

Things to Know about Baby Teeth: A Parent Inventory

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A thesis

submitted in partial fulfillment of the  
requirements for the degree of

Master of Public Health

University of Washington

2014

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Program Authorized to Offer Degree:

Health Services

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This thesis is dedicated to my parents Angela and Armand,  
and my children, Josh and Alex, who allowed me to pursue my dreams.

I would like to thank Colleen E. Huebner, PhD, MPH and Peter Milgrom, DDS for encouraging my passion and their amazing support throughout the entire degree process. I would also like to thank Dr. Elihu Estey, who made it possible for me to survive and finish MPH program.

## **Abstract**

**Purpose:** Parents play a vital role in the health of their children. Accurate knowledge is one determinant of health behavior choices. Very little is known about parents' knowledge of their children's oral health. This study tested the reliability and validity of a parent inventory of knowledge of pediatric oral health and examined associations between parents' knowledge of the deciduous (primary) dentition, receipt of dental visit(s), and frequency of brushing their young children's teeth.

**Methods:** As part of the planning and baseline assessment for an intervention to increase frequency of tooth brushing, 107 parents of children ages 6 months through 5 years living in rural Washington State completed a questionnaire about dental health status, dental care and a brief inventory of their dental health knowledge. The inventory, Things to Know about Taking Care of Baby Teeth (TTK-14) includes 14 statements regarding young children's dental hygiene, disease and development that are scored on a three-point scale from "I don't know" to "I know for sure".

**Results:** The mean TTK-14 score was 2.33 (SD = .38). On average, parents were sure of their knowledge in six of the 14 TTK-14 topics; and more parents were sure about knowledge of dental hygiene than about dental disease or dental development. The items parents were least sure of included the following: the age to begin the use of fluoride toothpaste, (55% weren't sure or didn't know), that cavities in baby teeth can be predictive of cavities in the adult teeth (77% weren't sure or didn't know) or that caries is an infectious disease transmissible through saliva (50% weren't sure or didn't know). TTK-14 total scores were significantly associated with parent's age, child's age, and the number of children in the home. TTK-14 scores were also higher for parents who brushed their children's teeth twice daily vs. less often ( $t(105) = 2.16; p < 0.0001$ ), parents of children reported to be in good, very good or excellent oral health vs. fair or poor oral health ( $t(102) = 2.10; p = 0.03$ ) and among parents of children who had been to a dentist at least once ( $t(95) = 2.26; p = 0.02$ ).

**Conclusions:** Professional dental care is one of many potential sources of information about home hygiene and pediatric dental care. In rural, low-income regions, community health programs have the potential to deliver, augment, and reinforce oral health

recommendations for parents of young children and support preventive oral health care practices.

## Introduction

In 2000, the U.S. Surgeon General documented oral health disparities for large segments of the nation's population. Since that time, dental caries rates have decreased among most age groups; however, they have increased among two-to five year old children. (1) In his report, the Surgeon General described the oral health crisis in the United States, as a "Silent Epidemic," yet, 10 years later there is nothing silent about this epidemic, which continues unchecked among low income children, disproportionately affecting minority or immigrants adversely. (2)

The Surgeon General's Report also advocated for broadening awareness and the use of common preventive tactics including personal daily oral hygiene habits such as daily tooth brushing with fluoridated toothpaste. (1) Efforts to reduce oral health disparities by focusing solely on improving access to dental care will not eliminate the problem. To successfully alleviate health disparities, it is necessary to reconsider standard approaches and explore options that include family, culture and community in addition to focusing on caregiver education and promoting home oral health behaviors. (1)

Guidelines recommended both by the American Association of Pediatric Dentists (3) and the American Association of Pediatrics, (4) to prevent caries in infants and young children are to:

- Begin oral hygiene practices early
- Wipe the gums prior to the first tooth's eruption
- Brush teeth twice daily before the age of one
- Involve parents in the tooth-brushing (parents brush for the child) (5)

These recommendations depend on parents to enact the behaviors for their children, at least twice each day, and yet there is ample evidence of parents' confusion and misinformation about young children's dental needs. (6-15)

In one study, researchers found that some mothers lack knowledge about recommended tooth brushing guidelines regarding frequency and duration, (11) when to start brushing, the importance for parents to assist in the tooth brushing until their child is at least 8-years old and the importance of using fluoridated tooth paste. (12) Another study found most families believed that children should brush their own teeth. (13)

