

DEBATE

Health literacy revisited: what do we mean and why does it matter?

ANITA PEERSON^{1*} and MARGO SAUNDERS²

¹Health Promotion and Public Health, School of Health and Social Development, Faculty of Health, Medicine, Nursing and Behavioural Sciences, Deakin University – Geelong Waterfront Campus, Geelong, VIC 3217, Australia and ²Public Health Policy Consultant, Canberra, ACT 2600, Australia
*Corresponding author. E-mail: anita.peerson@deakin.edu.au

SUMMARY

'Health literacy' refers to accessing, understanding and using information to make health decisions. However, despite its introduction into the World Health Organization's Health Promotion Glossary, the term remains a confusing concept. We consider various definitions and measurements of health literacy in the international and Australian literature, and discuss the distinction between the broader concept of 'health literacy' (applicable to everyday life) and 'medical literacy' (related to individuals as patients within health care

settings). We highlight the importance of health literacy in relation to the health promotion and preventive health agenda. Because health literacy involves knowledge, motivation and activation, it is a complex thing to measure and to influence. The development of health literacy policies will be facilitated by better evidence on the extent, patterns and impact of low health literacy, and what might be involved in improving it. However, the current lack of consensus of definitions and measurement of health literacy will first need to be overcome.

Key words: health literacy; medical literacy

INTRODUCTION

In Australia and other developed countries, the burden of disease attributable to preventable diseases and conditions has resulted in an increasing focus on health promotion and chronic disease prevention on a population-wide and health system-wide basis (World Health Organization, 2004; Begg *et al.*, 2007; Health Council Canada, 2007; National Health and Hospital Reform Commission, 2008a,b; National Preventative Health Taskforce, 2008). At the same time, 'having the capacity to manage health and wellbeing, and demonstrating that self-efficacy and capacity, have become central components of citizenship in post-industrial societies' [(Green *et al.*, 2007), p. 21]. The issue of responsibility for modifiable risk factors has

also reignited debates within both the political and the public health communities about disease prevention and the relative roles of individual responsibility, social determinants of health and 'healthy public policy'. In this context, it is useful to revisit notions of health literacy and establish what we know and need to understand about its contribution to health outcomes.

The term 'health literacy' was first used, in 1974, in a discussion of health education as a policy issue affecting the health system (Simonds, 1974, cited in Ratzan, 2001, p. 21). Definitions of health literacy have evolved so that the concept commonly refers to people's capacity to obtain, process and understand basic (written or oral) health information and services needed to make appropriate health

decisions (Ratzan and Parker, 2000). There is a definitional split, however, in relation to the settings for those ‘health decisions’. Many studies purporting to discuss ‘health literacy’ are limited to information, knowledge and action within health care settings. In contrast, broader notions of ‘health literacy’ include the capacity to understand and act on messages that are central to making critical judgements and decisions not only in health-related settings, but also *about* health.

It was 10 years ago—in 1998—that Nutbeam described the broad concept of health literacy as ‘cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health’ (World Health Organization, 1998). He subsequently noted that while ‘health literacy’ as a term had been used in the health literature for at least 30 years, it was still a relatively new concept in health promotion (Nutbeam, 2000). More recently, Nutbeam (Nutbeam, 2008) has drawn attention to the continuing lack of systematic attention to the broader concept of health literacy.

Nutbeam’s definition is in sharp contrast to the more limited concept we call ‘medical literacy’. Alternative terms are: ‘patient health literacy’ (Ishikawa and Yano, 2008) and ‘clinical health literacy’ (Pleasant and Kuruvilla, 2008) referring to the knowledge, skills and abilities that pertain to interactions with the health care system. It is this more limited concept that has tended to be the focus of research.

While reports focusing on medical literacy are relatively easy to identify, the literature on the broader concept of health literacy is much more elusive. When doctors refer to the need to do more to help people to be ‘motivated, informed and coached so that they take better care of their health’ [(Harding, 2008), p. 10], they are talking about health literacy. Discussions of men’s lack of knowledge of health services and risk factors, and their limited motivation (or self-efficacy) to promote and maintain good health (Johnson *et al.*, 2008) are also discussions of health literacy.

