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Improving Health Literacy with Clear Communication

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Walden University

College of Health Sciences

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Carol Wilson

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2015

Abstract

Improving Health Literacy with Clear Communication

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MBA/TM, University of Phoenix, 2002

BSN, University of Tampa, 1993

Project Submitted in Fulfillment
of the Requirements for the Degree of
Doctor of Nursing Practice

Walden University

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Abstract

Health literacy is demonstrated when individuals can obtain, process, and understand basic health information and services needed to make appropriate health decisions. Veteran health literacy is believed to be lower than the general population due to the aging and culturally diverse population. Veterans require adequate health literacy to manage their diverse high acuity physical injuries, psychological conditions, and chronic diseases. Clear communication between the clinician and veteran patient is essential to provide high quality health services. The objective of this quality-improvement project was to evaluate the ability of nurses in the ambulatory environment to identify low health literacy patients and to deliver an educational intervention focused on health literacy awareness and communication strategies. A pre-intervention Clear Communications Questionnaire (CCQ), a validated instrument, was delivered to 299 ambulatory nurses with a 20% response rate. The results from this questionnaire informed the development of a 40-minute educational program, multimedia and discussion format, provided to 200 nurses. Following the education program, the post-intervention CCQ was sent to the nurses, with a 30% response rate. Survey Monkey was utilized to collect the CCQ data and Minitab for the statistical analysis, including a pre- and post-intervention data analysis with a *t* test. While this project was unable to show a significant difference between the pre- and post-intervention CCQ, the individual survey items indicated increased awareness about the importance of health literacy and the ability to locate patient health literacy level in the medical record. Further work needs to be undertaken to assure veteran patients can actively engage in clear communication with clinicians, discern between treatment options, adhere to treatment recommendations, and develop health-seeking behaviors across their lifespans.

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December 2015

Dedication

First, to my sons, Ed and Jeff, to Rebecca, and my grandson Jack.

I also dedicate this to my fellow veterans, especially Army nurses.

Acknowledgement

I would like to acknowledge the members of my committee and my mentors at the VA,
Dr. Raia, Dr. Holte, Dr. Massengale and Dr. Sprehe.

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Section 1: Nature of the Project

Health literacy, an issue that affects all levels of society, is” the degree to which individuals can obtain, process, and understand the basic health information and services they need to make appropriate health decisions” (Centers for Disease Control and Prevention [CDC], 2010). There are 80 million individuals with limited health literacy, which accounts for 36% of the population (CDC, 2010). This includes the elderly, minorities, those who speak English as a second language, and those in poverty (CDC, 2010). Poor health literacy leads to poorer health outcomes, increased mortality, low medication adherence, inadequate ability to interpret labels, and a host of other health care issues that affect a person across the wellness-illness continuum (Koh et al., 2012). The National Patient Safety Board (2012) lends credence to this health care issue and its impact on patient care. It confirms that patients need assistance in digesting health information to make better choices, following providers’ instructions, and in negotiating healthcare services.

Another vulnerable group of individuals at risk for poorer health outcomes because of health literacy issues are military servicepersons. Changes in health literacy among returning servicepersons is thought to be caused by the prevalence of posttraumatic stress disorder and traumatic brain injury among this population, limiting their cognitive ability to make sound decisions (RAND, 2008). In addition, soldiers from the World War II, Korean War, and Vietnam War eras were called to arms before many of them completed secondary education and/or attained any degree of health literacy. For example, in 1967–68, then-Secretary of Defense McNamara initiated Project 100,000.

This project aimed at drafting recruits who tested in the 10-49 percentiles on the Armed Forces Qualification Test (AFQT), a test that measures a subject's level of mental aptitude. The results are in stark contrast to the current minimum standard score of 50 to enlist in the branches of the military (W. Nieves, personal communication, February 14, 2014).

The AFQT uses the following two indices to gauge the quality of new recruits: scores on enlistment tests and educational achievement (Sands & Gade, 1983). As a result, many of the veterans seen today are among those men and women from earlier wars (RAND, 2008), the consequence of which has serious implications for providers in all healthcare systems. Therefore, increased awareness of how to identify the client's health-literacy level and create handoff tools that are sensitive to their reading and comprehension levels will help staff ensure patient compliance with treatment modalities and plans of care (Lattimer, 2009). This awareness will also help nurses choose appropriate materials for teaching as well as supporting safe care across the healthcare setting.

Although patients in the veterans' hospitals are asked what their preferred language is and what grade or level of education they have completed, they are currently not assessed on initial encounter for cultural preference and learning needs. In specialized clinics for aging veterans, some efforts to address gaps in assessing veterans' understanding of their treatments and health status are seen. Providers in these settings also give special attention to the medication profiles of their patients.

Historically, the elderly have what is known as *medication confusion*, a term that describes situations when new medications or dosages are ordered, which results in the patient taking both the earlier medication along with the newer one (Davis, 2006). This phenomenon has been linked with an increase in readmissions within 30 days of discharge. According to hospital performance metrics, patients in this population have a readmission rate of 15% for acute myocardial infarction, 23% for congestive heart failure, and 15% for pneumonia. These rates are 10% above benchmarks for other populations with these same diagnoses (VA hospital compare [Performance standards], 2013).

Purpose Statement and Project Objectives

Hospital data indicate that most patients are readmitted because they have not followed their plan of care, not taken their medications as directed, or are experiencing “crisis care,” where they experience an acute or chronic event (Koh et al., 2012). Though providers may recognize the challenges of teaching the elderly or those with chronic illness, further patient and staff education is still needed. It is important for staff members to know how to determine a patient’s learning needs and identify a patient’s health-literacy level to tailor their approaches to education and care. Although healthcare organizations are moving toward patient-centered care wherein patients determine their care needs in collaboration with providers, in many instances providers find that patients cannot comprehend written directions or calculate dosage amounts (Koh et al., 2012). The purpose of this project was to implement a nurse training program to increase the

staff's awareness of the nature of health literacy, its causes, and the techniques that can help them in the educational process and can enhance compliance with the plan of care.

Quality Improvement Process

Baily (2006) stated that quality improvement is an ongoing exercise in meeting the needs of the patient by seeking ways to improve processes. This quality-improvement project sought to create awareness of health literacy in veterans. In looking at the frequency with which patients visited the emergency department soon after discharge, it becomes clear to us that patients are not following their plan of care and are not taking their medication as directed. Thus, improvement is needed (Davis et al., 2006).

Implications for Change in Practice

As noted by Koh et al. (2012), problems with health literacy have led to millions of Americans not being able to follow their healthcare provider's plan of care. Patients who have trouble understanding labels cannot participate in preventative healthcare. Thus, these clients experience more hospitalizations and greater use of emergency room visits (Koh et al., 2012). Placing health literacy in the greater context of literacy, experts (Koh et al., 2012) believe that only 12% of adults in the United States have adequate health literacy. This statistic implies that roughly nine out of 10 individuals are poorly prepared to manage their health and to prevent disease.

Significantly, health literacy has been found to be a national issue affecting all healthcare initiatives. The Department of Education's National Assessment of Adult Literacy statistics demonstrate that only 12% of adults can follow and understand medical information. Therefore, adults with low literacy levels may fail to follow basic directions

on medication labels, with people at intermediate levels of literacy being unable to understand a medical term.

The Institute of Medicine (IOM, 2004) indicated (a) culture and society, (b) health systems, and (c) educational systems as the three potential venues for improving health literacy. Moreover, health literacy has become such an important social issue that the Patient Protection and Affordable Care Act integrated health literacy into “the law of the land” (Smith & McCaffery, 2010).

Definition of Terms

Health literacy is the degree to which individuals can obtain, process, and understand the basic health information and services they need to make appropriate health decisions (CDC, 2010).

Literacy implies a capability to use the English language in both written and spoken forms (Institute of Medicine, 2004).

Print literacy involves reading, writing, and comprehending printed communication when the necessary background understanding is present (Institute of Medicine, 2004).

Reading or text literacy in association with the difficulty level of the text and its complexity (Institute of Medicine, 2004).

Functional literacy as the proficiency required to execute a specific task (Institute of Medicine, 2004).

Medication confusion describes situations when new medications or dosages are ordered, resulting in the patient taking the earlier medication along with the newer one (Davis, 2006).

Assumptions and Limitations

Assumptions

In this study, I assumed that some factors were true, because I could not verify them. I first assumed that the study participants would answer the questions honestly and that they would remain anonymous. Kolcaba's (2006) comfort theory and Knowles' adult learning theory (Knowles, Holton, & Swanson, 2012) helped to confirm or reject the presence of a change in the subject caring culture. Another assumption that guided this study is that the study sample satisfied the statistical requirements of a random study and can be generalized to the wider population.

