

The Impact of Limited Literacy on Health Promotion in the Elderly

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Abstract

The public health impact of limited literacy has begun to be explored. The elderly and those with limited formal education are often the most vulnerable populations at risk of having low health literacy. Health promotion specialists must be cognizant of the literacy demands of health education materials (e.g., pamphlets, questionnaires) distributed to the elderly. Care must be taken to ensure that health education materials are both linguistically and culturally appropriate for whom they are intended.

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Scope of the Literacy and Health Literacy Problem

An astonishing number of American adults have limited or low functional literacy skills (Institute of Medicine Report [IOM], 2004). For instance, many adults can barely read a street map, calculate postage for mail, or enter background information on a Social Security application. Healthy People 2010 defines health literacy as “the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.” The problem of low health literacy has received national attention recently as the U.S. Surgeon General (Richard Carmona, M.D., M.P.H.), American Medical Association (Weiss, 2003), and Institute of Medicine (IOM, 2004) have issued statements and reports highlighting this societal and public health crisis. Further, health literacy was identified in the Priority Areas for National Action: Transforming Health Care Quality document as one to twenty priority areas to improve overall quality of the health care system (2003).

The repercussions of limited literacy on public health are not an Appalachian problem or a New York City problem or a California problem, but a national problem. Given that 90 million American adults have limited health literacy (IOM, 2004), the ramifications on the healthcare system and public health initiatives are

enormous. Much of what health care professionals consider to be rudimentary (e.g., taking medication on an empty stomach, completing an insurance application) is often very difficult if not impossible for many individuals to comprehend or carry out. For instance, Davis and colleagues (2001) found that patients did not understand such terms as “blood in the stool,” “growth,” “lesion,” and “tumor.”

Limited literacy affects an individual’s ability to fully function in all segments of society, including the health care setting. Research has shown that limited literacy is associated with higher hospitalization rates (Baker, Gazmararian, Williams, Scott, Parker, Green, Ren & Peel, 2002), greater annual healthcare costs (Weiss & Palmer, 2004), poorer management and knowledge of chronic disease (Schillinger, Grumbach, Piette, Wang, Osmond, Daher, et al., 2002; Williams, Baker, Honig, Lee, Nowlan, 1998; Williams, Baker, Parker, Nurss, 1998), and under-use of preventive health services (Scott, Gazmararian, Williams, Baker, 2002).

Patients with limited literacy have more difficulty understanding medication-related instructions and navigating the health care system (Williams, Parker, Baker, Parikh, Pitkin, Coates et al., 1995). Further, increases in the number of elderly and rising numbers of individuals with chronic conditions (e.g.,

diabetes mellitus, chronic obstructive pulmonary disease, congestive heart failure, asthma) further compounds the problem. Individuals with chronic medical conditions often require diligent self-management skills (e.g., regular blood glucose monitoring, assessing nutrient intake of foods), however many are not fully capable of successfully carrying out these tasks.

Who is at Risk of Having Limited Literacy Skills?

The reasons contributing to limited literacy skills are numerous and not easily discernable, however the impact on both societal and individual levels is significant. Although limited literacy skills are found across all demographic groups, the following risk factors are often associated with limited literacy skills (IOM, 2004; Weiss, 2003):

- Advanced age (≥ 65 years)
- Limited formal education (less than high school)
- Poverty or limited income
- Presence of chronic disease
- Recipient of public assistance (e.g., Medicare, Medicaid)
- Member of an ethnic minority group
- Recent immigrant to the United States
- Native speaker of a language other than English

Use It or Lose It

Years of formal schooling is a starting point for estimating literacy level, however, it is not sure-proof. "Years of schooling tells us what people have been exposed to, not what skills they have acquired (Doak, Doak, & Root, 1996, p. 6)." Researchers have shown that most American adults read at least 4 grade levels lower than the highest grade level of schooling completed (Meade, McKinney, & Barnas, 1994). Based on these data, most high school graduates can be expected to read at approximately a 6-9th grade level. Reading, as with any skill, the less it is used the less fine-tuned it becomes.

Literacy Skills as Related to Health Education and Promotion

Over the past decade, the link between limited literacy skills and poor health outcomes has been well documented. Health promotion professionals routinely develop and disseminate intervention materials to promote healthy behaviors and promote health behavior change. Moreover, many intervention materials are geared toward elderly populations since they tend to carry the greatest burden of chronic disease (e.g., cardiovascular disease, type II diabetes mellitus, osteoporosis).

Unfortunately, many health promotion professionals fail to recognize that many materials (e.g., pamphlets, questionnaires) they develop may not be suitable for their target population, especially the elderly. Hence, pilot testing all materials is critical to ensure that members of the target population are able to comprehend the health messages provided to them. For instance, it is not enough to simply ask elderly women if they know what osteoporosis is and how they can protect themselves from experiencing a hip fracture. They may know what osteoporosis is, in their mind, however, this may not be how you define osteoporosis (or what it really is).

Providing Appropriate Health Education Materials to the Elderly

Health care consumers are bombarded with health information (and misinformation) via the evening news, newspapers, magazines, billboards, and the Internet. Despite the wide availability of health information, many of the messages intended for the general public are not appropriate and often lead to more confusion. Moreover, those preparing health messages often fail to recognize that most American adults have not received any formal medical or health training and are not familiar with medical/health terminology (i.e., medical jargon).

Although literacy specialists have recommended that patient/health education materials are written at 5-6th grade level to be readable to the greatest number of individuals (Doak, Doak, & Root, 1996), most materials available are written at much higher levels. The mismatch between

literacy requirements to understand typical written patient/health education materials and actual reading ability of American adults has been well documented. For instance, patient/health education materials developed by the American College of Obstetricians and Gynecologists ranged from 7.0 - 9.3th reading level (Freda, Damus, & Merkatz, 1999), while patient/health handouts available from the American Academy of Family Physicians averaged 9.43 ± 1.31 grade level (Wallace & Lennon, in press). Further, product information (i.e., package inserts) intended to supplement television direct-to-consumer prescription drug advertisements was found to exceed the reading ability of most American adults (Kaphingst, Rudd, DeJong, & Daltroy, in press).

Taking the ME Out of Easy to Read

Too often those preparing health education materials use their own standards to judge the quality and appropriateness of these materials. For instance, a Ph.D. with extensive training and expertise in the etiology and management of type 2 diabetes should not use his/her reading ability and familiarity with complex medical terms to determine if health education materials are appropriate for the target population. A person with advanced training in a focused medical area, such as diabetes, uses terminology (e.g., HbA1c) on a daily basis when conversing

with colleagues and often loses sight of what is known by individuals outside of their field.

Health education materials written at the 10th grade level may seem easy to an individual used to reading MEDLINE® articles on a daily basis, however 10th grade level materials will be incomprehensible to most people who did not complete high school or who has not had a health class in 25 years or whose primary language is not English. Unfortunately, neglecting to pilot test materials in the intended target population for suitability and comprehensibility has been commonplace. Those with advanced degrees and high reading ability prefer to receive patient/health education materials that are straight-forward and easy to comprehend (Doak, Doak, & Root, 1996).

Conclusions

Limited literacy negatively impacts the health and health care of individuals and society as a whole. The health needs of the elderly are continually changing and health promotion specialists must be cognizant of the needs of diverse populations through cultural competence. Providing the necessary skills to enable health promotion specialists to develop culturally and linguistically appropriate health education materials should be a major focus point of health promotion training.

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