HEALTH LITERACY: AN EDUCATIONAL PROGRAM FOR THE ACUTE CARE PROFESSIONAL NURSE

by

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Abstract

Health literacy is fundamental to promotion, prevention, and maintenance of one's health. It is pertinent to one's ability to obtain, understand, and use information in order to make informed healthcare decisions. The provision of patient-centered nursing care is required by Centers for Medicare and Medicaid Services and accreditation agencies. An acute care hospital in the Midwest experienced low patient satisfaction scores specific to communication with the nursing staff. In order to increase these scores, a needs assessment was performed to determine the nursing staffs' knowledge of definition of health literacy, its attributes, impact on health disparities, and patient-centered care. Based on the results, a pilot health literacy educational program for the acute nurse was developed, implemented, and evaluated to meet this need. One hundred and twenty-five nurses out of 365 (34%) completed a classroom course and 599 nurses out of 706 (85%) took an additional web-based course. As the result of the course, 563 (94%) of the nurses were able to define health literacy, 575 (96%) were able to identify attributes of health literacy, 587 (98%) were able to identify different types of health literacy, 563 (94%) were able to identify strategies for assessing the attributes of health literacy, and 581 (97%) were able to identify nursing interventions to bridge health literacy gaps specific patient-centered education. Outcomes specific to patient satisfaction and nurse sensitive indicators were not measured due to changes in the hospital's patient satisfaction reporting mechanisms. The evidence-based practice change, synthesis of the evidence to support the change, outcome evaluation methodologies, the results, strength and limitations of the program and future implications for nursing are discussed.

Keywords: health literacy, nursing, patient education

Health Literacy: An Educational Program for the Acute Care Professional Nurse

Nearly 90 million Americans lack essential health literacy skills to care for themselves (Chen, Yehle, Plake, Murawski, & Mason, 2011). Health literacy is essential for health promotion, prevention, and maintenance. Health literacy pertains to the ability to obtain, comprehend, and utilize basic information about one's health and resources that are necessary to make informed decisions (Mitty & Flores, 2008; U. S. Department of Health and Human Services, 2012). It includes the capacity to successfully care for oneself (Cutillo, 2007; Dennison et al., 2011; Walker & Gerard, 2010). The provision of patient-centered care and education is an integral role of the nurse to meeting this need.

An acute care hospital in the Midwest experienced low patient satisfaction scores specific to communication with the nursing staff. The patient population is 88% non-Caucasian which includes Asians, Hispanic, and African Americans (Professional Research Consultants, Inc., 2013). In order to increase these scores, a needs assessment was performed to determine the nursing staffs' knowledge of the definition of health literacy, its attributes, impact on health disparities, and patient-centered care. Patients who understand their health care needs have the potential to be more satisfied with their health care.

Based on the results, a pilot health literacy educational program for the acute care nurse was developed, implemented, and evaluated to meet this need. The intent of this paper is to describe processes for the evidence-based practice change, synthesis of the evidence to support the change, outcome evaluation methodologies, and the results of the program. Strengths and limitations of the program and future implications for nursing are discussed.

Background and Significance

Limited health literacy is associated with poor health outcomes and higher health care costs (U.S. Department of Health and Human Services, 2012; Weld, Padden, Ramsey, & Bibb, 2008). Thirty day readmission rates in heart failure patients are also affected by health literacy (Dennison et al., 2011; McNaughton et al., 2012). Low health literacy is found across all demographic groups to include non-white racial and ethnic groups, the elderly, individuals with lower socioeconomic status and education, people with physical and mental disabilities, those with low English proficiency (LEP), and non-native speakers of English (U. S. Department of Health and Human Resources, 2012).

Health disparity and health literacy are entwined as a symbiotic relationship. Each has an impact on each other in relationship to comprehension of health care providers' recommendations, health care promotion, and preventative measures. Health care provider and patient shared decision making is contingent upon effectively managing this relationship. Without appropriately trained health care professionals, health disparities will continue in the United States and on a global basis. The profession of nursing has a moral and ethical obligation to aid in the delivery of safe and quality driven patient -centered relationship based care. This is founded in Provision I of the Code of Ethics for Nurse (American Nurses Association [ANA], 2010). The provision states that nurses in all professional relationships, practice with compassion and respect for the inherent dignity, worth, and uniqueness of every individual, with unrestricted considerations of social or economic status, personal attributes, or the nature of health problems (p. 143).

