Chapter 7

HEALTH LITERACY AND PEOPLE WITH MENTAL ILLNESS

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ABSTRACT

A high level of health literacy is essential for successful management of disorders such as schizophrenia and depression, yet there has been little research into the role that health literacy plays in the lives of people with mental illness. Many people who live with serious mental illness interact with a number of clinicians, for both acute and chronic treatment. They may take complex medication regimens, and some medications require monitoring and have potentially dangerous side effects. The health literacy demands are therefore considerable. However, many psychiatric disorders can affect cognitive function. Disorders like dementia cause an obvious impairment, but illnesses such as schizophrenia and depression are also associated with more subtle cognitive deficits. All of these factors impact on the everyday health literacy of people with mental illness. Limited health literacy may serve as a barrier to recovery and social participation. The healthcare context is also important. This chapter considers how health literacy affects people with mental illness in two very different health care systems: the U.S.A, which has a system of privatized medicine, and Australia, which has universal coverage.

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INTRODUCTION

Though the definition is somewhat contentious (Berkman, Davis, and McCormack, 2010), health literacy is generally understood as “the degree to which individuals have the capacity to obtain, process, and understand the basic health information and services that are needed to make appropriate health decisions” (U.S. Department of Health and Human Services, 2000). The Agency for Healthcare Research and Quality’s (AQHR) Publication on Literacy and Health Outcomes reported that health literacy is associated with multiple health outcomes, including hospitalization, global measures of health, and chronic disease management (Berkman et al., 2004). Lower levels of health literacy have been associated with less frequent use of a variety of preventive health services (Bennett et al., 1998; Davis et al., 1996) and both higher mortality rates and cardiovascular disease among the elderly (Baker et al., 2007). Additional research has shown that patients with limited health literacy are more likely to have been hospitalized in the previous year as well re-hospitalized (Baker, Parker, and Clark, 1998; Baker, Parker, Williams, Clark, and Nurss, 1997; Baker et al., 2002), and also more likely to have poorer self-reported rates of both physical and mental health (Wolf, Gazmararian, and Baker, 2005). Though less is known about the relationship between health literacy and mental health, several studies have examined the role of limited health literacy in the development of psychiatric symptoms, and the recently released National Action Plan to Improve Health Literacy acknowledges the importance of mental health within health literacy (U.S. Department of Health and Human Services, 2010, p. 5).

The few studies that have examined health literacy and mental illness have mostly focused on depression or depressive symptoms. The AHRQ Publication on Literacy and Health Outcomes cites five such studies, four of which report statistically significant associations between lower health literacy and higher rates of depression (Berkman et al., 2004). In one of the few longitudinal analyses available, limited health literacy was associated with worse depressive symptoms among people with alcohol and drug dependency (Lincoln, Paasche-Orlow, and Cheng, 2006). There is also some evidence that health literacy varies by psychiatric diagnosis. In a small study of an urban outpatient mental health clinic, lower rates of health literacy (as measured with the REALM) were found among people with schizophrenia, while higher rates of health literacy were related to PTSD (Lincoln et al., 2008).

It is important to note that general literacy and health literacy are two distinct concepts, though a basic level of general literacy is necessary to obtain adequate health literacy. General literacy skills consist of five interrelated components: reading, writing, speaking, listening, and calculating (numeracy) (Nielsen-Bohlman, Panzer, and Kindig, 2004; Kirsch, 2001), and are often considered the foundation of education. The National Literacy Act of 1991 defines functional literacy as “the ability to read, write, and speak 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.” This definition has since been adopted in the U.S. as well as many other industrialized nations. Literacy, as assessed by word-recognition tests, has been found to relate to health in several critical ways. People with limited literacy have greater difficulty managing chronic conditions (Powell, Hill, and Clancy, 2007; Villaire and Mayer, 2007; Schillinger et al., 2002), obtaining health information, adhering to medications, and communicating with providers (Williams, Baker,

Much of the current scholarly literature on health literacy conflates (or fails to explicitly differentiate) these two concepts, substituting the term “literacy” where the authors are referring to health literacy. It is important to clearly distinguish between the two, particularly since an individual with reasonably high literacy skills (i.e., someone who meets the definition of functional literacy) may simultaneously have a relatively low level of health literacy. Thus, it is essential to measure not only general literacy skills, but health literacy as well. Health literacy, as described above, must also be distinguished from mental health literacy. Mental health literacy involves the recognition of mental disorders, generally from short vignettes, and knowledge about the treatment of these disorders (Reavley and Jorm, 2012).

