Assessing Provider and Staff Knowledge of Health Literacy and Satisfaction with a Health Literacy Assessment Tool in a Primary Care Practice

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Whitney J. Lynn, Student

Dr. Nancy Kloha, Advisor
Final DNP Project Report

Assessing Provider and Staff Knowledge of Health Literacy and Satisfaction with a Health Literacy Assessment Tool for Patients in a Primary Care Practice

Whitney J. Lynn

University of Kentucky
College of Nursing
Spring 2017

Nancy Kloha DNP, APRN, FNP-BC – Committee Chair
Lynne Jensen PhD, RN, APRN – Committee Member
Monica Heck DNP, FNP-C – Committee Member/Clinical Mentor
First and foremost I would like to thank God for the opportunity to be where I am today, without His strength and grace this all would not be possible. This DNP project is dedicated to all of the hard-working, determined women in healthcare whose strength is inspiring; may you always remember where you came from and where you aim to go. I would also like to dedicate this project to my husband I cannot thank you enough from the bottom of my heart for all of the patience you have shown me over the last 3 years in graduate school. I am especially grateful for your encouraging words; and for reminding me day after day that all of my hard work will pay off. Thank you to my parents and grandparents for supporting me in all of my aspirations and for showing me how to work hard toward my dreams. And lastly thank you to all of my friends and family for understanding my absence these last few years at gatherings and events, it is difficult to put into words how much I appreciate you all!
Acknowledgements

I would like to thank my advisor Dr. Nancy Kloha; you have guided me through many ups and downs in my graduate education. I appreciate you sharing not only knowledge, but also personal stories and advice about life. Without the many hours of counseling and guidance this would not have been possible. I would like to thank Lynne Jensen and clinical mentor Dr. Monica Heck for taking the time to serve as my committee members. I would like to thank my professor and clinical preceptor Dr. Judi Daniels for investing so much time and energy into the development of my skills as a future nurse practitioner and for always reminding me to “be a strong soldier”. And last but not least thank you to my fellow colleagues for three years of studying together, working together, and celebrating together. I could not have done this without the help and support from you all.
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Abstract

PURPOSE: The purpose of this quality improvement project was to assess provider and staff knowledge about health literacy. Specifically, the knowledge of health literacy and perceived importance, current usage, and benefits of the use of a health literacy assessment tool at a primary care clinic was evaluated pre-intervention. The perceived importance of health literacy as well as satisfaction with, frequency of use, and recommendation of the chosen health literacy assessment tool for future use was evaluated post-intervention.

METHODS: This project used surveys pre- and post-intervention at an urban primary care clinic in the southeastern United States from January to March 2017. The sample consisted of 9 providers and staff who completed surveys before and after collaboratively choosing one health literacy assessment tool to use with patients for one month during the intervention period.

RESULTS: All participating providers/staff strongly believed the patients at their clinic could benefit from tailored education based on individualized assessment of health literacy levels, yet over two-thirds of providers/staff felt that the health literacy of patients was not being assessed at the clinic prior to the intervention. With 88.8% of participants using the selected health literacy tool with 0-10 patient encounters (n=8) during the intervention, two-third of the participants (n=6, 66.7%) believed they “Might or Might Not” recommend use of the chosen health literacy assessment tool in clinic while the remaining one-third answered probably or definitely will recommend use.

CONCLUSION: The majority of providers/staff believe health literacy of patients is not currently being assessed at their clinic and that using a health literacy assessment tool with patients is important for patient education teaching. The majority of providers/staff are unsure if the tool used in this study is the best choice for everyday use in their clinic.
Assessing Provider and Staff Knowledge of Health Literacy and Satisfaction with a Health Literacy Assessment Tool for Patients in a Primary Care Practice

Introduction

A quality improvement project was developed to evaluate provider and staff knowledge of health literacy and satisfaction with a patient health literacy assessment tool in a primary care practice. A health literacy assessment tool can help to optimize patient education by assessing patient’s health literacy in combination with documenting patient’s preferred learning styles. Providers and nursing staff often overestimate the capability of patients to receive and understand knowledge about disease and treatment plans (Dickens, Lambert, Cromwell, & Piano, 2013). Individuals with low health literacy may not acknowledge they have difficulty understanding health information and instructions, and may use coping mechanisms to hide their lower literacy (Dennison Himmelfarb, & Hughes, 2011). Assessing patient’s health literacy, will allow for a more comprehensive treatment approach for patients and providers, leading to improved patient outcomes (Ferguson, Lowman, & Dewalt, 2011).

