

Oral Health Knowledge among WIC-Enrolled Pregnant Women

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Background:

Early childhood caries (ECC) disproportionately affects children from low-income families, partly due to gaps in maternal oral health knowledge. Understanding these gaps during pregnancy is critical for designing targeted interventions to reduce ECC risk.

Methods:

This secondary analysis included 634 baseline survey responses from WIC-enrolled pregnant women in longitudinal the Birth to Three – Cavity Free study, a trial of an intervention to improve care behaviors and reduce ECC. Maternal oral health knowledge was assessed using a 32-item questionnaire scored from -2 (strongly incorrect) to +2 (strongly correct), summed to create a total score. Univariable linear regressions examined associations between total knowledge score and demographics (age, education, employment, income, marital status, dental insurance, ethnicity). Regression coefficients, 95% confidence intervals (CI), and p-values are reported.

Results:

Participants had a mean age of 27 years (SD = 5.7); most held a high school diploma/GED (63.9%), and nearly half were single (46.9%). Income was low, with 21.1% reporting \$0–5,000 annually; 67.4% had Medicaid coverage. Higher total knowledge scores were associated with age [+0.383 points/year (95% CI: 0.24–0.53; $p < 0.001$); education [two-year college (+11.703; $p = 0.004$), four-year college (+13.315; $p = 0.001$) vs. ≤ 8 th grade]; employment [full-time (+5.325; $p < 0.001$), part-time (+2.489; $p = 0.031$), and homemaker (+7.883; $p < 0.001$) vs. unemployed]; dental insurance [Medicaid (+4.589; $p < 0.001$) and private (+6.756; $p < 0.001$) vs. no insurance], income [$\geq \$30,000$ (+7.710; $p < 0.001$) vs. \$0–5,000]. Single mothers had lower scores than married (-4.003; $p < 0.001$). Hispanic ethnicity and student status were not significant. Item-level analyses revealed persistent misconceptions about fluoride toothpaste and bedtime brushing, even among higher knowledge groups.

Conclusion:

Maternal oral health knowledge is strongly linked to socioeconomic factors. Targeted education strategies for single, low-income, and less-educated mothers is critical to reduce ECC disparities.