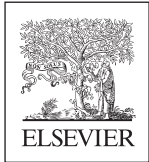# STUDYDADDY

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Oral literacy demand of health care communication: Challenges and solutions

*Debra L. Roter, DrPH**

Department of Health, Behavior and Society, The Johns Hopkins University, Bloomberg School of Public Health, Baltimore, MD

ARTICLE INFO

ABSTRACT

Literacy deficits are widespread; one-quarter of the U.S. population has below basic literacy skills and the health consequences of literacy deficits are well-known and significant. While the need to simplify written health education print material is widely recognized, there has been little attempt to describe or reduce the literacy demand of health care dialogue. Patients with limited literacy complain they are not given information about their problems in ways they can understand, leaving them uninformed, frustrated, and distrustful.

The purpose of this article is to review a conceptual approach to describing oral literacy demand in health care dialogue, to review several key studies that support the predictive validity of the conceptual framework in regard to patient satisfaction and recall of information, and to propose several practical ways to diminish literacy demand and facilitate more effective health care exchanges with patients.

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Literacy deficits are widespread and the health consequences of restricted literacy are considerable. Restricted literacy has been linked to lower levels of self-reported health,[1] less use of preventive care and cancer screening,[2] less effective diabetes management, more disease-related complications,[3] and higher rates of hospitalization[4,5] among other health consequences.[6]

Most health literacy research has focused on skill deficits in reading and numeracy; however, there is evidence that patients with literacy deficits also have difficulty understanding and recalling complex information delivered orally.[7] Patients with poor literacy skills are especially vulnerable. They report feelings of shame and humiliation in regard to their literacy deficits[8-10] and they experience more communication difficulties and have less satisfying health care visits than patients with adequate literacy skills.[11] It is not surprising to find that patients with low literacy skills are less likely to be active participants in the medical dialogue and in the decision-making process.[12,13]

The purpose of this article is to review a conceptual approach to describing oral literacy demand in health care dialogue, to review several key studies that support the predictive validity of the conceptual framework in regard to patient satisfaction and recall of information, and to propose several practical ways

* *Corresponding author*: Dr. Debra L. Roter, Department of Health, Behavior and Society, The Johns Hopkins University, Bloomberg School of Public Health, 624 North Broadway, Hampton House, Room 750, Baltimore, MD 21205.
  E-mail address: droter@jhsph.edu (D.L. Roter).

to diminish literacy demand and facilitate more effective health care exchanges with patients.

Oral Literacy Demand Framework

While some studies have considered particular aspects of medical communication that present challenges to patients with restricted literacy,[14] there have been few attempts to consider these challenges in a comprehensive manner.[15] In attempting to contribute to this sparse literature, my colleagues and I have proposed a framework that conceptualizes the oral literacy demand of health care communication by several interaction domains that present special challenges for patients with restricted literacy.[16-18] In brief, oral literacy demand is defined by 4 separate language elements: (1) medical jargon; (2) general language complexity; (3) contextualized language; and (4) structural characteristics of dialogue. These are described below, along with selected background literature and, when available, validity studies.

Medical Jargon

Studies dating back to the 1960's have demonstrated that medical jargon is widely used during routine medical visits and is linked to patient confusion. It is highly likely that a doctor will use at least one unfamiliar medical term in any given visit, and this has not changed very much over the past 50 years. In their pioneering work in this area, Barbara Korsch and her colleagues[19] found that the pediatrician's use of difficult technical language and medical shorthand was a barrier to communication in more than half of the 800 pediatric visits that were studied. Mothers were often confused and unsure of terms used by the doctor to describe what was wrong with their children and what the doctor was going to do about it. Although one mother (out of 800) asked the doctor to "repeat what he said in English", this kind of confrontation was infrequent. For the most part, mothers did not ask for clarification of unfamiliar terms. Fear of appearing ignorant was the reason most often given by patients for not asking what technical terms meant. The investigators added, however, that some patients may have been flattered by having the physician think that they understood difficult and unfamiliar language, making it even harder for them to admit otherwise.

In more recent studies, Castro and colleagues went beyond the previous studies by specifically examining the use of unclarified jargon with patients who have limited literacy skills and by assessing patient understanding of the terms used.[20] All 60 patients in the study were diabetic, so it was possible to explore the impact of jargon use on patients' ability to understand diabetic treatment recommendations. The investigators found that 4 unclarified terms were used per visit (median = 3; range 1-14) and at least one unclarified term was used in 85% of all visits. Overall, patient comprehension of the unclarified diabetes-specific terms was low and never reached >40% (range, 13-38%).

My colleagues and I took a somewhat different approach to our validity study of medical jargon during genetic counseling sessions. We tracked the frequency of 7 key genetics-specific terms used during genetic counseling sessions (ie, variation, susceptibility, abnormality, sporadic, hereditary, mutation, chromosome) based on transcript analysis of >150 sessions.[18] We found that an average of 3 different key terms (of 7) were used in every session and, when used, a term was repeated often. In fact, key words were typically repeated 20 times in a single session, with some terms repeated as often as 78 times. We related the frequency of key word use to the subject's ability to learn genetics-related information from the sessions. This was done by instructing the study volunteers to imagine being the patient in a genetic counseling session they viewed. In this way, the study subjects essentially became "analogue patients," acting as a proxy for actual patients.