Background

Time with patients is limited, and patient education is crucial in primary care practice for building patients knowledge of disease prevention, and understanding treatment plans in preparation for self-management. Health literacy plays a primary factor in patients’ ability to receive education. According to the Agency for Health Research and Quality (AHRQ), “health literacy is the ability to get, process, and understand basic health information and services needed to make appropriate decisions” (2015, p. 1). Limited health literacy skills are associated with reduced understanding of health terms and concepts as well as poor health outcomes (Ferguson
et al., 2011). Poor health outcomes include; increased coronary heart disease risk in women (Martin et al., 2010); poorer ability to interpret nutrition information (Davis, Jones, Logsdon, Ryan, & Wilkeson-McMahon, 2013); increased hospitalizations; increased use of emergency care; lower rate of receiving the influenza vaccine; poorer ability to demonstrate taking medications appropriately; poorer ability to interpret labels and health messages (Berkman, Sheridan, Donahue, Halpern, & Crotty, 2011), and reduced medication adherence (Joplin et al., 2015). The Centers for Disease Control and Prevention (CDC) has stated, “Limited health literacy costs the healthcare system money and results in higher than necessary morbidity and mortality” (2016). Acknowledging, assessing, and helping to educate patients with limited health literacy can lead to better patient outcomes, and cost savings in health care.

In combination with assessing health literacy, acknowledging the need for and providing interpreter services when necessary is important for culturally competent care. Linguistically discordant health services have been shown to be associated with poorer communication, less understanding of client’s own condition, lower client satisfaction, and higher healthcare costs when compared to those with linguistically concordant care (Nápoles et al., 2010). AHRQ identifies the importance of clear communication in patient education to improve care for all patients regardless of their level of health literacy, as well as removing literacy-related obstacles that result from racial, ethnic, cultural, and linguistic differences (AHRQ, 2015, p. 1).

Ferguson et al. (2011) found that low literacy is associated with poorer understanding of health terms and concepts as well as poorer health outcomes. The results showed that patients and providers are unable to measure patient literacy levels without completing a formal assessment. Inott and Kennedy (2011) suggest the adult learner develops patterns of behaviors, thoughts, and feelings, which influence how teaching is received and how learning is
experienced. Assessment is deemed as the important initial stage in determining readiness to learn as well as identifying barriers to learning. The goal of patient health literacy assessment is to address patient knowledge, behaviors, attitudes, and skills so the patient is able to accept responsibility for their own care (Inott & Kennedy, 2011).

Recently, universal health literacy precautions have been suggested for use in the primary care setting to provide accessible and understandable health information to all patients regardless of their education and literacy levels (Hersh, Salzman, & Snyderman, 2015). Universal precautions include explaining things without using medical terms, focusing on only two or three key messages, speaking slowly, using teach-back, and using easy-to-understand written materials at or below a fifth to sixth-grade reading level (Weiss, 2014). Although this appears to be is a simple solution, this approach is not tailored for individual patients and does now allow for patient empowerment and verified understanding through customized education (Marks, 2009).

Skelton, Waterman, Davis, Peipert, and Fish (2015) state “best practices in chronic disease education generally reveal that education that is individually tailored, understandable for patients with low health literacy, and culturally competent is most beneficial” (p. 77). The findings concerning the impact of health literacy on coronary artery disease education by Eckman et al. (2011) found that incorporating booklet and video education had a significant improvement in exercise and weight loss, and those with lower health literacy benefited as much as higher literacy patients. Similarly, a study about delivering health information to patients with diabetes in community care clinics, Koonce, Giuse, Kusnoor, Hurley, and Ye (2015) found when using a personalized approach; patients’ knowledge about diabetes significantly increased after exposure to educational materials targeted to their health literacy levels and learning style preferences.
In 2014, AHRQ released a document suggesting the importance of quality improvement (QI) activities in primary care. The document suggested QI activities were essential to “achieving the triple aim of improving the health of the population, enhancing patient experiences and outcomes, and reducing the per capita cost of care, to improve provider experience” (Taylor et al., 2014, p. 1). Dickens et al. (2013) found that nurses incorrectly identified patients with low health literacy and overestimated the number of patients with adequate health literacy. Assessing and improving provider and staff knowledge of health literacy and health literacy strategies can improve patient education and therefore improve patient outcomes (Cafiero, 2013).