Health literacy as a subject is still relatively new. MEDLINE searches have found that, of 371 articles published in English about health literacy during 1985–2006, nearly half were published in 2005–06 [(Ishikawa and Yano, 2008), p. 114]. Our own searches of PUBMED

in 2007–08 produced 659 articles with ‘health literacy’ as a key phrase. This is less than half the number of articles that have been published about ‘social marketing’, another concept relevant to health promotion, introduced only 3 years earlier (Kotler and Zaltman, 1971) and not included in World Health Organization’s *Health Promotion Glossary* until 2006 (Smith *et al.*, 2006).

To some extent, these findings reflect both the lack of a coherent literature and a limited attention to health literacy itself: many published papers discussing health literacy fail to identify themselves as such, and may appear outside of mainstream health and medical journals. Research and commentaries highly relevant to various aspects of health literacy are scattered throughout, and buried deeply within, the multi-disciplinary literature and publications devoted to public health; rural health; obesity and nutrition; tobacco, alcohol and other drugs; health education; health promotion; health communications; gender studies; gerontology and geriatric medicine; psychology; social psychology; education; literacy and numeracy studies; marketing; nursing; internal medicine and primary care; cancer; heart disease; sport and human movement; and international development.

In this article, we explore definitions of health literacy, drawing a distinction between ‘health literacy’ and ‘medical literacy’, and propose that more attention be given to measuring and analysing health literacy and its complexities.

WHAT IS HEALTH LITERACY?

‘Literacy’ is generally taken to mean the ability to read and write, while a ‘literate person’ is someone ‘who can with understanding both read and write a short simple statement on his [or her] everyday life’ (United Nations Educational, Scientific and Cultural Organization, 2005, p. 15). ‘Literacy’ is also given a broader meaning as the ability to grasp meaning and develop critical judgement (United Nations Educational, Scientific and Cultural Organization, 2005). A comprehensive, multi-faceted definition is provided in the American 1991 *National Literacy Act*, which refers to the ability

to read, write and speak in English, and compute and solve problems at levels of proficiency necessary to function on the job and in society, to achieve one's goals, and develop one's knowledge and potential. (National Institute for Literacy, 2008)

'Literacy' is now used not only to refer to reading, writing and comprehension ability, but also to describe a person's knowledge of a particular subject or field, such as nutritional literacy (Diamond, 2007), financial literacy (Vitt *et al.*, 2000; Financial Literacy Foundation, 2007; Fear, 2008) and 'computer literacy, cultural literacy, media literacy, scientific literacy, and health literacy' [(Keleher and Hagger, 2007), p. 25].

The term 'health literacy' has been used for 30 years to reflect the intersection of the fields of literacy and health (Green *et al.*, 2007). However, some confusion arises because most of the published literature focuses not on concepts such as Nutbeam's (World Health Organization, 1998), but on more limited (and easily measurable) constructs involving people's ability to read and act on oral and written information in health care settings (Ishikawa and Yano, 2008).

A number of definitions refer to individuals' ability to locate, understand and use information for health-related decisions and to make 'appropriate health decisions' (Ratzan, 2001; Green *et al.*, 2007). There are indications that governments and international organizations are increasingly regarding health literacy as an 'access and equity issue' and as a 'right of citizenship' (Green *et al.*, 2007). Kickbusch *et al.* (Kickbusch *et al.*, 2005) have proposed a suite of recommendations for action by European countries to improve health literacy, with overall aims of reducing health inequalities and improving the health status of individuals and population groups.

