Health Literacy in Older Adults

Final Project Proposal

Readers: Xiaoshuo Hou and Crystal Moore

For my final project, I want to understand the impact of health literacy on older individuals in my community of Saratoga Springs. I also want to educate and empower this group by increasing their health literacy levels.

Purpose:

The health literacy of the public needs to be addressed. Most public health interventions aim at an organizational level through primary prevention. This approach would involve changing health instructions to a lower reading level and including graphics and larger print, the building of strong relationships by doctors, communicating in simple, direct, and jargon-free, comprehensible language; and training healthcare professionals with promising practices for the population they serve. However, there is also a necessity for local, community, individual, and tertiary prevention. Ultimately, there needs to be less of a gap between what professionals know and what consumers and patients understand. I have the ability to make a difference in the health outcomes of my community through research and education. Health promotion has the potential to empower people to develop a healthy lifestyle. In terms of health literacy, patients will hopefully improve their health outcomes through the increase in their ability to be responsible for their own health care.

Justification:

Courses such as Public Health and Contemporary Challenges in Global Health have made me aware of the nuances and epidemiology of this health care problem. Methodology courses such as Statistics for the Social Science and Social Research Methods have afforded me the skills and techniques to conduct research with surveys and analyze the results. I can also analyze this data and present it logically. The second component to my project will be creating my own workshop to educate and empower older adults about their own health and health literacy. Peer

have already received permission from the senior center to survey members and facilitate an educational program in the Spring.

Responses from this questionnaire will allow me as a researcher and educator to better meet the needs of this population. This survey would help me understand barriers to health care among this population to create a program that addresses them. I will analyze the data I collected through SPSS and Excel to understand the most common issues. The results will show which element of health literacy is the least understood.

The next component of my final project will be to use the results to create an educational workshop and tangible resource. The most pressing concern, based on the lowest score, will be used as the subject matter for the workshop. Hopefully I will have an expert on this topic to assist me during the class. This could be an individual from a local organization or a Skidmore health services faculty member. Depending on the topic, the intervention may include about three classes throughout a few weeks. I will use the data on which method of information is easiest to comprehend as a resource that could be kept at the senior center permanently. For example if the results show that visual information with few words is easiest to understand, I can create a pamphlet with a limited amount of text and engaging pictures describing information.

Throughout this project, I will study previous health literacy studies and questionnaires. I will also find resources on best health promotion practices. These will frame and support my research, analysis, and program.

March 31:

-First draft of paper completed and submitted to readers for revision

April 15:

-Final paper submitted to readers

Annotated Bibliography:

Albany Medical Center. 2015. "Cultural Competency and Health Literacy Strategy." (https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/cultural_competency/docs/albany_cchl_strategy.pdf).

This report by the Albany Medical Center Hospital provides a local perspective to the issue of health literacy. Their report is focused mostly on cultural competency and a health literacy strategy. They surveyed individuals regarding their opinions on the health care system in regard to health literacy. The medical center used these results to show that the greater Albany health care institutions are lacking in using a formal health literacy assessment and culturally competent care such as linguistic inclusivity. There is available data on Saratoga. For example, there are four towns in Saratoga that are hot spots of uninsured people and a high percentage of mother-led households. This can increase risk for health disparities and these areas may require targeted services. The source discusses motivational interviewing, a tool to successfully understand patients' preferences. There are other methods included that are important when providing culturally competent care.

Centers for Disease Control and Prevention. 2022. "Health Literacy." (https://www.cdc.gov/healthliteracy/learn/index.html).

This website provides an overview of health literacy. It also explains why health literacy is important and provides many other linked resources such as previous studies, national initiatives, and plain language materials to its page. The CDC is a trusted and relevant resource that can be referred to throughout this research process.

Center for Health Care Strategies. 2013. "Health Literacy Fact Sheets." (https://www.chcs.org/resource/health-literacy-fact-sheets/).

