

Oral Health Literacy and Outcomes in Central Wisconsin Adults



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Background: Low oral health literacy (OHL) is a known risk factor for infrequent tooth brushing, bleeding gums, and missed dental appointments. There are relatively few studies of OHL overall, however, and no previous population-based studies of OHL in the U.S. We investigated the association between sociodemographic factors and OHL, as well as OHL and several oral health outcomes, in central Wisconsin adults.

Methods: A cross-sectional survey was conducted on a stratified-random sample of 164 adult residents of two communities within the Marshfield Epidemiologic Study Area in central Wisconsin in 2017. OHL was assessed using a previously validated tool, the Oral Health Literacy in Adult Questionnaire. Survey data were then linked to Marshfield Clinic Health System electronic medical/dental records. Linear regression was used to identify sociodemographic factors associated with low OHL. Linear and logistic regression was used to examine the association between OHL and oral health outcomes, including: oral hygiene, oral health quality-of-life, dentist visits, and emergency room visits for non-traumatic dental conditions.

Results: The mean age of the sample was 48.2 years (95% CI: 46.2, 50.1), 68% were females, 99% were white race/ethnicity, 27% had less than a college education, and 35% had an annual household income below \$40,000. OHL was generally high in the study population. Non-white race/ethnicity ($p < 0.001$), those without a college education ($p < 0.001$), and those with lower household income ($p = 0.02$) had significantly lower OHL. Low OHL was also significantly associated with fewer visits to the dentist in the past five years ($p < 0.001$) and more emergency room visits for non-traumatic dental conditions ($p = 0.02$).

Conclusions: Low OHL tracked closely with markers of socioeconomic status and may be most influential in the context of appropriate dental care utilization. Future research should consider a prospective, longitudinal study to explore how OHL influences preventive and emergency dental care decisions over time.