

# An Evaluation of Cancer Education Materials Currently Distributed by Health Departments in New Jersey

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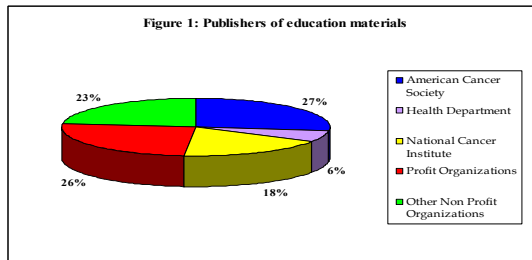
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## BACKGROUND

Cancer education materials are a means of communication with the general public and cancer patients. Although educational materials have the potential to increase a person's awareness and knowledge about cancer, the utility of the educational materials depends on their readability and cultural sensitivity. Since 40 million Americans are functionally illiterate, there is a need for materials written at a variety of reading levels including very simple levels. To ensure that materials are appropriate for target audiences, materials should have recognizable formats, use culturally appropriate words and phrases and include pictures of the target population to illustrate that cancer is an issue they should be concerned about.

## OBJECTIVE

This study sought to determine publication sources, types of cancers addressed, readability and cultural sensitivity of cancer education materials that are currently distributed by health departments in New Jersey. The focus of this project was to compare those available in both English and Spanish.



## METHODS

New Jersey Health Departments were contacted via mailings and asked to submit copies of cancer education materials that they distributed. Materials were also obtained directly from publishers so that Spanish and English versions were available for all materials analyzed.

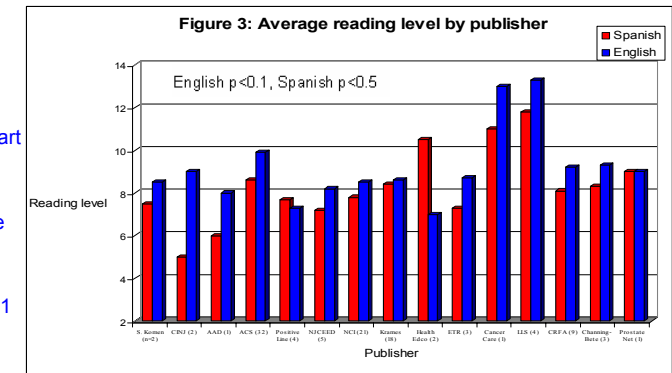
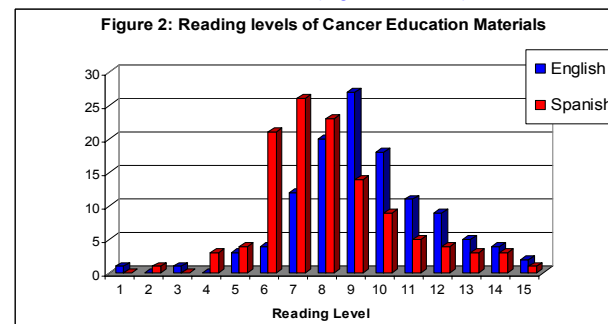
- The SMOG reading scale was used to assess English materials
- The Fry Graph method was used to assess Spanish materials
- The Cultural Sensitivity Assessment Tool (CSAT) was used to assess cultural sensitivity of materials
- The CSAT tool rates the format, written and visual messages of educational materials on a scale of 1 to 4, with 4 being the best possible score for each section and 12 being the highest total score.
- A limitation of the current analysis is that different tools were used to analyze Spanish and English texts. Further investigation is needed to ensure differences found are not attributable to differences in the instruments.

Table 1: Average Reading Levels of Spanish and English Materials compared to standard 6th grade reading level

Language	Audience	Avg. Reading Level	p-value *
English	Cancer patient	9.9	<0.001
Spanish	Cancer patient	9.3	<0.001
English	General Public	8.9	<0.001
Spanish	General Public	7.5	<0.001

## RESULTS

- 295 materials were received from 54 (46%) of the 116 NJ health departments.
- 87 materials were obtained directly from publishers. 53 pieces were Spanish translations not distributed by health departments, though the English counterpart was being distributed. Remaining materials were paired sets not distributed by any health department.
- Of 382 items obtained, 148 were available only in English and omitted from the study. No item was available only in Spanish. Thus, 234 items (117 pairs) were available for paired analysis.
- 59 items (25%) were distributed by one or more health department; of these, 41 were in English and 18 were in Spanish.
- Only 17 health departments distributed at least one paired set of materials.
- The greatest sources of materials were American Cancer Society and the National Cancer Institute (Figure 1).
- 11 cancers types were addressed including breast, colorectal, cervical, prostate and skin.
- 95% of English materials were written at or above the recommended 6th grade reading level, with a mean reading level of 9.3 and 93% of the Spanish materials were written at or above the recommended reading level, with a the mean reading level of 8.0
- Materials written for cancer patients on treatment options had significantly higher reading levels than those written for the general public (Table 1)
- 48% of the Spanish materials had scores at or below the acceptable value (2.5) in one or more of the written, format and visual categories
- 23% of English materials scored at or below 2.5 in one or more categories
- English materials had significantly higher written ( $p<0.001$ ) and visual scores ( $p<0.001$ ) than Spanish counterparts
- CSAT scores and reading levels varied by publisher, though ANOVA testing revealed no statistical differences (Figures 3 and 4)



## CONCLUSIONS

Cancer education materials can be powerful communication tools for the general public and cancer patients but only if they are written at appropriate reading levels and are culturally sensitive. Special consideration must be given to the selection of Spanish education materials as they are usually translations of pre-existing English materials. Direct translations result in expressions and syntax that may be unfamiliar to the audience. This was evidence by the CSAT written scores for Spanish materials which were significantly lower than those of their English counterparts. Additionally, as graphics are often not changed for translated materials, the graphics may be culturally inappropriate. This was evidenced by significantly lower CSAT graphic scores for Spanish materials. Additionally, to ensure the needs of target audiences are met, health departments should distribute materials written at various reading levels, including simple reading levels. Health departments should utilize census data and related information to determine the language and reading level needs of their local communities.