Limitations

A number of challenges and limitations during the quality improvement initiative and the analysis of data may arise. The first limitation regards the sampling process. It is the hope of the project manager that all clinic nurses working in ambulatory care will participate in this quality improvement project. However, this may not be possible due to logistical concerns.

The project was limited to the ambulatory-care nurses who respond to an anonymous questionnaire and in doing so render implied consent. The hospital leadership's approval of the improvement project was important in gaining participants' trust. A potential limitation is the personal relationship of the project manager has with

many of the participants. This relationship may result in reluctant participation whereby participants respond to inquiries in a way they perceive the project manager wishes to hear instead of exploring their biases and/or current practice patient care approaches.

Summary

The assessment of literacy has developed over time, and in the evolutionary process the aspect of health remains deliberately integrated in the design of literacy measurement instruments to determine *health literacy*. Health literacy issues exist at all levels of society and contribute billions of lost dollars to healthcare costs and morbidity and mortality indices.

The IOM (2004) with the National Patient Safety Board (NPSB, 2012) and others (Institute of Healthcare Improvement [IHI], 2014) confirm that numerous causes contribute to a person's ability to understand health-related information. They (IHI, 2014; IOM, 2004; NPSB, 2012) suggest that biases presently exist in reading materials that target English-speaking persons with a college-level education, using jargon specific to different providers when interacting with both patients and families and other written material that is lengthy and often includes complicated directions, all of which confuses patients when obtaining appropriate information, following providers' advice, and engaging in healthy behaviors.

According to the RAND Corporation (2008), veterans' health care systems face unique challenges related to health literacy. Veterans of World War II, the Korean War, and Vietnam, suffer from physical and psychological injuries sustained during their

military service. Additionally, there are limitations in the screening of intellectual capabilities in this patient population.

To better serve these men and women, providers, especially nurses practicing in outpatient centers, need an increased awareness of how to recognize health literacy issues in their patients. They will also need to employ strategies that allow a safe environment in which patients can share their limitations without fear of reprisals and/or embarrassment. Health care organizations also have a responsibility to create initiatives that aim to reduce preferential and ambiguous healthcare policies that marginalize certain groups and/or construct barriers to care. Health literacy initiatives are critical in assuring patients can engage with providers, discern between treatment options, adhere to recommendations, and develop health-seeking behaviors across their lifespans (Koh, 2012; Koh, 2013; Kutner, 2006; Kwan, 2006).

Section 2: Review of Literature

Research Strategy

The literature review covers literature published in English from 1997 to 2013. It used the following databases: EBSCO and Google Scholar. The following keywords were used: *nursing, adult patient education, cultural impact, health literacy, and health issues*. In the EBSCO database, a search for health AND literacy AND information yielded 649 peer-reviewed articles between 2009 and 2014 and 223 articles published between 2004 and 2009.

Background

Health information is an important aspect of any strategy aimed at promoting health literacy, choice, shared decision-making, self-care, and self-management of chronic diseases and medication adherence (Coulter, Parsons, & Ashkham, 2008). For patients and the public making decisions concerning their healthcare choices, health literacy is an important criterion to assure understanding, especially regarding new treatments or invasive procedures. Generally, any information should not only be timely but also relevant, reliable, easily comprehended, and readily obtained from a variety of sources (Coulter, Parsons, & Ashkham, 2008). It is well accepted that these basic components are needed to achieve higher patient involvement with, and engagement in, the healthcare system (Coulter, Parsons, & Ashkham, 2008).

Patient care outcomes have been indicators of quality care and in some instances have been linked with reimbursement structures (Hashmi et al., 2014; Hartman, 2014; Lucci, Shoher, Sherman, & Azzizadeh, 2004). Therefore, provisions for quality health

information are essential for optimal service delivery and outcomes that meet or exceed benchmarks. Edwards (2012) and others (Jibala-Weiss, 2006) indicated that individuals need access to unbiased and high-quality information to empower themselves and a wider society in making informed decisions. Poor health information restricts people from making better choices. In fact, without information, clients have no real choices (Edwards, 2012).

Moreover, the impact of low health literacy is felt on both individuals and the entire healthcare system. The healthcare costs of individuals with low literacy levels are approximately four times higher than those with higher literacy skills (Weiss, 2003). Low literacy levels are known to cause medication issues, an increase in mortality and morbidity rates, as well as an increase in emergency visits and readmissions. In addition, the Center for Medicare and Medicaid Services (CMS) does not cover or reimburse preventable admissions (Berkman, 2010; Jibala-Weiss, 2006).

Prior to the 1990s, literacy in healthcare was considered to be the ability of an individual to read health education information that was provided to them. A report published by the National Library of Medicine (2000) stated that although the concept of health literacy was introduced in a paper published in 1974 supporting minimum standards for health education in United States public schools, it was not until 1992 that references to health literacy began to surface in the literature (Speros, 2005). Moreover, many early research studies conducted in the 1990s found relationships between reading ability and knowledge or health literacy, with the use of healthcare services, poorer health

status, and outcomes (Baker, Parker, Williams, Clark, & Nurss, 1997; Fisher, 1999; French & Larrabee, 1999; Gazmararian et al., 1999; Miller & Bodie, 1994).

Literacy

Literacy implies a capability to use the English language in both written and spoken forms (Fisher, 1999). In addition, literacy includes proficiency in critical thought processes to resolve problems at a certain level of adeptness to perform the necessary tasks and duties of employment or to function in society. Individuals demonstrate literacy aptitude by mastering knowledge and skills to accomplish goals or reach maximum competence (Brach et al., 2012). Historically, the term *literacy* and its measurement were unsophisticated (Jibala-Weiss et al., 2006). Over time, the definition of literacy and its determining factors expanded and evolved. This section reviews the chronological development of literacy assessment.

Berkman, Davis, and McCormack (2010) asserted that in the years preceding the Civil War one's ability to sign his or her name rather than indicate an "X" suggested literacy. From the mid-1800s through the 1930s, the U.S. Census Bureau assessed literacy by a self-reported ability to read and write in any language. However, although the popular conception of literacy often relates only to the ability to read, literacy also comprises skill in writing, speech, and fundamental numerical computations. The IOM further distinguishes three types of literacy. These are *print literacy* such as reading, writing, and comprehending printed communication when the necessary background understanding is present; *reading or text literacy* in association with the difficulty level of

the text and its complexity; and *functional literacy* as the proficiency required to execute a specific task.

As societal requisites and employment demands necessitate higher levels of knowledge, functional literacy became the indicator for three or more years of schooling. This was a consistent requirement for many employment opportunities over the next 30 years. Berkman et al. (2010) described the 1940s as a time when a fourth-grade education was necessary for most U.S. Army positions. Through the subsequent decades, requirements for higher educational levels rose from a sixth-grade level in the 1960s to the completion of high school in the late 1970s. Berkman et al. (2010) contend that individuals now need at least postsecondary training to be viable in the current employment market.

Reading problems have continually plagued the US population. In 1985, the Young Adult Literacy Survey (YALS) was one of the first adult literacy assessments that focused on the literacy of immigrant populations and their inability to find work due to deficits in their English language skills. The YALS (1985) was the first literacy instrument to test on the three items of prose, documents, and quantitative literacy. Prose literacy was the level of ability to understand familiar household instructions or newspaper articles; documents literacy was the level of ability to glean understanding from such printed matter as might be found in job applications, food or drug labels, or questionnaires; and quantitative literacy level was determined from the degree of skill in filling out order forms or balancing a checkbook. In response to low literacy levels, the National Literacy Act (1991) promoted public policy to implement a major literacy

assessment. According to Berkman et al. (2010), low literacy was recognized at that time as a national policy concern that might potentially restrict the United States' financial, social, and defense viability and thus threaten national security (Smith et al., 2010).

In 1993, a National Adult Literacy Survey (NALS) also quantified the following four levels of literacy: below basic, basic, intermediate, and proficient. The findings of the NALS indicated that 90 million Americans had insufficient literacy skills. The researchers conducting this study chose participants randomly from citizens in 12 states. More than 26,000 adults participated. Of those surveyed, approximately 1,100 were inmates from state and federal prisons, and roughly 13,600 were other adults of age 16 and older. In this investigation, nearly 23% scored at the poorest level of prose, document, and quantitative ability (Level 1). Zarcadoolas, Pleasant, and Greer (2006) maintain that this survey indicates that nearly 50% of all adult Americans read at the eighth-grade level or lower. Issues that contributed to this below-basic literacy level included limited formal education, inadequate English language skills, and health conditions compromising physical or mental capacity, aged 65 or older, and visual impairment (Edwards et al., 2012).

