



Introduction

The Progress and Promise of Health Literacy Research

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It brings us great pleasure to present this special issue on health literacy of the *Journal of Health Communication*. This is the fourth year that the journal has dedicated an issue to this important and evolving topic and we greatly appreciate their continued commitment to this growing area of research. We hope that this year's special issue will continue to generate discussion and inform future research and practice initiatives to promote the field of health literacy.

As in previous years, this special issue builds upon research presented at the Health Literacy Annual Research Conference (HARC IV), which was held on October 22–23, 2012 in Bethesda, Maryland. The 2012 conference continued the legacy of previous HARC conferences as the largest health literacy research conference, showcasing innovative health literacy research conducted in both the United States and internationally. Through more than 150 oral and poster presentations by investigators from diverse fields and perspectives, HARC fulfilled its primary objectives of (a) professional development, (b) advancing the science of health literacy, and (c) promoting

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interdisciplinary health literacy research. We look forward to continuing our dialogue during HARC V, which will be held on October 28–29, 2013 in Washington, D.C. at the National Academy of Sciences in collaboration with the Institute of Medicine Roundtable on Health Literacy.

The field of health literacy research continues to grow and attain increasing national and international recognition. This year's special issue reflects this growth and the expanding scope of health literacy research. It includes more than 20 articles and commentaries from across the United States and Europe from a variety of disciplines. Some articles delve into new and particularly timely policy issues, such as the Foreword by Migliore, which describes the role of health literacy in the implementation of the Affordable Care Act, and the article by Coughlan, Turner, and Trujillo on the framing of health literacy within the context of Irish health care reform. Other articles continue current lines of research, expanding our understanding of the relationship between health literacy and health outcomes, offering potential strategies for overcoming literacy barriers and exploring the conceptualization and measurement of health literacy.

As in previous issues, the relationship between health literacy and medication understanding and use continues to receive a great deal of attention. Bailey, Oramasionwu, and Wolf offer a conceptual framework for understanding medication self-management from a health literacy perspective. An original research article by Lenahan et al. describes the association between patients' ability to identify their drug regimen, medication adherence, and health outcomes, while Gardiner and colleagues explore complementary and alternative medicine use among patients with limited health literacy. Two articles offer potential strategies for overcoming literacy challenges and promoting safe and appropriate medication use. McCarthy et al. evaluated a patient-centered label for PRN medications, while Mohan and colleagues describe the development of a bilingual, patient-informed drug label.

Many articles in this special issue focus on health professionals, their understanding of patients' literacy skills, and the identification and use of effective communication strategies. Dickens et al. examine nurses' awareness and estimation of their patients' literacy skills, and Cafiero explores nurse practitioners' knowledge, experience, and intention to use health literacy communication strategies within clinical practice. The study by Kim et al. explores the use of visual versus auditory methods of explaining conditions and treatments to patients with limited literacy skills, and the article by Rodriguez et al. assesses the effect of patients' health literacy, numeracy, and graphical literacy on shared decision-making and physician trust. Finally, Coleman and colleagues systematically reviewed recommended health literacy practices and identified associated educational competencies for health care professionals and trainees. Their findings can inform clinician education and address many of the provider deficiencies reported in the studies by Dickens et al. and Cafiero.

As in previous years, a few articles in this issue seek to disentangle health literacy from other, related variables as well as to explore the mechanisms by which health literacy affects health outcomes. Specifically, van der Heide and colleagues analyze whether health literacy mediates the relationship between education and physical and mental health status among a large cohort of adults in the Netherlands. Sentell et al. examine the respective and combined role of health literacy and English proficiency on colon cancer screening among Asian and White adults in California. These studies advance our understanding of the pathways through which health literacy impacts patients' health and the interrelatedness of health literacy and key socio-demographic characteristics.