Traditionally, the instruments most frequently used to measure health literacy have been the Test of Functional Health Literacy in Adults (TOFHLA), or its short version (STOFHLA), and the Rapid Estimate of Adult Literacy in Medicine (REALM). These assessment tools provide practitioners and researchers with relatively quick and easy methods to test individuals’ basic abilities to read and/or comprehend health-related materials. The TOFHLA consists of two sections. The first section assesses the ability to read and understand the labels on medication bottles or packets. The second section uses sentences that provide instructions about various medical situations. The test-taker must choose from a set of four words to fill in blank spaces in each sentence so that the narrative makes sense.

The REALM is designed to assess the patient’s ability to comprehend patient education and other health-related materials, such as medication labels, by asking participants to read aloud a list of health-related words. A number of other instruments, including the Health Literacy Skills Instrument (HLSI) (McCormack et al., 2010) and the Mandarin Health Literacy Scale (MHLS) (Tsai, Lee, Tsai, and Kuo, 2011), are also used, though less frequently.

Recently, new technologies have emerged to allow for more precise and accessible forms of measurement. For example, Health Literacy Assessment Using Talking Touchscreen Technology (Health LiTT) is a self-administered multimedia touchscreen test designed to assess prose, document, and quantitative literacy and produce an overall health literacy score. Health LiTT can be accessed by researchers for free online, and as it is self-administered, it could reduce the possible stigmatization test-takers with low literacy skills may experience during traditional interviewer-administered assessments1 (Hahn, Choi, Griffith, Yost, and Baker, 2011).

Despite the advances in dialogue and technology surrounding health literacy assessment, Pleasant, McKinney, and Rikard (2011) argue that most screening instruments are one-dimensional in that they actually only measure an individual’s reading and (occasionally) numeracy skills, and thus, are not attuned to the current theoretical approaches to understanding health literacy. Current theories about health literacy emphasize not only patients’ ability to read health information, but also the capacity to complete the tasks of “finding, understanding, evaluating, and communicating information, and using that information to make informed decisions” (Coleman et al., 2011; Pleasant and McKinney, 2011).

1 (http://www.assessmentcenter.net/)
Additionally, health literacy is now commonly understood as an interaction between the patients who seek health information and the organizations and providers that supply it. The screening of individuals’ general ability to read and comprehend a limited selection of health-related materials may capture valuable information, but existing instruments fail to evaluate the effects of the communication between the patient and the service provider or the patient’s ability to understand health-related information. Holistic assessments of health literacy must also be culturally relevant (Fransen, Van Schaik, Twicker, and Essink-Bot, 2011) and take into account patient efficacy (Pleasant et al., 2011). Thus, it is essential that researchers and practitioners continue to discuss and develop more comprehensive ways of assessing health literacy.

HEALTH LITERACY IN PEOPLE WITH SERIOUS MENTAL ILLNESS

Though well documented, health disparities experienced by people with serious mental illness (SMI) have largely been unaddressed. Little is known about general or health literacy among people with SMI; however, adults with mental illness, measured more broadly, are disproportionately affected by limited literacy when compared to the general population. A targeted analysis of the 2003 National Assessment of Adult Literacy (NAAL) data, a nationally representative sample of Americans aged 16 or older, confirmed that adults who reported having a mental health problem had significantly lower levels of general literacy than adults who did not, even after controlling for education and other predictors of literacy (Sentell and Shumway, 2003). This likely underestimates the relationship between mental illness and limited literacy, as people living with more serious mental disorders were disproportionately excluded from the study.

People with serious mental illness have particular need of good health literacy skills. The treatment of mental illness often includes complex medication regimes, advice about lifestyle factors (e.g., sleep, diet, daily routines, and stress management), and the need to attend appointments with a range of clinicians. In addition, a large proportion of people with mental illness also have serious physical health conditions, which similarly require complex treatments and lifestyle modifications. For example, it is well known that people with depression are more likely to suffer from a cardiac event (infarction or death), but Ye and colleagues (2013) found that this increased risk was mainly because depressed people used more alcohol and tobacco, were less compliant with medication, and exercised less, compared to people who were not depressed. People with schizophrenia have high rates of cardiometabolic disorders (Galletly et al., 2012a) and die 10-25 years earlier than expected, mainly of cardiovascular disorders (Laursen, Munk-Olsen, and Vestergaard, 2012). People with bipolar disorder also die prematurely, by about 12-14 years (Laursen, 2011). Again, lifestyle factors and noncompliance with medication are likely to contribute to these poor outcomes.