Nurses at the acute care hospital in the Midwest document the assessment of each patient's barriers to health education on a standardized patient education form in the

electronic medical record (EMR). The form has boxes that identify patient barriers to education. The nurse identifies the specific barrier(s) by placing an x next to the appropriate box. Literacy is one of the options to be checked. However, there is no standardized definition of literacy. Lack of standardization lends itself to subjective interpretation and discordance with the delivery of patient-centered education and care. A health literacy educational program is an innovative approach to standardize and enhance the quality nursing care and patient education. An increase in nurse sensitive patient satisfaction scores may be realized.

Purpose and Goal

The United States is home to one of the most ethnically and culturally heterogeneous populations in the world (Halloran, 2009). Hospitals are being asked to enhance communication utilizing a patient-centered approach and monitor how well they are meeting this expectation (Weidner, Brach, Slaughter, & Hays, 2012). The professional nurse is required by accreditation agencies such as Center for Medicaid Medicare Services, The Joint Commission, and Healthcare Facility Accreditation Program to provide patient-centered education and care. The purpose of the project is to meet these needs at this particular Midwestern hospital. The aim of the project is to provide an evidenced-based foundation to assist the nurse in understanding the phenomena of health literacy, its attributes, and impact on the provision of patient-centered education and care during the hospital phase of healing. A subsequent increase in patient satisfaction related to nurse communication may be realized.

Summary of the Literature

A rigorous literature review of the Ovid and Cochrane Database of Systematic Review using the key phrases *health literacy, patient education, and nursing* revealed a robust array of relevant, current, and credible scholarly articles on the attributes of health literacy and its impact on patient centered care, education, and health disparities. Each of which is integral to the role of

the nurse in relationship to patient education and care and ultimately patient satisfaction.

Approximately 310 articles were reviewed. Articles were chosen from nursing and non-nursing health care professionals working in the acute and non-acute care setting. A synthesis of the evidence revealed the following.

Health literacy is affected by cultural beliefs specific to health and illness, language, family relationships, communication styles, gender norms, misconceptions about Western medicine, race, ethnicity, length of time in the United States, and immigration status (Chen, Yehle, Plake, Murawski, & Mason, 2011; Cutillo, 2007; Ganzer, Insel, & Ritter, 2012; Shaw, Hueber, Armi, Orzech, & Vivian, 2008). Ennis, Hawthorne, and Frownfelter (2012) cited gender as an attribute that has an impact upon health literacy. The patient's level of formal education was also found to have an impact (Chen, Yehle, Plake, Muraski, & Mason, 2011; Cutillo, 2007; Dennison et al., 2011; and McCarthy et al., 2012). Research indicated that patient educational materials need to be at the 6th grade level (Sommers & Mahadevan, 2010).

Ruppar, Conn, & Russel (2008) found that cognitive and physical changes related to aging, beliefs specific to use of homeopathic and holistic medicine, personal and financial support, perceptions of health and wellness, previous experiences with health care, the location and amount of time spent with health care providers impact health literacy. Dennison et al. (2010) also noted that socio-demographics had an impact upon inadequate health literacy. Working memory and cognition were also identified as attributes that influence compliance with health care provider's recommendations (Cutillo, 2007; Dennison et al., 2011; Ennis, Hawthorne, & Frownfelter, 2012; Ganzer, Insel, & Ritter, 2012; McCarthy, et al., 2012; Walker & Gerard, 2010).

Numeracy, the ability to use and understand numbers, is essential for effective self – management (McNaughton et al., 2012 & Walker & Gerard, 2010). The ability to provide prescription drug information in a comprehendible format is essential. Understanding medication

doses, administration time, adverse effects, and written information is fundamental to patient safety and compliance with care (Fried, Tinet, Towle, O'Leary, & Iannone, 2011). Drug labeling with easily read print font and size has the potential to improve patient compliance (Winterstein, Linden, Lee, Fernandez, & Kimberlin, 2010).

The literature provided credible information that affirmed the need for an educational program on health literacy, its attributes, and impact. The scope of the information was broad due to information obtained from non-nursing health care professionals in a variety of health care settings. The translation of the information across disciplines and settings is evident. All of which enhanced the quality of the course content development.

Synthesis and Organizational Congruence

Effective implementation of a proposed practice change is contingent upon the rationale for the change and its congruence with an organization's mission, vision, goals, fiscal, and personnel resources. The organization's mission statement is derived from the Sisters of Mercy tradition of ministry to the poor, sick and uneducated as lived by their founder Catherine McAuley. The mission is to foster an environment of healing through providing access and care with compassion and excellence to the diverse communities it serves. Its vision is to be the preferred healthcare provider in every community served, providing quality care, and setting a standard of service excellence.