As in the article by Sentell et al., Morris and colleagues also explore the association between health literacy and cancer screening; this study used a novel health literacy

measure among a large, multisite sample of insured adults to examine cancer attitudes, beliefs, and behaviors. Other studies similarly examine the effect of health literacy on various outcomes. The study by Willens et al. explores the relationship between health literacy and blood pressure control in 10,644 patients over 23,483 clinical encounters. Previous studies among smaller samples have reported inconsistent findings, making this study a valuable addition to the existing literature. The study by Sequeira and colleagues explores the relationship between health literacy and decline in executive function among community-dwelling older adults, while Gossett et al. examine the association between women's literacy skills and their knowledge of the consequences of delayed childbearing. These studies extend to areas of research that have received less attention from health literacy investigators, namely cognitive decline and women's health.

Finally, this special issue continues to address issues surrounding the conceptualization and measurement of health literacy. McCormack and colleagues provide a commentary on health literacy measurement and offer recommendations for a future research agenda. Lincoln et al. discuss the limitations of current literacy measures for patients with posttraumatic stress disorder and calls for revisions that increase the appropriateness of these tools for individuals seeking mental health services. Mackert and colleagues utilize innovative, eye-tracking technology to advance our understanding of how patients process health-related information. Finally, two articles focus on the assessment of literacy skills among specific populations. The study by Press et al. considers the measurement of literacy skills among patients with poor vision while Leung and colleagues describe the development and validation of a health literacy assessment for Chinese adults with chronic conditions.

Overall, this year's special issue covers a variety of topics across a number of disciplines, including medicine, communication science, pharmacy, and nursing. Taken together, the articles in this special issue represent progress that has been made—but also significant gaps that remain in the field of health literacy. It is clear that ongoing challenges in core definitional issues persist. These problems are reflected in the variability for how authors conceptualize and write about health literacy and in the tools that they use. The problem can also be felt at another level: most of the articles are cross-sectional in nature, describing associations instead of focusing on interventions to improve health outcomes among patients with limited literacy. As our audacious goal is no less than improving the human condition, the field of health literacy will need to evolve.

References

- Bailey, S. C., Oramasionwu, C., & Wolf, M. S. (2013). Rethinking adherence: A health literacy-informed model of medication self-management. *Journal of Health Communication*, 18(Suppl 1), 20–30.
- Cafiero, M. (2013). Nurse practitioners' knowledge, experience, and intention to use health literacy strategies in clinical practice. *Journal of Health Communication*, 18(Suppl 1), 70–81.
- Coleman, C. A., Hudson, S., Maine, L. L. (2013). Health literacy practices for health professionals: A consensus study. *Journal of Health Communication*, 18(Suppl 1), 82–102.
- Coughlan, D., Turner, B., & Trujillo, A. (2013). Motivation for a health-literate health care system—Does socioeconomic status play a substantial role? Implications for an Irish health policymaker. *Journal of Health Communication*, 18(Suppl 1), 158–171.
- Dickens, C., Lambert, B. L., Cromwell, T., & Piano, M. R. (2013). Nurse overestimation of patients' health literacy. *Journal of Health Communication*, 18(Suppl 1), 62–69.
- Garcia, C. G., Espinoza, S. E., Lichtenstein, M., & Hazuda, H. P. (2013). Health literacy associations between Hispanic elderly patients and their caregivers. *Journal of Health Communication*, 18(Suppl 1), 256–272.