Implementation of health literacy strategies into electronic health records can help achieve the aims of meaningful use. Meaningful use was introduced in 2009 via the Health Information Technology for Economic and Clinical Health (HITECH) Act and is the use of certified electronic health records (EHR) technology to achieve health and efficiency goals (Galbraith, 2013). Meaningful use is grouped into five patient-driven domains relating to health outcomes and policy priorities. The three domains most affected by implementation of health literacy screening include; improving quality, safety, and efficiency; engaging patients and families; and improving care coordination (Health IT, 2014). Meaningful use is required for Medicare and Medicaid reimbursement and incentives; therefore health literacy screening can be used to achieve the aims of meaningful use through improving patient outcomes with improved patient education (Galbraith, 2013).

Assessing provider and staff knowledge about health literacy and providing a screening tool to assess patient health literacy will allow for a multifactorial approach in providing patient education tailored to the needs of the patient. It is now not enough to simply provide patient
education due to the changing culture of the world and wide patient diversity (Batterham, Hawkins, Collins, Buchbinder, & Osborne, 2016). It is important to provide education specific to the patient, taking into account any cultural considerations and factors affecting readiness and ability to learn (Schonlau, Martin, Haas, Derose, & Rudd, 2011). Through assessing knowledge of providers and staff about health literacy and offering providers and staff a health literacy assessment tool to use with patients; all involved can mutually benefit from becoming further engaged in health literacy.

**Purpose**

The purpose of this project is to assess provider/staff health literacy knowledge and provide a health literacy assessment tool to use with patients at the primary care clinic. Using a health literacy assessment tool can assist in personalizing patient education needs and providing necessary feedback to providers for education teaching. Phase I, an initial survey was given to providers/staff that chose to participate in the project to assess knowledge and perceived importance of health literacy, if health literacy is thought to be currently assessed at their clinic, and to see if they thought a health literacy assessment tool would be beneficial for their clinic (Appendix 1). Phase II, providers/staff were given three health literacy assessment tools to review, the Newest Vital Sign (NVS), Rapid Estimate of Health Literacy in Medicine (REALM), and Short Test of Functional Health Literacy in Adults (S-TOFHLA). Providers/staff were then taught how to use each tool, and discussed how each tool could be used to assess the health literacy of patients. All of the participating providers/staff then discussed the pros and cons of each tool and collaboratively chose one health literacy assessment tool to use with patients for one month in the clinic. Phase III, following the one-month use of the health literacy tool, a final survey was given to participating providers/staff to assess their perceived importance of health
literacy, frequency of use and satisfaction with the tool that was used, and recommendation of health literacy tool for future use in the clinic (Appendix 2).

Initial objectives for this project included:

- Complete an initial survey about health literacy on 50% of providers/staff meeting the inclusion criteria at the primary care clinic within one week of initiation of project;
- Present three-health literacy screening tools to 50% of providers/staff at the primary care clinic who met the inclusion criteria, and have providers collaborate to choose one tool to use with patients within 3 weeks of initiation of project;
- Complete a final survey about health literacy and satisfaction with selected health literacy screening tool on 50% of providers/staff meeting inclusion criteria at the primary care clinic after the one-month intervention period of providers/staff using the selected health literacy screening tool with patients.