One of the organization's goals is to meet or exceed the nurse sensitive benchmarks and patient satisfaction scores. The project site is accredited by the Healthcare Facilities Accreditation Program (HFAP). HFAP requires nursing to assess patients' health literacy status. The health literacy educational program is aligned with the project site's mission, vision, values, strategies, and goals. The alignment aids in obtaining and sustaining the support of key stakeholders. It fosters the ability to unleash potential, clarify vision, direction, prioritization, and inspiration.

Characteristics of an empowered nursing staff include patient and family center care, strong administrative leadership, excellence in teaching, and research and evidence –based practice (Ponte et al., 2007). The educational program has the potential to improve the quality of the care provided within the context of the organizational initiatives to meet and exceed established national safety and quality benchmarks, patient and staff satisfaction, fiscal and personnel management goals.

Project Description and Design

The utilization of intentional processes is an essential component of a successful project design. The purpose of this section is to describe the strategies and methodologies used throughout each phase of the project. The IRB approval process is discussed. Tools used for the needs assessment, program content, validation of learning and evaluation are described.

IRB Approval Process

The plan for the development, implementation, and evaluation of the health literacy educational program was reviewed by both the project site and Capella University's Internal Review Board. Exempt status was obtained from each. Protection of identity of each nurse was password protected. The results of the program were also password protected and available solely to the administrator of the hospital's educational intranet, HealthStream Learning Center (HLC), and this author.

Course Design

The course was offered in two parts. One offering was a patient care simulation. The second was offered in HLC. Both occurred during the project site's annual nursing competency validation called the annual educational marathon. Each nurse is required to attend simulations and take the HLC courses to validate knowledge and skills. The simulated courses were offered for two weeks in tandem with the HLC courses. The HLC courses were available for six weeks.

The simulations occurred in a mockup of a patient room with props. Props included a patient communication board, commonly referred to as the white board, an insulin pen, pre-printed patient education materials on the topic of diabetes, and a computer with access to a fake patient chart. Personnel from the educational department were provided with scripted scenarios (see Appendix A for the script).

Content and Tools

The content and tools were developed by the author based on the scholarly literature. Definitions of health literacy, the attributes of health literacy, the impact of health literacy and its relationship to health disparity and patient-centered care and education became key elements of the needs assessment. Subsequently, the content for the didactic and clinical component of the program was developed in collaboration with the project site's Healthstream administrator to ensure that the project site guidelines were followed.

Self-Assessment Tool

A needs assessment of the nursing staff's understanding of the definition of health literacy, its attributes, impact on health disparities, and implication for patient centered care was completed at the project site. A seven point Likert scale self-assessment tool was used for the assessment (see Appendix B for Likert scale). The needs assessment scores are located in Appendix C.

A post course self-assessment for knowledge gained was performed. The content of which was the same as the needs assessment. The same seven point Likert scale was used to rate individual responses (see Appendix E).

Course Content and Test

A PowerPoint presentation was designed and imported into HLC. The content included the definition of health literacy, attributes of health literacy, the impact of health literacy on health disparity, and strategies for patient–centered care and education utilizing concepts related to health literacy. A post-test was included to measure knowledge gained (see Appendix D for the post-test).

Findings

The course was new to the project site. There were no baseline statistics for a comparative analysis of the simulation or the HLC course. The simulation course in its entirety was cancelled by the educational department staff and is discussed in the limitations section. The following statistics are for the health literacy course.

One hundred and twenty-five acute care nurses out of 365 (34%) completed the simulation and 599 nurses out of 706 (85%) completed the HLC course. As the result of the course, 563 (94%) of the nurses were able to define health literacy, 575 (96%) were able to identify attributes of health literacy, 587 (98%) were able to identify different types of health literacy, 563 (94%) were able to identify strategies for assessing the attributes of health literacy and 581 (97%) were able to identify nursing interventions to bridge health literacy gaps specific patient-centered care and education. Five hundred and sixty-three (94%) agreed or strongly agreed that upon completion of the education they would be able to provide better patient centered care and education.

Further analysis revealed the following. Comparing the initial needs assessment with the post course self-assessment scores, there was a 44% increase in the understanding of the concept of health literacy, a 26% increase of the understanding of the impact of health literacy on patient

education, a 31% increase in interest in health literacy, 35% increase in the ability to assess the patient's health literacy attributes, and a 34% increase understanding how to screen for health literacy.