Differences in the epidemiology, symptoms and course of the various mental disorders would be expected to have a specific impact on health literacy, in addition to the more global correlates of SMI such as poor education and low income. Four common mental disorders will be discussed below – acquired brain injury, dementia, depression, and schizophrenia – to
illustrate how disorder-specific factors might be expected to impact on health literacy and how poor health literacy might affect the management of the mental illness.

**Acquired Brain Injury**

There are a number of factors that would be expected to reduce health literacy in people with mental illness. The most obvious is damage to the brain, either from an external cause (e.g., accident, injury) or a medical condition (such as dementia or stroke). In people with acquired brain injuries, the nature of the cognitive impairment depends on which parts of the brain are damaged. For example, there may be specific problems with communication due to damage to the speech centers, and less ability to make reasoned decisions due to impaired executive function. Brain injuries can also be associated with personality change; people can become more impulsive with less capacity for insight. People with acquired brain injuries may therefore have a considerably reduced capacity for understanding and utilizing health-related information. Brain injuries are often associated with physical disabilities such as paraplegia, requiring complex management, so there may be considerable demands on their limited health literacy skills.

**Dementia**

The World Health Organization (WHO, 2012) estimates that 35.6 million people worldwide have dementia, and there are 7.7 million new cases every year. People with dementia generally experience a gradual decline in cognitive abilities with a consequent decline in health literacy over time, leading to the need to gradually increase levels of support.

For example, medications may initially be dispensed in bottles and packets bearing printed instructions. As the dementia progresses, dosage aids with pre-packaged medication may be used, and then eventually carers will need to administer the medications. Similarly, the ability to understand instructions about managing chronic conditions such as diabetes, involving diet, measurement of blood sugars, and adjustments of medication, declines as dementia progresses.

There have not been any studies of health literacy in people with dementia, although previous research (Adams, 2009) has shown that health literacy tends to be lower with increasing age. In elderly people without dementia, better health and financial literacy are associated with more frequent engagement in health promoting behaviors and better health status (Bennett, Boyle, James, and Bennett, 2012). In Medicare-enrolled people aged over 65 years and living in the community, lower health literacy was associated with higher all-cause mortality (Baker et al., 2007). These findings suggest that strategies to improve health literacy in older people might improve health outcomes. Further, it seems likely that interventions to support or improve health literacy in older people with cognitive impairment would be particularly useful.
Depression

Depressive disorders were the third most common cause of disability internationally in 2004, and are expected to be the leading cause of disability by 2013 (WHO, 2009). The impact of depression on health literacy will therefore become increasingly important.

As noted above, depression is associated with cardiovascular disease (Lichtman et al., 2008) as well as a number of other common physical conditions (Goldberg, 2010). People with chronic medical disorders, such respiratory disease or arthritis, are more likely to be depressed, and conversely, people with pre-existing depression are more likely to become physically unwell.

People with depression therefore need good health literacy skills to manage both their depression and any co-existing conditions. Some medications such as lithium (a mood stabilizer) are potentially toxic. Besides medications, treatment for depression commonly includes psychological therapies such as cognitive behavior therapy and mindfulness, which require learning of new material and new cognitive skills, and completion of homework. However, depression is generally associated with cognitive deficits, especially in executive function, working memory, attention, and psychomotor processing speed. These deficits are a significant predictor of psychosocial dysfunction (McIntyre et al., 2013). Additionally, low motivation, poor sleep, and fatigue, all of which further impair cognitive abilities, are common in depression.

Despite the potential contribution of low health literacy to poor outcomes in people with depression, there have only been a small number of studies addressing this issue. Gazmararian, Baker, Parker, and Blazer (2000) found that depression and poor physical health were both more common in elderly people with poor health literacy. The relationships between these and other associated factors were complex; for example, physical inactivity was associated with both depression and poor health status. Similarly, in adults with drug and alcohol dependence, lower health literacy was associated with more severe depressive symptoms (Lincoln et al., 2006).

