

Does Parental Oral Health Literacy Impact Their Children's Dental Service Utilization and Outcomes?

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ABSTRACT

Research Objective: To evaluate parents' oral health knowledge and to assess the association of parental oral health literacy level with children's utilization of dental services and oral health outcomes.

Methods: This research is based on data obtained from a nationally representative survey on access to health care that was fielded by the Association of American Medical Colleges in 2019. Oral health data was accrued from parents of children under 18 years of age who were living in their household in 2019. The sample comprised 1,785 parents with 3,070 children in their care.

Principal Findings: Parents were asked to indicate whether 10 statements about children's oral health were true or false. Over a quarter of parents answered fewer than 5 statements correctly; no single statement was correctly identified as true or false by more than 70% of parents. Lower parental oral health literacy (<5 correct answers) was associated with children's poorer oral health outcomes such as not receiving needed care in the past year, experience of oral health symptoms, dental caries, and fair/poor oral health status.

Implications: The survey results suggest the importance of continued efforts to increase oral health literacy through the education of parents, including during dental and medical visits, to improve regular dental visits and oral health outcomes for children. Dental providers and non-dental clinicians (ie, pediatricians, nurse practitioners) are uniquely positioned to enhance parents' oral health knowledge and contribute to preventing childhood caries.

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INTRODUCTION

- According to the National Health and Nutrition Examination Survey, about 46% of children had dental caries and 13% of children had untreated dental caries in 2015-2016
- Children from underrepresented minority groups and low-income families have the highest prevalence of oral health concerns, creating striking oral health disparities
- Factors that may influence children's access to utilization of oral health services include parental oral health literacy, cost of care, and availability of oral health providers
- Research objective:** To evaluate parents' oral health knowledge and to assess the association of parental oral health literacy (OHL) with children's utilization of dental services and oral health outcomes

METHODS

- The research was based on data collected through the *Consumer Survey of Health Care Access* fielded by the Association of American Medical Colleges in 2019 (online survey using a national panel of 1.2 million adults)
- Oral health data were collected from 1,785 parents of 3,070 children under 18 years of age who were living in their household at time of survey (01/2019; 06/2019)
 - Respondents' ability to obtain needed oral health care for their children
 - Children's oral health status and oral health behaviors
 - Parental OHL and attitudes toward oral health

Parental OHL Evaluation

- Parents were asked to indicate whether 10 statements about children's oral health were true or false
 - Lower or higher OHL (<5 correct answers; ≥5 correct answers)

Children's Oral Health Outcomes Evaluation

- Parents were asked to report about their children's oral health, including need for and utilization of oral health services, symptoms (ie, difficulty eating, toothache, broken/missing filling), dental cavities, and overall oral health status

Statistical Analyses

- Descriptive statistics (ie, Pearson chi-square test) were used to estimate differences in children's oral health outcomes by parental OHL level
- Survey data were weighted by sociodemographic characteristics

