

Analyzing Health Literacy to Improve Patient Self-Care Management: A Systematic Review

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Abstract: The primary objective of this systematic literature review is to determine the use of measurement scales for health literacy among clinicians for the improvement to patient self-care management. Low health literacy has been described as the inability to comprehend and to effectively use medical information and treatments. Predominantly found among adults sixty-five years old and older residing in low-income populations. To date, a treatment has not been identified to increase health literacy. However, effective communication is a resourceful tool that to bring forth an increase in understanding and education to individuals to help them control their self-care management. A search was conducted using PubMed (Medline) and Cumulative Index of Nursing and Allied Health Literature academic databases following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines. Data from 16 relevant articles were analyzed using screening criteria that revolved around the research question. Three themes emerged from the literature during the analysis process. The themes included “health literacy”, “adults in poverty”, and “patient self-care management”. The results indicated that the use of measurement scales for health literacy are necessary to see improvement in patient self-care management. The implications of these findings provide healthcare leaders and clinicians an opportunity to effectively use measurement scales for health literacy to produce positive outcomes and continue to improve the quality of a patient’s self-care management.

Keywords—health literacy, adults in poverty, patient self-care management.

1. INTRODUCTION

Health literacy levels are increasing but continue to be a significant issue in the United States of America.² Health Literacy provides patients the ability to read and comprehend healthcare information and to make sound decisions regarding their medical care.² According to the National Assessment of Adult Literacy, Hispanic adults have the lowest average health literacy scores of all the racial groups combined, followed by African American, American Indian/Alaska Native Adults.¹ Additionally, health literacy continues to impact older adults 65 and older, based upon them reporting issues with poor mental health statuses, continuous physical pain, and the limitations of daily activities.¹ Patients with low health literacy typically use more expensive healthcare services. The average patient with low health literacy tends to spend \$993 as an inpatient, which is annually costing the U.S. economy \$106 billion to \$238 billion.¹ Several authors have shown that a correlation exists between health literacy and an individual’s overall health; however, it is unknown if the use of measurement scales for health literacy among clinicians improves patient self-care management for adults living in poverty.² The purpose of this systematic literature review is to determine whether the use of measurement scales for health literacy among clinicians providing services to adults living in poverty improve patient self-care management.

2. METHODS

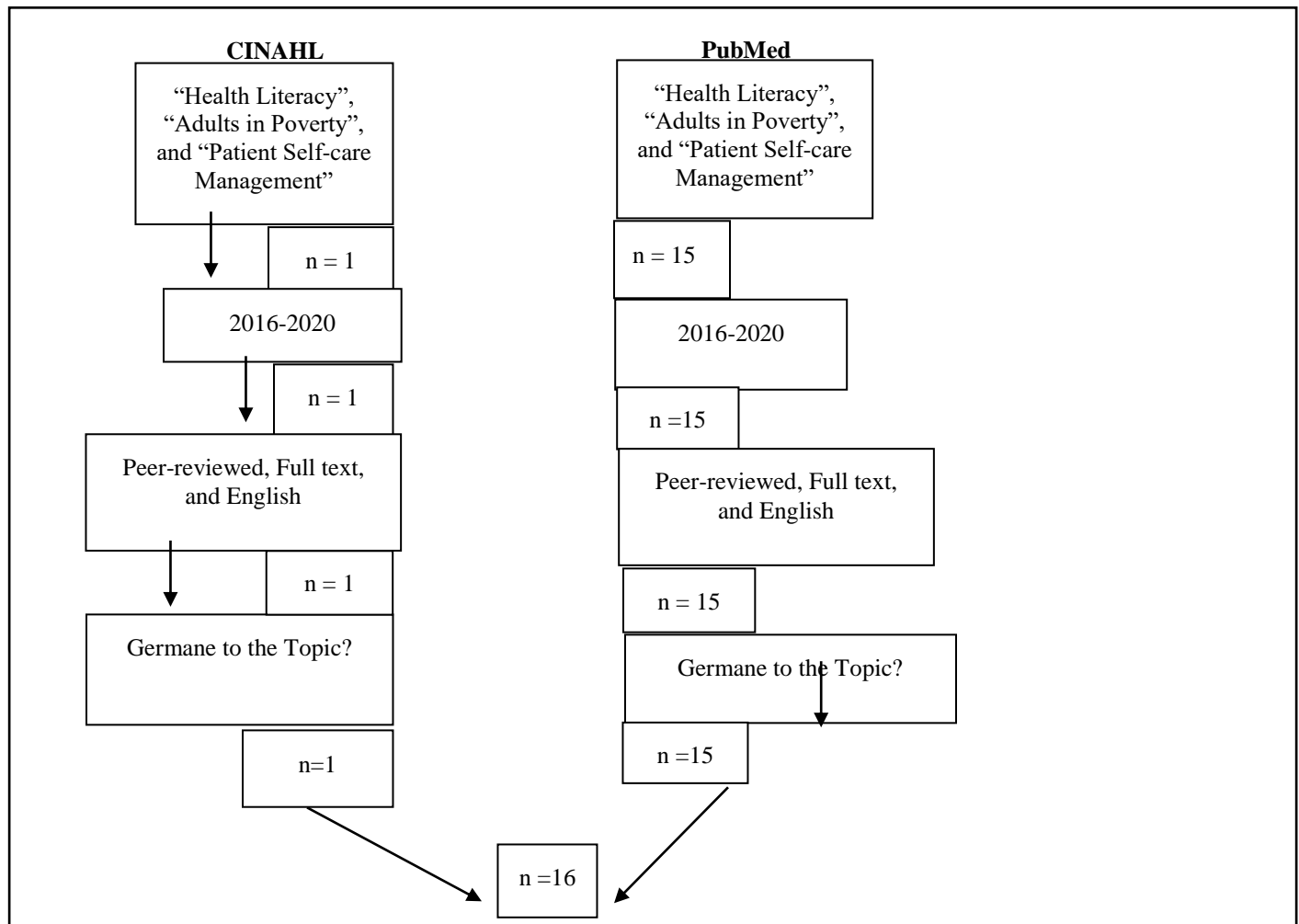
The literature search process Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. PRISMA guidelines include searching for pertinent studies, screening for inclusion and exclusion criteria, data extraction based on the screening for criteria, synthesis of the data to identify key themes, and finally reporting the findings (Moher, 2009). The process used for selecting the articles in this review illustrated in Fig 1. After utilizing Google Scholar to narrow the research topic choice, a systematic search using the CINAHL and PubMed research databases transpired. The exclusion of Google Scholar transpired due to an excessive amount of unrelated terms and articles found. An in-depth search was conducted utilizing keywords such as “health literacy”, “adults in poverty”, and “patient self-care management”. The initial search returned 106 results combined.

2.1 EXCLUSION CRITERIA

Filters were applied to the CINAHL and PubMed databases to exclude articles that were outside of the selected study timeframe of 2016-2020, and not academic peer-reviewed journals. Additionally, filters were applied such as “full text only” and to ensure that the results returned in the English language. The total articles excluded from these files were 193. The remaining 16 articles were screened by one reviewer to determine whether the articles were appropriate for the study. The articles excluded were removed based on health literacy related to other factors than adults living in poverty. The screening criteria based on the research

question: does the use of measurement scales for health literacy among clinicians providing services to adults living in poverty improve patient self-care management? Articles not related to this objective remain excluded. The final sample was 16 articles.

1. Figure 1: Flow Diagram



3. RESULTS

Does the use of measurement scales for health literacy among clinicians providing services to adults living in poverty improve patient self-care management? The broad term search criteria produced a well-rounded sampling of the literature. Sixteen articles were analyzed for common themes. Table 1 provides a detailed summary of the articles. Sixteen of the articles concentrated on patient health literacy. While only seven of the articles focused on patient self-care management.