Basic literacy skill was the next highest level (Level 2). This group encompassed 25 to 28% of the participants. Their skills were more diverse than the Level 1 group. They might integrate information with less difficulty, retrieve it easier, and make simple conclusions from printed text. They were also able to complete uncomplicated quantitative tasks such as a comparative cost for a purchase or finding a specified location on a map.

The National Assessment of Adult Literacy (NAAL, 2003) measured literacy levels of more than 19,000 adults by means of direct tasks in prose, document, and quantitative literacy. This assessment tool used familiar language in contexts that individuals might encounter in their everyday lives. Use of these direct measures was in contrast to prior literacy assessments that relied on self-reports or other self-appraisals of knowledge and education. By using authentic texts and documents, responders were apt to read with intention. Reading with a purpose provided a more accurate test of literacy since it assessed comprehension as well as the ability to distinguish words or grasp intangible meaning from written text.

The NAAL (2003) researchers appreciated that individuals with low literacy would also struggle with the burden of comprehending the ever-increasing complexity of health information and navigating the healthcare system. Therefore, many of the questions from the NALS (1993) were included with the addition of items to assess participant literacy related to health. Results of the NAAL (2003) indicate that approximately 14%, or 30 million adult Americans, rank “below basic” in health literacy (Edwards, 2012). These data suggest that survey participants were not able to comprehend simple information concerning health. Thus far, the NAAL, administered by the Department of Education (DOE; Ishikawa, 2008), remains the sole source of national data on health literacy and is not currently being rescheduled. The following section explores the connection between literacy and health literacy and establishes health literacy as a separate area for continued research.

Health Literacy

As mentioned, the assessment of literacy has developed over time, and in the evolutionary process, the aspect of health remains deliberately integrated in the design of literacy measurement instruments to determine “health literacy.” Ishikawa and Yano (2008) propose that general literacy lays a foundation for literacy in health and healthcare constructs, and in doing so shapes one’s health literacy. These researchers deduced that those with low literacy would therefore have low health literacy (Fisher, 1999). It was through the appeal of health services researchers and those creating Healthy People 2010 that health items were incorporated into the NAAL (2003) survey.

The association between literacy and health is complicated. Literacy influences health awareness, health circumstance, and access to health services. As indicated by the most extensively cited definition and as discussed earlier in Section 1, health literacy is “the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions” (CDC, 2010). Zarcadoolas, Pleasant, and Greer (2005) contend that inadequate education and low literacy, inferior health status, and premature death were markedly interconnected in the United States as well as internationally. These authors determined that adequate health literacy became an area of concern as the health domain advanced through progressive technology and new knowledge. These researchers added to the definition of health literacy, remarking that it incorporates the expansive array of proficiencies that individuals utilize to search for health information and to estimate its use in choosing options that decrease health risks and enhance quality of life. A recent

shift in the notion of health literacy practice is that information-seeking is foremost. Understanding, evaluating, and communicating information follows, with the anticipated outcome of health behavior change (Jibala-Weiss, 2006). Low health literacy is a problem of considerable magnitude. Literature cited in subsequent segments establishes that the obstacle of low health literacy is not only challenging for individuals, healthcare providers, healthcare systems, and educational systems, but it is also a difficult issue compelling social change. The health literacy framework links cultures and societies, health systems, and educational systems as critical to health literacy and predictors of health outcomes, and thus healthcare costs. The health literacy model guides this inquiry, along with tenets from the diffusion of innovation theory acknowledged by Rogers (2003). These theoretical frameworks drive the innovation of health literacy improvement in educational systems, particularly for the unique student population at community colleges. The following section demonstrates the appropriateness of these conceptual models to this inquiry and supports their integration throughout this investigation.

Types of Health Literacy

There is an extensive debate in the field of literacy studies about the various types of literacy and their application in real-life situations. A model of health literacy classified health literacy into the following three different forms: functional health literacy, critical health literacy, and interactive health literacy (Nutbeam, 2008). According to this model, functional health literacy is based on traditional literacy skills, which include reading and writing and enhancement of an individual's knowledge by communication on health information. Interactive health literacy is described as the

development of skills to act on knowledge independently and the personal capacity for development. Finally, critical health literacy is described as the development of skills to support social, political, and individual action.

Different studies on health literacy have led to differing perspectives of its constituent parts. Eventually, the varied interactions through which consumers obtain, process, and understand health information will have an impact on how they make decisions concerning their healthcare as well as their health outcomes. Evidence shows a strong association between low health literacy and poorer outcomes for patients (DeWalt, Berkman, Sheridan, Lohr, & Pignone, 2004). In one study, individuals with insufficient health literacy were shown to have poorer degrees of knowledge and understanding concerning their condition (Smith & McCaffery, 2004). They were less likely to make appointments and could not adhere to medication regimens. In addition, these individuals were shown to make numerous medication errors, and they performed dismally with regard to self-care activities (Smith & McCaffery, 2004).

The Problem of Low Health Literacy

Clear communication and assurance of comprehension of the intended message are vital to advancing optimum health literacy. In order to maximize effective communication processes, carefully conveyed culturally and linguistically appropriate messages must be a part of any compulsory best-practice initiative. Forty-seven million Americans over the age of five speak a language other than English at home, and 21 million adults in the United States have limited English proficiency. Andrulis and Brach (2007) discuss the interactive association between literacy, culture, and language as

variables in managing the health of diverse individuals. They defined culture as the integrated pattern of human behavior that includes the thoughts, communications, actions, customs, beliefs, values, and institutions of a racial, ethnic, religious, or social group. Culture will affect those from whom health care is sought, how symptoms are described, how treatment options are considered, and whether medical treatment will be chosen and observed (Poureslami et al., 2011).

In contrast to the Andrulis and Brach (2007) definition, those sharing comparable cultures may not be of similar racial, ethnic, religious, or social groups. Some individuals may define themselves by other commonalities such as the military culture, an institutional culture of higher education, a culture of inclusion such as of scholarly inspiration, or by the way they obtain information—the ‘Net generation’ (Sorensen et al., 2012). Culture steers patterns of thinking, decision-making, and action. Social interaction advances culture, often involuntarily. It is through shared beliefs, meanings, and ideals that individuals learn their culture and thus learn their society (Lie, Carter-Pokras, Braun, & Coleman, 2012).

Culture and society are important factors to respect when taking into account their impact on health literacy. Mayer and Villaire (2009) described cultural competence as using cultural knowledge to complement the set of behaviors, attitudes, and policies that support a means of connection between the healthcare consumer and the healthcare provider/system. Healthcare providers must acknowledge their own cultural biases and accept that culturally competent healthcare delivery intends to support patients even if it conflicts with standard practices of care (Shaw et al., 2012).

Lye (1997) reported that patients tended to remember key points and were able to recall information they considered most significant. In a synthesis of several studies regarding health information recall, Lye contended recall had no relationship to patient age and had a low association with intellectual level. However, recall was better with an increased degree of previous medical knowledge. Surprisingly, he noted improved recall was significant in the more anxious patient, yet, conversely, recall was less when the patient perceived the physician to be anxious or apprehensive.

Cultural factors hold a significant position in predicting an individual's response to health communication. Communication practices dictated by beliefs and behaviors impact prioritization of needs, preferences, appraisal of locus of control, perception of illnesses, and the obligations of the individual, family, and community. Weinman, West, and McManus (1997), as mentioned in Chervin et al. (2012), identified patients as monitors and blunters. Monitors tended to seek information regarding their health difficulties, while the blunters wanted as little information as possible (Chervin et al., 2012).

Singleton and Krause (2009) assert that many cultural recommendations are recognized early. Inasmuch as a formal screening for health literacy is a proactive intervention for health literacy assessment, many of those trying to conceal the magnitude of their health literacy disability might not be amenable to screening examinations, nor would they be agreeable to documentation of the results in their medical record. Wolf et al. (2007) determined that 90% of patients acknowledged it would be helpful for health practitioners to be familiar with their health literacy difficulties; however, they insisted

providers be sensitive in their assessment, knowing the embarrassment it might create. These researchers alluded to previous studies asserting that many patients were often willing to have their low literacy level noted in their medical charts so that healthcare practitioners would be aware of their reading difficulties. In the Wolf et al. study, 10% of patients were averse to this idea (Lie et al., 2012).

