

Health literacy measurement: A brief review and proposal

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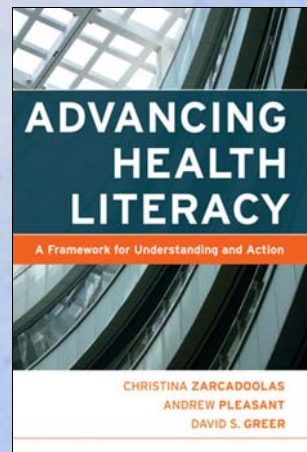
Extension Dept. of Family and Community Health Sciences

Hi!



Institute of Medicine of
the National Academies

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Givens ... I think

- We are here, as there is at least tacit agreement that the measurement of health literacy is unfinished/incomplete.
- Theory and definition should guide measurement
- Measurement leads to attention
- Attention leads to funding
- Attention and funding can lead to change.
- The 'sick care' system in the U.S. needs to change.
- Health literacy can be both a theoretical and empirical guide to how, where, when, and why that change should occur.

Alphabet soup



- **NAAL** - National Assessments of Adult Literacy Health literacy component
- **HALS** - Health Activities Literacy Scale
- **REALM** - Rapid estimate of adult literacy in medicine; now REALM Spanish, REALM Teens (really!)
- **TOFHLA, S-TOFHLA, “Adapted” TOFHLA** - Test of Functional health Literacy in Adults
- **NVS** - Newest Vital Sign
- The **single (or 3) item** screeners
- **SAHLSA** - Short Assessment of Health Literacy for Spanish-speaking Adults
- **SIRACT** - Stieglitz Informal Reading Assessment of Cancer Text
- **MART** - Medical Achievement Reading Test
- **FHLM** - Functional Health Literacy Measure
- **ELF** - Health literacy screener
- **More on the way ...**

How many of you agree?

- There is not an open access (free/easily available) comprehensive measure of health literacy.
- Caveat - assuming a new one isn't introduced today.



How many of you agree?

- There is not a comprehensive measure of health literacy.



How many of you agree?

- There is not a measure of health literacy.



A fundamental distinction

- The goal of **screening** ...
 - divide people into healthy and sick categories (have/ have not).
 - In clinical contexts, this demands short, quick & easy to use.
- The goals of **measurement** ...
 - advance knowledge - i.e. test hypotheses
 - explore and explain structure and function
 - monitor effectiveness and equity of interventions
 - indicate major problems confronting society
 - contribute to setting policy goals

Equivalent to the difference between an “old-fashioned blood pressure cuff, stethoscopic, and manual abdominal health check-up and a comprehensive health examination” (Breslow, 2006)

And this ...

**Health Care
System**

**Patients /
Public**

Level of demand (Sending skills)	HEALTH LITERACY	Ability to participate
		(Reception Skills)

↓
Some
readability tools;
new OSCEs

↓
Nothing
measures skills
on either side in
context

↓
NAAL, TOFHLA,
REALM, NVS et
al.

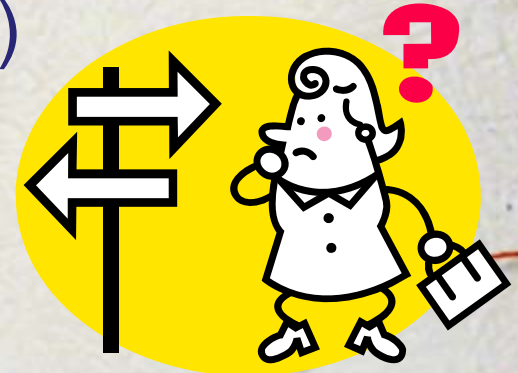
I wish I had time to ask this as a question ...

- Using data from any of the currently available tools ...

No one can

- ~~Can anyone~~ tell us how health literacy **causes** improved health

– (Not what happens when it isn't present ..
And not just correllational data)



Comprehensive - is not an impossible task

- “Comprehensive”
 - Does not mean all inclusive, it means:
 - “Marked by or showing extensive understanding”
 - Does not mean that it is “impractical for almost all projects.” (Baker, 2006 p.880)
 - Does mean that it should consist of items that test a theory/ framework/ definition of health literacy.

Now - How many of you agree?

- There is not an open access, comprehensive measure of health literacy.
- But there should be.



If that ... Then this ...

- A comprehensive measure of health literacy will not be built until the field agrees on exactly what it is that we want to measure.
- Despite a number of false summits, that has not happened yet.
 - There will probably be more false summits.
- **How we go about this process is as important – if not more important – than what the process produces.**



**How to proceed:
Two should do's**



Should do ...

- Remember the broader context health literacy operates within
 - Kuruvilla, et al., (2006). Describing the impact of health research: a Research Impact Framework. BMC Health Services Research, 6:134doi:10.1186/1472-6963-6-134
 - Nutbeam, D. (2000). Health literacy as a public health goal: A challenge for contemporary health education and communication strategies into the 21st century. Health Promotion International 15(3), 259-267.

Should do ...