However, such statements hold little meaning without knowing what is meant by 'health literacy'. We also need to know how 'health literacy' is defined in order to decipher findings about the relationship between health literacy and health outcomes, such as claims that lower health literacy is associated with

poorer self-reported health, inappropriate medication use and non-compliance with physician orders, poorer glycemic control and increased prevalence of self-reported complications that resulted from poor control, less health knowledge, less sharing in

decision-making about treatment, less expression of health concerns and worse communication with practitioners. [(Rootman, 2006), p. 606]

There are also claims that people with poor health literacy skills are 'less knowledgeable about health, receive less preventive care, have worse chronic illness control, poorer physical and mental health function, and higher emergency department and hospital utilization' [(Hibbard *et al.*, 2007), p. 380].

'Medical literacy'

Definitions of health literacy distinguish between functional health literacy and critical health literacy (Nutbeam, 1999). We have adopted the short-hand term 'medical literacy' to denote the type of health literacy that focuses on knowledge and skills relating primarily to health care settings, and which takes various forms such as: basic reading and numerical skills that allow a person to function in the health care environment (DeWalt *et al.*, 2004; McCray, 2005; Rootman and Ronson, 2005; Safeer and Keenan, 2005); the ability to apply literacy skills to material such as prescriptions, appointment cards, medicine labels and directions for self-management of diseases and conditions (Parker *et al.*, 1995); the ability to understand and act on information and instructions (specific and individual-related) from health professionals (e.g. brochures, videos, pamphlets, CD-ROMs, consent forms, package labels) (Parker, 2000, Pignone *et al.*, 2005, Dani *et al.*, 2007); and, patient information-seeking and shared decision-making with health professionals (Sihota and Lennard, 2004). These approaches to health literacy tend to rest on notions of 'risk', which 'needs to be identified and managed in clinical care' [(Nutbeam, 2008), p. 2074].

Health literacy

Obvious limitations of medical literacy definitions of health literacy are that they say nothing about individuals who are neither patients nor part of a health-care setting; and they do not (except for arranging preventive screenings) consider the many health-related decisions that people make in the context of 'keeping well' in everyday life (Peerson, 1998), rather than managing illnesses and conditions.

Consistent with Nutbeam's (Nutbeam, 2008) reminder of the 'promise' of health literacy as an 'asset' with broad application, we propose a greater focus on definitions that involve the broader concepts of health literacy. In addition to the definition of health literacy accepted by the World Health Organization (World Health Organization, 1998), various definitions have been put forward that acknowledge the ability to access, interpret and make decisions about information from a range of sources that promote or impede good health (e.g. immunization, mammography, smoking, alcohol) (Ratzan, 2001; DeWalt *et al.*, 2004). Other definitions of health literacy recognize individuals' 'capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions' (US Department of Health and Human Services, 2000); 'make sound health decisions in the context of everyday life at home, in the community, at the workplace, in the health care system, the marketplace and the political arena' enabling them to exert 'control over their health', 'seek out information' and assume responsibility [(Kickbusch *et al.*, 2005), p. 8]; feel more empowered (Nutbeam, 2008); and, 'as a way to promote, maintain and improve health in a variety of settings across the life course' (adopted by the Canadian Expert Panel on Health Literacy) [(Rootman and Gordon-El-Bihbety, 2008), p. 11]. Health literacy also consists of a 'wide range of skills, and competencies that people develop to seek out, comprehend, evaluate and use health information and concepts to make informed choices, reduce health risks and increase quality of life' [(Zarcadoolas *et al.*, 2005), pp. 196–197].

We refer to these concepts as 'health literacy'. A simple way of describing the difference is: 'medical literacy' involves the ability to read, understand and act on instructions for taking a cholesterol-lowering drug; 'health literacy' involves the ability to access information about cholesterol, to understand it and to apply it to one's own life.