Schizophrenia

Schizophrenia is less common than depression, with a prevalence of 0.5-1.0% of the population, but as the onset usually occurs during adolescence or young adulthood, and the disorder tends to result in lifelong disability, schizophrenia results in considerable financial and social burden. Low IQ is a risk factor for schizophrenia (Matheson, Shepherd, Laurens, and Carr, 2011), and the age of onset means that education is commonly disrupted. Morgan et al. (2010) found that one in five Australian adults living with psychosis reported difficulty with reading and writing. Schizophrenia is associated with significant cognitive impairment (Galletly, 2009), which would be expected to further reduce health literacy. The cognitive deficits are generalized, of the order of 1-2 standard deviations below matched controls, and tend to be most severe in verbal memory and new learning (Bilder, et al., 2000; Saykin et al., 1994).

The physical health comorbidities described above place considerable demands on people with schizophrenia. In addition, poor adherence to treatment is a major problem, often resulting in relapse (Sun, Lie, Christensen, and Fu, 2007). It is possible that one of the factors
contributing to poor adherence is a failure to fully understand the rationale for particular treatments as well as and/or the instructions given about medication and disease self-management. However, there is a lack of published research exploring the prevalence of inadequate health literacy in people with schizophrenia and the association between health literacy and medication adherence.

**Comparing Health Literacy Skills in People with Depression and Schizophrenia**

A pilot study of health literacy in Australia, measured using the TOFHLA, evaluated a group of people with schizophrenia and a comparison group of people with depression (Galletly et al., 2012). In brief, poorer health literacy was associated with fewer years of education and greater cognitive impairment. However, both groups had surprisingly good health literacy, which is perhaps related to their participation in a universal health system in Australia. Further discussion of possible national differences in health literacy is presented later in this chapter.

**Health Literacy and Recovery**

For people with SMI, poor general literacy and poor health literacy serve as barriers to recovery and social participation. Increasingly, in part due to efficacious treatment, improved medication, and possibly decreased stigma, people living with SMI are able to obtain meaningful lives in the community. Limited literacy may serve as an under-examined obstacle to achieving optimal recovery and social inclusion, and further research to develop strategies to improve both general literacy and health literacy skills in people with SMI is needed.

**HEALTH LITERACY IN THE U.S. AND AUSTRALIA**

It is probable that national differences in education and living standards might impact on health literacy. Further, the nature of the available health services, the degree of interaction a person has with these services, and the amount and nature of education about general health and disease management offered by clinicians would be expected to impact on health literacy capabilities. The next section of this chapter addresses these issues in the U.S. and in Australia, two Western countries with very different health systems.

**Literacy and Health Literacy in the U.S.**

The NAAL tested Americans age 16 years and older in three domains of general literacy: prose, document, and quantitative. Prose literacy refers to the individual’s ability to “search, comprehend and use information from continuous texts,” such as books or newspapers;
document literacy refers to the same ability regarding “noncontinuous texts,” such as job applications and transportation schedules; and quantitative literacy is defined as the “knowledge and skills needed to identify and perform computations using numbers that are embedded in printed materials,” which includes tasks such as computing a tip or balancing a checkbook (Kutner, Greenberg, and Baer, 2005, p. 2).

Working from the National Literacy Act’s definition of functional literacy, the NAAL divided literacy skills into four categories: Below Basic (“no more than the most simple and concrete literacy skills”), Basic (“skills necessary to perform simple and everyday literacy activities”), Intermediate (“skills necessary to perform moderately challenging literacy activities”), and Proficient (“skills necessary to perform more complex and challenging literacy activities”) (Kutner, Greenberg, Jin, and Paulsen, 2006, p. 3). The results show that 14% and 29% of Americans, respectively, have Below Basic and Basic prose literacy skills. For document literacy skills, the percentage of low scoring adults is somewhat smaller: 12% at Below Basic and 22% at Basic. Of the three domains of literacy, scores were lowest for quantitative literacy. Twenty-two percent scored Below Basic and 33% at the Basic skill level. General literacy skills were higher among Whites and Asian/Pacific Islanders, as compared to Black and Hispanics, and literacy scores tended to increase along with level of education (Kutner et al., 2006).

Despite the large number of Americans with limited literacy skills, a review of health information posted on Websites, print materials used for research and instruments, and other health-related texts published between 2000 and 2005 showed that this information was typically written in language that exceeded a high school reading level (Rudd, Epstein Anderson, Oppenheimer, and Nath, 2007).