RESULTS

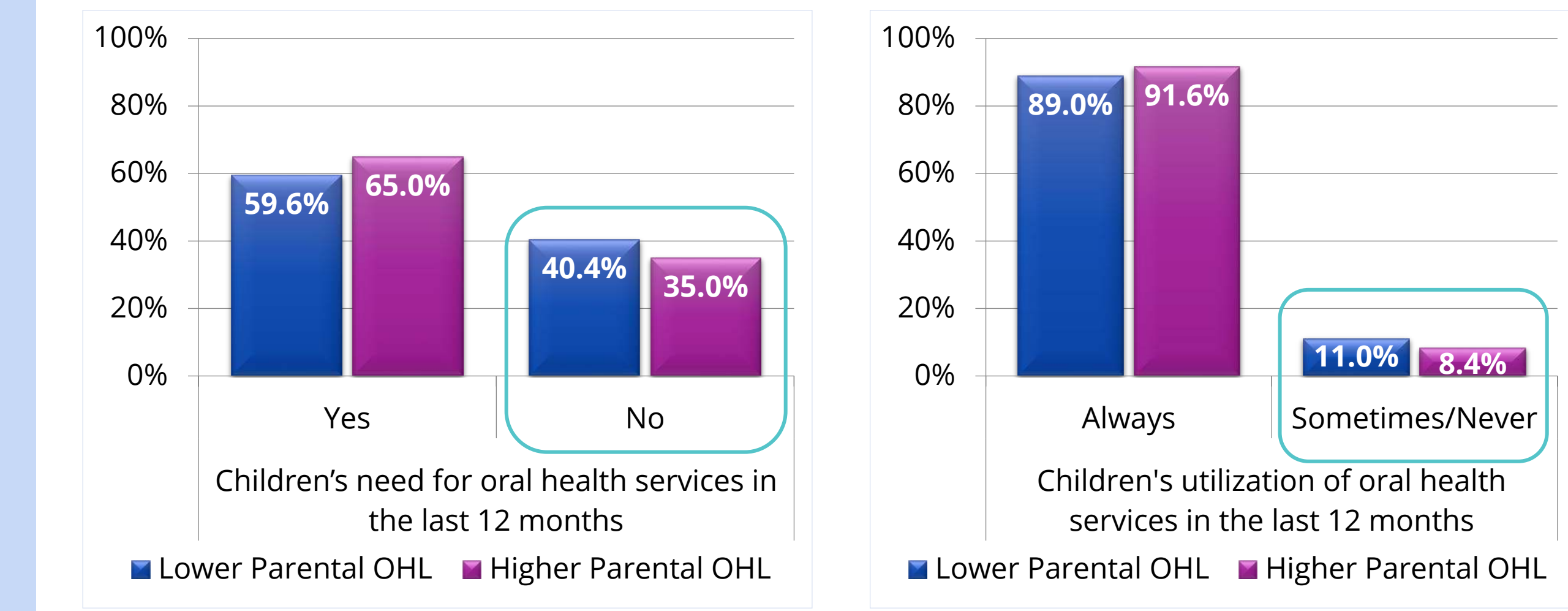
- Over a quarter of parents answered <5 statements correctly, while no single statement was correctly identified as true^a or false^b by >70% of parents

Table 1. Parental Oral Health Literacy (OHL)

| Oral Health Knowledge Statements | Correct Answer | Incorrect Answer | Don't Know |
|--|----------------|------------------|------------|
| There is a strong relationship between what children eat and their dental health ^a | 69.6% | 13.1% | 17.3% |
| Thumb sucking can cause problems with the development of a child's teeth and jaws ^a | 69.0% | 14.9% | 16.1% |
| Oral health does not affect overall health ^b | 68.5% | 18.7% | 12.8% |
| If a child has been sick, you should replace the child's toothbrush once the child is well ^a | 63.7% | 12.6% | 23.7% |
| Giving a young child fruit juice in a bottle at bedtime or naptime cannot cause tooth decay ^b | 59.6% | 25.7% | 14.7% |
| Cavities are nearly 100% preventable ^a | 57.6% | 17.6% | 24.9% |
| A child should go to the dentist by age 1 or within 6 months after the first tooth erupts ^a | 53.7% | 16.1% | 30.2% |
| It is not important to clean a baby's gums with a soft cloth even before the baby's teeth surface ^b | 47.8% | 30.9% | 21.3% |
| Giving a young child milk in a bottle at bedtime or naptime cannot cause tooth decay ^b | 46.8% | 30.5% | 22.8% |
| Dental disease cannot be passed from a caregiver to a baby by sharing utensils ^b | 30.7% | 35.3% | 34.0% |