In Nutbeam's (Nutbeam, 1999) three-tiered concept of health literacy, our emphasis is on the third tier, *critical health literacy*. This refers to the ability to critically analyse information, increase awareness and participate in action to address barriers. While *functional health literacy* (basic reading and writing skills to understand and follow simple health messages) and

interactive health literacy (more advanced skills to manage health in partnership with professionals) are integral to maintaining health, it is the ability to interpret and apply information that is crucial to optimizing prevention and self-management of diseases and conditions. This concept includes individuals' motivation (a point which we return to below) and skills to access, understand and utilize information in ways that promote and maintain good health (World Health Organization, 1998; Kickbusch, 2001). We agree with Nutbeam [(Nutbeam, 2000), p. 263] that the functional concepts of health literacy lack 'much of the deeper meaning and purpose of literacy for people' and that what is of interest is not merely measures of achievement in reading and writing, but 'what it is that literacy enables us to do'.

FOCUSING ON HEALTH LITERACY

As we have suggested, there is a recognition (not necessarily reflected in the published research and commentaries) that health literacy is a concept that should apply to communication and knowledge outside of primary care. Kickbusch (Kickbusch, 2001) has commented that 'health literacy' is a misnomer for 'functional health literacy'; that is, reading consent forms, patient labels and inserts, and understanding other written and oral health care information provided by multi-disciplinary health professionals, as well as acting upon necessary procedures and directions (e.g. medications, appointment schedules) (DeWalt *et al.*, 2004).

Kickbusch *et al.* (Kickbusch *et al.*, 2005) propose an understanding of health literacy which is active, dynamic and empowering, and is an important life skill required 'to navigate modern society' and the choices in everyday life influencing health and well-being (Kickbusch, 2006). This approach is much like Nutbeam's original definition and its references to the cognitive and social skills which determine not only an individual's knowledge, but also the motivation and ability to access, understand and use information in ways that promote and maintain good health (World Health Organization, 1998).

Placing greater emphasis on health literacy outside of health care settings has the potential to impact on preventative health and reduce

pressures on health systems. Our concept of health literacy includes information and decision-making skills occurring in the workplace, in the supermarket, in social and recreational settings, within families and neighbourhoods, and in relation to the various information opportunities and decisions that impact upon health every day.

We consider an appropriate concept of health literacy is one which: encompasses the level of knowledge, personal skills and abilities that enhance personal empowerment (Nutbeam, 2000; Kickbusch, 2001; Kickbusch *et al.*, 2005); fosters informed decision-making (Nutbeam and Kickbusch, 2000; Levin-Zamir and Peterburg, 2001); and, generally enables an individual to understand and use information to promote and maintain good health (World Health Organization, 1998; Parker, 2000; Greenberg, 2001; Shohet, 2002; Kerka, 2003; Australian Bureau of Statistics, 2006). In other words, 'health literacy' is relevant to those individuals who may never become 'patients' or deal directly with the health system, whereas 'medical literacy' is not. Health literacy is a 'resource for daily living in the settings where people live, learn, work, worship and play', and 'health status and learning are closely linked at all ages and stages of life' [(Rootman and Gordon-El-Bihbety, 2008), p. 11].

Calls for more emphasis on preventative health serve to bring this broader concept of health literacy—including motivations and abilities to promote and maintain good health—into greater focus: if the overall goal is for more people to achieve and maintain a standard of health such that their engagement with the health system will be minimal (National Preventative Health Taskforce, 2008), then 'health literacy' becomes an everyday resource outside of health care settings.

MOTIVATION AND ACTIVATION IN HEALTH LITERACY

Implicit in many of the broad concepts of health literacy is the view that obtaining, processing and understanding basic health information is intrinsically connected to 'appropriate health decisions', or decisions that are consistent with promoting or maintaining good health. Nutbeam has reiterated how health literacy is 'critical to empowerment by improving people's

access to health information, and their capacity to use it effectively' [(Nutbeam, 2008), p. 2075], 'to exert greater control over their health' and enabling them 'to use health information in ways that promote and maintain good health' [(Nutbeam, 2008), p. 2076].