Additionally, some parents do not realize the value of preventive dental care beginning with the primary dentition. In one study comprised of 177 participants, many caregivers of children between the ages of one and five, regardless of ethnicity, incorrectly surmised, "since baby teeth are replaced by adult teeth, they were unimportant." (8) Researchers also found extended family members suggesting it was not necessary to visit the dentist if there was a problem with baby teeth. (9) In another study, parents believed that dental decay in primary teeth would disappear with eruption of the adult teeth. (14)

Research also indicates that some parents regardless of age, education, ethnicity, or location (urban/rural) are confused of about when to initiate brushing, whether their water supply was fluoridated, whether to use fluoride with toddlers, the correct brushing technique, (frequency and duration) and whether they should assist in brushing. (7)

Researchers also examined the knowledge and usual attitude of 640 parents and

caretakers regarding the transmissibility of caries disease by using a questionnaire. Almost 59 percent of adults participating in this study, did not know that dental caries is an infectious and transmissible disease, and reported the habit of blowing and tasting food, sharing utensils and kissing the children on their mouth. (15)

The purpose of this study was to establish the reliability of the TTK-14 items and to validate the inventory with a group of low-income parents of preschool-age children. Validity tests examined scores of parents who varied in years of formal education, age, total number of children in the home and the age of their preschool-age child. We examined also if TTK-14 scores differed for parents whose children had received any professional dental care (versus none) and those who reported brushing their children's teeth twice a day versus less often. Unique to this research was the development and field test of a brief self-report inventory to capture the information. We hypothesized that greater oral health knowledge would be associated with more optimal home hygiene, specifically tooth brushing, and with the use of pediatric dental services. Additionally, we tested the association between parents' knowledge and brushing frequency, independent of the child's use of professional dental care, to determine if professional care was a unique source of influence on tooth brushing.

## **Methods**

**Setting and Sample.** The study took place in a rural county in southwestern Washington in which nearly one in five children lived in households below the Federal Poverty Level and almost one quarter of adults' age 25 and older lacked a high school diploma. Parents who participated in the study were clients of one of three early childhood education programs in the community serving low-income families with infants and preschoolers. Additional eligibility criteria were that the parents could converse, read

and write in English and that the children were in the age range of six months through five years.

**Design and Procedure.** The study design was a cross-sectional, one-time survey of parents. A local research assistant trained in the study protocol conducted data collection in person and assisted parents who requested the survey be read aloud. The survey questions asked for demographic information, specifically the parent's age, gender, ethnicity and education, the dental health status of the parent and the child, current home hygiene practices, and included the knowledge inventory, "Things to Know about Baby Teeth" (TTK-14). Additionally, parents were given the option of providing any additional thoughts they wished to convey. Parents received a \$20 gift card and tooth brushing supplies as a thank you gift for participating in this study. The Institutional Review Board of the University of Washington, Seattle, WA, approved all procedures including the process of informed consent.

The TTK-14 is composed of 14 knowledge statements regarding young children's dental hygiene, disease and development. The items were derived from the anticipatory guidance given by pediatric and general dentists affiliated with the University of Washington's Center for Pediatric Dentistry and in readily available pediatric oral health brochures designed for parents to optimize their children's oral health. All 14 items are presented in Table 2. Parents were asked to read each TTK-14 item and indicate their familiarity with the information conveyed in the statement as "I didn't know that" (= 1 point), "I sorta know that" (= 2), or "I know that for sure" (= 3), where the maximum possible score was 42. The response option "sorta know" was included to minimize social desirability bias, which would lead parents to over-estimate their knowledge. A copy of the complete TTK-14 instrument is in the Appendix.

Reading level for each of the TTK-14 items was evaluated using the Flesch Reading Ease test. The test rates text on a 100-point scale based on the number of words in a sentence and the number of syllables per word. Higher scores indicate the text is easier to understand. The recommendation is that text scores between 60 and 70 points. TTK-14 item scores ranged from 57 to 100. The average score was 83.1 points. Two items scored at or below 60 points and both pertained to dental disease. These were: “Cavities in baby teeth predict cavities in adult teeth” (57 points) and “The germs that cause caries are transmitted in saliva (60 points).”