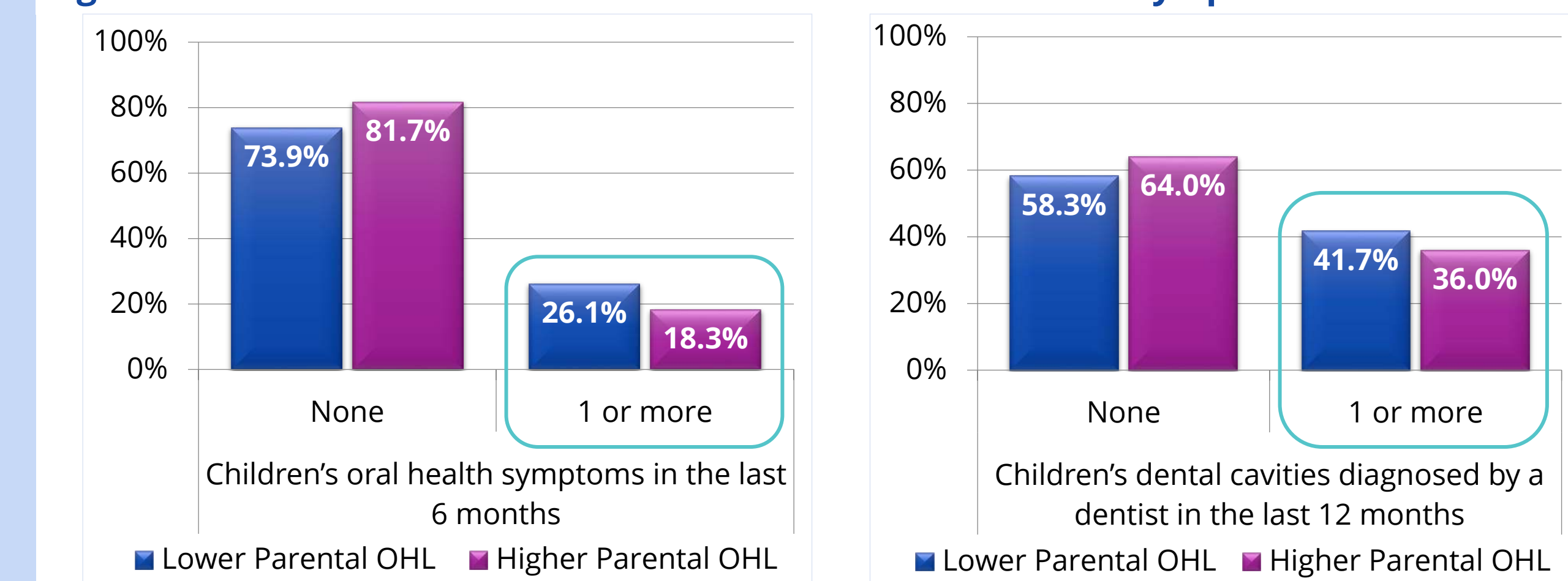
- Proportionally more parents with lower OHL reported that their children did not need oral health services in the past year ($P=.006$) and only sometimes or never received needed care in the past year ($P=.017$)

Figure 1. Association of Parental OHL With Children's Need for and Utilization of Oral Health Services



- Children whose parents had lower OHL were more likely to experience oral health symptoms ($P<.001$) and dental caries ($P=.009$) compared to children whose parents had higher OHL levels