This fact sheet by the Center for Health Care Strategies is a resource for an overview of the concept of health literacy. The source covers what health literacy is, the impacts of it, and who is most affected by low health literacy. Helpful ways to address health literacy are also stated, starting with a list of assessments for determining level of health literacy as well as other tips such as appropriate research practices. The role of cultural norms is discussed and resources for providing culturally competent health care. The authors explain that if cultural norms do not match the dominant values of the healthcare system, an individual can have trouble navigating the healthcare system in a variety of ways. Improving print communication is important in promoting health literacy and this resource explains aspects providers should adhere to. There is also a list of national resources to address health literacy, federal policies, and details of the affordable care act.

Lood, Qarin., Greta Häggblom-Kronlöf, and Synneve Dahlin-Ivanof. 2015. "Health promotion programme design and efficacy in relation to ageing persons with culturally and

research can allow for educational interventions as well as the availability to copy this model to estimate functional health literacy.

Morony, Suzanne., Emma Lamph, Danielle Muscat, Don Nutbeam, Haryana M. Dhillon, Heather Shepherd, Sian Smith, Aisha Khan, Julie Osborne, Wedyan Meshreky, Karen Luxford, Andrew Hayen, and Kristen J. McCaffery. 2018. "Improving health literacy through adult basic education in Australia." *Health Promotion International* 33 (5): 867-877.

This Australian qualitative research study facilitated partnerships between adult literacy teachers and community health providers to deliver an empowering health literacy training program in adult basic education classrooms. The researchers taught the course and then interviewed 19 adult education teachers and four community health providers and analyzed the transcripts using a Framework Analysis. The health literacy program had ten core units and 21 other topics. Some include reading medicine and food labels, communicating with health professionals, understanding nutrition labels, screening questions, etc. The goal of the program was to empower adults and provide them with the ability to succeed in real situations. Practical skills in the curriculum are described in this research article. The interviews of the teachers stated that there was a positive improvement in their student's health behaviors, confidence, vocabulary and understanding of health terms, and literacy skills. The health care providers and teachers described their teamwork as impactful and complementary to each other. The study notes that coordination between community health providers and teachers was sometimes difficult and unattainable. The research demonstrates that adult education can be empowering and impactful for older adults. This research serves as an example for future programs to use.

Positive, assertive, and clear language is the appropriate communication for providing health information to patients.

Slayter, Susan., Christine Toyeb, Elissa Burtond, Alessandro Ferrari Jacintoe, and Keith D. Hillf. 2022."Measurement properties of self-report instruments to assess health literacy in older adults: a systematic review." *Disability and Rehabilitation,* 44:2241-2257. https://doi.org/10.1080/09638288.2020.1836044.

This systematic review aimed to evaluate health literacy instruments and measurements. The study searched different databases on studies of different health literacy tools and their impacts. The Health Literacy Questionnaire was shown to have the highest ratings among older individuals. This health literacy tool will optimize the effectiveness of health interventions for the elderly population.

Tavousil, Mahmoud., Samira Mohammadi, Jila Sadighi, Fatemeh Zarei, Ramin Mozafari Kermani, Rahele Rostami, and Ali Montazeri. 2022."Measuring health literacy: A systematic review and bibliometric analysis of instruments from 1993 to 2021." PLOS ONE 17 (7).

This research paper analyzes and reviews all existing methods of measurement for health literacy. Their study performed a bibliometric analysis to review all existing instruments. The researchers examined the known capability on health literacy instruments which provides knowledge on what may be lacking. The study found that there were enough health literacy measurement tools available but that there were almost too many available. The research suggests that there needs to be a global general health literacy instrument to be widely used instead of the large number of poor-quality instruments. The systematic review states that the

HLS-EU-Q has the highest potential to be used universally as it examines health literacy through health care, health promotion, and health prevention. With one universal instrument, more specific instruments could be built off of it as versions to measure different variables such as disease-specific health literacy. The review also examines the impact of e-health literacy which is important to understand the impacts as this might further isolate the elderly from society and positive health outcomes.

Van den Broucke, Stephan. 2019. "Capacity building for health literacy." *International handbook of health literacy: Research, practice and policy across the life-span* 705-719.

