



# Does Parental Language Barrier Contribute to Early Childhood Caries Risk?

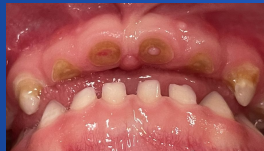
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## INTRODUCTION

Parental language barrier has been linked to poorer clinician-patient relationships, adherence to treatment protocols, and inhibition of understanding chronic disease (Ferguson, 2002). Studies in medical literature have shown overcoming language barrier results in better compliance with medications and appointments (Manson, 1988). Early childhood caries (ECC) is one of the most common diseases of childhood and can be painful and debilitating. ECC is a significant public health problem with profound disparities. Children of low-income and minority families suffer a disproportionate amount of the disease.

**PRIMARY GOAL:** To assess if parental language barrier was linked to caries-risk factors, dietary, and oral hygiene habits in low-income children aged 12-60 months enrolled in the University of Iowa's Infant Oral Health Program (IOHP).



A 4-year-old suffering from ECC at the University of Pittsburgh Pediatric Dental Department

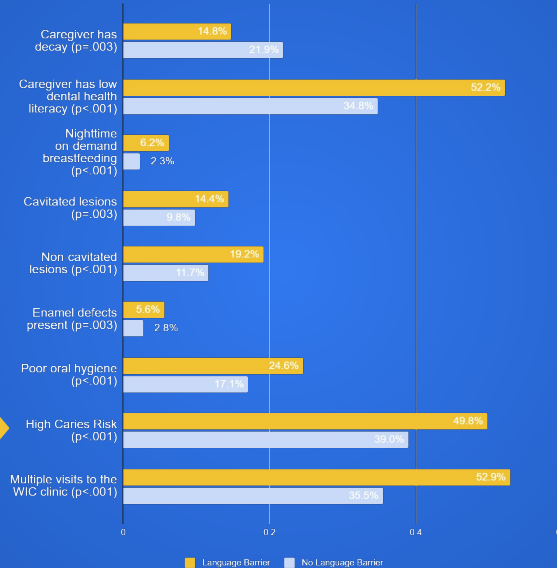


An infant having an exam completed at the IOHP

## METHODS

The charts of children aged 12-60 months enrolled in the University of Iowa's IOHP were reviewed for this retrospective cross-sectional study (n=1,846). Data were taken from their baseline health history, clinical exam, and caries-risk assessment form. Descriptive, bivariate, and logistical regression analyses were performed (alpha=0.05) to explore known caries-risk factors associated with parental language barrier. 51% were female. 73.7% were non-white. The mean age of participants was 26.1±12.6 months.

Chart 1: Caries Risk Factors Significantly Associated with Parental Language Barrier



## CONCLUSIONS

- Parental language barrier was associated with dietary, oral hygiene habits, and caries-risk factors
- Children whose parents had a language barrier were 1.54 times more likely to be classified as high caries risk than their counterparts

## RESULTS

### DEMOGRAPHIC FACTORS:

Children whose parents had a language barrier were more likely to be older, be a minority other than black, live with both parents, and have married parents.\*

Children whose parents did NOT have a language barrier were more likely to be white and have mothers with previous knowledge of ECC.\*

### DIETARY FACTORS:

Children whose parents had a language barrier were more likely to be breastfed, be breastfed to sleep, be breastfed throughout the night, be bottle-fed with milk, be bottle-fed with milk with sugar, be given sweets twice or more daily.\*

Children whose parents did NOT have a language barrier were more likely to be bottle-fed, bottle-fed to sleep, bottle-fed throughout the night, and bottle-fed with formula, water, or other liquid.\*

### ORAL HYGIENE FACTORS:

Children whose parents had parental language barrier were more likely to have been to the dentist before, have parents brush their teeth and use fluoride toothpaste.\*

Children whose parents did NOT have a language barrier were more likely to have fluoridated drinking water.\*

\*(All p-values <.05)

Table 1: Demographic Variables Predictive of High Caries Risk

Variable	OR (95% CI)	P-Value
Parental Language Barrier	1.54 (1.17-2.04)	.002
Age	1.02 (1.01-1.03)	<.001
Black or African American	1.46 (1.07-2.00)	.022
Other Race than Caucasian	1.50 (1.10-2.05)	.019
Child does not live with parents	1.34 (1.04-1.73)	.025
Previous ECC knowledge	1.43 (1.14-1.81)	.003