Assessing Health Literacy

It is not always easy to recognize problems with health literacy, because patients have adopted well-practiced coping mechanisms and other avoidance behaviors. For instance, patients have been heard postponing decisions by claiming that they forgot their glasses or by claiming that they would read something when they were home. Those with low health literacy often feel embarrassed due to their lack of understanding. Actually, research shows that less than 50% will tell their loved ones about the problem.

In a review involving 182 patients and provider surveys conducted at an internal medicine clinic, it was reported that only 10% of the 32% of patients with low health literacy were identified (Bass et al., 2006). The frequency of low health literacy is so low that it warrants the use of the term “universal precautions” in order to reduce the risk that a particular patient cannot comprehend the health information provided. Universal precautions would presume that any given patient could have low health literacy. This would create an environment where care is augmented for the patient with or without sufficient health literacy levels (DeWalt et al., 2004).

One way of gaining subjective knowledge about a patient’s health literacy is the use of informal questions. This technique employs a neutral, nonjudgmental approach. In

some instances, these questions could be used informally as icebreakers (Wallace, Cassada, & Rogers, 2007). Close-ended questions should be avoided, since they can make a patient uncomfortable. There are several well-validated tools that can be used to assess health literacy. Word-recognition tests, which assess an individual's ability to identify and pronounce words, are often used as predictors of general reading ability (Friedman & Hoffman-Goetz, 2006).

Communication in Health Literacy

The National Action Plan to Improve Health Literacy (2010) of the US Department of Health and Human Services appeals for effective actions and emphasizes the significance of ensuring accessible, usable, and actionable health information. Many of the studies in the expanding body of research called "health literacy" show that a significant amount of health information is not usable. Obviously, exchange of information is an important concept of communication and a key element of health literacy (Rudd et al., 2007).

Since the 1960s, numerous public health and patient educators have highlighted the features of the health materials that hinder communication of essential information. Nowadays, assessment of health materials comprises information in print, on the Internet, and verbal exchange, and is evident in health and social services agencies (Martin, Schonlau, Haas, Derose, Rudd, & Loucks, 2011).

Communication is hindered when the staff has multiple countries of origin and is dealing with patients whose background is also divergent (Siebert et al., 2012).

Miscommunication about medications, dietary needs, and customs specific to the individual's origin are among the issues that exist.

The Veterans Administration (VA) has put together mandatory classes which discuss cultural traditions. Different ethnic traditions are celebrated, which allows the staff to discover the foods, dress, and dances of each culture. As a global care environment, good communication is essential to provide a partnership of care (Ball, personal communication, February 16, 2015).

Approaches to Improving Health Literacy

In the recent past, there has been a rapid emergence of evidence-based strategies geared toward addressing health literacy from the fields of health care, communication, adult education, and public health. Much of the evidence on interventions arises from streamlining and refining written materials, along with the use of video or other targeted tactics for patient education and improvement of patient-provider communication. These interventions have assumed various forms, including in-person Saturday school classes, computer-based participatory processes, plain language, and pictogram sheets. These interventions have had positive results and show that low health literacy levels can be addressed (Blanson et al., 2008).

The available evidence regarding health literacy backs the involvement of members of the target audience in the planning and testing of communication products. Such participatory design processes result in enhanced outcomes such as those for individuals with limited health literacy. Likewise, health professionals could make use of

established health literacy design principles and standards in order to improve health information and services.

For instance, studies have demonstrated that picture-based instructions encourage improved understanding of the proper way to take medicine and reduce prescription errors among patients. In addition, graphs could be an appealing and informative way of communicating health risk information to individuals having limited numeracy skills (Jibala et al., 2006).

Health Literacy and Empowerment

Effective use of health information is critical to empowerment. Patients who possess limited health literacy have a limited understanding and knowledge of health that lowers their independence in self-care and in decision-making (Jordan, Buchbinder, & Osborne, 2010). People also become disempowered because of a restricted understanding of what they are reading or what they are being told during consultations, particularly in cases where the health consultant is more paternalistic. The communication style of the healthcare practitioner can either support the exchange of information to enable empowerment or act as a barrier to information exchange, which can lead to disempowerment of patients. Since people with improved health literacy may be more empowered and enjoy better health outcomes, enhancing health literacy could lead to superior self-management, resulting in better health outcomes, better health decision-making, and increased ability to manage one's health.

Many health literacy descriptions come from health-promotion fields; however, few researchers have studied theorized health literacy using qualitative methods (Jordan

et al., 2010; Kwan, Frankish, & Rootman, 2006). Jordan et al.'s (2010) model of health literacy was developed using qualitative research. In this model, Jordan et al. created seven health literacy abilities associated with seeking, comprehending, and utilizing health information within a care setting.

These abilities can be summarized as understanding when and where to look for information, verbal communication skills necessary to describe one's health conditions, the ability to understand responses from health professionals, decisiveness, facility in processing information, skills in information application, and general literacy (Jordan et al., 2010). These abilities can be considered in the context of wider healthcare system factors and can help in informing healthcare professionals about the health literacy abilities of the patient and personal barriers that determine whether such abilities can be advanced and put into use. Nonetheless, the model of Jordan et al. (2010) is based on single interviews with study participants and may not be able to explain health literacy abilities that occur in various health contexts over time.

Larson, Norse, Howard, and Ross (2011) identified the role that communication plays in health literacy. Their study sought to establish whether there was clear communication between clinicians and their patients and how barriers in communication cause the patient's health literacy to decrease. Benning (2009) focused on the role of nurses in the improvement of health literacy. The study discussed the use of clinical reasoning by nurses to facilitate care, as well as their decision-making capabilities. Kolcaba (2006) revealed the impact of a creative environment on the patient's health by outlining the importance of giving comfort and information to patients who are admitted.

This literature review further explores the dimensions within which health literacy is understood. These include factors such as age, gender, and educational levels. The impact of low health literacy on healthcare costs is also explored. Koh et al. (2012) indicated that millions of Americans have low literacy health levels, yet health literacy has been discounted, with more focus given to improving healthcare in a bid to increase access and reduce costs. However, they note that if these efforts were redirected to health literacy, patient-centered care would be achieved faster and the cycle of costly crisis care avoided.

Koh, Brach, Harris, and Parchmen (2013) proposed a new care model aimed at improving the patient's engagement in healthcare. The proposed Health Literate Care Model recommends that all patients be viewed as bearing the risk of not understanding their conditions or treatment. Therefore, the clinician should take time to explain and confirm the patients' understanding. It further proposes that organizations adopting their model incorporate health literacy as an organizational value (Coulter et al., 2008).

Agho, Deason, and Rivers (2011) proposed the use of different assessment methods to determine the literacy levels of patients so as not to make any assumptions when administering or recommending treatment. They suggested the use of simplified written texts that would be given to patients in order to test their literacy. They also proposed the use of multimedia tools such as video recordings and PowerPoint presentations. Questionnaires containing short questions on issues such as the ability of the patient to fill out medical forms are also suggested as ways of determining patients' literacy.

In their study, Osborn, Paasche-Orlow, Bailey, Cooper, and Wolf (2011) aimed to establish the link between health literacy and physical activity, as well as self-reported health. The study population was hypertension patients recruited from clinics. It established that health education needed to be more literacy sensitive and that it should aim at enhancing patient self-care.

Bryant (2011) used the Rapid Estimates of Adult Literacy Medicine (REALM) as a screening tool that evaluates how individuals understand medical terminology. The study evaluates the effectiveness of the health education tools in current use while assessing the informational needs of clients with low levels of health literacy. The study also addressed the lack of reading skills in the population, along with the effect it has on the ability of individuals to understand their medical conditions and treatments and the health outcomes to expect. It also studied how this affected their chances of receiving the highest quality of care.

Different studies have been conducted to assess the level of health literacy in different groups in the health care system. A study by Ivanitskaya, Hanisko, Garrison, Janson, and Vibbert (2012) sought to establish the literacy levels of students by conducting a qualitative research on university students undertaking introductory health classes. A study by Manafo and Wong (2013) was aimed at establishing the information available for providing older patients with healthcare assistance, as well as self-care management.

This literature review reveals a gap in the awareness of health literacy levels of patients and patients' level of understanding regarding their care plans. This study seeks

to establish the level of health literacy in veterans by carrying out an assessment of team awareness to reveal the assistance patients require in understanding their plan of care. Similar studies (Agho et al., 2011; Bryant, 2011; Koh et al., 2013) identified in this literature review will act as a framework on which this study will be carried out.