Methods

Setting

Providers/staff were asked to participate in the project via a short presentation by the principal investigator (PI) in January 2017. This project took place in an urban primary care clinic in the southeastern United States, providing family medical services to children and adults of all ages. The primary care clinic was chosen for this project based upon the variety of providers/staff and the urban patient population at the clinic. The patient population at the clinic is a high percentage of Hispanic, African American, or Other Non-Caucasian ethnicities, with the majority of patients having Medicaid, Medicare, or HMO insurances.
Sample

The sample of the project consisted of nine of a potential eleven providers/staff that agreed to participate. Providers at the clinic included physicians and advanced practice registered nurses. Staff at the clinic included nursing, clerical, radiology, and management. Participating in the project consisted of attending all three meetings and completing a paper survey at the first and third meeting. Inclusion criteria for providers/staff included employees of the clinic aged 18 years and older whom had direct patient contact. Exclusion criteria included employees at the clinic who did not have direct patient contact. Providers/staff independently chose with which patients to use the selected health literacy tool. Patient data was not collected as part of this project.

Data Collection

Approval was obtained from the Institutional Review Board (IRB) of the PI’s University prior to starting the project. Initial and final survey responses from the nine providers/staff participating in the project between January and March 2017 were utilized to meet the purpose and objectives of this project. To protect against breaches in confidentiality and invasion of privacy of providers/staff due to small population size, the paper surveys were kept confidential and no personal identifiers or demographics were collected or included on the paper surveys. The PI left the room while providers/staff completed the survey and once all surveys were complete a provider/staff member placed all surveys in a sealed manila folder and gave directly to the PI.

Data Analysis

The project used a cross-sectional descriptive design to assess paper survey responses of providers/staff at the clinic. Data was transferred from paper survey responses and analyzed electronically using IBM Statistical Software Analysis Package (SPSS) version 22. Frequency
distribution tables were used to analyze each survey question response. Correlational statistics were not performed due to the small sample size and absence of supporting demographic data.

**Results**

From a potential eleven providers/staff who met the inclusion criteria for the project at the primary care clinic, nine providers/staff agreed to be part of the project for an 81.8% participation rate. The objectives of the project were met by having a 50% or greater participation rate for the pre-intervention survey, intervention, and post-intervention survey from the providers/staff who met the inclusion criteria. Of the nine participating providers/staff there was a 100% response rate with all nine providers/staff completing the project.

**Pre-Intervention Survey**

At the first meeting after providers/staff consented to participating in the project a survey was given to the participants with five questions, four were likert-scale questions and one allowed for a free-text response (Appendix 1). All participants answered the four likert-scale questions, and there were no written responses in the free-text section, “If you would like to share any additional comments about health literacy or patient education, please comment below”. The likert-scale answer choices were; “Strongly Agree”, “Agree”, “Neutral”, “Disagree”, and “Strongly Disagree”. When asked, “Do you feel you have a strong understanding on what health literacy is?” most participants answered “Agree” (n= 5, 55.6%), while fewer participants answered “Strongly Agree” (n= 3, 33.3%), and only one participant answered “Neutral” (Table 1). When asked, “Do you feel that the health literacy of patients is assessed at your clinic?” over two-thirds of participants believed that health literacy is not assessed at their clinic by answering “Strongly Disagree” (n=3, 33.3%) or “Disagree” (n=3,
Only one participant thought health literacy of patients is assessed at their clinic and answered, “Agree”, while two participants answered “Neutral” (Table 2). The overwhelming majority of participants (n=8, 88.8%) answered, “Strongly Agree” that “assessing health literacy of patients is an important part of patient education teaching” with one participant answering, “Agree” (Table 3). When asked “Do you think that patients could benefit from tailored education based on individualized assessment of health literacy levels?” 100% of the participants (n=9) answered “Strongly Agree” (Table 4).

**Intervention**

At the second meeting providers/staff were given three health literacy assessment tools, the Newest Vital Sign (NVS), Rapid Estimate of Health Literacy in Medicine (REALM), and Short Test of Functional Health Literacy in Adults (S-TOFHLA) all of which are validated tools for measuring health literacy in adults (Wolf et al., 2012). Providers/staff were taught how to use each tool, and discussed how each tool could be used to assess the health literacy of patients. All of the participating providers/staff then discussed the pros and cons of each tool and collaboratively chose the NVS to use with patients for one month in the clinic. The NVS assesses fluid health literacy through reviewing a nutritional label and utilizing reading comprehension and simple math calculations skills. The NVS assigns a score of 0-6 based on accuracy of answering questions. A score of 0-1 suggests high likelihood of limited literacy, a score of 2-3 indicates the possibility of limited literacy, and a score of 4-6 almost always indicates adequate literacy (Weiss et al., 2005). Providers/staff were provided with 100 copies of the NVS, which were placed in a high-traffic area near where patients at the clinic were roomed. Providers/staff were instructed to use the paper health literacy assessment tool over the one-month intervention period with various adult patient encounters of their choice.
Post-Intervention Survey

