

Examination of Oral Health Literacy in Public Health Practice

Jessica Y. Lee DDS, MPH, PhD
University of North Carolina at Chapel Hill
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Presenter Disclosures

Jessica Y. Lee DDS, MPH, PhD

(1) The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

No relationships to disclose

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What is Health Literacy?

Healthy People 2010 defines health literacy as:

“The degree to which individuals have the capacity to obtain, process, understand and act on basic health information and services needed to make appropriate health decisions.”



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Definition of Oral Health Literacy

(NIDCR, 2006)

“The degree to which individuals have the capacity to obtain, process, and understand basic oral health information and services needed to make appropriate health decisions.”



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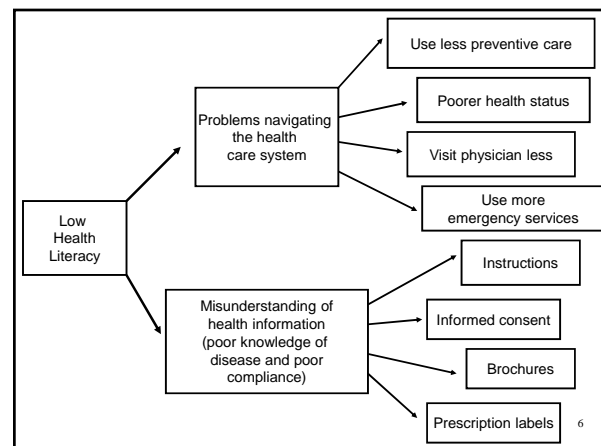
Epidemiology

It is estimated that somewhere between 25-50% of Americans are functionally illiterate (NLS, 2000).

- 90 million Americans struggle to understand basic health information.
- This includes consents, verbal instructions, and drug labels.



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Significance for Dentistry

Is low oral health literacy linked to poorer dental health outcomes?

- Less preventive services use/increase ER use.
- Understanding and management of dental disease.
- Difficulty following instructions/compliance.
- Poorer oral health status.



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Health Literacy in Dentistry

There is limited research on literacy's role in relation to oral health and dental care outcomes.

Why?

A lack of appropriate instruments to assess oral health literacy.



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Preliminary Work

REALD-30

- Based on REALM- medical measurement.
- Relies upon 30 common dental words.
- Scored 0-30 and listed according to the level of difficulty.

Rationale

If respondents have trouble pronouncing words, a beginning-level reading skill, they are likely to have difficulty with comprehension, a higher order skill.



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Preliminary Work

Test of Functional Health Literacy in Dentistry (TOFHLiD)

- Based on TOFHLA- medical measurement.
- Tests reading comprehension and numeracy.
- Strong correlation between reading ability and comprehension.

Rationale

Reading, comprehension, and numeracy together are more thorough assessments of health literacy.



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Carolina Oral Health Literacy Project (COHL)

- 1) Determine the oral health literacy levels among a low income, high risk population.
- 2) Examine the role oral health literacy/low literacy and health behavior and knowledge.
- 3) Examine the role oral health literacy/low literacy and self reported health status.
- 4) Evaluate the effects of oral health literacy/low literacy on cumulative treatment and costs of dental services provided by Medicaid as well as oral health related quality of life.



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Methods

- Five Year Study (2007-12).
- Caregiver/Child Dyads in WIC Clinics.
- Two trained interviewers using an ordered survey.
- TELEFORM scannable data capture forms used.
- The inclusion criteria:
 - Healthy (ASA I or II).
 - Less than 60 months of age.
 - Accompanied by the primary caregiver.
 - English-speaking.
 - Medicaid-eligible.



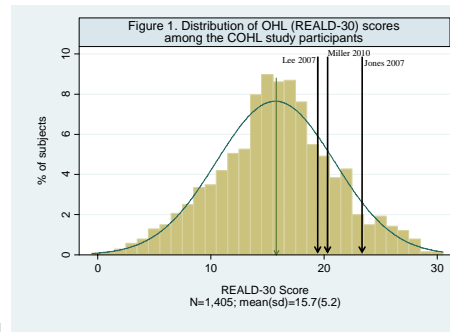
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Results



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Results

Reported Socioeconomic Characteristics (n=1,405)

Table 1. Distribution of REALD-30 scores by demographic characteristics of the COHL study participants.