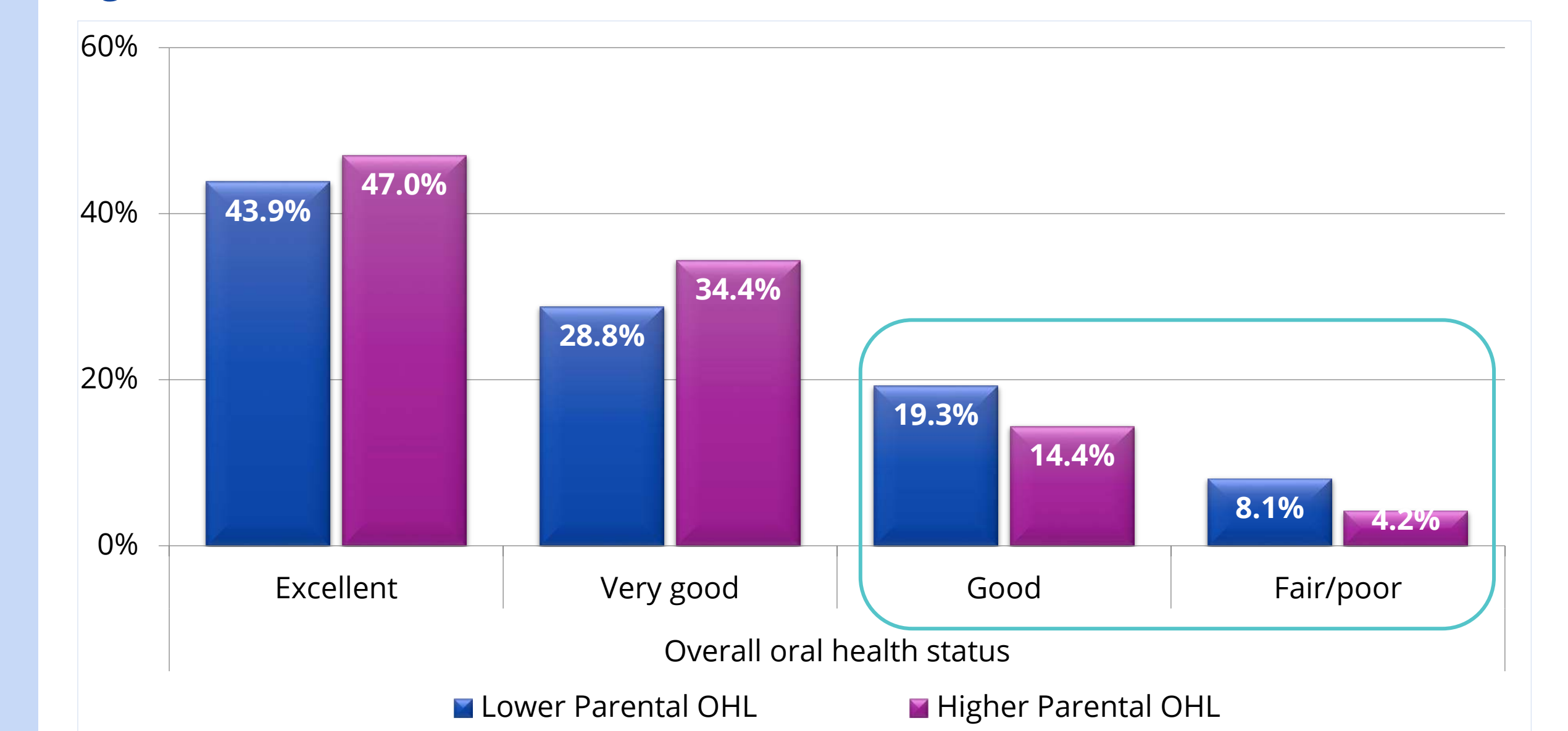
Figure 2. Association of Parental OHL and Children's Oral Health Symptoms & Dental Cavities



RESULTS (con't)

- Children whose parents had lower OHL were more likely to experience good or fair/poor oral health status ($P<.001$) compared to children whose parents had higher OHL levels

Figure 3. Association of Parental OHL With Children's Overall Oral Health Status



IMPLICATIONS

- Levels of OHL among study parents were relatively low (no single statement was correctly identified by >70% of parents)
 - Only about half of parents understood that children should visit a dentist within 6 months of the first tooth erupting
- Parents with lower OHL were less likely to report a need for dental services for their children, despite accepted guidance that children should receive preventive care at least annually
- Parental OHL was associated with children's utilization of oral health services, symptoms, dental cavities, and overall oral health status
- Continued efforts to increase OHL through the education of parents are essential
- Increasing parental OHL may improve regularity of children's dental visits and oral health outcomes

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