After watching the video, the analogue patients took a knowledge test to assess their learning of genetic-related information conveyed during the session. The knowledge test scores were subsequently related to the subject's level of literacy and the number of times each key term was used in the viewed session. There were no significant relationships between analogue patient learning and use of medical jargon in the sessions for low literate subjects; it did not appear to significantly aide or hinder the ability of these analogue patients to learn genetic-related information as communicated by the counselor.

Other study analyses, based on ratings by the simulated patients who directly participated in the counseling videos, found a negative effect of medical jargon on their satisfaction with the genetic counselors.[17] When the counselor's total use of medical jargon was high, simulated patient's satisfaction with interpersonal rapport suffered. This suggests it was not the use of specific words, per se, that created a negative impression, but the relative emphasis on these words—including frequent repetitions—that interfered with satisfaction. We also know that in these counseling sessions there was a trade-off between attention to technical descriptions of tests and procedures, largely the context within which medical jargon was used, and the address of emotional and psychosocial issues. We suspect that it was the neglect of the latter, rather than the jargon use, per se, that diminished simulated patient satisfaction.

General Language Complexity

The second group of measures in the framework reflects general language complexity, which is directly

parallel to readability assessment of print material. General language complexity is distinguished from jargon by the structure of the language, rather than its formality, unfamiliarity, or specialized use. The markers of complex oral language can be seen as parallel to those used to assess the literacy demand of print material. In our study of genetic counseling sessions,[18] we used Microsoft Word "grammar summary statistics,"[21] to generate a variety of language measures including: the total transcript word count, the average number of words per sentence, the percentage of transcript sentences in the passive voice, the Flesch Reading Ease Score, and the Flesch-Kincaid (F-K) Reading Grade Level Score. The percentage of transcript sentences in the passive voice was used as a proxy for conversational formality. Although not directly provided with summary statistics, the average number of syllables per word (ASW) was extrapolated from the Flesch Reading Ease Score.

We found that language complexity was not related to learning among low literate subjects, perhaps because the reading grade level equivalent of the dialogue transcripts was relatively low.[18] However, as was the case for jargon use, the simulated patients rated the genetic counselors who used simpler and less complex language more positively than those who used more complex language.[17] More specifically, the simulated patients were significantly more satisfied with the informativeness of sessions that had lower Flesch-Kincaid Reading Levels and less use of the passive voice.

Contextualizing Language

Decontextualized language conveys abstract ideas or novel use of language or metaphors to describe an event or an internal state to another person. Individuals with restricted literacy tend to have difficulty with these sorts of explanations and are more likely to use and understand language that is concrete and grounded in what is directly seen and experienced.[22,23] In this regard, personalized information may be recognized as more relevant and useful than information given in general terms. An example of personalized information about risks in the genetic counseling context is: "Based on what you told me about yourself and your family, you have a 1 in 400 risk of having a baby with Down's Syndrome." The more general reference was: "Nobody has a risk of zero—women over 35 have about a 1 in 400 risk of having a baby with Down's Syndrome."

Some 35% of all information given by counselors in sessions was coded as being personally contextualized, and findings relating knowledge scores to personally contextualized language were striking.[18] Analogue patients with restricted literacy skills learned significantly more from the counselors in sessions in which information was made less abstract and more concrete by personal contextualization.

Dialogue Structure

Three aspects of dialogue structure are considered in the literacy demand framework: (1) speech speed, (2) turn density, defined as the number of thoughts communicated in one speaking turn, and (3) interactivity, the conversational up and back of the dialogue defined as the rate per minute at which speakers exchange the floor.

There is some evidence that faster-than-normal speech speed adversely affects comprehension,[24] and patients in focus groups complain about the fast pace in which information is communicated to them.[9] While a patient can explicitly request that the physician slow down or repeat information, patients with low literacy skills are less likely to make requests of this kind than other patients.[9] Although speech speed was included in the oral literacy demand framework, it was not found to be related to analogue patient recall in the genetic counseling study.[18] A second simulation study, this one conducted in primary care, also explored the relationship between speech speed and simulated patient ratings.[25] In this study, simulated patients rated physician demeanor, interpersonal satisfaction, and decision-making partnership more positively when the clinician spoke at a faster rate.

Turn density is the amount of uninterrupted speech delivered by a speaker at a single speaking turn. We know that when information in print material is presented in manageable chunks, only a few items at a time, readers are more likely to remember the information given[26] and, in medical visits, there also appears to be an inverse relationship between the amount of information given and the proportion of information a patient can recall.[27,28] A corollary in oral exchange is the informational block delivered during a speaking turn. Thus, the longer a clinician speaks, the denser the informational chunk, and the greater the oral literacy demand.