At the third meeting the participants were given a five question survey, three being likert-scale questions, one asking for frequency of health literacy tool use with patients during the intervention period, and one allowed for a free-text response (Appendix 2). When asked “Do you think that assessing health literacy of patients is an important part of patient education teaching?” answers were the same as with the pre-intervention survey; the majority of the providers (n=8, 88.8%) answered “Strongly Agree” with only one participant answering, “Agree” (Table 5). When asked “How often over the course of one-month did you use the selected health literacy assessment tool with a patient”, most participants (n=8, 88.8%) responded with “0-10 patient encounters”, and one answering “11-20 patient encounters” (Table 6). When asking how satisfied participants were with the selected health literacy assessment tool, answers ranged from “Somewhat Satisfied” (n=2, 25%) to “Highly Satisfied” (n=1, 12.5%). Other participants chose “Satisfied” (n=3, 37.5%) and “Very Satisfied” (n=2, 25%), one participant chose not to answer the question and wrote out “N/A” next to the question (Table 7). The last agreement question of the survey asked the likelihood of recommending the selected health literacy assessment tool for future daily use in the clinic. The majority of the participants chose “Might or Might Not” recommend future daily use in the clinic (n=6, 66.7%), followed by one participant (11.1%) choosing “Probably Will”, and two participants (22.2%) choosing “Definitely Will” (Table 8). Two participants chose to provide comments on the fifth survey question, “If you would like to share any additional comments or experiences about the selected health literacy assessment tool, please comment below.” One of those comments was, “Most of my patients couldn’t complete questions. It was awkward.” Another was, “Just not sure tool is better than nothing still don’t know how they prefer info.”
Discussion

The findings reported from this project reveal a sample of providers and staff that felt they were knowledgeable about health literacy and felt assessing health literacy of patients was important. Providers and staff also revealed the health literacy of patients were not being assessed at their clinic, and thought health literacy should be assessed at their clinic in the future. Although a tool was not used in this project to assess specific health literacy knowledge regarding facts, guidelines, and experience with health literacy tool use, these findings are consistent with Cafiero (2013) who used a Health Literacy Knowledge and Experience survey with nurse practitioners to gauge their knowledge of health literacy and found nurse practitioners to have some knowledge of health literacy. Although, the nurse practitioners used only a few health literacy strategies in their own practice their responses revealed they would like to use more health literacy strategies in the future (Cafiero, 2013).

Previous research has shown increasing age, low education levels, and low incomes are all associated with lower health literacy (Alberti & Morris, 2017). Even with known demographical links to low literacy, Dickens et al., (2013) found nurses incorrectly identify patients with low health literacy when not using a health literacy tool. Therefore, assessing health literacy, providing effective communication, and verifying patient understanding of education and treatment plans are all ways to help assist patients at any literacy level.

Although two-thirds of the providers and staff were satisfied or more than satisfied with the selected health literacy assessment tool, most participants reported they were unsure if they would recommend use of the NVS at their clinic in the future. One reason for providers/staff not confidently recommending the selected tool for future use in the clinic may be that the one-month intervention period did not provide an adequate amount of time for evaluation of the tool
with a larger sample of patients. Eighty-eight percent of providers/staff reported using the tool with zero to ten patient encounters during the intervention month, with 75% of those providers/staff answering “Might or Might Not” recommend use of tool in everyday practice at the clinic. The one provider/staff who used the tool during 11-20 patient encounters, answered “Definitely Will” recommend use of tool in everyday practice at the clinic; therefore increased use of the tool may correlate to higher satisfaction and higher recommended use.