**Analytic Plan.** Data were coded, entered and analyzed using STATA version 10. Frequencies and percentages were used to describe the characteristics of the study sample and parents’ TTK-14 responses. Cronbach alpha reliability coefficients were computed to determine internal consistency reliability of three subsets of TTK-14 responses (items regarding: dental hygiene, disease and development) and the overall knowledge inventory. To create a single TTK-14 score for purposes of data analysis, scores on the TTK-14 were summed and the sum divided by the number of items to yield mean scores that could range from 1.0 to 3.0. T-tests and one-way ANOVA were used to assess associations between characteristics of the parents, the children, and TTK-14 scores.

Ninety-eight percent of the participants in our sample completed the entire TTK-14 knowledge inventory. If an item response was omitted, it was assigned the value corresponding to “didn’t know” (= 1). Regression analysis was conducted to test the relative contributions of parents’ knowledge as measured by the parents’ TTK-14 total score and whether or not the child had been to a dentist in the past, to parents’ report of how often they brushed their child’s teeth per day. Additional covariates added to the

model were those significantly associated with brushing frequency in the bivariate analyses.

## **Results**

The sample comprised 107 primary caregivers. A description of the socio-demographics of this sample is displayed in Table 1. As noted in the table, the majority of parents (75%) were Caucasian and under 30 years of age (77%). Thirty-one percent of participants lacked a high school degree 28 percent were either were high school graduates or had a GED. Most (62%) were parents of singletons, under the age of two (46%). Slightly more than half of the children were male (53%). Most parents (70%) rated their dental health status, and that of their children (88%), to be in good health. Almost 57 percent of parents reported brushing their child's teeth twice daily and slightly less than half (47%) reported their child had ever visited a dentist. In response to an open-ended question asking for "additional comments," three mothers' explained their motivation for tooth brushing was to eliminate the need to for their child to go to the dentist.

Parents' responses to each of the TTK-14 items are indicated in Table 2. Many parents were unaware that caries in baby teeth predict cavities in adult teeth, and believed baby teeth are unimportant. Forty-seven percent of the parents were unaware that cavities in primary teeth are predictive of cavities in adult teeth. One parent offered, "It's not like his teeth are going to rot. I mean there are some nights I forget..." Another parent mentioned that her two-year old had a lot of crowns and that Grandma gives him chocolate milk at night but she "doesn't want to wake him up " adding "... really, who cares, they're baby teeth and anyway, they'll lose them..."

Among the TTK-14 items parents were least sure of were: an awareness that poor oral health and caries in primary teeth are highly correlated with similar problems in the adult dentition (47% answered this as “didn’t know”); the age to begin to use of fluoride toothpaste (16% didn’t know) and that the transmission of the disease that causes caries is spread through shared saliva (31% didn’t know). Interestingly, the two items that found to be most difficult in terms of reading ease were also the items parents were least sure of.

In contrast, 77 percent of parents reported knowing the importance of brushing their children’s teeth twice daily and 50 percent knew to schedule their child’s first dental visit by age one.

The mean TTK-14 total score was 2.33 (SD = .38) and the median was 2.36. Total scores of individuals ranged from 1.36 to 3.0 where a score of 1 corresponds to “didn’t know” and a score of 3 corresponds to “know that for sure.” A higher average score indicates greater knowledge.

#### Reliability

Analysis of the internal consistency of parents’ response to TTK-14 items, using Cronbach’s alpha, yielded an alpha coefficient of 0.80 for the TTK-14 total score. The correlation coefficients between individual items and the rest of the scale ranged from 0.29 and 0.56. Cronbach’s alpha was 0.67 for the subset of nine hygiene items, 0.44 for the two dental disease items, and 0.54 for the three dental development items. Due to relatively low alpha scores, indicating low internal consistency for each of these three subsets, the TTK-14 total score was used in all further analyses.