- Gardiner, P., Mitchell, S., Filippelli, A. C., Sadikova, E., White, L. F., Paasche-Orlow, M. K., & Jack, B. W. (2013). Health literacy and complementary and alternative medicine use among underserved inpatients in a safety net hospital. *Journal of Health Communication*, 18(Suppl 1), 290–297.
- Gossett, D. R., Nayak, S., Bhatt, S., & Bailey, S. C. (2013). What do healthy women know about the consequences of delayed childbearing? *Journal of Health Communication*, 18(Suppl 1), 118–128.
- Kim, N. S., Khalife, D., Judge, K. A., Paulus, D., J., Jordan, J. T., & Yopchick, J. E. (2013). Visual causal models enhance clinical explanations of treatments for generalized anxiety disorder. *Journal of Health Communication*, 18(Suppl 1), 103–117.
- Lenahan, J. L., McCarthy, D. M., Davis, T. C., Curtis, L. M. Serper, M., & Wolf, M. S. (2013). A drug by any other name: Patients' ability to identify medication regimens and its association with adherence and health outcomes. *Journal of Health Communication*, 18(Suppl 1), 31–39.
- Leung, A. Y. M., Cheung, M. K. T., Lou, V. W. Q., Chan, F. H. W., Ho, C. K. Y., Do, T. L., ... Chi, I.. Development and validation of the Chinese Health Literacy Scale for Chronic Care. *Journal of Health Communication*, 18(Suppl 1), 205–222.
- Lincoln, A. K., Arford, T., Prener, C., Garverich, S., & Koenen, K. C. (2013). The need for trauma-sensitive language use in literacy and health literacy screening instruments. *Journal of Health Communication*, 18(Suppl 1), 15–19.
- Mackert, M., Champlin, S. E., Pasch, K. E., & Weiss, B. (2013). Understanding health literacy measurement through eye tracking. *Journal of Health Communication*, 18(Suppl 1), 185–196.
- McCarthy, D. M., Davis, T. C., King, J. P., Mullen, R. J., Bailey, S. C., Serper, M., ... Wolf, M. S. (2013). Take-wait-stop: A patient-centered strategy for writing PRN medication instructions. *Journal of Health Communication*, 18(Suppl 1), 40–48.
- McCormack, L., Haun, J., Sørensen, K., & Valerio, M. (2013). Recommendations for advancing health literacy measurement. *Journal of Health Communication*, 18(Suppl 1), 9–14.
- Migliori, R. (2013). Helping tomorrow's health care consumers. *Journal of Health Communication*, 18(Suppl 1), 3–4.
- Mohan, A., Riley, M. B., Boyington, D., Johnston, P., Trochez, K., Jennings, C., ... Kripalani, S. (2013). Development of a patient-centered bilingual prescription drug label. *Journal of Health Communication*, 18(Suppl 1), 49–61.
- Morris, N. S., Field, T. S., Wagner, J. L. Cutrona, S. L., Roblin, D. W., Gaglio, B., ... Mazor, K. M. (2013). The association between health literacy and cancer-related attitudes, behaviors, and knowledge. *Journal of Health Communication*, 18(Suppl 1), 223–241.
- Press, V. G., Shapiro, M. I., Mayo, A. M., Meltzer, D. O., and Arora, V. M. (2013). More than meets the eye: Relationship between low health literacy and poor vision in hospitalized patients. *Journal of Health Communication*, 18(Suppl 1), 197–204.
- Rodríguez, V., Andrade, A. D., García-Retamero, R., Anam, R., Rodríguez, R., Lisigurski, M., ... Ruiz, J. G. (2013). Health literacy, numeracy, and graphical literacy among veterans in primary care and their effect on shared decision-making and trust in physicians. *Journal of Health Communication*, 18(Suppl 1), 273–289.
- Sentell, T., Braun, K. L., Davis, J., & Davis, T. (2013). Colorectal cancer screening: Low health literacy and limited English proficiency Among Asians and Whites in California. *Journal of Health Communication*, 18(Suppl 1), 242–255.
- Sequeira, S. S., Eggermont, L. H. P., Silliman, R. S., Bickmore, T. W., Henault, L. E., Winter, M. R., ... Paasche-Orlow, M. K. (2013). Limited health literacy and decline in executive function in older adults. *Journal of Health Communication*, 18(Suppl 1), 143–157.
- van der Heide, I., Wang, J., Droomers, M., Spreeuwenberg, P., Rademakers, J., & Uiters, E. (2013). The relationship between health, education, and health literacy: Results from the Dutch Adult Literacy and Life Skills Survey. *Journal of Health Communication*, 18(Suppl 1), 172–184.
- Willens, D. E., Kripalani, S., Schilderout, J. S., Cawthon, C., Wallston, K., Mion, L. C., ... Roumie, C. L. (2013). Association of brief health literacy screening and blood pressure in primary care. *Journal of Health Communication*, 18(Suppl 1), 129–142.