Project and Methods Design

The patient-aligned care staff must recognize the importance of health literacy in the care of patients in order to encourage the veterans to participate in their care. In order to participate fully in their care, veterans need to understand their proposed plans. This quality-improvement project will measure the staff's assessment of veterans and assist nurses in facilitating the patients' understanding of their plan of care. The project is designed to increase the staff's awareness of health literacy using a clear communication questionnaire (Appendix B, C) that will be sent by e-mail to the participating clinic nurses. After compiling the questionnaire results, the staff will be trained using innovative learning techniques that will include the explanation of health literacy and a presentation on the consequences of the veterans completely understanding their own needs (Appendix I). A method of communicating a client's health literacy level to fellow caregivers will be discussed and will be implemented in the future. After the educational intervention, a pre-post questionnaire will be used to establish whether there was a statistically significant change in the knowledge of health literacy.

Theoretical Model

Theories that will be used include the comfort theory of Kolcaba et al. (2006) and the adult learning theory of Knowles et al. (2012). The comfort theory is a midrange

theory used in nursing practice and research. It is called a midrange theory because it has a limited number of concepts and propositions, a low abstraction level, and is easy to apply in actual practice. Kolcaba et al. stated that when nurses are comfortable in their environment, they act on behalf of patients. The adult learning theory of Knowles et al. maintains that learners build on their previous experiences. The comfort theory of Kolcaba et al. revolves around the following four elements: (a) the physical element, which deals with being in a safe, clean environment where nurses are secure in their roles; (b) the psycho-spiritual element, which incorporates nurses' ability to be creative in their work and being able to suggest alternative solutions; (c) the sociocultural element, which provides for interdisciplinary collaboration; and (d) the organizational culture element, which calls for having a strong nursing department that supports the staff.

Section 3: Methodology

The objective of this quality-improvement project was to use a qualitative questionnaire to evaluate a hospital staff's ability to recognize individuals with health literacy issues at the pre- and post-intervention stages. This project assisted nurses in developing their awareness of patient health literacy, how to recognize it, and how to approach patients so that they do not feel self-conscious. Based on interviews with the staff and nurse managers, the hospital had no formal way to assess a person's health-literacy level. Two questions were asked of the patient on admission to the hospital (as well as on admission to the clinics). The patients were asked their highest educational level and their preferred language.

Phase 1

Phase 1 consisted of sending out a questionnaire via e-mail (see Appendix B) to 299 ambulatory-care nurses. A 30% return rate, which is appropriate for an internal survey, was anticipated (PeoplePulse Exceptional Survey Solution, n.d.). The actual rate was 20%. It contained no demographic questions. The results were measured on a Likert scale. The data were then compiled, and based on the results, the ambulatory-care staff were then educated.

Phase II

The data from the first survey provided elements that needed to be empathized for the educational session. The education session for all clinic nurses was expected to be a 30- to 40-minute multimedia meeting using video presentations, live meeting presentations, and PowerPoint presentations. After reviewing the concept of health

literacy using discussion and question-and-answer sessions, a follow-up self-reporting questionnaire (see Appendix C) was sent to the ambulatory-care nursing staff, with a return rate of 30%.

Project Evaluation

The efficacy of the project was evaluated by comparing the results of the initial questionnaire to the follow-up questionnaire using descriptive statistics based on formulas in Minitab. A summative evaluation was used to establish the value of the project. The plan was that the staff would discuss the creation of a handoff tool that would be part of the electronic medical record cover sheet.

Setting and Data Gathering

The project took place at a VA facility in west central Florida. According to the Flesch-Kincaid grade-level metric, the questionnaires were at a 5.3 reading level. The questionnaires were distributed to 100% of participants ($N = 299$) at the main hospital and outlying clinics. No response was identified to ensure the anonymity of nurses' responses. After two weeks, the results were reviewed and tabulated. The expected response rate for this survey was 30%. After the presurvey, staff training was conducted and a follow-up survey was distributed by e-mail; the results were then tabulated and charted. The initial data were compared to the follow-up data to establish a culture change. The minimum increase in awareness was 10% .

There is no cost to the hospital other than the salaries of the participating nurses for the time taken to complete both the survey and intervention. Staff education will be

held at the clinics and will include a discussion of the various aspects of health literacy.

The educational intervention will focus on the results of the compiled data.

Ethics and Human Subjects Protection

Resnik (2011) stated that it is critical for every doctoral student to obey study ethical norms in order to uphold the values that are indispensable for collaborative work. The ethical standard was followed as required by Central Florida VA Hospital. The project was determined to be performance improvement per local review. Authorization to carry out the study will be acquired from Walden University's research and ethics committee.

Creswell (2008) emphasized that the most important issue in every study is that every participant should be granted an informed consent (Appendix J) prior to participating. In receiving the questionnaire via group e-mail, the 299 clinic nurses will have the option to answer, and hence an implied consent will occur. Before commencing the study, the doctoral student clarified the nature of the project and informed the participants that participation in the study was voluntary. Participants were not affected by their participation or nonparticipation in the study in any way. Anonymity was ensured throughout the study since participation was not obligatory, and identifiers were not used to distinguish the participants or their clinics. The Health Insurance Portability and Accountability Act of 1996 (HIPAA) Privacy, Security, and Breach Notification Rules do not apply to this study, since patient medical records are not involved.

Summary

Health literacy can be defined as the degree to which individuals can obtain, process, and understand the basic health information and services they need to make appropriate health decisions. Patients have difficulties evaluating information for credibility and quality. The inability to analyze risks and benefits of treatment plans, problems interpreting test results, and difficulties calculating dosages are significant issues. Some individuals have difficulty locating health information. All these issues contribute to an increase in hospital readmissions, poor medication compliance, and higher mortality rates. The objective of this study was to evaluate the staff ability to recognize individuals with health literacy difficulties using quantitative analysis of a Likert scale based questionnaire. The clinic nurses received this diagnostic evaluation electronically, and responses will be tabulated to establish a baseline. The staff was provided with training using accelerated learning techniques such as role-playing and reviewing educational materials (Appendix H). Then the same survey was e-mailed once again to establish whether a behavior change has taken place and to measure any possible increased ability to recognize health literacy on the part of the nurses.

Section 4: Findings, Discussion and Implications

Health literacy is often defined as the degree to which individuals can obtain, process, and understand the basic health information and services they need to make appropriate health decisions (Nutbeam, 2008). The clinic staff encourages patients to participate in their plan of care. When patients had difficulty evaluating information for credibility and quality, they were unable to judge what care was appropriate for them. The inability to analyze risks and benefits of treatment plans, problems interpreting test results, and difficulties calculating dosages are significant issues. Some individuals also have difficulty locating health information. All these issues contribute to an increase in hospital readmissions, poor medication compliance, and higher mortality rates. The objective of this study was to evaluate the staff's ability to recognize individuals with health literacy difficulties using a quantitative analysis such as a Likert scale. The clinic nurses received this diagnostic evaluation electronically, and responses were tabulated to establish a baseline. The staff was provided with training using accelerated, fast-tracked learning techniques such as role-playing and reviewing educational materials (Appendix H). Then the same survey was e-mailed to establish whether a behavior change had taken place and to measure any possible increased ability on the part of the nurses to recognize health literacy.

Literature Review

This literature review revealed a gap in the awareness of health literacy levels of patients and patients' level of understanding of their health care plans. This study sought to establish the level of health literacy in veterans by carrying out an assessment of team

awareness to reveal the assistance patients require in understanding their plan of care. Similar studies (Agho et al., 2011; Bryant, 2011; Koh et al., 2013) identified in this literature review acted as a framework on which this study was carried out.

Phase I

After receiving IRB approval (#01-17-15-0381981), a questionnaire was e-mailed (see Appendix B) to 299 ambulatory-care clinic nursing staff. There were no demographic questions incorporated in the survey. It was a self-reporting survey measured with a Likert scale, one being almost never and five being almost always. A 30% return rate of the 299 clinic nurses was anticipated, which was appropriate for an internal survey (PeoplePulse Exceptional Survey solutions, n.d.). The data was then compiled, and ambulatory-care staff were trained based on the results.

Phase II

The data from the first survey provided element prioritization for the educational session. The education session for all the clinic nurses was scheduled for a 30- to 40-minute long multimedia meeting, using video, live meeting, and PowerPoint presentations. After reviewing the concept of health literacy using discussion and question-and-answer sessions, a follow-up self-reporting questionnaire (see Appendix C) was sent to the ambulatory-care nursing staff.

Results

The results of this quality improvement project were products of assessment, an educational intervention, and reassessment.