Discussion

The findings of the health literacy program represent an increase in the capability of the nurses to impact patient-centered care and education. An increase in patient satisfaction was not realized. The strengths and limitations of the project are discussed in this section. Strengths of the program included the ability to include the content in an established format. Both the simulation and HLC formats were utilized in the past annual educational marathons. The familiar format and the fact that the program occurred within a mandated context and timeframe aided in the number of course respondents.

HLC has the capacity to analyze and report results in data and graph format. It has the capacity to track each student's response, the amount of time each respondent took to complete the course, and the results of the Likert scales and test. It also has the capacity to trend results.

There were many limitations encountered. Methodologies for obtaining and measuring patient satisfaction scores and nurse sensitive indicators changed during the pilot program. Prior to the course, patient satisfaction scores including those specific to nurse sensitive indicators were obtained via a phone interview by personnel at the project site within a few days after discharge. The results were manually calculated and reported on a monthly basis to the executive team. A month after the program started, patient satisfaction scores were obtained by an outside company via a survey that was mailed to the patient post discharge from the hospital. The timeframe for the results were delayed. The frequency of reporting results did not coincide with the project's timeframe.

Lack of an onsite HLC administrator hindered the implementation and evaluation of the course. An offsite HLC administrator was found. However, the availability to the project site as a resource was restricted. Data abstraction and analysis was initially done by hand until the offsite HLC administrator was available.

There was an imposed HLC administrative limitation to number of education slides and number of questions on the test. Each posed challenges specific to content development and validation of knowledge gained.

Known barriers for the educational marathon included competing project site priorities, lack of trained staff to oversee the simulation, inability of the professional nursing staff to attend the simulation due to staffing issues, lack of time for staff to take the HLC course, and budgetary constraints. The marathon including the health literacy program was extended from July to September 2014 through the end of January 2015.

Conclusion

Patient-centered care encompasses collaborative involvement of the individual and the health care provider in decision making and plan of care that customizes and reflects the patient's needs and values (Fredericks et al., 2012). According to Sleath and Goldstein (2011), the strategies that encourage active patient participation in care decision making are assessment of patient beliefs, behavior, and knowledge, collaborative goal setting, identification of personal barriers and supports, skills in teaching including problem-solving and addressing barriers, increasing access to resources and supports, and developing a personal action plan that is based on the previous steps. The recognition and skill on the health care provider's part to frame health information to accommodate cultural understandings of health information, science, and individual and collective action is important (Zarcadoolas, Pleasant, & Greer, 2005).

Nurses have a primary commitment to the patient as an individual, family, group, and community (ANA, 2010). The health literacy educational program provides the foundation for improvement in the quality of patient-centered education with the intent to enhance patient's understanding of and compliance with health care provider's recommendation. The results of the pilot confirmed that knowledge was acquired. The impact of the program on nurse sensitive and patient satisfaction scores was not realized due to the timeframe of the program and changes in project site's patient satisfaction reporting methodologies.

The project site recognizes the value of the program. The health literacy educational program has been presented at Nursing Grand Rounds. It has been incorporated into the nursing orientation and will continue in the annual mandatory nursing educational marathon.

Recommendations

The development of a web-based video conference that entails each component of the health literacy educational program offers a format to present the information on health literacy, its attributes, and implications for patient centered relationship based care. This venue offers an opportunity for continuing education for all health care providers across the continuum of care. The tools used in the educational marathon can be used for the program. Completion of the program should be required within 90 days of hire for all professional staff. Pre and post patient satisfaction scores should be tracked and trended to measure effectiveness of the program.

Nurse practitioners have key leadership roles in both clinical and public health settings and should be aware and make maximum use of the evidence-based recommendations (Trinite, Loveland-Cherry, & Marion, 2009). The role of the doctorate nurse practice is pivotal to implementing and sustaining a comprehensive approach to understanding and managing the relationship of health disparities, health literacy, and shared decision making. The ability of the

professional nurse to assess patients' health literacy attributes has the potential to re-frame the context of patient-centered education to include patient specific health literacy attributes. It has the potential to improve patient satisfaction and enhance the quality of communication, understanding and compliance with health care provider's recommendations, improve quality of care, and decrease health disparities (Weidner, Brach, Slaughter, & Hays, 2012).

The development of a health literacy assessment tool for the nurse to use to screen for barriers to patient centered education specific to health literacy is a natural sequel to the educational program. The tool may be used as nursing research project to assess for its validity and reliability.

