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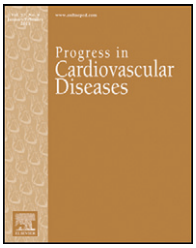

The Evolution of Health Literacy and Communication: Introducing Health Harmonics

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ABSTRACT

In the last fifteen years, research on the link between health literacy (HL) and poor health outcomes has resulted in mixed results. Since 2004, concerted effort has been made to improve not only practitioner training, but also the HL of the United States population. And yet, to this day, only 12% of adults are considered health literate. Along with increased awareness of HL, creation of strategies and initiatives, such as shared decision, plain language, and decision aides, have improved patient-centered approaches to facilitating a person's ability to obtain and understand health information to the extent that they are able to affect a level of health autonomy; efforts have clearly fallen short given that during the same amount of time, the unhealthy living phenotype and chronic disease burden persists globally. In an effort to expand and leverage the work of shared decision making and communication models that include all forms of literacy (e.g., food, physical, emotional, financial, etc.) that make up the broad term of HL, we introduce the concept of harmonics as a framework to explore the bi-directional transaction between a patient and a practitioner with the goal of constructing meaning to assist in maintaining or improving one's health.

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Contents

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Abbreviations and Acronyms
CDC = Centers for Disease Control
HL = Health Literacy
U.S. = United States

*"He is forced to coin words himself, and, taking his pain in one hand, and a lump of pure sound in the other (as perhaps the people of Babel did in the beginning), so to crush them together that a brand new word in the end drops out.[1]"

Virginia Woolf, On Being Ill

According to the National Assessment of Health Literacy, only 12% of the United States (U.S.) population is considered health literate.[2] Since 2004, data collected suggest that roughly 80% of the U.S. population is unable to adequately locate and understand health information to the degree that they are able to take care of their health needs. Concurrently, roughly 26% of the U.S. population works in the healthcare field. Read together, the statistics could imply that even a significant percentage of those working in healthcare are not health literate. This comes at a time when chronic disease (i.e., cardiovascular disease, pulmonary disease, diabetes, cancer, etc.) incidence and prevalence is the primary health crisis in the U.S. and many other countries around the world.[3–5] Never before have people needed to understand health information in a manner that allows them to act with some degree of medical autonomy for prevention and, as commonly is the case, treatment of disease. Likewise, now more than ever, patients and practitioners need a framework that captures the complexity of communication, particularly communication fraught with emotion, culture, linguistics, paralinguistics,[6] technology,[7] religion,[8] and education levels. Perhaps, what would be best at this juncture is to acknowledge that the goal should be for effective health communication, by whatever means and skills available, rather than the ability. Moving forward, a new health communications framework should acknowledge that there are many strategies and methods to communicate and each person in the transaction is responsible for organizing and processing a vast amount of information, either explicitly or implicitly, typically in a relatively short amount of time (e.g., a 15 min outpatient clinical encounter). In the end, the ultimate goal in health communication, particularly between a patient and practitioner, remains to improve the patient's health.

Recent research indicates that health literacy (HL) can have a profound effect on the prevention and treatment of chronic disease.[9–12] At the same time, in the recent healthcare climate, the encouragement of patient participation or patient agency in their own healthcare, from lifestyle behaviors, identifying early signs and symptoms, selecting appropriate physicians, navigating systems to schedule appointments, understanding diagnosis and patient records, to participating in the decisions for treatment and care of diagnosed illnesses or injuries, is at an all-time high.[13] Never before, have patients had access to information, from their own health records[14] to the vast pool of information found on the Internet. Practitioners from a wide array of disciplines (i.e., nurses, pharmacists, dentists, dieticians, physical/occupations therapists, etc.) are now not only responsible for an ever-growing body of scientific information and the application of that information for each case they see, but also responsible to share the information and decision making process with their patients, who presumably have little to no training in the medical field.[11]

But what is known about HL? First off, the definitions vary just enough to create confusion on the part of the practitioner and patient. However, if we start our search with the Centers for Disease Control (CDC), we find a definition focused on "the potential a person has to do or accomplish something. Health literacy skills are those people use to realize their potential in health situations. They apply these skills either to make sense of health information and services or provide health information and services to others.[15]" Broadening the definition of HL, the World Health Organization explains that it "means more than being able to read pamphlets and successfully make appointments. By improving people's access to health information and their capacity to use it effectively, health literacy is critical to empowerment.[16]" Between the two agencies, we can see that HL improves potential and empowers a person to understand and act on health information with some autonomy. However, both definitions place the entire burden on the patient or consumer of health information. The "how and who" still exist.[17] *How* should a person gain the skills to make sense of health information, and *who* is responsible for teaching them? As research indicates, measuring a patient's HL as an indicator for improved health trajectory[6] may not be the best measure.

Health literacy clearly has a great impact on health. In fact, studies show that even health practitioners' HL score is inversely associated with high density lipoprotein cholesterol and that nutrition literacy, specifically, had a statistically significant influence on anthopometry measures.[18] The authors of this perspective paper are not arguing against HL, rather we are positing that there are various forms of literacy under the health umbrella: nutrition literacy, physical literacy, emotional literacy, and technology literacy are but a few examples of the literacies that influence how one outwardly communicates health-related information to others and absorbs this information to construct their own health behaviors. By only placing the burden of various literacies on the minds and bodies of the patients, we have created a framework (i.e., what is currently known as the field of HL) that disproportionately burdens the person in the most stress, who requires information the most, and has likely had the least amount of training in medicine and sciences.

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