Assessment

A self-reporting questionnaire was e-mailed to the clinic nurses with a letter of invitation to participate in this quality improvement project. After two weeks, 61 staff (20%) of the 299 staff responded. A multimedia presentation was then sent to the staff. After two weeks, a follow-up questionnaire similar to the pre-educational questionnaire was sent electronically to all clinic staff nurses. After two weeks, 91 (30 of the staff) responded.

Table 2

Questionnaire, weighted averages

<u>Item</u>	<u>PRE</u>	<u>POST</u>
I am able to access information on my patient's health literacy	3.56	3.30
I am able to access information on my patient's barriers to communication	3.64	3.60
I use Teach Back as a patient education method	4.23	4.00
I use demonstration as a patient education method	4.33	4.13
I use reading aloud as a patient education method	3.39	3.67
I present 2 to 3 concepts at a time	3.08	3.08
I use plain language	4.75	4.50
I speak slowly	4.38	4.31
I use written materials	4.26	4.34
I use pictures and drawing	3.13	3.56
I include significant others	4.31	4.20
I include techniques to provide culturally competent care	3.89	3.91
I can easily locate information on a patient's barriers to communication	3.45	3.41
I change patient education techniques based on patient health literacy information	4.11	3.92

An independent-samples *t*-test was conducted to determine whether an educational intervention increased the awareness of the clinic nurses concerning health literacy. There was an insignificant difference in the pre-educational scores ($M = 3.854$,

$SD = 0.426$) and the post-educational scores ($M = 3.894$, $SD = 0.519$): $t = 0.22$, $p = 0.825$.

These results show a failure to reject the null hypothesis and suggest that this intervention does not have an effect on the staff awareness of health literacy.

Two additional questions were included as part of the post-intervention questionnaire. The first questioned if the clear communication profile changed their idea about what patients understand. The staff were given choices of yes, no, and “does not apply.” Of the participants, 66.29% said “yes,” 16.85% replied “no,” and 16.85% stated that the profile was not applicable.

The second additional question asked the following regarding the individual’s ideas regarding patient learning needs: “did you overestimate,” underestimate,” or have it “just right.” Those who overestimated were at the lowest level of 4.88%, underestimated were 43.90%, and those who replied “just right” were at 51.22%.

Discussion

This project did not show a definitive difference between the pre-intervention questionnaire and the post-intervention questionnaire. There was a higher assertion on item one that the staff could locate a client’s health literacy level (3.56), while on the post-intervention there was a different assertion (3.30). This indicates that there was a change in the staff’s perspective about locating a health literacy level on the client’s record. In reviewing the raw data, a change in awareness was identified.

Table 3

Raw Scores

1. I am able to access information on my patient’s health literacy.
Almost never Seldom Half the time Often Almost always

PRE	8	6	9	21	18
POST	13	17	10	28	21
2. I am able to access information on my patient's barriers to communication.					
	Almost never	Seldom	Half the time	Often	Almost always
PRE	5	8	9	21	18
POST	10	14	6	32	28
3. I use Teach Back as a patient education method.					
	Almost never	Seldom	Half the time	Often	Almost always
PRE	0	2	6	28	24
POST	3	3	13	43	28
4. I use demonstration as a patient education method.					
	Almost never	Seldom	Half the time	Often	Almost always
PRE	0	0	5	31	25
POST	0	5	9	46	31
5. I use reading aloud as a patient education method.					
	Almost never	Seldom	Half the time	Often	Almost always
PRE	3	13	13	23	10
POST	5	15	9	37	24
6. I present 2 to 3 concepts at a time.					
	Almost never	Seldom	Half the time	Often	Almost always
PRE	5	16	14	23	4
POST	9	24	20	25	12
7. I use plain language.					
	Almost never	Seldom	Half the time	Often	Almost always
PRE	0	0	0	15	46
POST	0	2	3	32	51
8. I speak slowly.					
	Almost never	Seldom	Half the time	Often	Almost always
PRE	0	1	5	24	30
POST	0	1	8	43	38
9. I use written materials.					
	Almost never	Seldom	Half the time	Often	Almost always
PRE	0	1	7	29	25
POST	0	0	11	37	42
10. I use pictures and drawing					
	Almost never	Seldom	Half the time	Often	Almost always
PRE	6	15	14	17	9
POST	2	20	12	28	18

11. I include significant others.					
	Almost never	Seldom	Half the time	Often	Almost always
PRE	0	2	6	25	26
POST	0	5	13	32	41
12. I include techniques to provide culturally competent care.					
	Almost never	Seldom	Half the time	Often	Almost always
PRE	2	4	12	24	19
POST	3	8	11	40	28
13. I can easily locate information on a patient's barriers to communication.					
	Almost never	Seldom	Half the time	Often	Almost always
PRE	8	10	7	20	17
POST	10	15	12	29	22
14. I change patient education techniques based on patient health literacy information.					
	Almost never	Seldom	Half the time	Often	Almost always
PRE	4	3	5	20	30
POST	5	5	11	39	29

A change in awareness was noted in the raw scores concerning where to find health literacy levels, barriers to health literacy, and adjusting the educational style to accommodate the patient's health literacy needs.

Implications for Practice

Health literacy stems from the ability of clients to comprehend their plan of care. The clinic nurse must use a method of communication that has been established as an aid to educating each patient. In a recently published article, Haun et al. (2015) identified the need to create various forms of education for the patients.

Project Assessment

Strengths

Though the statistical means (*m*) were close and the *p* value was high, the staff acknowledged that the self-reporting questionnaire changed the way they looked at health literacy. In discussion with the nursing staff, they sought to find ways to clearly

communicate the learning needs of their patients. The need for a handoff was acknowledged as a method to prepare the nurse for educating a particular patient.

Limitations

A number of challenges and limitations in this quality improvement initiative and the analysis did arise. The first limitation regarded the sampling process. It was the hope of the project manager that all clinic nurses working in ambulatory care would participate in this quality-improvement project. However, this may not be possible due to logistical concerns.

Each nurse was assigned to a physician who had a specific size panel. The nurse worked with the physician, taking patients' calls and performing follow assessments. The nurses had time to scan their e-mails but not to read each item. Even though the invitation to participate in this quality improvement was sent with the link to the survey, many did not reply.

The project was confined to the ambulatory-care nurses who responded to an anonymous questionnaire and in doing so rendered an implied consent. The hospital's leadership approval of the improvement project was also important in gaining the trust from the study participants' perspective. A potential limitation was the personal relationship the project manager had with many of the subjects. This relationship may result in reluctant participation whereby participants respond to inquiries in a way they perceive the project manager wishes to hear instead of exploring their biases and/or current practice patient care approaches.

Recommendations

Health literacy has and continues to increase the cost of healthcare. In a 2015 retrospective study of 92,749 North Florida/South Georgia veterans with health literacy issues (Haun et al., 2015), the authors state that enhanced efforts should be made to use alternate methods for patient education.

In order to determine which educational strategies are preferential for our veterans, some type of handoff must be created. At the central Florida Veterans Hospital there is an area on the electronic chart front page that indicates the patient's preferred language. In this area, the staff proposes to add a drop-down menu regarding the patient's preferred learning style. When a patient is seen in the clinic, the nurse can check this patient preference area and educate the patient in his or her preferred learning style.

This enhanced template will have to go through an approval process. If approved, further studies can then be recommended to establish approaches to educate our veteran patients.

Analysis of Self

When I started this program, I had been a nurse for 45 years, and as I finish, I am a nurse of 48 years. As a student, one draws on previous experiences to answer questions. Some of those experiences are from verbal feedback, and some are from research subjects. In January 2013, I completed the DISC survey. The results of that survey have proved to be enlightening. My dominant element was influencing, the classical pattern was that of persuader. Mark Twain noted in his 1924 autobiography "There is no such

thing as a new idea.” In the discussion points and in defending my proposal, many answers came naturally to me; however, I had to remember that citations were important.

My journey as a student in the Doctor of Nursing Practice Program was emotional in working through the various stages of project development. Having high standards and always wanting to achieve them led to self-doubt. Being a risk-taker and wanting to know the rationale for various stages was frustrating to me.

The challenge for me in this program was to mix my work experience with my classwork. I had to push myself to expound on issues and concerns rather than merely stating them. Some progression has been noted using the DNP essentials as a framework. As preceptor for a DNP student, I see what I was struggling with at her current stage of forming her question, framing her design, and wanting to do too much.

