The evolving concept of *Health literacy*: New directions for health literacy studies

Rima E. Rudd

Department of Social and Behavioral Sciences, Harvard T.H. Chan School of Public Health, USA

Inside commentary: Perspectives by our editorial board members

Correspondence to:

Rima E. Rudd,
rrudd@hsph.harvard.edu

Health literacy is, as Don Nutbeam so aptly noted, an evolving concept.[1] As the concept develops, so too must the research. I offer, in this perspective, a brief overview of the field and suggestions for the next stage of evolution.

Research linking literacy skills to health outcomes firmly began after the publication of findings from adult literacy surveys conducted in 22 industrialized nations in the early part of the 1990s.[2] Findings that significant numbers of adults had difficulty using commonly available print materials with accuracy and consistency prompted a number of health researchers to focus on possible health consequences. As the U.S. Institute of Medicine report on health literacy noted and the U.S. Agency for Healthcare Research and Quality's systematic reviews determined,[3] health literacy research inquiries established differences in health outcomes between those with strong and those with weak literacy skills. Health literacy, most frequently defined as the capacity to obtain, process, understand, and use health information, emerged in the last decade as an important determinant of health. Poor literacy skills, however measured, predict untoward health outcomes.

During the same time period but begun a decade earlier, a parallel strand of research focused on health information. For well over three decades, at least 2,000 peer-reviewed studies reported on the reading level or 'suitability' of health materials, tools, and messages designed for public use – primarily related to health information, directions, preparations, and self care. For the most part, studies across an array of health topics indicate that health materials are written at levels that exceed the average reading skills of the public.[4,5] This represented a serious mismatch, making health information relatively inaccessible. However, these studies were rarely part of or cited within the inquiries focused on health outcomes. Instead, in a majority of health literacy studies, the health materials and messages were often taken as a *given* and the focus was on patients' ability or inability to comprehend and use them.

Over the past decade, over 50 tools were developed to measure the health literacy skills of individuals[6] but scant attention was being paid to the communication skills of health professionals or to the contexts within which health discussions or health actions were taking place. Key variables were not being considered in examinations of the link between literacy and health outcomes.

Models and theories in the fields of literacy, public health, and health communication call for attention to interaction and to context. For example, literacy scholars do not measure reading or listening skills without a careful assessment of the complexity of the text or speech accompanied by an analysis of what people are expected to do. Literacy has been found to vary by situation and is dependent on text and task difficulty. In addition, the science of epidemiology calls for attention to the environment, agent, as well as the host and focuses on the reciprocal relationships among these factors. Furthermore, Brofenbrenner's *Social Ecological Model*, increasingly influencing public health program design, reminds us to consider individuals within multiple layers of the physical, social, and political systems over time. Finally, health communication studies offer similar insights about the importance of contextual issues – addressing a wide array of variables including sender and receiver, participant groups, sociopolitical environments, levels of participation in communication processes among different stakeholders, message and media. The missing variables in health literacy studies tended to be factors related to other players (for example, those of us in public health, health care management and policy, medicine, nursing, dentistry, pharmacy) and to the contextual factors related to public health and health institutions.

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As findings emerged that literacy is linked to health outcomes, interest in efficacious action increased. Analysts began to note that the narrow definition of health literacy (defined and measured as individual skills and capacity) stymied attempts to redress the disparities – that those with limited literacy skills face more negative health outcomes than do those with better skills. How, for example, could health professionals increase the literacy skills of the public? Wasn't this more appropriately the responsibility of the education sector? More attention to the communication skills of professionals and the facilitating or inhibiting factors within the health context might reveal that the *fix* lies with us. I use this opportunity of a *perspective* to suggest a number of actions for your consideration.

First, we need to revisit definitions of terms for health literacy inquiry. A definition does, after all, shape research by suggesting a focus, determining the measures to be used, as well as specifying who or what is to be measured. If the definition of health literacy continues to focus on patients'/people's skills, so too will the measures. Findings will be limited and could be faulty.

Many definitions of *health literacy* are currently on the table. We might examine them to see which ones best serve a rigorous research agenda. We might ask *to what extent does the definition of terms and the accompanying measures include the interactions among individuals, materials and messages designed and delivered by health professionals, and the norms, policies, and practices within institutions?* We might consider a definition that shifts attention to the capacity of professionals and health institutions to support access to information and the active engagement of people.

Next, we ought not to accept a continued focus on people's ability to access information without a concurrent assessment of the accessibility of that information. We must carefully examine whether or not the information provided to the public is readable and usable. Multiple tools [beyond reading level] are available for such assessments. Myriad guidebooks offer insight for appropriate language, organization, and displays. Formative research protocols articulate the steps and processes needed for rigorous development and piloting with members of the intended audience. We cannot continue to allow the proliferation and dissemination of poorly developed and ill designed health materials and messages. The practice is unscientific and the consequences are dire.

Then, we need to broaden our inquiry. With a focus on redressing the current mismatch, we can be more attentive to the communication skills of professionals and to the culture and environment of health services and health care. Possible areas of inquiry might focus on public health messages or doctor/patient discussions and include attention to the use of and explanation for numeric concepts (such as normal, range, risk, likelihood) as well as the use of numeric displays and examine the influence on decision making processes. Literacy related attributes of organizational culture and their contribution to health outcomes is emerging as an area of interest as well.[7,8,9] Research studies might examine, for example, policies related to reimbursements for time spent on patient education and chronic disease management outcomes.

Overall, studies linking literacy and health outcomes should include variables from *both sides of the coin* – the literacy skills of individuals as well as the communication skills of the professionals; the communication skills of professionals as well as the policy related constraints/facilitators set by the institutions within which they practice. Only then can determinations of contributions to health outcomes can be appropriately made.

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Author information

Rima E. Rudd, ScD, MSPH, is a member of the faculty in Social and Behavioral Sciences at the Harvard School of Public Health. Her teaching, research studies, and policy work are focused on health disparities and health literacy. Dr. Rudd drafted the first action plan to achieve health literacy objectives (USDHHS, 2003) served on the original Institute of Medicine Health Literacy Committee (2002–4), and has written and contributed to multiple health policy reports, white papers, and research studies. She has expanded the scope of health literacy - calling for attention to literacy related barriers to information, programs, services, and care. She continues to provide a wide range of resources for health literacy research and practice including assessment tools for measuring the health literacy environment of health and healthcare institutions, mechanisms for integrating health literacy into adult education, and educational programs for health and healthcare professionals. Dr Rudd currently serves on the Institute of Medicine Roundtable on Health Literacy and is engaged in research and policy projects in the US, Europe, Australia, and New Zealand. Rima Rudd is a founder of and a leader in the burgeoning field of health literacy studies and has won multiple awards for her contributions.

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