This chapter in the *International Handbook of Health Literacy*, provides an analysis into the concept of capacity building for health literacy. It explains how capacity building includes actions that strengthen and build resources needed to improve health services to special populations. The passage includes statistics on how recent the research on health literacy impacts is. The resource focuses on ten attributes of what a health literate organization should look like since so many are not. The examples act as a useful guide for health literacy issues or exemplars in organizations. The handbook stresses the importance of being mindful of pre-existing structures during research or intervention. A researcher should identify pre-existing skills, competencies, structures, partnerships, and resources. The context observed should allow the ability to respond and understand the existing environment and cultural context. Van Den Broucke discusses a combination of effective capacity building strategies at the individual, group, organisational, and community levels. Each stage is provided evidence on what intervention would look like. Health promotion workers can use these guidelines to plan models and interventions for change.

Nutbeam, D., Bronwyn McGill, and Pav Premkumar. 2018. "Improving Health Literacy in Community Populations: A Review of Progress." *Health Promotion International, 33*(5), 901–911. doi: 10.1093/heapro/dax015.

This research paper discusses the recent interest in understanding the importance of health literacy as an avoidable health risk. The researchers evaluated the strength of health literacy interventions in organizations. They found that many studies met the criteria for inclusion, meaning they were influenced by the concept of health literacy, but very few studies implemented health literacy into the design of their programs. The paper discusses the need for community health practitioners to deliberately implement health literacy techniques into their practice.

Santos, Diego., Rita Silva, and Joana Gomes. 2022. "Better Health Communication During the Life Cycle Contributes to Better Health Literacy: On the Adequacy of Information Leaflets." *IGI Global* 9:143-167.

This resource discusses the importance of health communication in promoting health literacy. The chapter explains the use of information leaflets as a tool to allow self-management of health. A question-answer system was used in these pamphlets which allows the patient to understand specific information. Content on leaflets should be clear and contain positive language, targeted at the specific population. The paper includes a theoretical framework and exemplar samples of leaflets. The reference goes into depth on what a targeted leaflet should look like. Leaflets provide inexpensive, reliable, and an available source of information. This empowers individuals to manage their health and have autonomy.

linguistically diverse backgrounds: a systematic literature review and meta-analysis." *BMC Health Services Research,* 15:560, 1-10. Doi: 10.1186/s12913-015-1222-4.

The goal of this study was to help diminish barriers of health care for the ageing population. The study was conducted with the elderly population in Sweden. The focus of this paper was the role of health promotion and how it can empower individuals to live a healthy life through their behavior. The research examined randomized control trials and assessed the relevance and design of them. A mixed-methods approach to data analysis was used. The study found that health promotion programs should be designed with a person-centered approach and involve culturally and linguistically diverse activities involving health information. This resource provides a broad overview of health programming in the elderly population and best practices or limitations.

Miller, Michael., Howard B. Degenholtz, Julie A. Gazmararian, Chyongchiou Jeng Lin, Edmund M. Ricci, and Susan M. Sereika. 2007. "Identifying elderly at greatest risk of inadequate health literacy: A predictive model for population-health decision makers." *Social and Administrative Pharmacy* 3: 70-85.

This proposed model was a result of a collection of data to estimate functional health literacy among the elderly. This data was used to develop a model for estimating functional health literacy in the elderly. This 2007 study was the first to appropriately quantify the high levels of inadequate health literacy in the elderly. This research can be used for other research to understand the appropriate level of care for the elderly and better understand the correlation between health literacy and health status. The research aimed to identify the extent of risk elderly individuals were to inadequate health literacy. The known data and

Baker, David., Julie Gazmararian, Joseph Sudano, and Marian Patterson. 2005."The Association Between Age and Health Literacy Among Elderly Persons." *Journal of Gerontology, 55:6, 368-374.*

This study examines health literacy by specific demographics. The study was completed through home interviews. The study found that mental health, visual acuity, and reading activity were positively associated with health literacy. The study also explains that lower health literacy may be a result of normal cognitive decline with age. Older adults show more difficulties that require reasoning or inferences from information presented to them. This makes tasks like reading prescription bottles difficult for older adults.

Berthenet, Marion., Regis Vaillancourt, and Annie Pouliot. 2016. "Evaluation, Modification, and Validation of Pictograms Depicting Medication Instructions in the Elderly." *Journal of Health Communication,* 21: 27–33. DOI: 10.1080/10810730.2015.1133737.