Hospitalization does not lend itself to learning skills of self-care and management due to the patient's acuity of illness (Suter & Hennessey, 2013). As patients leave the hospital setting and re-enter the community, the stress of the change in their health status does not dissipate. Nursing research examining health literacy attributes after hospitalization may provide a fuller understanding of how to enhance the health care provider's recommendations from a patient centered frame of reference prior to community re-entry with the intent to provide long term educational support for patients and their partners.

Healthcare providers must ensure that patients receive knowledge of self-care measures to prevent hospital readmission (Hill, 2012). Providing electronic medical record access to the patient enhances patient engagement by providing them with information about their health and treatment (Wilson, Murphy, & Newhouse, 2012). The National Action Plan to Improve Health Literacy vision is to provide everyone with access to accurate and actionable health information, to deliver person-centered health information and services, and to support lifelong learning and skills to promote good health (U. S. Department of Health and Human Services, 2010). The

heath literacy educational program provides a context within which the professional nurse can supply the content and reputable intranet links to augment patient centered learning specific to the demographics of the patient population.

Summary

One of the most important universal values is health (Lorntz et al., 2008). Understanding the attributes of health literacy and its impact on health disparities and shared decision making are integral components of culturally sensitive, quality driven patient-centered care. The educational program discussed is a foundation for the professional nurse to aide in the provision of patient centered care that promotes patient safety, quality, with the potential to improve patient satisfaction, decrease health care costs, and increase compliance with health care provider recommendations.

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APPENDIX A. SCRIPT

White Board Questions - Response to be written on the white board with patient permission

By what name would you like to be called?

Who makes the decisions for you?

What language do you speak at home?

What is your preferred method for receiving education (written, pictures, conversation)?

What is your highest level of education?

Insulin Pen – ask staff to have patient hold the insulin pen and read the numbers and state what half dose is

Patient education materials - ask staff to validate patient's ability to read English or preferred language; validate vision, use teach back to validate learning

APPENDIX B. LIKERT SCALE SELF-ASSESSMENT TOOL

Prior to this course

1. I had heard of the concept health literacy

   Strongly disagree-1-2-3-4-5-6-7- Strongly agree

2. I was interested in the concept of health literacy

   Strongly disagree-1-2-3-4-5-6-7- Strongly agree

3. I understood the impact of health literacy on patient education

   Strongly disagree-1-2-3-4-5-6-7- Strongly agree

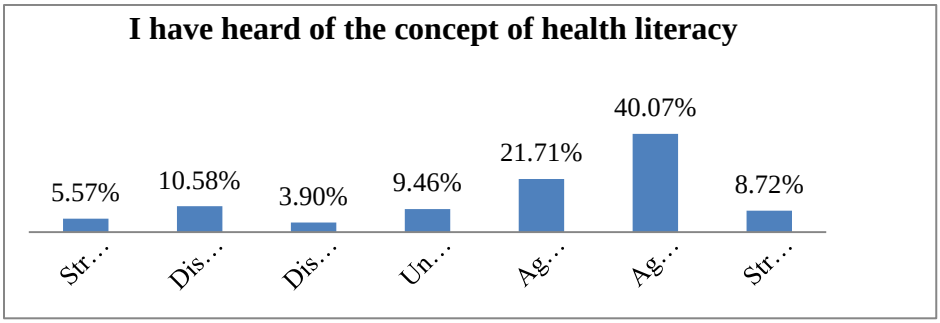
4. I understood the impact of health literacy on health disparities

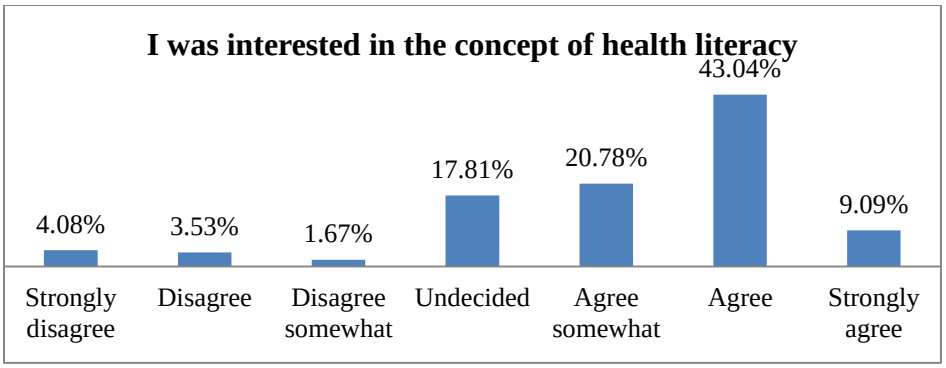
   Strongly disagree-1-2-3-4-5-6-7- Strongly agree