Associations between parent and child characteristics and TTK-14 total scores are presented in Table 3. Parents 20-years old or older had significantly greater TTK-14 scores than did younger parents ( $t(103) = 2.19$   $p = 0.02$ ). TTK-14 scores were higher also for parents with more education than those with or lacking a high school degree ( $F(1,102) = 0.11$   $p = 0.74$ ), parents with more than one child at home versus those of singletons ( $t(105) = 2.26$   $p = 0.02$ ), parents of study children who were 12 months or older, versus younger than 12 months ( $t(105) = 2.10$   $p = 0.002$ ) and of parents who rated their child to be in excellent, very good, or good, versus fair or poor dental health ( $t(102) = 2.10$   $p = 0.03$ ). TTK-14 scores were higher for parents who reported twice daily brushing versus those who reported brushing their child's teeth less often ( $t(105) = 2.17$   $p = 0.0001$ ) and higher for parents who reported their child had been to a dentist versus those whose child had not yet been to a dentist ( $t(95) = 2.26$   $p = 0.02$ .)

#### Validity

Regression analysis was used to examine the separate and combined effects of parents' knowledge (as indicated by the TTK-14 score) and the child's dental attendance (ever versus never) on the frequency of tooth brushing at home. In addition, the following three variables were added to the model as covariates because of their significant associations with the TTK-14 score in the bivariate analyses: the number of children in the home, child's age (less than 12 months vs. 12 months or older) and parent's age (less than 20 years vs. 20 years or older). Parent's rating of children's oral health was not included in the model because of the possibility that it is the causal pathway between knowledge and brushing frequency; that is, accurate perception of their child's oral health might be related to greater knowledge of pediatric oral health generally and related to parents' brushing behavior.

Regression analysis revealed that parents' knowledge, indicated by their TTK-14 score was more strongly associated with tooth brushing frequency than any other variable in the model. The association between parents' knowledge and parents' report of brushing their child's teeth twice daily, versus less often, was statistically significant (OR = 7.15; 95% CI = 1.89, 26.97; p = .004) whereas there was no significant association between a dental visit (ever versus never) and brushing twice daily (see Table 4).

## **Discussion**

This study sought to assess parents' knowledge of their child's oral health to identify gaps in knowledge that could be addressed with a subsequent health education intervention. Our findings mirror multiple pediatric oral health studies citing parental confusion or lack of consistent information about when and how to initiate brushing. (6-15) The areas in our study, in which parents' were least knowledgeable were that cavities in baby teeth predict cavities in adult teeth; the germs that cause caries are passed through saliva; and that parents should brush for their children's teeth for two minutes.

Our research results are consistent with other research that indicates parents lack knowledge of caries transmission through saliva. In our study, only 50 percent of parents said they knew this to be true, 19 percent said their "sorta knew" this and 31 percent said they "didn't know" this information. Other research illustrates how this lack of information can lead to suboptimal behavior, including sharing toothbrushes. (14) We found this to be true too. As one mother of a 17-month old said in our study, "He wants to use my toothbrush and I'll give him my toothbrush so he can brush too." Similarly, other researchers have found that parents recognized that sharing a toothbrush would

transmit bacteria but did not conceive that or biting and sharing small pieces of food or utensils. (14-15)

Slightly over 83 percent of parents in our study reported they “knew for sure” to use a small, soft toothbrush. Thirty nine percent reported they “sorta knew” and an additional 16 percent reported they “didn’t know” to begin using fluoride at age one. Almost 77 percent “knew for sure” to brush their children’s teeth twice daily. Similar research designed to explicate knowledge and attitudes of 268 mothers of 334 preschool children found that most mothers (71%) knew to brush their children’s teeth with a small, soft toothbrush (94%) but only 52 percent knew to use a small pea-size amount of toothpaste. Forty percent of mothers reported that their children brushed their own teeth exclusively, and 40 percent of parents brushed their children’s teeth inadequately. (16)

Our study found that 15 percent of parents “sorta knew” and 1 percent “didn’t know” that parents should be involved in the brushing of their children’s teeth. Over 24 percent “sorta knew” and almost 24 percent “didn’t know” to schedule their child’s first dental exam by their first birthday.