This study evaluated the effectiveness of pictograms on the elderly population. These pictograms were constructed to a high standard and contained various health information. The participants in this study were all older than 65 and recruited from local pharmacies. Participants were asked to describe the meaning of each pictogram after the participant read it. The results of this study show that the older participants were incorrect more often. Education also influenced the transparency scores. The result from the survey demonstrates that there were more misconceptions when there were confusing pictures. The pamphlets that were understood the most were ones with pictures and simply worded captions. Pamphlets should be given simultaneously with oral medical advice. Pamphlets should be used along with counseling as a helpful teaching tool.

Timeline:

December:

-Approval of research proposal

-Continue to meet with readers for feedback

-Apply for Opportunity Fund to gain access to HLQ

-IRB approval with completed IRB and consent form

Early January:

-Research effective health promotion interventions

-Schedule workshop dates for the spring at the Saratoga Senior Center

-Contact a co-facilitator for educational workshops

End of January and early February:

-Conduct survey at Saratoga Senior Center

End of February:

-Processing survey data

-Write results section of final project

-Finish spring program planning

-Begin work on permanent resource for the senior center to be given by the end of the program

Early March:

-Workshops at senior center (a total of three events spaced throughout three weeks)

-Write discussion and conclusion of final paper

-Meet with readers to continue to edit and revise paper

Health Education, Advanced Peer Health Education, and Exercise Testing and Prescription will all help me produce an effective program. These courses have provided me with experience in planning programs to promote the health of a population while being mindful of how social identities impact health. This project will allow me to combine my foundational knowledge of public health and social issues as well as my practical research skills to improve health literacy in my community and understand its impact on an individual's quality of life.

Methodology:

This project will require multiple steps for the different goals. I will meet with the employees at the senior center to finalize a plan for the next six months. After creating a meaningful relationship with the employees and members at the senior center through multiple visits, I will survey them through convenience sampling. I am aiming for 100 participants. The most used survey for health literacy is the Health Literacy Questionnaire (HLQ). The assessment will be self-reported and include independent scales that measure health literacy on a scale. The scores will range between 1 and 4. I will use all the elements of this survey and add a few of my own. I will add questions on the participants' age and education level, but personal information is unnecessary allowing the project to be anonymous. At the end of the survey, I will ask the participants their thoughts about accessing health information and their comfortability with the health care system. I will have the HLQ survey questions reviewed by the Institutional Review Board (IRB) of Skidmore College.

The survey will be administered at the senior center. I will approach members during lunch or downtime and ask if they want to participate. Most members will already be aware of my role as a researcher because I will have spent time at the center already. The survey will be in print, but I will sit next to the respondent during the survey to help if they have any questions. I

Introduction:

Throughout the world, country, and community, there are vast disparities in the quality of health of different groups that limit an individual's opportunity to live a longer and healthier life. Some of the health inequalities throughout our communities are avoidable, and one such inequality is health literacy. Health literacy is the degree to which individuals can obtain, process, and understand basic health information and services needed to make appropriate health decisions (Centers for Disease 2022). According to data from the Center for Health Care Strategies, it is estimated that 90 million Americans have low health literacy. Lower health literacy can have negative consequences, including medication errors, unnecessary emergency room visits, ineffective management of chronic conditions, and a higher mortality rate (Center for Health 2013). One group that may be affected by this issue the most are older adults.

Issues generated by poor health literacy are amplified in older patients because of several interrelated factors. As age increases, so do the deficits in literacy due to possible declining cognitive function, increased time since formal education, and decreased sensory abilities. For example, reading and comprehension are shaped by vision, hearing, and brain function capability. The effects of aging can also be exasperated by identity and social determinants of health. According to an article in the *Health Promotion International* journal, "The majority of patients older than 60 years perform at the lowest levels of literacy, and 80 percent have limited ability to fill out forms, such as the ones they are asked to complete in physician waiting rooms" (Nutbeam 2018). These consequences are powerful since the elderly are more likely to have chronic and comorbid conditions, which means that minor healthcare errors could mean life or death.