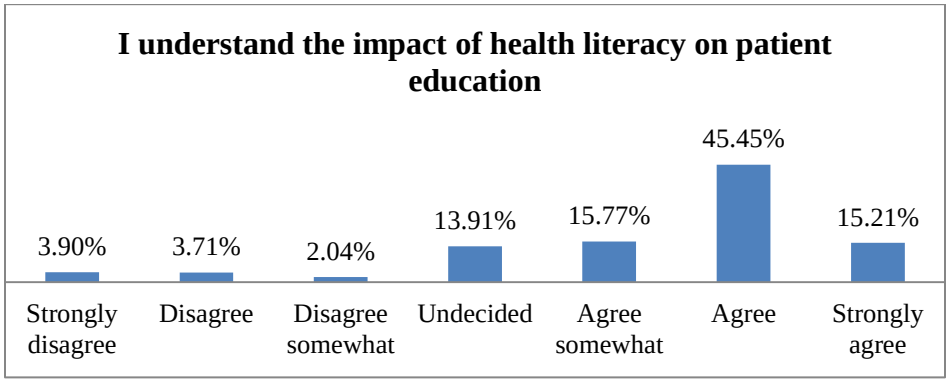
5. I understood the importance of screening patients for health literacy

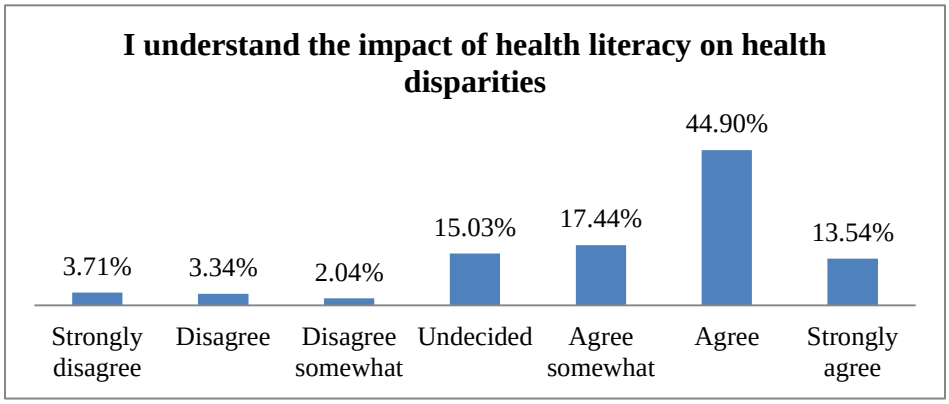
   Strongly disagree-1-2-3-4-5-6-7- Strongly agree

