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Review

State of the science of health literacy measures: Validity implications for minority populations

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ABSTRACT

Objectives: To review the evidence supporting the validity of health literacy (HL) measures for ethnic minority populations.
Methods: PubMed, CINAHL, and PsycINFO databases were searched for HL measures between 1965 and 2013.
Results: A total of 109HL measures were identified; 37 were non-English HL measures and 72 were English language measures. Of the 72 English language measures, 17 did not specify the racial/ethnic characteristic of their sample. Of the remaining 55 measures, 10 (18%) did not include blacks, 30 (55%) did not include Hispanics, and 35 (64%) did not include Asians in their validation sample. When Hispanic and Asian Americans were included, they accounted for small percentages in the overall sample. Between 2005–2013, a growing number of REALM and TOFHLA translations were identified, and new HL measures for specific cultural/linguistic groups within and outside the United States were developed.
Conclusions: While there are a growing number of new and translated HL measures for minority populations, many existing HL measures have not been properly validated for minority groups.
Practice Implications: HL measures that have not been properly validated for a given population should be piloted before wider use. In addition, improving HL instrument development/validation methods are imperative to increase the validity of these measures for minority populations.

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1. Introduction

Health literacy (HL) is most widely defined as "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions" [1]. HL is necessary in almost all facets of healthcare, and poses a challenge to millions of individuals worldwide [2,3]. However, limited HL is endemic and especially problematic among older adults, ethnic minorities, and those who are less educated [2,4–6].

Ethnic minorities in the United States (US) and people with low English proficiency are particularly vulnerable. For example, in the US 62%, 48%, and 27% of adult immigrants born in Latin America, Asia, and Africa, respectively, are unable to speak English well [7]. In addition, many have low educational attainment, with 56%, 21%, and 14% of immigrants born in Latin America, Asia, and Africa, respectively, having less than a high school education [7]. Furthermore, up to 46–59% of elderly immigrant populations, such as the Hmong, Korean, Vietnamese, and Chinese Americans, are categorized as linguistically isolated [8,9], and have reported high levels of stress as a result of their inability to communicate with health-care providers [10,11]. Similar trends have been reported globally. Notably, in Europe, where there are over 75 million immigrants, minorities also score low on health literacy measures, have poor access to health information, and receive less healthcare services [3].

The high prevalence of limited HL and the associated consequences have been extensively documented [2,12]. Supporting the expansion of this literature, there has been a significant proliferation of tools to measure HL. Several reviews of these measures have been published [13–15]. However, existing reviews do not focus on validation issues affecting appropriate use with ethnic minority populations, and have been more narrowly focused in various ways. For example, Luk and Aslani [14] focused exclusively on written health information from the "document and user perspective," thereby precluding measures that focused on other domains of HL. Mancuso et al. [13] did not limit their work to a specific domain of HL, but only included measures from 1991 to 2006; the number and linguistic diversity of HL measures has substantially increased in the intervening years. The absence of a critical evaluation for the validity of HL tools for use among ethnic minorities is particularly important given the potential introduction of measurement bias when researchers use instruments that have not been well validated for a particular population. Specifically, measures that have been developed using methods associated with Classical Test Theory (CTT) result in reliability estimates that are highly dependent on the sample, and require extensive validation before use in other populations [16,17]. Whereas measures developed using methods associated with Item Response Theory (IRT) or Rasch Modeling, have the potential to produce items and scales that are metrically equivalent across different groups [18,19]. To address this gap, we have systematically reviewed the validation data that have been presented for racial and ethnic minority populations for all HL measures.

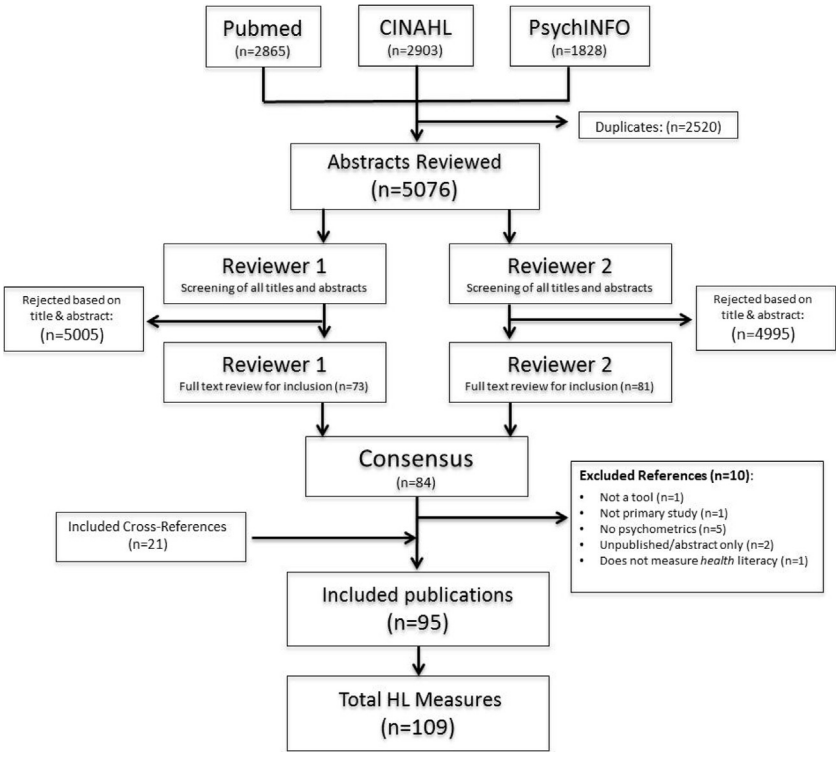

Fig. 1. Search strategy for the systematic review.

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