Similar research revealed parents cited a variety of “right ages” to schedule their child’s first dental visit, ranging from first tooth eruption through age six. (12) Additional research indicate that some parents believed supervision could consist of a reminder to brush for children, as young as one-year old. Misinformation and confusion surrounding when to schedule a first check-up, or that parents need to be involved in their child’s tooth brushing, was reported to come from sources as varied as dentists, doctors, public health clinics, family and friends. (13)

Prior research consistent with our finding of an association between oral health knowledge and home hygiene comes from a study that included mothers of 1,114 three-year-olds who participated in a national cross-sectional self-administered oral health survey. Dental caries rates among the children were recorded by WHO criteria and methods. The questionnaires examined demographic factors, mothers' and children's oral health-related habits and oral health knowledge. The study found a strong interdependence between children's oral health and mothers' level of oral health-related knowledge. (17) Additional research conducted in Edmonton, Alberta, came to a similar conclusion. This study, using 10 focus groups comprised of 65 parents of preschoolers, found that the parent's ability to enhance their children's overall health was limited as much by low incomes, inadequate health care and a lack of transportation, as much as it was by the parent's lack of education. (18)

Several limitations exist with the design and conduct of this research study. The use of a small convenience sample limits the generalizability of our findings to the larger population of low-income families. Second, the parents in our study were participating in an early education program for their children and thus may have received information about children's oral health as part of the early education program. If so, our findings may overestimate parent's knowledge of their children's oral health relative to other parents and this is troubling, because caregivers in our study had important gaps in knowledge and behavior pertaining to their children's oral health. Finally, we found low internal consistency for the three subsets (dental hygiene, disease and development) in our knowledge instrument (TTK-14). One reason may be that there were relatively few items in each subscale. We used the TTK-14 total score in our analyses and recommend other researchers who use this tool do likewise.

Our results identified many areas of uncertainty and lack of knowledge of children's oral health, however this was not true of all parents. For example, more than half of parents knew to brush their children's teeth for at least 2 minutes, that parents should brush for the child and to brush the front and the back of the teeth and more than half reported brushing their children's teeth, on average, twice a day more. Findings based on the multivariate regression modeling showed that parents' correct knowledge about pediatric oral health was associated with home oral hygiene and that this knowledge was not attributable to the child's receipt of dental care. Recall that more than half of the child had never been to a dentist, for any reason. We do not know the other sources of parents' knowledge and recommend this as an area for future research.

Rural communities, including our study location, are facing increasing challenges by the economic downturn. Decreased access to health care resources, limited transportation and a dearth of providers, has resulted in a population increasingly isolated from health care services, further increasing the need for strategies to improve health that are independent of professional clinic-based oral health services. (1, 19-20)

Many oral health proponents advocate incorporating innovative strategies to increase health outcomes, echoing the Surgeon General's 2000 address Increased Parent Education Services in Community Health Centers (CHC) are one choice. (1, 21-22) Another includes increasing university partnerships to revitalize neighborhoods with Community Based Participatory Research (CBPR). CBPR draws on the strengths of both entities to create equal partnerships. CBPR also encourages collaborating with existing agencies in the community to improve overall health and wellbeing. Because many populations, including those most in need of services, are comprised of low-income, less educated or ethnic populations lacking regular access to care, community

based interventions may help fill this gap. (21)

Another choice would be to expand the protocols of Public Health Nurses who provide home visiting services for at-risk mothers and infants to include infant oral health education. Public Health Nurses can assist families to navigate through the system, connecting patients to many services available. Additionally, they can educate parents lacking knowledge of health determinants and their interrelationships, alert parents to the current guidelines pertaining to health, and facilitate the coordination of preventative health care services and auxiliary agencies providing low cost and free support resources for families. (23)

Dental visits are only one source of accurate information. Health education provided in many different settings, including child care, schools, work sites, has the potential to deliver, augment or reinforce recommendations for parents of young children and support preventive oral health care practices. In light of our finding that fewer than 50% of the children had ever seen a dentist, and yet more were brushing twice daily, we speculate caregivers receive accurate and relevant information from sources outside the dental office. Since there is a lack of pediatric providers nationally, with rural areas experiencing even greater shortages, (25) expanding the network of professionals who can encourage preventive dental visits AND promoting oral health knowledge and behavior among parents is strongly encouraged.

