

Oral health literacy and associated oral conditions

A systematic review

Ramon Targino Firmino, MSc; Fernanda Morais Ferreira, PhD; Saul Martins Paiva, PhD; Ana Flávia Granville-Garcia, PhD; Fabian Calixto Fraiz, PhD; Carolina Castro Martins, PhD

Oral health literacy (OHL) is the degree to which people have the capacity to obtain, process, and understand basic oral and craniofacial health information and services needed to make appropriate health decisions.¹ Low levels of OHL have been associated with poor oral health knowledge,²⁻⁵ which may contribute to compromised self-care

behavior. Moreover, patients with low OHL levels find it difficult to understand health instructions or the importance of preventive dental procedures.⁶ Thus, it would be reasonable to hypothesize that these patients are more likely to experience oral health problems than are patients with a high OHL levels.

Investigators have found a higher prevalence of oral conditions such as dental caries, extracted teeth, and periodontal disease among patients with low levels of OHL.⁷⁻⁹ However, study results are conflicting; investigators also have reported opposite results.¹⁰⁻¹² Systematic reviews of the literature provide the best available research evidence to support sound clinical or health policy decisions¹³ and, thus, could be used to clarify this issue.

Copyright © 2017 American Dental Association. All rights reserved.

ABSTRACT

Background. The authors systematically reviewed the scientific evidence regarding an association between oral health literacy (OHL) and oral conditions.

Types of Studies Reviewed. The authors performed an electronic search of 8 databases up through October 2016, as well as a manual search. The authors included studies in which the investigators evaluated oral conditions and measured OHL through a validated tool and studies in which OHL was an explanatory variable. The authors assessed risk of bias by using the Newcastle-Ottawa Scale.

Results. The authors included 10 cross-sectional studies. Risk of bias was high in most studies ($n = 6$). Dental caries and periodontal status were the most common oral conditions reported (each outcome was reported in 5 studies). Investigators in 4 studies found a statistically significant association between dental caries and lower levels of OHL ($P < .05$), with investigators in 3 of the studies finding this in primary teeth. A reduced number of teeth and loss of attachment were associated with lower levels of OHL ($P < .05$). Findings for deep periodontal pockets, bleeding on probing, severity of periodontal disease, history of extractions, dental treatment need, and dental plaque were inconclusive. Investigators barely reported other clinical conditions such as temporomandibular joint problems, oral mucosal lesions, enamel opacities, dental fluorosis, and use of and need for dental prostheses.

Conclusions and Practical Implications. There seems to be a weak association between lower levels of OHL and dental caries in primary teeth. Similar findings for adults and between OHL and other oral conditions remain unsubstantiated because the results are controversial, with considerable clinical and statistical heterogeneity between studies.

Key Words. Dental caries; dentistry; health literacy; literacy; literacy in dentistry; oral health; periodontal diseases.

JADA 2017;■(■):■-■

<http://dx.doi.org/10.1016/j.adaj.2017.04.012>

Investigators in a previous systematic review focused on evaluating the psychometric properties of the available tools for measuring OHL and found that a growing number of instruments, such as the Test of Functional Health Literacy in Dentistry, the Rapid Estimate of Adult Literacy in Medicine and Dentistry (REALMD-20), and both versions of the Rapid Estimate of Adult Literacy in Dentistry (REALD) (99 and 30), have been developed and validated.¹⁴ Our systematic review underscores OHL as a burgeoning field of research. However, to our knowledge, no investigators have conducted a systematic review to investigate whether OHL is a predictor of oral conditions. To fill in this gap, we performed our study with the aim of systematically reviewing the scientific evidence regarding an association between OHL and oral conditions.

METHODS

Protocol and registration. We reported this systematic review in compliance with the guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analysis checklist.¹⁵ We also registered it in the PROSPERO database (protocol CRD42016040160).