The NVS, REALM, and S-TOFHLA are all widely used, validated tools for measuring fluid literacy in health care (Wolf et al., 2012). The NVS determines the risk for limited health literacy through the review of a nutrition label to demonstrate ability to make inference and perform basic calculations (Weiss et al., 2005). The REALM utilizes word comprehension skills to correctly pronounce a list of health-related terms (Davis et al., 1993). The S-TOFHLA utilizes reading comprehension skills by having the participant read a health-related text and fill in missing terms using multiple choice responses and performing health numeracy tasks (Parker, Baker, Williams, and Nurss, 1995). Wolf et al. (2012) found all three tools; the NVS, REALM, and S-TOFHLA to be “highly predictive of an individual’s ability to perform routine healthcare tasks” and recommended clinics to chose a tool based on the needs of the clinic and depending on test attributes such as the tool’s linguistic availability and time requirements to administer the tool (p. 1306).

Providers and staff of the clinic participating in the project agree assessing health literacy is important for patient education, although a solution for assessing health literacy in the clinic is yet to be found. Previous research has shown improving provider and staff knowledge about health literacy and strategies to assess health literacy can improve patient education and patient outcomes (Cafiero, 2013). From the comments received as part of the survey data, more
education may be necessary on how to effectively and comfortably present and complete a health literacy assessment tool with patients.

**Limitations**

This project has several limitations. First, the convenience sample came from providers and staff of one primary care clinic and therefore may not be able to be generalized to all primary care clinics. Second, since the convenience sample of providers/staff was so small, demographic data on the providers/staff was not collected to protect their anonymity. Without demographic data, conclusions could not be drawn based on role in the workplace, and if demographics such as gender, age, or education affected provider/staff view of health literacy. Third, patient’s views and how they felt about completing a health literacy tool were not assessed during this project. Patients can provide valuable feedback on how it felt to complete the health literacy assessment tool, and if they think completing the tool will be valuable for receiving individualized health education.

**Recommendations**

The findings from the surveys provide valuable feedback for the management of the primary care clinic looking for future solutions in providing personalized patient education. A potential solution for assessing the health literacy of patients in the future is to appoint one staff member who is adequately trained and feels comfortable using the health literacy assessment tool, to train others on how to comfortably use the tool with patients. Additional training would allow for increased confidence when implementing the tool with patients so the experience would potentially not feel “awkward” as one participant described in the project post-intervention survey.
Conclusion

The majority of providers/staff who participated in this project believe that using a health literacy assessment tool with patients is important for patient education teaching, and that the health literacy of patients is not currently assessed at their clinic. Evidenced from their survey responses, the majority of providers/staff are also unsure if the health literacy tool used in this project is the best choice for everyday use in their clinic. Although, there is conflicting evidence about whether health literacy screening is beneficial or if all health education should be targeted at the lowest literacy levels; this quality improvement project shows that providers and staff believe in the importance of health literacy screening of patients at their clinic. Future studies should focus on identifying patients preferred learning styles along with health literacy levels to provide education that is not only tailored to the patients health literacy, but also to their preferred method of learning.
References


Table 1  
*Frequency of Health Literacy Understanding Pre-Intervention*

<table>
<thead>
<tr>
<th>Do you feel you have a strong understanding on what health literacy is?</th>
<th>Frequency (n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Disagree</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Neutral</td>
<td>1</td>
<td>11.1</td>
</tr>
<tr>
<td>Agree</td>
<td>5</td>
<td>55.6</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>3</td>
<td>33.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>9</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
Table 2  
*Frequency of Health Literacy Assessment Pre-Intervention*

<table>
<thead>
<tr>
<th></th>
<th>Frequency (n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>3</td>
<td>33.3</td>
</tr>
<tr>
<td>Disagree</td>
<td>3</td>
<td>33.3</td>
</tr>
<tr>
<td>Neutral</td>
<td>2</td>
<td>22.2</td>
</tr>
<tr>
<td>Agree</td>
<td>1</td>
<td>11.1</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>9</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Do you feel that the health literacy of patients is assessed at your clinic?
Table 3
*Frequency of Health Literacy Importance Pre-Intervention*