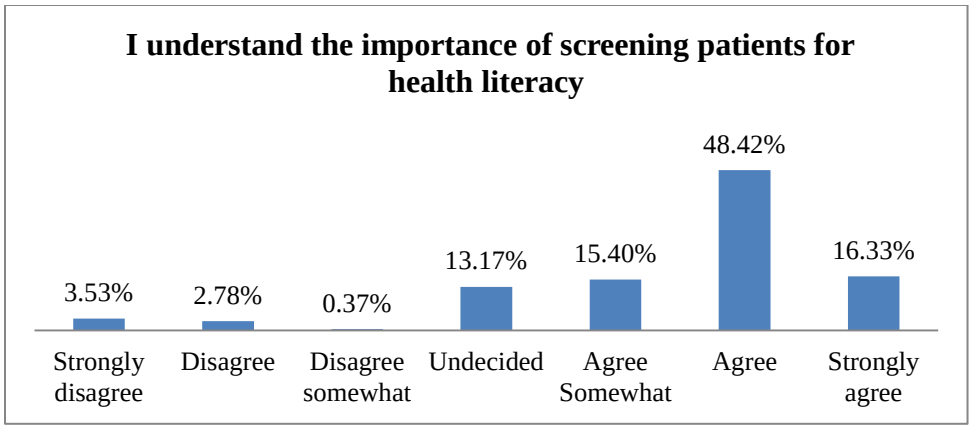
APPENDIC C. NEEDS ASSESSMENT SCORES









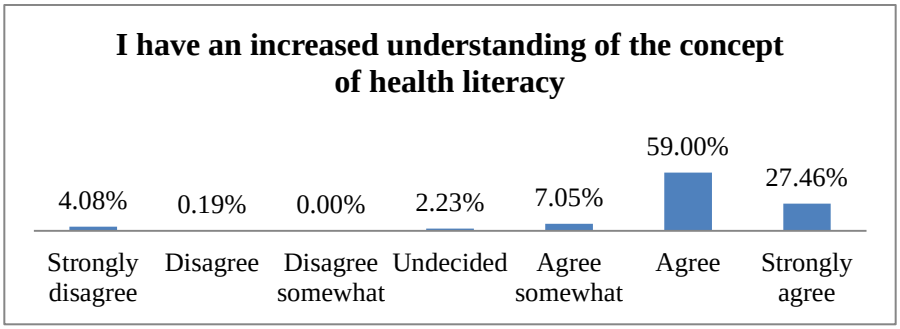

I understand the importance of screening patients for health literacy
3.53%
2.78%
0.37%
13.17%
15.40%
48.42%
16.33%
Strongly disagree
Disagree
Disagree somewhat
Undecided
Agree Somewhat
Agree
Strongly agree

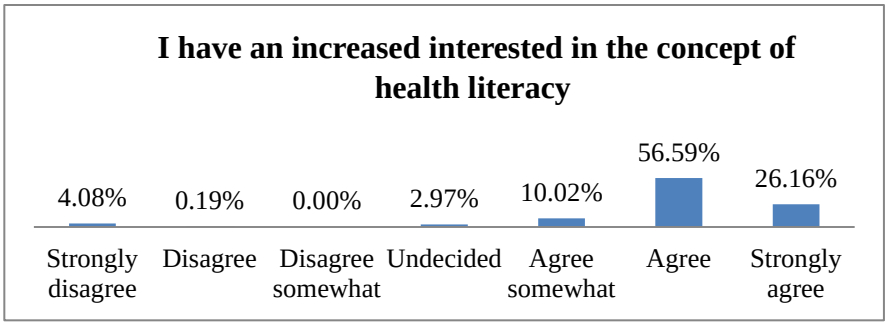
APPENDIX D. POST COURSE TEST EDUATIONAL MARATHON 2014 HEALTH LITERACY QUIZ

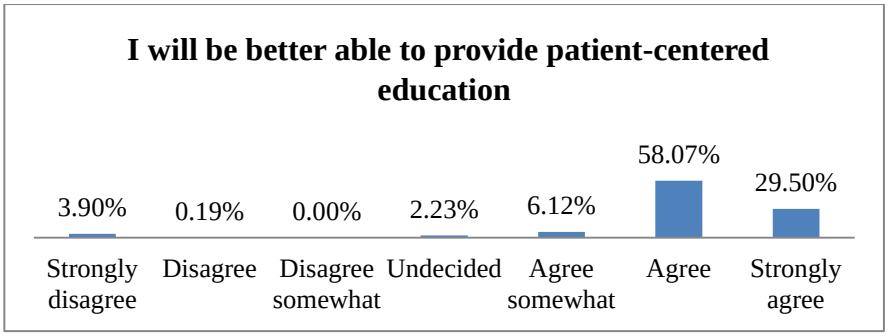
Circle the best answer:

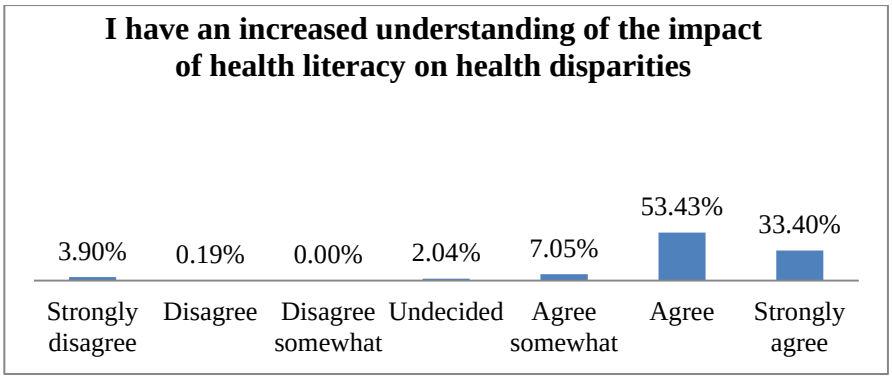
1. Health literacy is:
   A. The ability to obtain, comprehend, and utilize basic information about one's health and resources that are necessary to make informed decisions and successfully care for oneself
   B. Includes the capacity to process and understand basic health information and services needed to make appropriate health decisions
   C. Both A & B
   D. None of the above
2. Health literacy is affected by:
   A. Cultural beliefs specific to health & illness
   B. Cognitive & physical changes related to aging & medications
   C. Previous experiences with health care to include location & amount of time spent with health care providers
   D. All of the above
3. Types of health literacy are:
   A. Print literacy - ability to read and understand text and to locate & interpret information in documents
   B. Numeracy – ability to use quantitative information for tasks, such as interpreting food labels, measuring blood glucose levels, & adhering to medication regimens
   C. Oral – ability to speak and listen effectively
   D. All of the above
4. Health literacy assessments include:
   A. Preferred language spoken &methods for teaching
   B. Highest level of education completed
   C. Race & ethnicity
   D. All of the above
5. Nursing interventions include:
   A. Document required assessments
   B. Validate that the patient can see, read labels, interpret information
   C. Teach back methods per patient preference; written verbal, or visual aids include family member
   D. All of the above