Eligibility criteria. We used the Population, Exposure, Comparison, Outcome structure to define the eligibility criteria: Population, people of any age; Exposure, inadequate or low levels of OHL; Comparison, adequate or high levels of OHL; Outcome, oral conditions. The inclusion criteria were epidemiologic studies (cross-sectional, case-control, cohort, and clinical trials) in which the investigators studied the association between OHL and oral conditions (for example, dental caries and its consequences, periodontal status, dental plaque, malocclusion, dental fluorosis, enamel opacities, temporomandibular joint [TMJ] problems, oral mucosal lesions, use of and need for dental prostheses, and need for dental treatment) by means of any comparative statistical analysis. In addition, they needed to have evaluated OHL through a validated instrument (measuring word recognition, reading comprehension, numeracy, and conceptual knowledge),¹⁴ and OHL had to be an explanatory variable in the studies. There were no restrictions regarding the publication dates of the articles. We excluded case reports, letters to the editor, expert opinions, narrative reviews, literature and systematic reviews, studies conducted with animals, studies that concerned nonspecific health literacy, qualitative investigations, studies exploring unrelated outcomes, studies regarding the validation of OHL instruments, and studies in which the investigators reported OHL as the outcome.

Information sources. Three of us (R.T.F., F.M.F., C.C.M.) performed an electronic search up through October 2016 in 8 electronic databases: PubMed, Scopus, Web of Science, the Cochrane Library, the Latin American and Caribbean Health Sciences Literature and the

Brazilian Library of Dentistry through the Bireme Virtual Health Library, the clinical trials database of the US National Institutes of Health, the International Standard Randomised Controlled Trial Number database, and the National Institute for Health and Care Excellence. We also performed manual searches in the reference lists of the included articles to identify any study that might not have been reached through the electronic search. We used software (Reference Manager, Version 12.0.3, Thomson Reuters) to identify duplicate studies and organize the list of abstracts.

Search strategy. We used the following search strategy in PubMed, Scopus, Web of Science, and the Cochrane Library: ((health literacy [medical subject heading (MeSH)] OR health literacy OR oral health literacy OR numeracy OR literacy in dentistry) AND (dentistry [MeSH] OR dentistry OR oral health [MeSH] OR oral health OR oral condition*)). For the remaining databases, we used combinations of keywords regarding the exposure and the outcome: (health literacy AND dentistry), (health literacy AND oral health), (health literacy AND oral condition), (oral health literacy AND dentistry), (oral health literacy AND oral health), (oral health literacy AND oral condition), (literacy in dentistry AND dentistry), (literacy in dentistry AND oral health), and (literacy in dentistry AND oral condition).

Study selection. Two independent and trained researchers (R.T.F., F.M.F.) selected the studies. Initially, they selected studies on the basis of title and abstract. In cases of disagreement between the researchers, they discussed eligibility criteria until they achieved a consensus. For studies that met the inclusion criteria, they obtained the full text. When abstracts were unavailable or had insufficient information on which to make a decision about inclusion, they retrieved the full text and then made a decision. They excluded from the review studies that did not meet the inclusion criteria. These are provided in [Appendix 1](#) (available online at the end of this article). In the second phase, the same 2 researchers (R.T.F., F.M.F.) independently selected full texts considering the eligibility criteria. As before, the researchers resolved disagreements through a discussion until the achievement of a consensus. The list of excluded articles and reasons for exclusion is available in [Appendix 2](#) (available online at the end of this article).

ABBREVIATION KEY. **dmfs:** Decayed, missing, or filled surfaces in primary teeth. **DMFS:** Decayed, missing, or filled surfaces in permanent teeth. **dmft:** Decayed, missing, or filled primary teeth. **DMFT:** Decayed, missing, or filled permanent teeth. **MeSH:** Medical subject heading. **OHL:** Oral health literacy. **REALD:** Rapid Estimate of Adult Literacy in Dentistry. **REALMD-20:** Rapid Estimate of Adult Literacy in Medicine and Dentistry-20. **TMJ:** Temporomandibular joint.

Download English Version:

<https://daneshyari.com/en/article/5639402>

Download Persian Version:

<https://daneshyari.com/article/5639402>

[Daneshyari.com](https://daneshyari.com)