<table>
<thead>
<tr>
<th>Do you think that assessing health literacy of patients is an important part of patient education teaching?</th>
<th>Frequency (n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Disagree</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Neutral</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Agree</td>
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<td>11.1</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>8</td>
<td>88.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>9</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
Table 4
*Frequency of Health Literacy Benefit with Patients Pre-Intervention*

<table>
<thead>
<tr>
<th>Do you think that patients could benefit from tailored education based on individualized assessment of health literacy levels?</th>
<th>Frequency (n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Disagree</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Neutral</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Agree</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>9</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>9</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
Table 5
*Frequency of Health Literacy Importance Post-Intervention*

<table>
<thead>
<tr>
<th></th>
<th>Frequency (n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Disagree</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Neutral</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Agree</td>
<td>1</td>
<td>11.1</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>8</td>
<td>88.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>9</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
Table 6  
*Frequency of Health Literacy Tool Use Post-Intervention*

<table>
<thead>
<tr>
<th>Patient Encounters</th>
<th>Frequency (n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>00-10</td>
<td>8</td>
<td>88.9</td>
</tr>
<tr>
<td>11-20</td>
<td>1</td>
<td>11.1</td>
</tr>
<tr>
<td>21-30</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>31-40</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>41+</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>9</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
Table 7
*Frequency of Health Literacy Tool Satisfaction Post-Intervention*

<table>
<thead>
<tr>
<th>Overall, how satisfied were you with the selected health literacy assessment tool?</th>
<th>Frequency (n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all Satisfied</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Somewhat Satisfied</td>
<td>2</td>
<td>25.0</td>
</tr>
<tr>
<td>Satisfied</td>
<td>3</td>
<td>37.5</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>2</td>
<td>25.0</td>
</tr>
<tr>
<td>Highly Satisfied</td>
<td>1</td>
<td>12.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Note, one participant chose not to answer this question and wrote in “N/A”.*
Table 8
*Frequency of Health Literacy Tool Recommended Future Use Post-Intervention*

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency (n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitely Will Not</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Probably Will Not</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Might or Might Not</td>
<td>6</td>
<td>66.7</td>
</tr>
<tr>
<td>Probably Will</td>
<td>1</td>
<td>11.1</td>
</tr>
<tr>
<td>Definitely Will</td>
<td>2</td>
<td>22.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>9</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
Appendix A

Provider/Staff Survey #1

Assessing Provider and Staff Knowledge of Health Literacy and Satisfaction with a Health Literacy Assessment Tool for Patients in a Primary Care Practice

Provider/Staff Survey #1

Please circle your chosen answer to each question below.

1. Do you feel you have a strong understanding on what health literacy is?
   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

2. Do you feel that the health literacy of patients is assessed at your clinic?
   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

3. Do you think that assessing health literacy of patients is an important part of patient education teaching?
   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

4. Do you think that patients could benefit from tailored education based on individualized assessment of health literacy levels?
   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

5. If you would like to share any additional comments about health literacy or patient education, please comment below:
Appendix B

Provider/Staff Survey #2

Assessing Provider and Staff Knowledge of Health Literacy and Satisfaction with a Health Literacy Assessment Tool for Patients in a Primary Care Practice

Provider/Staff Survey #2

Please circle your chosen answer to each question below.

1. Do you think that assessing health literacy of patients is an important part of patient education teaching?
   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

2. How often over the course of one-month did you use the selected health literacy assessment tool with a patient?
   a. 00-10 patient encounters
   b. 11-20 patient encounters
   c. 21-30 patient encounters
   d. 31-40 patient encounters
   e. 41+ patient encounters

3. Overall, how satisfied were you with the selected health literacy assessment tool.
   a. Highly Satisfied
   b. Very Satisfied
   c. Satisfied
   d. Somewhat Satisfied
   e. Not at all Satisfied

4. Based on your experience with the selected health literacy assessment tool, would you recommend use of this tool in everyday practice at this clinic?
   a. Definitely Will
   b. Probably Will
   c. Might or Might Not
   d. Probably Will Not
   e. Definitely Will Not

5. If you would like to share any additional comments or experiences about the selected health literacy assessment tool, please comment below: