Estimating Health Literacy in the Chaldean Community

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Introduction

Health literacy is a key factor influencing an individual's ability to navigate the healthcare system and achieve positive health outcomes. Yet research on the Chaldean-American population, a distinct Middle Eastern ethnoreligious group primarily residing in Metro Detroit, remains limited[1]. Although Chaldeans have a long history of immigration to the United States, they are often categorized within broader racial groups, masking their unique health challenges[1].

Within this community, financial success and business ownership often occur independently of formal education, suggesting that health literacy patterns may differ from those observed in other immigrant populations[2].

This study aimed to estimate health literacy among Chaldean adults in Metro Detroit and examine how it varies by education level and frequency of physician visits. Understanding these relationships can help guide culturally appropriate interventions and improve health communication and outcomes in this community[3].

Aims and Objectives

Aims:

This study aimed to assess health literacy within the Chaldean-American community in Metro Detroit, a historically underserved and understudied population, and to examine how health literacy varies based on socioeconomic and behavioral factors—specifically education and physician-visit frequency.

Objectives:

- Analyze the relationship between health literacy and highest education level.
- Evaluate the relationship between health literacy and frequency of physician visits.
- Identify potential gaps in literacy that may contribute to disparities in healthcare access.
- Provide insights to inform culturally tailored interventions for improving communication and outcomes.

Methods

Study Design & Population

This study utilized a cross-sectional survey to assess health literacy in the Chaldean community of Metro Detroit. Adult participants (≥18 years old) who self-identified as "Chaldean" or "Chaldean-American" were recruited from primary care facilities and community centers. Participants were required to be proficient in English or Arabic.

Survey Instrument

Health literacy was assessed using a modified questionnaire incorporating items from the **BRIEF Health Literacy Screening Tool** and the **All Aspects of Health Literacy Scale**, both validated measures recommended by the National Institutes of Health.

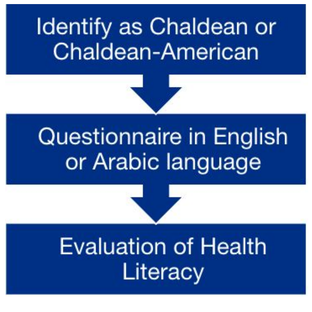
Three questions from the BRIEF Health Literacy Screening Tool were adopted. The tool was scaled from 3–15, with 3–9 classified as inadequate and 10–15 classified as marginal/adequate health literacy.
Twenty questions from the All Aspects of Health Literacy Scale were adopted. The tool was scaled from 20–100, with 20–60 classified as inadequate and 61–100 classified as adequate health literacy.
The survey was available in both English and Arabic.
Participants also reported their **highest education level** and **how often they see a physician** (monthly, every 3 months, every 6 months, yearly, or as needed).

Data Collection

- Surveys were distributed at participating primary care clinics and community centers in Metro Detroit.
- Participants were given the option to complete a hard copy during their visit.
- Surveys were collected anonymously in sealed envelopes and retrieved by research personnel.
- An informational sheet was provided to obtain consent, and participants were compensated with a $10 incentive.

Data Analysis

Health literacy scores were compared across education level and frequency of physician visits.
Pearson's Chi-Square Test and Fisher's Exact Test were used for categorical comparisons, with $p < 0.05$ considered statistically significant.



Results

At the conclusion of the project, 45 surveys were completed during the research project. The data was separated based on the respective health screening tools and was analyzed as it related to education level and frequency of physician visits.

Modified BRIEF Health Literacy Screening Tool:

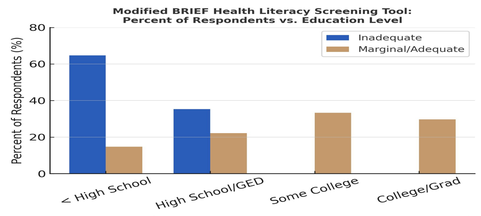


Figure 1. Shows the percent of respondents that were grouped as Inadequate (N=18) or Marginal/Adequate (N=27) on the modified BRIEF Health Literacy Scale as it related to their highest education level. The Fisher Exact p-value between the two groups was statistically significant at 0.0003.

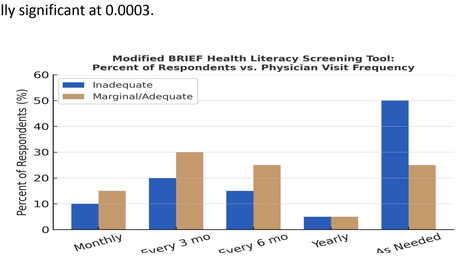


Figure 2. Shows the percent of respondents that were grouped as Inadequate (N=18) or Marginal/Adequate (N=27) on the modified BRIEF Health Literacy Scale as it related to their self-reported frequency of physician visits. The Fisher Exact p-value between the two groups was not statistically significant at 0.7848.

Modified All Aspects of Health Literacy Scale:

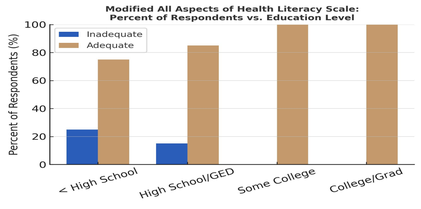


Figure 3. Shows the percent of respondents that were grouped as Inadequate (N=5) or Adequate (N=40) on the modified All Aspects of Health Literacy Scale as it related to their highest education level. The Fisher Exact p-value between the two groups was not statistically significant at 0.1466.

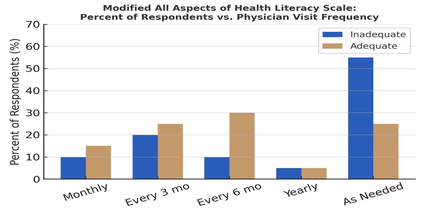


Figure 4. Shows the percent of respondents that were grouped as Inadequate (N=5) or Adequate (N=40) on the modified All Aspects of Health Literacy Scale as it related to their self-reported frequency of physician visits. The Fisher Exact p-value between the two groups was not statistically significant at 0.5826.

Conclusions

This study highlights significant relationships between education and health literacy within the Chaldean-American community in Metro Detroit. The findings indicate that education plays an important role in health literacy, as shown by the statistically significant association between highest education level and BRIEF Health Literacy Score ($p = 0.0003$). Participants with lower education were more likely to have inadequate literacy, while those with college or higher education demonstrated adequate literacy.

No statistically significant differences were observed when comparing health literacy with frequency of physician visits, although individuals who reported more regular visits tended to have higher literacy levels. The modified All Aspects of Health Literacy Scale showed that most participants fell into the adequate literacy range (88.9%).

The inconsistency between the two health-literacy tools and the limited sample size of forty-five participants highlight the main limitations of this study. The use of shortened survey instruments may also have reduced accuracy or cultural fit for this population.

These findings emphasize the importance of targeted health-education programs that account for educational background and cultural context. Tailored interventions to improve understanding of medical information may strengthen patient–provider communication and enhance healthcare outcomes for Chaldean-American adults. Future research should include a larger sample and explore additional factors such as language proficiency and healthcare access to develop stronger strategies for improving health communication.

References

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