Table 1: Summarized findings of the literature

Title	Findings
Health Literacy and Access to Care [1]	The author's analyzed a sample of a low-income community that contained adults that were 50 and above in order to determine an estimate for the relationship between having low health literacy and being able to self-report the difficulties of obtaining care.
Promoting self-management, health literacy and social capital to reduce health inequalities in older adults living in urban disadvantaged areas: protocol of	The author's conducted a trial of a low-income community of adults that were 60 years and above in order to determine how to improve their health literacy as an indicator of health inequality reduction.

the randomized controlled trial AQUALIS [2]		Health Literacy Profiles of Patients Admitted to a Public and a Private Hospital in Melbourne, Australia [10]	The author's conducted a survey to determine if adults that have lower health literacy have a better influence of care based upon private versus public care.
Simple screening tools to identify limited health literacy in a low-income patient population [3]	This study utilized adults that were 40 years and above that were patients of a medical center and compared a single screening question about perceived difficulty completing medical forms.	Prevalence and Risk Factors of Low Health Literacy: A Community-Based Study in Shanghai, China [11]	The author's conducted a study on a sample of individuals residing in China to evaluate the impact of low health literacy and its association with the demographics in China.
Health literacy of recently hospitalized patients: a cross-sectional survey using the Health Literacy Questionnaire (HLQ) [4]	A survey was used to try and find an association between low health literacy and the utilization of hospital health services.	Association Between Health Literacy and Self-Care Behaviors Among Patients with Chronic Kidney Disease [12]	The author's conducted a study to help to determine the relationship between health literacy and self-care management of low-income patients with chronic kidney disease.
The association between health literacy and self-management abilities in adults aged 75 and older, and its moderators [5]	The study findings determined the relationship between low health literacy and poor self-management of older adults.	Associations of Acculturation with English- And Spanish-Language Health Literacy Among Bilingual Latino Adults [13]	The author's conducted a study to determine the relationship between the sociodemographic and acculturation variables with English and Spanish language health literacy among Latino adults with adequate health literacy.
Health Literacy and Income Mediate Racial/Ethnic Asthma Disparities [6]	The study results determined if health literacy and socioeconomic status increase asthma issues.	Exploring the Relationship Between Maternal Health Literacy, Parenting Self-Efficacy, and Early Parenting Practices Among Low-Income Mothers with Infants [14]	The author's conducted a study to determine the relationship between maternal health literacy, self-efficacy, among low-income mothers with infants.
Health Literacy, Sociodemographic Factors, and Cognitive Training in the Active Study of Older Adults [7]	The authors examined the relationship between socioeconomic factors and health literacy in older adults.	The Effectiveness of Self-Management Interventions for Individuals with Low Health Literacy and/or Low Income: A Descriptive Systematic Review [15]	
Health Literacy in Saudi Arabia: Implications for Public Health and Healthcare Access [8]	The study results determined what the direct impact of low health literacy has on the population of Saudi Arabia.		(Table continues)
Health Literacy in a Community with Low Levels of Education: Findings from Chakaria, a Rural Area of Bangladesh [9]	The author's analyzed a random population from Bangladesh to help bridge the knowledge gap of low health literacy and the effective use of health services.	Establishing the efficacy of	The author's conducted a study to review self-management in populations that had low income or low health literacy, and the efficacy of these entities.
Differences in			

interventions to
improve health
literacy and health
behaviours: a
systematic review
[16]

The authors conducted this study to determine if
health literacy interventions in adults would improve
overall health literacy.

An affinity matrix was used to illustrate the frequency of mention of the discussion of a topic. For this review, an affinity matrix was constructed to identify the occurrences of common themes in the literature relative for measured scales for health literacy and the improvement regarding patient participation in their self-care management.

