The Nuances of Health Literacy, Nutrition Literacy, and Food Literacy
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ABSTRACT
Health literacy, defined as the ability to access, understand, and use health information, has been identified as an international public health goal. The term nutrition literacy has emerged as a distinct form of health literacy, yet scholars continue to reflect on constituent skills and capabilities in light of discussions regarding what it means to be food literate and health literate. This viewpoint argues that a comprehensive conceptualization of nutrition literacy should reflect key elements of health literacy and food literacy constructs. Nutbeam’s tripartite model of health literacy is employed to explore competencies that are likely to facilitate healthy food relationships.

Key Words: health literacy, nutrition, food, health education (J Nutr Educ Behav. 2015;47:385-389.)
Accepted April 17, 2015. Published online May 27, 2015.

INTRODUCTION
Factors that contribute to poor dietary practices are complex and require an interdisciplinary approach that acknowledges the social context of health.1 Amidst current efforts to improve dietary behaviors, researchers are beginning to examine health literacy and its potential impact. Nutbeam’s2 originally described health literacy as “the 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.” A more recent definition links health literacy to people’s “knowledge, motivation and competencies to access, understand, appraise, and apply health information in order to make judgments and make decisions in everyday life concerning healthcare, disease prevention and health promotion, to maintain or improve quality of life during the life course.”3 Health literacy is complex and the past decade had many debates regarding its specific components. In considering the literature to date, it is fair to summarize that the aim of empowerment lies at the core of current conceptualizations. In this sense, health literacy lends itself to a health promotion approach4 by eliciting positive attitudes, skills, and behaviors that extend beyond individual knowledge to facilitate social change.

Nutbeam’s5 tripartite model of health literacy is central to health literacy research because it can be used to map the development of health literacy competencies beyond the accumulation of basic health knowledge. Nutbeam highlighted the importance of achieving health literacy at functional, interactive, and critical levels.5 At the simplest level, functional health literacy is concerned with the use of general literacy skills such as reading and writing to understand basic health messages. By contrast, interactive health literacy focuses on the ability to understand and use information for prevention and self-management. In discussing the highest level, critical health literacy, Nutbeam emphasized the importance of improving individual and community capacity for social action to address barriers to good health, thereby framing health literacy as a social capacity, as opposed to a purely intellectual one.5 Drawing on social determinants and civic orientation, critical health literacy can be further conceptualized as a form of health citizenship, empowering individuals to join together in social and political processes that act to modify the underlying causes of health inequalities.6

Health literacy is context specific and the field has acknowledged distinct health literacy forms: for example, eHealth literacy7 and mental health literacy.8 There has similarly been a gradual emergence of literature under the umbrella terms nutrition literacy and food literacy that explicitly focus on health literacy skills in a food context. Although these terms are often used interchangeably in public health research, policy, and practice, there is no consensus regarding their definitions, constituents, or relationship to one another. A lack of shared meaning presents a clear gap for nutrition researchers and practitioners to determine important aspects of the conceptual dimensions of these
constructs. This viewpoint proposes an expanded conceptualization of nutrition literacy using Nutbeam's\(^5\) model of health literacy.

**DISCUSSION**

Several authors conceptualize nutrition literacy as a specific health literacy domain that reflects the ability to access, interpret, and use nutrition information.\(^9,13\) This broad definition could arguably encapsulate a range of knowledge and competencies. Kickebusch\(^14\) highlighted the complexities surrounding an absolute definition by explaining that health and nutrition literacy “can mean many different things for different people … for example, understanding the politics of food, gauging the sugar content of a bottle of coke and buying and preparing a healthy meal.”\(^6\) Gibbs and Chapman-Novakofski’s\(^15\) conceptualization of health literacy within a nutrition education setting provides a useful starting point from the perspectives of 8 nutrition professionals. The professionals identified that knowledge of macronutrient intake, food groups, and food compositions, in conjunction with basic math and measurement competencies, were important skills for their clients. The ability to understand nutrition concepts was also perceived to be particularly significant if an individual presented with a disease with nutrition implications, such as diabetes and hypertension.\(^15\) Further work is warranted to expand the scope of nutrition literacy beyond clinical settings, and Nutbeam’s\(^5\) model provides a useful starting point.

**Functional Nutrition Literacy**

At a basic level, nutrition literacy skills should encompass the ability to obtain factual dietary information and develop an understanding of factors that can enhance or inhibit good health.\(^16\) Health information and knowledge generally feature as important components within the key health literacy definitions (eg, Sørensen et al,\(^7\) Nutbeam,\(^5\) Zarcadoolas et al\(^17\)) and the outcomes of this level of nutrition literacy could include improved knowledge of health risks, components of a healthy diet, and the benefits of good nutrition. In psychological terms, knowledge is classified as declarative or procedural.\(^15\) Declarative knowledge is characterized by an awareness of facts and processes and *knowing that*. In contrast, procedural knowledge is knowledge of skills and strategies and *knowing how* to do something. With respect to nutrition literacy, declarative knowledge could encompass the ability to identify foods that are high in sugar or fat, or to understand the health benefits of dietary fiber. Conversely, knowing how to compose a healthy menu plan or choose a low-salt product would demonstrate a degree of procedural knowledge or *interactive* health literacy skills.