- Recognize health literacy is a social construction.
 - i.e. solely the product of social interactions
- Health literacy is not a biomedical issue with social roots.
 - A perspective and approach associated with screening
- Health literacy is a social issue with biomedical implications.
 - requires measurement using tools of social research.



How to proceed:

**Eight proposed
methodological principles**

For measure(S),
not another clinical screener




1) **Be explicitly built on a testable theory or conceptual framework of health literacy.**

- Arrived at through a renewed consensus.
- Current screeners are shaped by incomplete metrics of literacy such as only one version of the cloze format or word recognition rather than by empirically generated theory.



2) Be multi-dimensional in content

- Most theories/ conceptual frameworks define health literacy as a construct with: 
 - **multiple conceptual domains** - e.g. fundamental, civic, science, culture, critical, communicative
 - **multiple skills and abilities** - e.g. finding, understanding, evaluating, communicating, using, navigating, prose, document, quantitative, speech
- Elements of the underlying construct should be explicit in a measure. (Streiner & Norman, 1995)

3) Use multiple methods

- Quantum leaps in skills between recognizing and understanding ...
 - The letter
 - The word
 - The sentence
 - The paragraph
 - The document/ narrative
- Word recognition \neq understanding
- The cloze - Does it provide information about the reader's understanding of anything more than a single sentence?



4) Clearly distinguish health literacy from communication

I suggest ...



- Communication – a symbolic transactional process
- Health literacy – the use of skills and abilities

5) Treat health literacy as a “latent construct”

Jargon warning!

- Health literacy is not explicit – you cannot “see” health literacy
- Health literacy varies across individuals and contexts (socially constructed).
- Thus, health literacy should be considered a “latent construct” for measurement purposes (DeVillis, 1991).
- This means a new measure should contain items that **sample** from all the conceptual domains outlined by the underlying theory or conceptual framework.

6) Honor the principle of compatibility

- In essence -- a measure of health literacy that focuses solely on the clinical setting is inappropriate when researching public health behaviors and outcomes.
- For a hypothesized relationship between attitudes, behaviors, and knowledge to hold true:
 - they must be measured at equivalent levels in regard to action, target, context, and time.

(Ajzen & Fishbein, 2005)

7)

Allow comparison

across contexts including culture, life course, population group, and research setting.

- This implies that
 - the measure be adapted or developed in parallel in different target **languages**, and different **contexts**.

7)

Allow comparison

- the final product may be a **core module** useful across all contexts,
- ☆ • **and add-on modules** that target specific issues such as diabetes, asthma, navigating the health care system and/ or specific populations such as physicians, patients, etc. (Pleasant & Kuruvilla, 2008).
- ☆
- Based on the **same theoretical basis**:
 - allows comparison.

8) **Prioritize social research and public health applications versus clinical uses**

- If we understand that
 - health literacy is an important determinant of public and individual health, and
 - we risk doing harm by labeling individuals as “low health literate” in a clinical setting
 - we have several screeners already
 - the time burden on clinical settings limits ability to measure versus screen
 - a simple tool is limited in its ability to advance knowledge of a complex social process
- Then it is time to dedicate resources toward building a complete measure of health literacy.

... and 3 MUST haves

To accomplish the task of building
a comprehensive measure of
health literacy



Must have consensus



- Social constructions are defined through a social process.
- We, and our colleagues around the world, are collectively and continually defining health literacy (in words and actions).
 - change is inevitable over time
 - either accept what others tell us OR have direct input in that process.
- Health literacy is still a new idea.

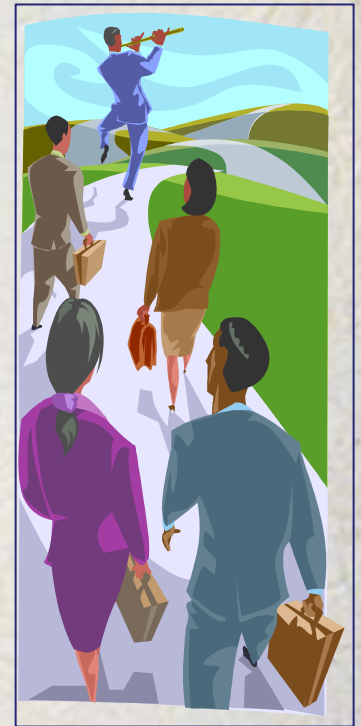
Must have the scientific method

- A measure of a social construct should explicitly test the definition of that social construct (i.e. use the scientific method).
 - As far as I am currently aware, no screener of health literacy was explicitly designed to test any of the more commonly accepted definitions of health literacy (of which there are many).
- Has anyone done a pre-post around an intervention using any of the currently available screeners?



Must have funding leadership

- Research funding organizations need to prioritize:
 1. A renewed consensus process about health literacy
 2. Development of measure(S) based on that process



Closing summary

- Current condition: A field at risk
- We have many screeners
- We have no comprehensive, usable, freely accessible measure of health literacy.
- There is a need for a renewed & inclusive consensus process.
- Development of a measure of health literacy should be based upon such a process.
- Funding organizations need to take the lead in making this happen.

Thank you.

Please throw all
bricks, comments,
or questions at:

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