These definitions imply that health literacy is directly linked to changed health behaviours and practices, engagement in social action for health and participation in altered social norms (Nutbeam, 2008). However, the current evidence is inconclusive about whether health literacy is a necessary (or sufficient) condition for: (i) achieving these outcomes or (ii) accomplishing the ultimate goal—better health given 'a wider range of options and opportunities for health' [(Nutbeam, 2008), p. 2075]. With their inbuilt link between knowledge, empowerment and health-promoting actions, these definitions do not appear to consider the possibility that someone may possess and understand health information without using it in health-promoting ways. For example, how would we describe the health literacy of someone who knows and understands the health risks of 'binge drinking', but chooses to ignore them? It is also possible that the possession of health information does not equate to the correct understanding of it, resulting in a failure to use it to promote health. To accept Nutbeam's model whereby 'People who have better-developed health literacy will thus have skills and capabilities that enable them to engage in a range of health enhancing actions including personal behaviours' [(Nutbeam, 2008), p. 2075], it is vital to accept motivation and activation as inseparable aspects of health literacy. For various and complex reasons, having information is no guarantee that it will be used to promote health (Miller *et al.*, 1996; Nutbeam, 2000; Packman and Kirk, 2000; Mazanov and Byrne, 2007). Pleasant and Kuruvilla [(Pleasant and Kuruvilla, 2008), p. 153] state:

although knowledge is often considered a prerequisite for change in attitudes and behaviours that lead to better health, that relationship is not always direct, positive, linear or even necessarily present.

It may therefore be useful to distinguish between: the possession of information; the understanding of it; and the inclination and ability to act on it in ways consistent with promoting health.

While it may appear obvious, our inquiry suggests that one factor often overlooked in the mainstream literature about health literacy, health education and health promotion is that 'to effectively access, understand and apply received health messages, individuals must be motivated to receive and process the information' [(Bernhardt *et al.*, 2005), p. 7]. Because of its ability to act as a barrier to the receipt, processing and application of health-related information, issues around motivation (which involve cultural or individual values that compete with and undermine health messages) are particularly relevant to the development of gender-focused health frameworks, including Australia's updated national women's health policy and inaugural national men's health policy (Allmark and Tod, 2005; Towers *et al.*, 2005; Arras *et al.*, 2006).

Nutbeam (Nutbeam, 2000) has commented that many health education and health promotion initiatives of the 1970s and 1980s were characterized by heavy reliance on the transmission of information and an emerging but incomplete understanding of the relationships between knowledge, beliefs and perceived social norms. While he observed in 2000, with some optimism, that a better understanding of the relationships between social and environmental influences on lifestyle choices has led to the adoption of more comprehensive approaches to health issues (Nutbeam, 2000), nonetheless many initiatives have had disappointing results either overall, or with respect to key population groups (Victorian Auditor-General's Office, 2007; Burton *et al.*, 2008). This suggests that either we do not appreciate the many factors affecting people's 'decisional balance' nor the differences in these factors and how they operate among different population groups, or we have not learnt how to influence them.

MEASURES OF HEALTH LITERACY

If 'what gets measured matters', then how 'health literacy' is measured matters quite a lot. Overall, 'health literacy' is an elusive thing to measure and there are few empirical studies (Kickbusch *et al.*, 2005). There is no 'gold standard' for measuring health literacy (Parker, 2000), and attempts to evaluate levels of health literacy have focused on patient

information, using measures such as: Test of Functional Health Literacy in Adults (TOFHLA), which includes two reading passages and four numeracy items to assess comprehension of hospital forms and labelled prescription vials (Baker *et al.*, 2007; Weiss, 2007); and Rapid Estimate of Adult Literacy in Medicine (REALM) (DeWalt *et al.*, 2004; Dani *et al.*, 2007) which is used in public health and primary care settings. Both of these have been criticized as not adequately testing 'health literacy' (Rudd *et al.*, 2007; Rootman and Gordon-El-Bihbety, 2008). Even measures of medical literacy have been criticized for measuring 'word recognition' only (Green, 2007), not measuring 'oral communication skills, listening or writing skills' [(National Symposium on Health Literacy, 2008), p. 5] or visual literacy (Entwistle and Williams, 2008; Smith *et al.*, 2008), or not considering ageing, gender, language, cultural, contextual and setting factors (Rootman and Ronson, 2005; Baker, 2006; Scudder, 2006). New measures of health literacy have been developed: Health Activities Literacy Scales (HALS) (Baker, 2006) and the Newest Vital Sign (NVS) (Weiss *et al.*, 2005), but these require further testing for validity and reliability in diverse population groups.