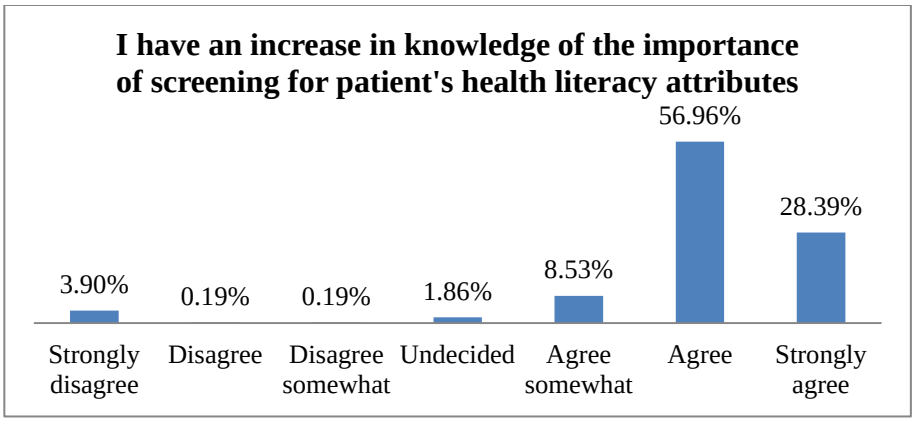
APPENDIX E. POST COURSE SELF-ASSESSMENT SCORES










I have an increase in knowledge of the importance of screening for patient's health literacy attributes
3.90%
0.19%
0.19%
1.86%
8.53%
56.96%
28.39%
Strongly disagree
Disagree
Disagree somewhat
Undecided
Agree somewhat
Agree
Strongly agree

Statement of Original Work

Academic Honesty Policy

Capella University's Academic Honesty Policy (3.01.01) holds learners accountable for the integrity of work they submit, which includes but is not limited to discussion postings, assignments, comprehensive exams, and the dissertation or capstone project.

Established in the Policy are the expectations for original work, rationale for the policy, definition of terms that pertain to academic honesty and original work, and disciplinary consequences of academic dishonesty. Also stated in the Policy is the expectation that learners will follow APA rules for citing another person's ideas or works.

The following standards for original work and definition of *plagiarism* are discussed in the Policy:

> Learners are expected to be the sole authors of their work and to acknowledge the authorship of others' work through proper citation and reference. Use of another person's ideas, including another learner's, without proper reference or citation constitutes plagiarism and academic dishonesty and is prohibited conduct. (p. 1)
>
> Plagiarism is one example of academic dishonesty. Plagiarism is presenting someone else's ideas or work as your own. Plagiarism also includes copying verbatim or rephrasing ideas without properly acknowledging the source by author, date, and publication medium. (p. 2)

Capella University's Research Misconduct Policy (3.03.06) holds learners accountable for research integrity. What constitutes research misconduct is discussed in the Policy:

> Research misconduct includes but is not limited to falsification, fabrication, plagiarism, misappropriation, or other practices that seriously deviate from those that are commonly accepted within the academic community for proposing, conducting, or reviewing research, or in reporting research results. (p. 1)

Learners failing to abide by these policies are subject to consequences, including but not limited to dismissal or revocation of the degree.
I have read, understood, and abided by Capella University's Academic Honesty Policy (3.01.01) and Research Misconduct Policy (3.03.06), including the Policy Statements, Rationale, and Definitions.

I attest that this dissertation or capstone project is my own work. Where I have used the ideas or words of others, I have paraphrased, summarized, or used direct quotes following the guidelines set forth in the APA *Publication Manual*.

Learner name and date	Laura Marie Owens May 25, 2015
Mentor name and school	Dr. Linda Matheson School of Nursing and Health Sciences