**Interactive Nutrition Literacy**

The informational approach to health literacy is open to criticism because of its emphasis on knowledge and behavior change. Although many people implicitly accept the notion that nutrition knowledge will influence the ability to eat well, practitioners need to acknowledge that nutrition knowledge is important, although not sufficient, for dietary change.\(^19,20\) The value of nutrition knowledge is irrefutable; yet what consumers choose to do with nutrition knowledge ultimately depends on a number of factors.\(^21\) This discussion does not seek to dispute the place of nutrition education within a nutrition literacy framework, but rather to highlight 2 points; first, the development of interactive and critical nutrition literacy skills in addition to functional knowledge; and second, the underlying importance of individuals having access to the opportunity to become nutrition literate and make best use of the resources available to them.\(^4\) Nutrition literacy does not operate in a vacuum, and it must be considered in the context of social, cultural, and environmental factors.

Nutbeam’s\(^5\) model reminds us that a health-literate individual moves beyond the basic acquisition of factual knowledge to use information in a meaningful way in the context of daily life. At a basic level, interactive nutrition literacy should reflect an ability to translate declarative knowledge into positive dietary choices; for example, knowing that *too much saturated fat is problematic* and then identifying a product low in saturated fat. Bliststein and Evans\(^10\) emphasized the importance of nutrition literacy when developing discrete literacy and numeracy skills necessary for selecting wholesome foods to be included within the diet. Zoellner et al\(^22\) envisaged that this would typically involve using dietary guidelines and food labels. Consequently, it is vital for nutrition researchers and practitioners to consider the usability of health information displayed on food guidelines, labels, and menus, and key problem-solving skills.\(^23-26\)

The interactive domain also needs to encompass the development of more complex skills, motivation, and confidence required to navigate the food system. In an era in which online health information seeking predominates, the interpretation of electronic health resources is integral to navigating a multifaceted food environment.\(^11\) As people are exposed to nutrition information through media channels, it is possible that some messages are misinterpreted or not properly understood. Consequently, nutrition literacy research should explore people’s trust in sources and factors that shape their capacity to interpret, critically evaluate, and use such information.\(^11,27-28\) The interface between nutrition literacy and media literacy theory can offer further understanding about dietary messages in the media. Peterson\(^5\) proposed *food media literacy* as a sub-competency that is composed of the ability to critically respond to food-oriented media that might empower people to pursue healthier choices in a commercially driven food landscape.

In discussing the development of interactive skills, the role of practical food preparation undeniably warrants consideration. Skills in food preparation are considered to be an essential component of translating nutrition knowledge into dietary practice, which naturally leads to a discussion of *food literacy*.\(^30\) Although there is no consensus regarding a definition of food literacy, recent dialogue emphasizes the importance of linking nutrition information with people’s practical use of food to meet day-to-
day needs. Vidgen and Gallegos offered perhaps 1 of the most inclusive definitions, based on their exploratory study that captured the perceptions of 2 different subgroups regarding food literacy competencies: Australian nutrition professionals and young disadvantaged women. Fundamental components of food literacy broadly related to the knowledge, skills, and behaviors required to access, select, prepare, and eat foods, and plan for meals. The specific competencies ranged from the ability to choose foods in a timely manner, knowledge of food use and storage, knowledge of food preparation across core food groups, skills in using kitchen equipment, and knowledge of food hygiene practices. Based on their findings, Vidgen and Gallegos described food literacy as:

The everyday practicalities associated with navigating the food system and using it in order to ensure a regular food intake that is consistent with nutrition recommendations. ... Food literacy is the scaffolding that empowers individuals, households, communities or nations to protect diet quality through change and strengthen dietary resilience over time.

When examining the discourse surrounding food literacy, cooking arguably emerges as a fundamental theme. The significance of cooking has particularly gained momentum in light of the demise of food preparation skills and their devaluing in Western society. Within an earlier qualitative Australian study conducted by Vidgen and Gallegos, most participants agreed that cooking was vital to meeting day-to-day nutrition needs. The transition from knowledge to practice is viewed as a vital component of food literacy, and Pendergast et al went so far as to say that one’s competence to use any dietary information is characterized by the acquisition of food preparation and cooking skills. Accordingly, practical skills should form an integral part of the nutrition literacy concept. Given Nutbeam’s emphasis on developing personal skills to improve positive health-related behaviors, interactive nutrition literacy skills arguably could relate to choosing a healthier alternative at a supermarket, takeaway outlet, or public event. Although food preparation skills are extremely important, it is important to acknowledge the ubiquity of a contemporary food environment that is saturated with processed convenient foods. Issues such as work/life balance, time scarcity, and cost come into play for many individuals and families. Nutrition literacy is influenced by culture and society, and it is important to consider the role of deeply rooted sociocultural norms regarding health and eating. Contemporary skills sets should not be excluded on the basis that they are not ideal and that they may reinforce further reliance on preprepared items. This may be an uncomfortable proposition for some practitioners, and others may even be inclined to reject this assertion, but it still deserves consideration alongside important efforts to re-skill individuals to prepare healthy food options.