As a component of the 2003 NAAL, the U.S. Department of Education for the first time measured the health literacy of American adults. The distribution of health literacy levels is similar to, but not identical with, the levels of general literacy across the population (Kutner et al., 2005). As with general literacy, respondents’ health literacy levels were divided into four categories: Below Basic, Basic, Intermediate, and Proficient. The majority of Americans (53%) had Intermediate health literacy and 12% had Proficient health literacy, while 22% scored at the Basic level and 14% at the Below Basic level (Kutner et al., 2006, p. iv). Across the population, men had lower average health literacy than women, and Blacks, American Indians/Native Americans, and multiracial adults had lower overall health literacy than did Whites and Asian/Pacific Islanders. Other groups who were more likely to have lower average health literacy were adults over the age of 65, those who had lower levels of education, people living below the poverty threshold, and those who spoke languages other than English or another language in addition to English (rather than only English) before beginning school. Furthermore, respondents’ levels of health literacy increased along with their levels of self-reported overall health, and those who had employer or private health insurance had higher overall rates of health literacy than those who either had public insurance (Medicaid or Medicare) or were not insured.

Literacy and Health Literacy in Australia

Unlike the adult population in U.S., Australians have relatively good health literacy. One study tested a nationally representative sample using the TOFHLA and found that only
approximately 3% of Australians had “inadequate” health literacy and 4% had “marginal” health literacy; the vast majority (93%) had “adequate” health literacy (Barber et al., 2009). However, when Barber et al. (2009) tested Australians with different instruments, rates of inadequate health literacy were higher: nearly 11% for the REALM and 26% with the Newest Vital Sign (NVS). Though these results cannot be directly compared to the U.S. data, as health literacy was measured differently, there appears to be a significant disparity in the degree of health literacy possessed by Australians and Americans. One possible explanation for this dissimilarity is the overall higher rate of general literacy in Australia as compared to the U.S. Data from the Adult Literacy and Life Skills Survey, undertaken in 2006, shows that overall, Australians have better literacy skills than people living in the U.S. (Australian Bureau of Statistics). Eighteen percent of Australians and 13% of Americans achieved the highest level of literacy, whilst 14% of Australians and 20% of Americans were found in the lowest literacy group. Another possible explanation is that Australia has free universal health care, with an emphasis on early intervention and patient education, and regular exposure to this health system enables people to learn better health literacy skills.

While a nationwide survey of health literacy among people living with SMI has not been conducted in Australia, as noted above, a small study in Adelaide tested the health literacy of 60 people living with SMI who attended clinics at one of two urban mental health facilities (also using the TOFHLA) and found no significant difference between the scores of these service users and the general population (Galletly et al., 2012). In fact, the vast majority of service users – 93% of those with a diagnosis of major depression and 97% of those diagnosed with schizophrenia – had “adequate” health literacy (as compared to the 93% of Australians in the general population who have “adequate” health literacy). Health literacy among both the general and SMI populations was positively correlated with years of education (Galletly et al., 2012).

**EXAMINING THE MECHANISMS OF ASSOCIATION**

**Health Literacy and Service Utilization**

Several studies have investigated the relationship between limited health literacy and health service utilization, finding that those with lower levels of health literacy face greater barriers to access to various kinds of health services, and are less likely to use these services (Grace and Christensen, 1998; Kefalides, 1999; Miles and Davis, 1995). Recently, an increasing number of researchers have pointed out that relationships between health literacy and health outcomes cannot be examined exclusively as a phenomenon of patients’ skills, but must also consider the nature of system-level phenomena (Brach et al., 2013; Koh et al., 2012; Koh, Baur, Brach, Harris, and Rowden, 2013; Paasche-Orlow and Wolf, 2007; Rudd et al., 2007). These authors assert that complex health care and insurance systems have become increasingly difficult for everyone to navigate and call for a system-level approach to improving health literacy. These difficulties are likely to be even greater for people with mental illness. According to this perspective, organizations should strive to become “person-centered” and “health literate” by providing materials that are easily understood, training staff to competently interact with people of varying literacy levels, and removing the burden of
coordinating one’s own care for those who struggle with this responsibility (Brach et al., 2012; Koh et al., 2013). Furthermore, specific vulnerable populations should be considered when discussing health literate organizations and service utilization. For example, both low health literacy and SMI are disproportionately high among individuals who are homeless; this combination of vulnerabilities calls for increased sensitivity among service providers, particularly those working in public health settings (Fetter, 2009).