As I complete this journey as a student, I will continue my work as a scholar as well as an educator. Reviewing concepts, questioning decisions, and how they are arrived at has always been in my nature. I will continue to research the rationale.

Summary

Health literacy can be defined as the degree to which individuals can obtain, process, and understand the basic health information and services they need to make appropriate health decisions. Patients have difficulties evaluating information for credibility and quality. The inability to analyze risks and benefits of treatment plans, problems interpreting test results, and difficulties calculating dosages are significant issues. Some individuals have difficulty locating health information. All these issues contribute to an increase in hospital readmissions, poor medication compliance, and

higher mortality rates. The objective of this study was to evaluate the staff's ability to recognize individuals with health literacy difficulties using a quantitative analysis with a Likert scale. The clinic nurses received this diagnostic evaluation electronically, and responses will be tabulated to establish a baseline. The staff was provided with training using accelerated learning techniques such as role-playing and reviewing educational materials (Appendix H). Then the same survey was e-mailed once again to establish whether a behavior change has taken place and to measure any possible increased ability on the part of the nurses to recognize health literacy. In comparing data with the results from the pre-questionnaire, there was a slight change noted.

Section 5: Executive Summary

Health literacy continues to be a looming issue today, which leads to individuals not following their plan of care, not asking the appropriate questions, with increasing revisits to the emergency department and admissions to the hospital. Health literacy is not limited to one group of individuals, one economic group, or an educational group.

Anyone in the United States can experience health literacy.

Clear communication remains an important dynamic between patients and their clinic nurses. The education of the nurses who work with an assigned patient panel must include the recognition of the signs of patients who do not understand their plan of care. The author presented her project to the American Academy of Ambulatory Care Nursing. At that time, the project data had not been collected. The project was again presented to the staff during Nurses Week, without data. Each time, the project generated discussion. The premise was that everyone must be assumed to have a health literacy issue, no matter what educational level he or she possesses. Veterans, who are depressed, have suffered a traumatic brain injury, and have PTSD, as well as those who have not suffered such injuries, are candidates.

I recommend that a patient preference template be constructed and that it be placed on the cover sheet of the electronic medical record. This template will contain language preference and learning style preference. It will act as a handoff for the interdisciplinary team, who might be seeing the client for the first time. Education will occur when the template is in place on the cover sheet. A follow-up questionnaire will be sent out to evaluate the effectiveness of the preference template. Assisting the nurse in

meeting the educational needs of veterans will lead to care that is more efficient, that offers improved outcomes and lowers health care costs.

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Appendix A: Summary Table of Analyzed Articles

Table 1: Summary Table of Analyzed Articles

Citation	Conceptual Framework/ Theory	Main finding/purpose of the study.	Research method	Strengths of study	Weaknesses	Level
Larson, M., Nourse, M., Howard, V., & Ross, D. (2011). Health Literacy, Clear Communication, Prompting, and Clinicians' Self-Reported Response. <i>Federal Practitioner</i> , (26)8.	Health belief Model.	Reminders on electronic record could be beneficial.	Education followed by questionnaire.	Staff not aware of client's literacy needs,	Two hundred and twenty questionnaires mailed, 40 returned.	C
Tomcavage, J., Littlewood, D., Salek, D., & Sciandra, J. (2012). Advancing the Role of Nursing in the Medical Home Model. <i>Nursing Administration Quarterly</i> , (36)3.	Geisinger's PHN model.	Impact of readmissions penalties.	Case study.	Role of nurse in the medical home model (PACT).	Need for connectivity, patient handoff.	C
Ownby, R., Waldrop-Valverde, D., & Taha, J. (2012). Why is Health Literacy Related to Health? An exploration among US National Assessment of Adult Literacy participants 40 years of age and older. <i>Educational Gerontology</i> , (38)11.	Geisinger's PHN Model.	28% decrease in readmissions.	Case studies patient satisfaction survey nursing satisfaction survey.	Nurses role in healthcare transformation.	Difficulty getting trained nurse.	C
Cooper, E. (2009). Creating a Culture of Professional Development: A Milestone Pathway Tool for Registered Nurses. <i>Journal of Continuing Education in Nursing</i> , (40)11.	Knowles adult learning theory Benner.	Personal growth plan.	Professional development tool.	Milestone pathway tool.	No mention of complacent staff.	

Ivanitskaya, L., Hanisko, J., Garrison, J., Janson, S., & Vibbert, D. (2012). Developing health information literacy: a needs analysis from the perspective of preprofessional health students. <i>Journal Medical Lib Association, 100</i> (4).	Comfort theory skill building.	Importance of providing health preprofessional students with resources.	Qualitative design.	Students reflected on the need to change their behavior to become mindful information seekers.	Students noted that they rely on librarian.	C
Yip, M., (2012). A Health Literacy Model for English Speaking Populations: Sources, Context, Process and Outcomes. <i>Contemporary Nurse, 40</i> (2).	Health literacy model for limited English proficient population.	Low health literacy levels are affected by social media.	Review	A new health literacy model composed four domains: sources context, process, and outcome.	Little consistency in measuring health literacy.	D
Shaw, E., Howard, J., West, D. Crabtree, B., Nease, D., Tutt, B., & Nutting, P. (2012). The Role of the Champion in Primary Care Change efforts. <i>Journal American board Family Medicine, 25</i> (5).	Change theory.	Practice transformation requires sustained improvement.	Qualitative case scenarios.	Two types of champions.	Challenges.	C
Edwards, M., Wood, F., Davies, M., & Edwards, A. (2012). The development of health literacy in patients with a long-term health condition: The health literacy pathway model <i>BMC Public Health, 12</i> :130.	Health literacy pathway model.	Clients can overcome barriers.	Qualitative interviews.	Clients can be more active in their care.	Low literacy population not included.	C
Weld, K., Padden, D., Ramsey, G., & Garmen Bibb, S. (2008) A Framework for Guiding Health Literacy Research in Populations with Universal Access to Healthcare. <i>Advances in Nursing Science, (31)</i> 4.	Health belief model; Zarcadoola, Pleasant, and Greer (ZPG) model.	New instruments needed.	Quantitative.	Discussion of theoretical frameworks	More research needed	C
Goodwin, M., Sener, I., & Steiner, S. (2007). A Novel Theory for Nursing Education. <i>Journal of Holistic Nursing, (25)</i> 4.	Kolcaba comfort theory.	Learners are open when in a comfortable environment.	Application and adaption of theory.	Discussion of learner-centered care.	Application to teams.	C

Dickens, C. & Piano, M. (2013). Health Literacy and Nursing: An Update. <i>American Journal of Nursing, 113</i> (6), 52-58.				C
Banning, M. (2008). Clinical reasoning and its application to nursing: Concepts and research studies. <i>Nurse Education in Practice, 8</i> (3), 177-183.	Clinical Reasoning.		Qualitative.	C
Agho, A. O., Deason, L. M., & Rivers, P. A. (2011). Provider Perceptions Of Health Literacy in an Urban Community. <i>International Journal of Health Promotion & Education, 49</i> (2), 36-43.				C
Bryant, A. (2011). Low Health Literacy Affecting the Client's Ability to Receive Adequate Health Care Education. <i>JOCEPS: The Journal of Chi Eta Phi Sorority, 55</i> (1), 7-11.				C

Appendix B: Pretraining Questionnaire

Please answer the following questions about the techniques you use. Read the statements and select 1 through 5 to indicate how often you use each technique:

1 = almost never, 2 = seldom, 3 = half the time, 4 = often, 5 = almost always.

- | | |
|--|-----------|
| 1. I am able to access information on my patient's health literacy | 1 2 3 4 5 |
| 2. I am able to access information on my patient's barriers to communication | 1 2 3 4 5 |
| 3. I use Teach Back as a patient education method | 1 2 3 4 5 |
| 4. I use demonstration as a patient education method | 1 2 3 4 5 |
| 5. I use reading aloud as a patient education method | 1 2 3 4 5 |
| 6. I present 2 to 3 concepts at a time | 1 2 3 4 5 |
| 7. I use plain language | 1 2 3 4 5 |
| 8. I speak slowly | 1 2 3 4 5 |
| 9. I use written materials | 1 2 3 4 5 |
| 10. I use pictures and drawing | 1 2 3 4 5 |
| 11. I include significant others | 1 2 3 4 5 |
| 12. I include techniques to provide culturally competent care | 1 2 3 4 5 |
| 13. I can easily locate information on a patient's barriers to communication | 1 2 3 4 5 |
| 14. I change patient education techniques based on patient health literacy information | 1 2 3 4 5 |

Appendix C: Post training Questionnaire

Please answer the following questions about the techniques you use. Read the statements and select 1 through 5 to indicate how often you use each technique.