Doak and colleagues suggest that readers cannot comfortably process more than 5 pieces of information at a time.[26] In the genetic counseling study described earlier, the average turn density for counselors was 6.8 statements, suggesting that the information load each time a counselor spoke would be challenging for anyone, but especially so for patients with restricted literacy.[16] In fact, analogue patients with restricted literacy skills learned significantly less in sessions with long, dense counselor speaking turns.[18]

The last dialogue dimension is interactivity, defined as the rate of speaker change per minute of interaction

throughout the session. Greater interactivity results in a more conversational exchange that provides speaking opportunities for patients, as well as a natural break between informational monologues. Once again, there is a parallel to dialogue interactivity in print assessment. To more effectively engage print readers, interactive strategies such as question/answer formats, quizzes, brainstorming exercises, and risk self-assessment has been suggested.[26] While the mode of interactivity is obviously different in print and dialogue, the rate of speaker exchange similarly demands active attention and engagement of speakers in a reciprocal process of informational evaluation and response.

There is evidence that analogue clients with restricted literacy skills learned significantly more when viewing genetic counseling sessions with greater interactivity[18] and that simulated patients rate highly interactive sessions more positively in regard to provider demeanor, interpersonal satisfaction, and decision-making partnership in both the genetic counseling context and in primary care.[16,25]

Implications for Nursing Practice

Based on the framework presented and research reviewed, 3 straightforward strategies can be proposed to reduce oral literacy burden in face-to-face communication with patients. While none of the studies cited in the review were specifically conducted with nurses, the principles are fully applicable to the nursing setting. The strategies can be summed up as: "strip it down", "bring it home" and "mix it up."

"Strip it down" refers to limiting unnecessary use of medical jargon and complex general language. This has a common sense appeal that is supported by a variety of studies. It is, however, important to note that some judicious use of key medical terms may be important to orient a patient to language that is likely to be encountered in the course of medical care and treatment. When a technical term is required, the word or concept should be defined and used in the context of patient care, but it should not become the primary focus of the dialogue. Patients want to be informed, but they also want to know how and why the terms that define their medical condition and treatment fit into the broader fabric of their lives. It is here that care must be taken to convey meaning and relevance and not simply a dictionary entry.

While there is far more attention in the literature to medical jargon than general language complexity, exploration in this regard may well be worth the effort. There has been broad support for a Plain Language initiative by the government for the past 10 years. As noted by Vice President Al Gore announcing the Executive Memorandum directing the heads of all executive departments and agencies to begin writing in plain language to the American people, "Plain Language is NOT… to enhance the level and facility of reading comprehension attained by the government's interlocutors according to objectively considered contemporary standards and measures. That was the old point; the new point… is to make sure you can understand us."[29] The take home instruction is to engage patients in conversation that is stripped down to more effectively facilitate understanding, establish rapport, and diminish social distance.

"Bring it home" refers to communicating information in a personally relevant context. It also goes further than this, and establishes a challenge to make information concrete by grounding it in the experience of learners. This strategy not only has intuitive appeal but resonates with the adult education literature that characterizes adult learners as drawing on life experience to make sense of new information.[26] By referencing prior experiences, the utility of the information to address immediate needs is increased. This includes not only personalizing a message in the way illustrated above, but building a connection with patients by beginning an educational session by asking patients what they know and using that as a starting point for building interest and assuring that communicated information is relevant.

The last instruction, "mix it up", suggests transforming the all-too-often series of mini-lectures and monologues that characterize significant segments of the healthcare encounter to a dynamic up and forth of a true conversation. The study findings suggest, specifically related to interviewing, to talk less and listen more. It may be more important for physicians to guard against their own tendency toward long monologues even if they are careful to offer the patient a chance to speak when they are finished. For example, when presenting treatment options it is not uncommon to overview several options and leave questions to the end. This is likely to result in far less meaningful patient engagement in the dialogue than chunking information and checking frequently for patient understanding and asking for questions as they arise. By consciously increasing the interactivity of the exchange, more opportunities are created for the patient to engage in the back and forth of normal conversation and, consequently, greater opportunity for the expression of patient voice.[16]

Conclusion

Oral literacy burden goes beyond the specific words that are used, examples that are given, or dialogue chunking and interactivity. It goes to a fundamental commitment to assisting patients in becoming full participants in their own health care. Although these

issues have received little more than minimal attention in traditional medical and nursing curriculum, there is some evidence that small changes in the way health care communication is delivered can pay off in terms of patient understanding, satisfaction, and motivation for self-care.

The studies presented in this review have come from outside of the nursing literature and several have relied upon simulated and analogue patients. Nevertheless, the findings are worth consideration and worthy of raising a challenge to the nursing field to explore these questions directly within the context of nurse-patient communication. The results may look different for nursing than other health care professionals, and that would be an important contribution to the growing evidence base through which the negative consequences of restricted health literacy on valued patient outcomes may be diminished.

Finally, as noted by the Surgeon General's Healthy People 2010, closing the gap in health literacy "is an issue of fundamental fairness and equity and is essential to reduce health disparities."[30]

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