Literacy and Health in America (Rudd *et al.*, 2004)

was the first research paper to analyse population-based health literacy skills among adults. The report used 191 health-related assessment tasks that formed part of the 1992 National Adult Literacy Survey to create a Health Activities Literacy Scale [(Australian Bureau of Statistics, 2008), p. 5].

An updated and improved scale was used for the Canadian Adult Literacy and Skills Survey and for the US National Assessment of Adult Literacy in 2003. *Literacy and Health in America*, together with a report by the US Institute of Medicine [Institute of Medicine, 2004], encouraged a view of health literacy as being external to the health system (Australian Bureau of Statistics, 2008). Until this time, health-related tasks in everyday settings, and the range of material relevant to these, had not been the subject of systematic investigation (Canadian Council on Learning, 2007; Australian Bureau of Statistics, 2008). The health literacy scale used in the Canadian survey was subsequently used in the Australian

2006 Adult Literacy and Life Skills Survey (ALLS) (Australian Bureau of Statistics, 2006, 2008), as part of an International Adult Literacy and Life Skills Survey (IALS), which included the domains of literacy, document literacy, numeracy, problem-solving and health literacy as a sub-domain. This was the first time health literacy had been included in an Australian National Literacy Survey providing population-level data. Due to differences in collection and derivation methods, Canada is the only country with a health literacy survey comparable to that of Australia (Australian Bureau of Statistics, 2008).

Although not a 'gold standard', the ALLS attempts to assess individuals' performance on health-related activities in health promotion, health protection, disease prevention, health-care and disease management, and navigation. Certainly its definition of health literacy is promising:

the knowledge and skills required to understand and use information relating to health issues such as drugs and alcohol, disease prevention and treatment, safety and accident prevention, first aid and emergencies, and staying healthy [(Australian Bureau of Statistics, 2006), p. 4].

However, discussions of IALS findings by the Australian Bureau of Statistics (Australian Bureau of Statistics, 2006), Canadian Council on Learning (Canadian Council on Learning, 2007) and Rootman and Gordon-El-Bihbety (Rootman and Gordon-El-Bihbety, 2008) suggest that the survey is much more useful in measuring abilities related to reading and interpreting written information rather than those relating to other aspects of health literacy (e.g. disease prevention) (Box 1).

Kickbusch (Kickbusch, 2006) notes 'health is everywhere': health and fitness magazines, the Internet, best-selling books, television and radio, and products and services extolling their various health benefits. Social and interpersonal relationships may influence the context in which information is accessed. Given that health literacy, like other types of literacy, develops in a range of contexts, including social ones, this also makes it difficult to measure (Institute of Medicine, 2004; Wickert and McGuirk, 2005). The limitations of available measures have led authorities (Rootman and Ronson, 2005) to conclude that

Box 1: Literacy and health literacy, Australia

In 2006, the ALLS (Australian Bureau of Statistics, 2006, 2008) measured health literacy among 8988 Australians (15–74 years) by assessing 191 items across the domains of prose and document literacy (e.g. ability to read newspapers and bus timetables), numeracy and problem-solving. Domains related to health literacy (a sub-domain) are health promotion, health protection, disease prevention, health-care maintenance or systems navigation. The test included items relevant to 'medical literacy' (e.g. following directions on medicine labels, calculating timing for medicine, locating health-care facilities, offering informed consent for procedures) and also included tasks such as determining risks, planning an exercise regime and deciding to use or avoid products.