Table 2: Frequency of occurrence in the literature

Benefits	Occurrences	Instances of Attributes (n)	Percentage (%)
Theme 1: health literacy	1,2,3,4,5,6,7,8,9, 10, 11, 12, 13, 14, 15, 16	15	100%
Theme 2: adults in poverty	1,3,4,6, 10, 12, 14, 15	8	53%
Theme 3: self-care management	2,5,6, 10, 12, 14, 15	7	46%

Overall there were three current themes throughout the literature. The three themes included (a) health literacy, (b) adults in poverty, and (c) patient self-care management. In total, there were 30 mentions of pertinent information in the articles about measured scales for health literacy and the improvement regarding patient participation in their self-care management. From the research findings, a total of 16(100%) articles reported results on (a) health literacy (1,2,3,4,5,6,7,8,9, 10, 11, 12, 13, 14, 15, 16). 8 out of 16 (53%) articles reported results on (b) adults in poverty (1,3,4,6, 10, 12, 14, 15). 7 out of 16 articles (46%) reported results on (c) self-care management (2,5,6, 10, 12, 14, 15).

4. DISCUSSION

Health literacy affects older adults 65 years in age and above predominantly found in lower-income populations. There is no specific identified method for improving health literacy.²¹ However, communication has been and always will be an imperative tool to bring understanding and education to an individual to manage further their care and medical ailments.⁴ The systematic literature review aimed to determine if the use of measurement scales for health literacy

among clinicians providing services to adults living in poverty improve patient self-care management. The research showcased, three common themes throughout the literature, as Table 2 confirms. These themes provide confirmation that measurement scales for health literacy among clinicians providing services to adults living in poverty can potentially improve patient self-care management.

The understanding and incorporation of health literacy as it relates to adults living in poverty were substantiated by a significant percentage of [100%] of the articles in this review [1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16]. Consistent information was repeatedly discussed regarding adults in poverty by a considerable percentage of [55%] of the articles in this review [1,3,4,6,10,12,14,15]. In contrast several authors proposed that measurement scales for health literacy can improve patient self-care management by a substantial percentage [46%] of the articles in this review [2,5,6,10,12,14,15]. The results of this review substantiate that the use of measurement scales can be useful and provide improved outcomes for patient self-care management.

This review had some limitations that included the exclusion of articles that were outside of the selected study timeframe of 2016-2020, and articles that were not included in academic peer-reviewed journals. This review was conducted over 12 weeks. The literature review was performed using a preliminary search strategy using Google Scholar first. Additionally, other search strategies were conducted utilizing PubMed (Medline), and CINAHL academic database for reviewing peer-reviewed journal articles. It is possible that other articles were missed based upon the lack of verbiage that was incorporated into the academic databases utilized for searching. However, it could also be due to the difference in the interpretation of the articles.

To help produce a minimized outcome to the limitations mentioned above the PRISMA based systematic review guidelines were followed. Two hundred and nine articles were collected from PubMed and CINAHL, and each article was analyzed thoroughly until no additional information was available to develop the themes. A review of each article transpired to determine whether the articles were aligned with the research question. Although there were limitations of this study, the use of measurement scales for health literacy among clinicians providing services to adults living in poverty does have the potential to improve patient self-care management.

Based upon the results of this literature review, future researchers can utilize this information for conducting additional studies. Researchers should consider the incorporation of additional phone interviews, questionnaires,

and physical studies to collect further data to provide efficacy in the measurement scales for health literacy. The implications of these findings provide healthcare leaders and clinicians an opportunity to increase a patient's self-care management by increasing their health literacy.

5. CONCLUSION

As measured scales develop, clinicians can effectively use these measurement scales for health literacy to produce positive outcomes and continue to improve the quality of a patient's self-care. Clinicians can incorporate additional phone interviews, questionnaires, and physical studies to collect further data to provide efficacy in the measurement scales for health literacy. The authors suggest that clinicians and future researchers can utilize this information to increase health literacy among adults and to conduct further studies on how to increase health literacy to improve patient self-care management.

6. REFERENCES

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