Background

Health literacy is the ability to read, understand, navigate, and communicate within the healthcare field in order to be able to make informed decisions about one’s health. Health literacy contributes to an individual’s ability to communicate health history information, employ preventative measures for disease, navigate insurance, fill prescriptions and understand mathematical concepts such as probability and risks for disease. This is an important skill in today’s health industry because due to under-staffing in hospitals, there is a decrease in face-to-face patient to healthcare provider time (Rosseter). By extension, people with poor health literacy skills may be less capable of obtaining the highest level of patient care and their health may suffer as a result. This research seeks to reveal the connections between patient health care and their language skills through analysis of language and healthcare related tests.

Methods

Participants:
- Inclusionary criteria for this study was that all participants must have previously completed a MAPS lab study.
- The sample size for this study was 52. Of this sample, 24.4% were male and 75.6% were female. 75% were White, 11.5% African American, 5.7% Asian and 7.8% were Hispanic/Latino. Their ages ranged from 18-32 and the mean age was 21 years old.

Materials:
- Subjects completed many language skill tests, outlined in Table A.
- RedCap and JASP software was used to record and analyze participant's scores.

Procedures:
- Participants came in for a 2 hour long language and reading testing session. Tests were administered one-on-one by a trained research assistant. Scores were then double checked and scored for accuracy.
- For the BRIEF and METER scores participants were emailed a link to a RedCap survey and participants completed the assessments online.

Analysis

Language Ability Predicts Health Literacy Skills
Charlotte Robinson1, F. Sayako Earle2
University of Connecticut 1, University of Delaware 2

Linear Regression BRIEF, Reading Composite and Token

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Adjusted R²</th>
<th>R²</th>
<th>RMSE</th>
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<td>0.762</td>
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Linear Regression METER, Reading Composite and Token

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<th>F</th>
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References


Spoken language scores did not show significance in our samples.

Results

• It was found that BRIEF scores had no significant relationships with any of the reading scores.
• This may have been due to the order in which the BRIEF, a self assessment, was administered after METER, a quantitative measure.
• Initial hypothesis that poor spoken language skills is linked to poor health literacy scores was not supported.
• It was found that non-spoken language skills such as reading and spelling were predictive of health literacy.
• Spoken language scores did not show significance in our samples.
• The implications of these findings may act as a basis for developing more effective tools for doctor-patient communication such as informational videos that use spoken language and visuals rather than written material to instruct patients and relay important health information.

Acknowledgements

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Discussion

• The data was transformed by taking the Z score of all the raw language score data.
• A correlation matrix was used to show that all reading and spelling measures in the language battery were all highly correlated. A composite reading score was then created by averaging the Z-scores.
• A linear regression was conducted to analyze METER, non-spoken and spoken language scores.
• In the linear regression, age was used as a covariate to control for any differences in age among participants.

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