1 = almost never, 2 = seldom, 3 = half the time, 4 = often, 5 = almost always

- | | |
|--|-----------|
| 1. I am able to access information on my patient's health literacy | 1 2 3 4 5 |
| 2. I am able to access information on my patient's barriers to communication | 1 2 3 4 5 |
| 3. I use Teach Back as a patient education method | 1 2 3 4 5 |
| 4. I use demonstration as a patient education method | 1 2 3 4 5 |
| 5. I use reading aloud as a patient education method | 1 2 3 4 5 |
| 6. I present 2 to 3 concepts at a time | 1 2 3 4 5 |
| 7. I use plain language | 1 2 3 4 5 |
| 8. I speak slowly | 1 2 3 4 5 |
| 9. I use written materials | 1 2 3 4 5 |
| 10. I use pictures and drawing | 1 2 3 4 5 |
| 11. I include significant others | 1 2 3 4 5 |
| 12. I include techniques to provide culturally competent care | 1 2 3 4 5 |
| 13. I can easily locate information on a patient's barriers to communication | 1 2 3 4 5 |
| 14. I change patient education techniques based on patient health literacy information | 1 2 3 4 5 |

The Clear Communication Profile changed my idea about what patients understand.

Yes

No

If your ideas about patient-learning needs changed, did you:

Overestimate their learning needs

Underestimate their learning needs

Estimated learning needs about right

Appendix D: Permission for Use

Thank you for contacting us regarding the Clear Communications questionnaire. You have our permission to use the questionnaire that appeared in the August 2011 issue of Federal Practitioner.

Mary E. Nourse, MSLS
Supervisor, Learning Resources Service
Erie VA Medical Center
135 East 38th Street
Erie, Pennsylvania 16504

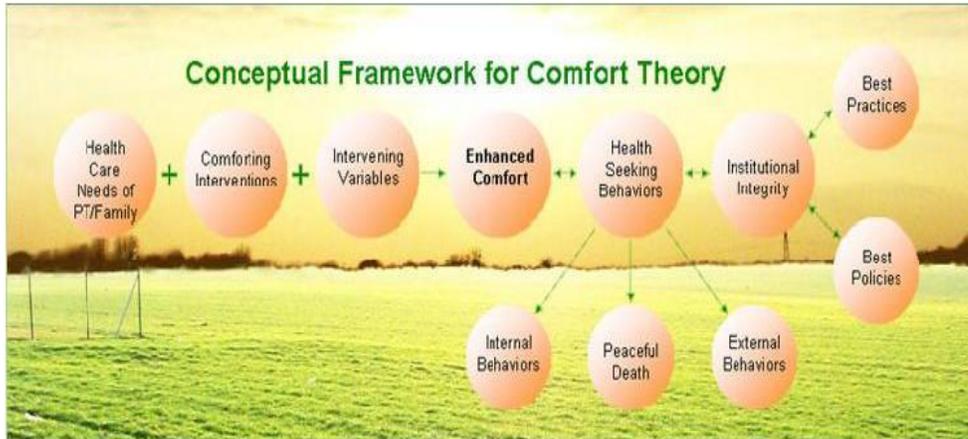
From: Wilson, Carol B.
Sent: Wednesday, November 13, 2013 10:08 AM
To: larson.meg@va.gov; Nourse, Mary
Subject: Clear Communications Questionnaire

Dr. Larson,

I am currently attending Walden University DNP program and have chosen my DNP subject as Health Literacy. My approach will be to assess the Clinic nursing staff's ability to recognize veterans who have health literacy issues. I am asking for your permission to use the questionnaire that you used in your August 2011 Federal Practitioner article on Health Literacy. Attached is my abstract.

Thanks,
Carol

Appendix E: Kolcaba's Comfort Theory

**Figure 1: Kolcaba's Comfort Theory**

Appendix F: Permission

On Friday, June 13, 2014 5:23 PM, Kathy Kolcaba <kathykolcaba@yahoo.com> wrote:

You have my permission!! Dr. K

Sent from my iPhone

On Jun 10, 2014, at 9:32 AM, carol wilson <majbabs45@yahoo.com> wrote:

Good morning Dr. Kolcaba,

My name is Carol Wilson. I am an old diploma nurse (Bellevue School of Nursing) who at 68 years old is in the process of submitting my DNP proposal to Walden University on Health Literacy in the outpatient veteran population. It is a quality improvement project that first will assess the nurse's awareness of health literacy, educating the staff and then reassessing their awareness.

I am requesting your permission to use your Comfort theory.

Thank You

Appendix G: Invitation

James A. Haley VA & Walden University Invitation to Participate in QI Project

Improving Health Literacy with Clear Communication
Date: 4/17/2015

Dear Ambulatory Care Nursing Group,

Carol Wilson, Doctor of Nursing Practice (DNP) student in the Walden University DNP program, invites you to participate in a VA quality improvement (QI) research project.

The purpose of the QI capstone project is to increase the awareness of health literacy in our patient population.

You are eligible to participate in this QI project as a member of the ambulatory care staff. A link to survey monkey will be provided with this email. An educational intervention will then be provided via a presentation disseminated using Outlook. A post intervention questionnaire link will then be sent to the ambulatory care nurses group.

The results of the pre and post education surveys will be analyzed using descriptive statistics.

No anticipated risk is expected with the QI project. The emails will be sent to the group not individuals. The questionnaires do not require identifiers. Anonymity will be preserved.

Your participation in this QI is voluntary and you may change your mind at any time. .
Sincerely,

Carol Wilson MSN, MBA/TM, CCRN, CEN
Clinical Nurse Educator

Appendix H: Educational Design

 Program Title: Improving Health Literacy with Clear Communication

OBJECTIVES :	SUBJECT MATTER	TIME SCHEDULE & INSTRUCTOR	TEACHING METHODS/STRATEGIES & EVALUATION METHOD(S)	EVALUATION CATEGORY
1. Define Health Literacy	Literacy definition; Health Literacy definition	Carol Wilson MSN, MBA /TM CCRN,CEN 20 Minutes	Video/Discussion AMA Health Literacy – short version http://www.youtube.com/watch?v=ubPkdpGH WAQ	Knowledge, skills
2. List problems that attribute to Health Literacy	Stress Traumatic Brain Injury; Post Traumatic Stress Syndrome	Carol Wilson MSN, MBA/TM, CCRN,CEN 5 minutes	Lecture, article, discussion, question and answer, evaluation	Knowledge, skills
3. Identify the effects of Health	Medication noncompliance	Carol Wilson MSN, MBA/TM,	Lecture, article, discussion, question and answer, evaluation	Knowledge, skills

Literacy	Plan of Care noncompliance	CCRN,CEN 5 minutes		
4. Discuss ways nurses can appropriately tailor specific educational needs of each patient.	Preferred language; Preferred learning style	Carol Wilson MSN, MBA/TM, CCRN,CEN 5 minutes	Lecture, article, discussion, question and answer, evaluation	Knowledge, skills
		TOTAL TIME = 35 min.	See reference list	

Appendix I: Proposed Staff Education

Wilson Carol PPT93141 - Microsoft PowerPoint

4:52 PM
9/8/2014

File Home Insert Design Transitions Animations Slide Show Review View

Improving Health Literacy with Clear Communication

Literacy

- Ability to read and write.
- <http://www.hhs.gov/ohrt/>

Health Literacy

- Ability to read, understand, and action health information.
- Effects on age, race, and income levels.
- <http://www.hhs.gov/ohrt/>
- <http://www.hhs.gov/ohrt/>

Contributors to Health Literacy

- Literacy
- Stress
- Cognitive dysfunction
- Depression
- Pain/Trauma/ Stress Syndrome
- Traumatic Brain Injury

Effects Of Health Literacy

- Low health literacy results in:
- Poorer outcomes
- Increased mortality
- Lower medication adherence
- Poorer ability to interpret labels

Clear Communication

- Joint Commission
 - PC-01.02.01 EP1 The interdisciplinary team identifies the patient's health literacy needs. The system may be used to disseminate their understanding of information provided by explaining it in their own words.
 - PC-01.02.01 EP2 The primary care team incorporates the patient's health literacy needs into the patient's education.

Clear Communication

- Is English your primary language?
- What is your primary language?
- What is your preferred language?
- What is your preferred learning style?
- Handout
- Range of handout
- Individual map
- Video
- Communication
- Return demonstration

Questions

References

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Slide Sorter "Office Theme" 100%