	N	(%)	REALD-30		
			Mean (SD)	Median	Range
Race					
White	504	39.4	17.4(4.9)	17	1-30
African American	522	40.8	15.3(5.1)	15	2-30
American Indian	254	19.8	13.7(5.3)	14	0-29
Hispanic ethnicity					
Yes	64	5.0	17.7(5.0)	17	5-28
No	1215	95.0	15.7(5.3)	16	0-30
Education					
Did not finish high school	306	23.9	13.0(4.8)	13	1-26
High school diploma or GED	480	37.5	15.0(4.9)	15	0-30
Some technical or college training	429	33.5	18.0(4.7)	18	4-30
College degree or higher	65	5.1	20.1(4.8)	21	11-29

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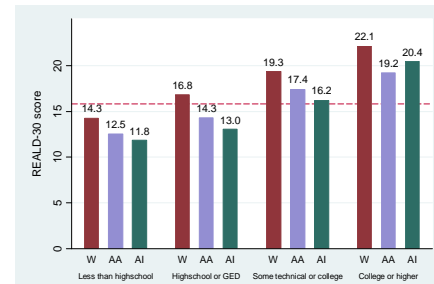
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Results

REALD Distribution by Race and Education (n=1,405)



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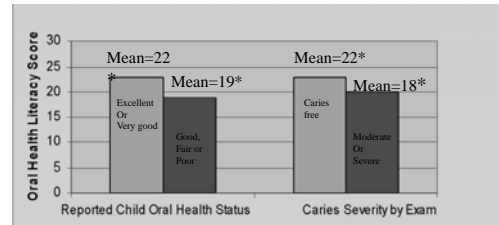
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Oral Health Literacy and Health Status



*Significance $P < 0.05$ level



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Results

Regression Models Predicting Oral Health Status

Variable	Disease Severity (Clinical Exam) None/Mild/ Mod vs Severe			Reported Oral Health Status Ex/VG/Good vs Fair/Poor		
	OR	95% CI	P-value	OR	95% CI	P-Value
REALD-30 Linear 0-30 Scale	1.12	1.02; 1.23	0.017	1.04	0.95; 1.14	0.35
Education -High School vs. High School or Less (Reference)	1.86	0.66; 5.28	0.072	2.75	0.96; 7.86	0.06
Race White vs. Non White-Minority (Reference)	0.74	0.29; 1.91	0.56	0.91	0.38; 2.22	0.84
Income Less than \$30,000 vs. ≥\$30,000 year (Reference)	0.76	0.28; 2.04	0.59	0.55	0.21; 1.39	0.20

(n=186)

*Significant at $P < 0.05$



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Summary

- Differences in OHL levels between racial groups persisted after adjusting for education and county of residence.
- Improving oral health literacy may be an avenue to reduce health disparities and potential interventions should be explored.



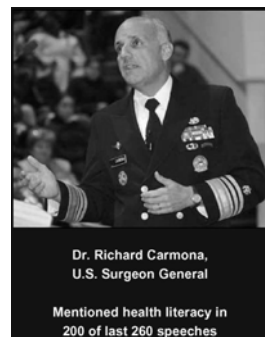
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Summary

- Lower oral health literacy is associated with poorer oral health
- Potential avenues and causal relationships for this association should be explored further.



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“As a former nurse, trauma surgeon, and public health director [I realized] there was a wall between us and the people we were trying to serve.

Health care professionals do not recognize that patients do not understand the health information we are trying to communicate.

We must close the gap between what health care professionals know and what the rest of America understands.”

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Collaborators

- Jessica Y. Lee DDS, PhD
Dept of Pediatric Dentistry
- R Gary Rozier DDS, MPH
Dept of Health Policy
- William Vann Jr DMD, PhD
Dept of Pediatric Dentistry
- Daniel Lee PhD
Dept of Health Policy
- Robert MacCallum PhD
Dept of Psychology
- Sally Stearns PhD
Dept of Health Policy
- Darren DeWalt MD, MPH
Dept of Internal Medicine
- Kimon Divaris, DDS
Dept of Pediatric Dentistry
- Diane Baker, MBA
Dept of Pediatric Dentistry
- Bryan Proctor, BA
Dept of Pediatric Dentistry
- Brian Stucky, MS
PhD Candidate, Psychology
- Bhavna Pahel, PhD
Post Doc Fellow, Sheps Center
- Jianlin Hou, MS
PhD Candidate, Health Policy
- Elizabeth Miller DDS
Pediatric Dental Resident
- Lauren Maxwell, BA
MPH Candidate, MCH
- Lauren Sanzone BA
4th year dental student

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Thank You

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