Critical Nutrition Literacy

Recently, the discussion of critical health literacy has tended to focus on critical appraisal skills. Despite the importance of the ability to critically analyze information, caution must be taken in ignoring the broader social skills that facilitate social action. Nutbeam drew attention to the significance of the capacity to act on and influence the underlying social determinants of health, as the utmost level of health literacy. Critical nutrition literacy should consequently encompass critical appraisal skills alongside increased awareness and critical/ emancipatory action to address barriers to good nutrition. As Kickbusch illustrated, a community that lobbies against the establishment of a fast-food restaurant opposite a local school may serve as an example of social action or citizenship that resonates with Nutbeam’s notion of critical health literacy. Subsequently, challenging deeply engrained sociocultural norms regarding food and health is one such expression of critical nutrition literacy.

Alternative food literacy discourses also warrant consideration. In describing food literacy, Fordyce-Voorham emphasized skills associated with identifying seasonal produce, whereas Drummond discussed capacities to grow and select food. Such interpretations are arguably grounded in progressive food approaches that emphasize the importance of “knowing where your food comes from” to encourage sustainable food choice and consumption. These competencies also align with critical nutrition literacy. Forming connections between food, society, and health by considering the wider impacts of individual and community food choices is extremely significant. This could further encompass decision making that reflects moral and ethical values, and communities challenging deeply engrained sociocultural norms regarding food by advocating for change to broader food policies and practices. Although these elements are largely drawn from food literacy discourse, they are extremely relevant to nutrition literacy as a concept, given Nutbeam’s original emphasis on social skills and broader determinants of health.

IMPLICATIONS FOR RESEARCH AND PRACTICE

This viewpoint highlights important factors that researchers and practitioners need to consider in a nutrition literacy context. Nutbeam’s model is a useful framework for examining potential links between the health literacy, nutrition literacy, and food literacy constructs, by drawing attention to functional, interactive, and critical dimensions. There is evidently an overlap between nutrition literacy and its cousin food literacy, particularly with regard to the selection of nutritious foods and interactive skills. Nutrition researchers and practitioners should draw on the 3 dimensions when possible. In particular, an expanded conceptualization of nutrition literacy should prompt individuals to consider integrating emancipatory health strategies into their work, because such efforts promise to be beneficial for the wider community. If a comprehensive approach is not feasible, practitioners should clearly identify what they are striving to address in their work.

Researchers and professionals should continually engage in reviewing, debating, and reflecting on key
competencies that are relevant to diverse contexts. Positive dietary practices are considered an ideal outcome of nutrition literacy; however, the extent to which this happens is largely mediated by the social determinants of health. Therefore, it becomes important to consider the competencies that are relevant to diverse groups (eg, children, elderly populations, disadvantaged populations) as well as the opportunities that are made available to individuals to develop skills and make use of internal and external resources. Acknowledging the significance of context concurrently raises many challenges for measurement. Existing nutrition literacy measurement tools tend to emphasize literacy and numeracy skills and/or nutrition knowledge. Some researchers have solely employed nutrition knowledge-based outcomes in their work (eg, Silk et al, Wall et al) whereas others have used methodological tools. For example, the Newest Vital Sign test and Nutrition Label Survey collectively focus on the ability to effectively use food labels. The Nutrition Literacy Assessment Instrument is broader than these measures in that it also accounts for additional skills in food measurement and aspects of nutrition knowledge.

Although no single instrument would necessarily capture all aspects of nutrition literacy, existing approaches largely focus on functional and (limited) interactive components. The need to move beyond a functional understanding of nutrition literacy is evident; yet, how this might look or how it could be measured requires further investigation. Although qualitative approaches to nutrition literacy research do not offer objective measurement or grading of skills, they can elicit rich data surrounding diverse population needs. The domain of qualitative inquiry also provides an opportunity to explore past events, cultural values, social norms, and structural factors that shape aspects of nutrition literacy. Accordingly, using quantitative methodological tools alongside qualitative approaches that explore sociocultural dimensions of nutrition literacy may offer some potential toward achieving a comprehensive approach that captures functional, interactive, and critical dimensions in diverse contexts.

This viewpoint offers an expanded conceptualization of nutrition literacy beyond the acquisition of knowledge and interpretation of food labels. This conceptualization is useful because it reminds us that nutrition literacy is enmeshed within a broader social, cultural, and political environment and that it should operate at personal, interpersonal, and societal levels. There is a clear need for further research, first, to strengthen the limited evidence base and second, to work toward developing broader measures in light of the multidimensional and dynamic nature of the construct. Despite these challenges, the prospect of nutrition literacy offers much potential as nutrition researchers and practitioners work toward promoting a healthy and just future.

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CONFLICT OF INTEREST

The author has not stated any conflicts of interest.