Proficiency scores ranging from 0 to 500 were grouped into skill levels from 1 to 5. Skill Level 3 is regarded by the survey developers as the 'minimum required for individuals to meet the complex demands of everyday life and work in the emerging knowledge-based economy' [(Australian Bureau of Statistics, 2006), pp. 7–8]. The Australian Bureau of Statistics (Australian Bureau of Statistics, 2008) indicated: more women (48%) than men (43%) achieved an overall score of Level 3 or above; women had higher scores for prose and health literacy, whereas men had higher scores for document literacy and numeracy; being employed, having a white-collar job, a higher level of income and higher educational qualifications were associated with having higher health literacy scores and internationally, Australia ranked in the middle across the different types of literacy with results closely aligned with those from Canada.

most of the tools currently available to measure health literacy primarily measure reading skills, and do not include other critical skills ... Advancement of the field of health literacy requires the development of new measures which can be used to establish baseline levels and monitor change over time (Institute of Medicine, 2004).

Ishikawa and Yano [(Ishikawa and Yano, 2008), p. 120] call for 'measures of health literacy beyond the functional level and which consider health literacy within an empowerment paradigm', whereas Nutbeam [(Nutbeam, 2008), p. 2075] asserts health literacy should be understood and comprehensively measured as 'a distinct concept, rather than a derivative concept from literacy and numeracy skills'.

RESEARCH PRIORITIES

Lack of consensus about definitions and measurement in the multi-disciplinary literature also makes it difficult to answer the question,

‘Does health literacy matter?’ Variations in research questions, study foci, methodologies, population groups, age, interventions and other indicators have contributed to disparate research findings (DeWalt *et al.*, 2004; McCray, 2005; Pignone *et al.*, 2005). Much of what has been measured and written about health literacy is about medical literacy, and most studies find that both ordinary ‘literacy’ and medical literacy do ‘matter’ in terms of health outcomes (McCray, 2005; Pignone *et al.*, 2005; Jorm and Kelly, 2007), despite important questions being raised about the relationship between literacy and socioeconomic variables (Sudore *et al.*, 2006). However, Baker (Baker, 2006) notes that the lack of a shared meaning for ‘health literacy’ has led to problematic confusion and disagreement between the authors of research articles, grant applications and reviewers—even when using the term to refer only to individuals in health care settings. Our inquiry suggests that references to explicit connections between ‘literacy’ and prevention are few and far between (White *et al.*, 2008), with one example being: ‘We are at risk of misdirecting vital resources and of failing to address health inequalities unless we address the issue of literacy in relation to fast food and obesity’ [(Hugo *et al.*, 2006), p. 10].

Some basic questions need to be answered about health literacy (e.g. what it is and how do we measure it?) before we can address other questions (e.g. what difference does it make to health outcomes?, how we can improve it among various populations—assuming that it is cost-effective to do so? and how do the pay-offs from investing in health literacy compare with those from other investments we might make to improve people’s health?).

Based on our investigations, the international literature on health literacy currently provides few answers. It points to a limited evidence base (Rootman and Gordon-El-Bihbety, 2008) and the need for further research (Rootman and Ronson, 2005; Keleher and Hagger, 2007) on a range of issues, particularly: increasing our understanding of the role of various factors and relationships relevant to the ‘decisional balance’ about health issues for individuals and population groups, and the impacts on everyday life (Peerson, 1998); ‘the complex interaction between general literacy, health literacy, information technologies and the existing health care infrastructure’ [(McCray, 2005), p. 158] and the

development of measurement instruments (Baker, 2006). More comprehensive measures are needed to better capture the meaning of ‘health literacy’ rather than ‘medical literacy’, be user-friendly and simple to administer by clinicians and public health professionals, address both individuals and population groups, and consider different ages and life stages (Nutbeam, 2008).

