

# Relationship between Adult Oral Health, Depression, Pain, and General Health

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**Objectives:** Few studies have examined relationships between race/ethnicity, self-reported oral health and depression symptomatology, bodily pain, and self-reported general health in a population of working age adults. Elucidating these relationships should contribute to our general knowledge of patients and their behaviors regarding dental encounters.

**Methods:** We used survey and performance-based data collected from 345 white, 278 black, and 177 Hispanic subjects recruited from two large academic medical centers and 2 community clinics in Cleveland and Chicago. Main variable of interest—oral health—was assessed with the item “How would you describe the health of your gums and teeth—excellent, very good, good, fair or poor”? Three “outcome” variables (from SF-36v2) assess depression symptomatology, pain, and general health, and are measured on a 0-100 scale. Analysis included descriptive statistics, ANOVA for dependent variables across categories of oral health, and multivariate OLS regression, including adjustments for age, sex, education, racial/ethnic group membership, chronic conditions, and physical functioning index.

**Results:** There were no significant racial/ethnic differences in depression symptomatology, pain or general health. However, blacks reported significantly worse oral health (47% fair or poor) compared to whites and Hispanics (30% and 35%, respectively). For subjects in the fair and poor categories of oral health, there were strong and positive relationships to worse depression (beta=9.9 and 14.7; p<0.001, respectively), pain (beta=10.8 and 16.0; p<0.001, respectively) and general health (beta=15.4 and 20.4; p<0.001, respectively) in unadjusted analysis. After controlling for confounders, these relationships were only moderately attenuated (20-45%), persisted significantly across all dependent variables, and did not significantly differ across racial/ethnic groups.

**Conclusions:** Oral health is an independent and significant contributor to self reported depression symptomatology, pain, and general health, even after adjustment for potential confounders. Further research is needed to look for unmeasured confounders in these relationships.

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