Health Literacy and Treatment

As described above, people who live with SMI must often manage complex, long-term medication and treatment regimens. Doing so successfully requires an adequate degree of health literacy. According to NAAL data, over half of all Americans have difficulties with understanding medical information, including both health insurance documents and treatment-related materials such as pre- and post-operative instructions (Kutner et al., 2006). We also know that individuals with low health literacy struggle with managing acute and chronic illnesses (Kalichman et al., 2000). As health literacy is likely to be lower among those with mental illness than among the general population, this indicates that people with SMI are at serious risk of not fully comprehending health information related to their conditions, and consequently, not adhering to treatment regimens.

In a recent study of 256 service users with SMI at an urban community mental health center in the U.S., low health literacy was associated with increased chances of inpatient hospitalization (Krishan, von Esenwein, and Druss, 2012). The authors explain that low health literacy, along with the cognitive impairments that sometimes accompany SMI, could affect “this population’s abilities to effectively interpret health information or to meaningfully engage in psychiatric interventions, which may result in poor self-management, increased disability, and adverse health outcomes, such as hospitalization” (p. 397).

However, it is essential that we understand the social and cultural forces that shape health literacy. In contrast to the American data discussed here, the Australian study discussed above (Galletly et al., 2012b), which tested the health literacy of 60 people living with SMI, found that poor health literacy was not correlated with treatment nonadherence in this sample. Galletly et al. suggest that nonadherence among this population is likely the result of a combination of factors including “lack of insight, believing that medication is no longer required or is ineffective, intolerance of adverse effects, and insufficient money to fill prescriptions,” rather than limited health literacy (2012b, p. 4).

Researchers, practitioners, and government organizations have developed a variety of interventions aimed at improving health literacy and reducing the burden for those who have limited health literacy. New health care policies in the U.S., including the Affordable Care Act, the National Action Plan to Improve Health Literacy, and the Plain Writing Act, provide the potential for transforming the health care system in ways that make it more accessible for those who struggle with limited general and/or health literacy (Koh et al., 2012). Additionally, the National Academy of Science in the U.S. sponsored the Institute on Medicine’s recent report on health literacy (IOM, 2004), which called for practitioners and researchers to “understand, measure, and modify both the demands of the health systems and the skills of professionals, as well as the skill of the public,” and to do so with attention to the various domains of literacy, including oral and numeracy (Rudd et al., p. 181).
In a systematic review of the literature on health literacy interventions, Sheridan and colleagues analyzed 38 intervention programs and found evidence that interventions that either present the most important information first or by itself, present information with ranked numbers in order of higher being better, depict numerical information in a table rather than text format, use icons in addition to numerical information, or add video components to verbal instructions, have all proven successful at mitigating the problems faced by individuals with limited health literacy, thus leading to better treatment outcomes (Sheridan et al., 2011). They also found that several studies involving mixed strategies aimed at self-management resulted in fewer hospitalizations and emergency room visits, and intensive mixed-strategies approaches to disease management lessened the severity of disease. Although these studies focused on physical rather than mental health, the lessons learned can be applied across health care contexts and tested for their appropriateness for mental health service users, many of whom must manage complex treatment regimens. With a word of caution, Taket, Graham, and Hakman (2007) suggest that, as most current health literacy models were designed for people with specific physical health and/or social conditions, targeted interventions for people who live with mental illness should be carefully developed to consider the specific needs of those with SMI.

The call for more “health literate” organizations discussed above provides a useful framework for understanding some of the mechanisms that may inform our understanding of the relationships among limited health literacy and health outcomes for people with SMI. In addition, though, there may be other salient mechanisms for the relationships among limited health literacy and SMI. Basic literacy skills, which are required for adequate health literacy, could play an important but overlooked role in access to and use of mental health services. A more holistic approach would include an analysis of such phenomena as disruption in the educational trajectories of young people with mental illness and the distinctive toll taken by shame, low self-efficacy, and stigma common to both mental illness and limited literacy (Parikh, Parker, Nurss, Baker, and Williams, 1996; Francis, Weiss, Senf, Heist, and Hargraves 2007; Link and Phelan, 1999).

REFERENCES


