hispanic (predominantly Caucasian and Asian) women were 35.4 ±14 years and 29.9 ±12 years, respectively.

- The highest educational level completed for Hispanic and non-Hispanic respondents was: high school or less (74% vs 31%), technical school (7% vs 16%) and college (19% vs 53%), respectively.

- There was a lower level of recognition (health literacy) of terms associated with vaccine-preventable diseases among Hispanic vs Non-Hispanic female respondents (**Figure 1**).

- The percentage of Hispanic and non-Hispanic respondents reporting recognition showed the greatest difference for "meningitis" (15% vs. 60%, p<.01), "hepatitis" (18% vs. 69%, p<.01), "HPV" (33% vs 67%, p<.05) and "pneumonia" (46% vs 77%, p=.06) as seen in **Figure 1**. Importantly, these diseases occur disproportionately in Hispanic populations and have low Hispanic vaccination rates.

- By contrast, the percentage of Hispanic respondents reporting recognition of "diabetes" was high and similar to that of non-Hispanic respondents (68% vs 60%, p=0.43).

- Further research should be done with larger populations so that differences between groups can be explored further.

Conclusions

- An important public health goal is to reduce ethnic disparities in immunization rates.

- This study found a lower level of recognition (health literacy) of terms associated with vaccine-preventable diseases among Hispanic vs. Non-Hispanic females, especially for diseases where Hispanic vaccination uptake remains low (meningitis, hepatitis, HPV, and pneumonia).

- Immunization campaigns often use words that patients may not understand. These findings have implications for developing improved, culturally tailored health educational messages and communication tools using a language more easily recognized by a specific community to reduce vaccination disparities.