In addition to scant published evidence on health literacy, we have found inadequate analysis and discussion of available data. Some researchers may underestimate the potential significance of their findings in relation to health literacy, and survey agencies may make only superficial information available. For example, the Australian Bureau of Statistics (Australian Bureau of Statistics, 2008) report on the health literacy of Australians offers only limited descriptive analysis of quantitative data.

Research opportunities exploring ‘lifestyle knowledge and behaviours’ [(Jochelson, 2007), p. 16] and the multiple factors influencing the health literacy of individuals and population groups will yield important data on how these impact on decision-making, motivation and activation in everyday life, as well as health outcomes. A sound evidence base is vital to inform health literacy policy development and implementation.

CONCLUSION

In considering the differences between medical literacy and health literacy, a final distinction should be noted: while the health sector may be able to substantially influence the former, it is less able to influence the latter. An individual’s personal, cognitive and social skills play a crucial role in health literacy but are subject to influences well outside of the control of health professionals and the health system. In addition, the importance of *both* motivation *and* activation mean that health literacy is a very complex thing to measure and to influence. The process of health education will need to involve a significant widening of content and methods. Significantly, Nutbeam (Nutbeam, 2000, 2008) notes that health education aimed at improving ‘critical health literacy’ can not only result in changes in individual lifestyles and health system use, but also help achieve change in the

social, economic and environmental determinants of health.

There is some evidence that questions are beginning to be raised about whether people are equipped with the 'health literacy' skills to help them to navigate not only the health system (Kickbusch *et al.*, 2005), but also the various decisions involved in both disease prevention and management. Bernhardt *et al.* [(Bernhardt *et al.* 2005), p. 4] note that:

Health literacy skills are required to function in health care systems that are increasingly characterized by technological sophistication and complexity. At the same time, individuals are being asked to assume more responsibility for the self-management of their wellness and illness and to make many more informed choices about their health.

Meanwhile, Green *et al.* [Green *et al.*, 2007), p. 29] observe a 'mismatch' between what people need and what they currently have:

In public health there appears to be a particular mismatch between contemporary literacy skills and the demands and expectations of conventional public health operations, with pressing implications not only for health policy in general but beyond, involving questions of social capital and current social and citizenship inequalities.

However, to date, health literacy has received only marginal attention in Australia, compared with Canada, the UK and the USA (Institute of Medicine, 2004; Rudd *et al.*, 2004; Canadian Council on Learning, 2007; Green *et al.*, 2007; Jochelson, 2007). Australia is currently without major health literacy policy initiatives by way of formal alliances, shared agenda, unifying framework or national approach (Green, 2007), apart from a proposal by Kickbusch (Kickbusch, 2007) to develop an alliance for health literacy in South Australia. From early 2008, as part of a national health reform agenda, various aspects of Australia's health system are being reviewed and with recommendations suggested for public consultation. The National Health and Hospital Reform Commission [(National Health and Hospital Reform Commission, 2008a), p. 31] has recently recognized the need for a 'national survey of patient experience and health literacy'. A key element of a proposed National Primary Health Care Strategy is that primary care is 'patient-centred and supportive of health literacy, self-management and individual preference' [(Department of Health and

Ageing, 2008), p. 18]. To date, only the National Health and Hospital Reform Commission has drawn attention to the importance of health literacy and offered proposals to strengthen health literacy as an integral part of the health care and health promotion agenda [(National Health and Hospitals Reform Commission, 2008b), p. 5]. The National Preventative Health Taskforce (National Preventative Health Taskforce, 2008) has not considered health literacy as part of a multi-pronged approach to address key priorities of obesity, tobacco and alcohol.

In Australia and elsewhere, what is required is that the health literacy agenda is aimed at 'improving health and reducing inequities by empowering both individuals and communities to make informed, and ethical, decisions about their health' [(Pleasant and Kuruvilla, 2008), p. 158]. Additionally, the role of individuals' motivation and activation in health literacy needs to be better understood, and to inform social marketing and health promotion initiatives.

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