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**Table 1. Characteristics of Parent and Child Participants**

<b>Participant</b>	<b>% (Count)</b>
<b>Caregivers</b>	
Relationship to Child (n =107)	
Mother	91.59 (98)
Other (father or grandmother)	8.41 (9)
Race / Ethnicity (n = 106)	
White non-Hispanic	74.77 (80)
Hispanic	17.78 (19)
Other non-Hispanic	6.54 (7)
Age (n = 105)	
Less than 18 years	14.29 (15)
18 - 19 years	14.29 (15)
20 - 29 years	48.57 (51)
30 years or older	22.86 (24)
Formal Education (n = 104)	
Lack a high school degree	30.77 (32)
High school grad or GED	28.45 (30)
Training beyond high school	33.65 (35)
College graduate	6.73 (7)
Dental Health Status of Parent (n = 105)	
Excellent, very good, or good	70.48 (74)
Fair or poor	29.52 (31)
Number of children in home (n=107)	

1	61.68 (66)
2	17.77 (19)
3 or more	20.56 (22)

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**Children**

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Gender (n = 107)

Male	53.27 (57)
Female	46.73 (50)

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Age (n = 107)

Less than 12 months	18.69 (20)
12 - 23 months	27.10 (29)
24 - 35 months	18.69 (20)
36 - 47 months	17.76 (19)
48 months or older	17.76 (19)

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Dental Health Status of Child Reported

by Parent (n = 104)

Excellent, very good, or good	88.46 (92)
Fair or poor	11.54 (12)

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Frequency of Brushing, Child (n = 106)

Not yet brushing	9.43 (10)
Once day or less	33.96 (36)
Twice a day or more	56.60 (60)

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Dental Visit, Child (n = 97)

Yes, ever	47.42 (46)
Never	52.58 (41)

**Table 2. Parents' Knowledge of Young Children's Oral Hygiene, Disease and Development as indicated by the TTK-14**

		<b>Know for Sure</b>	<b>Sorta Know</b>	<b>Didn't Know</b>
Things to Know Items*	n	% (Count)	% (Count)	% (Count)
<b>Dental Hygiene</b>				
Brush with water when first tooth erupts <sup>1</sup>	107	65.42 (70)	24.30 (26)	10.28 (11)
Brush with a small soft brush	107	83.18 (89)	12.15 (13)	4.67 (5)
Brush twice daily	106	76.64 (82)	15.89 (17)	6.54 (7)
Brush front and back of teeth	105	83.18 (89)	10.28 (11)	4.67 (5)
Use fluoridated toothpaste at 24 months <sup>1</sup>	107	44.86 (48)	39.25 (42)	15.89 (17)
Adult should brush for a young child	106	84.11 (90)	14.95 (16)	0.93 (1)
Brush for 2 minutes	107	52.34 (56)	27.10 (29)	20.56 (22)
Check fluoride level in home water	107	61.68 (66)	20.56 (22)	17.76 (19)
Have a dental check-up at 1 year	105	50.47 (54)	24.30 (26)	23.36 (25)
<b>Dental Disease</b>				
Germs are passed by saliva	107	50.47 (54)	18.69 (20)	30.84 (33)
Cavities in baby teeth	107	23.36 (25)	29.91 (32)	46.73 (50)

predict adult cavities

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**Dental Development**

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There are 20 baby teeth	105	13.08 (14)	31.78 (34)	53.27 (57)
Baby teeth erupt until approximately 4 years	105	17.76 (19)	31.78 (34)	48.60 (52)
Baby teeth hold space for permanent teeth	106	52.34 (56)	28.97 (31)	17.76 (19)

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\* A copy of the TTK-14 instrument is in the appendix.

<sup>1</sup> At the time of this study, the ADA recommendation was to begin using fluoridated toothpaste when a child was 2 years of age. The community parents and dental professionals involved in this study chose to promote this recommendation as best practice.

**Table 3. Associations between Parent and Child Characteristics, Dental Health Status, Oral Health Behaviors and Knowledge (TTK-14 Average Score)**

	n	TTK-14 M (SD)	t or F; p
<b>Parents' Age</b>			$t(103) = 2.19; p = 0.02$
Less than 20 years	30	2.19 (.37)	
20 years or older	75	2.38 (.37)	
<b>Formal Education</b>			$F(1,102) = 0.11; p = 0.74$
Less than high school	32	2.34 (.42)	
High school graduate or GED	30	2.24 (.39)	
Any training beyond high school	45	2.38 (.33)	
<b>Number of Children at Home</b>			$t(105) = 2.26; p = 0.02$
1	66	2.26 (.38)	
2+	41	2.43 (.35)	
<b>Parent's Dental Health Status</b>			$t(103) = 2.34; p = 0.92$
Fair or poor	31	2.34 (.39)	
Excellent, very good, or good	74	2.34 (.36)	
<b>Child's Age</b>			$t(105) = 2.10; p = 0.002$
Less than 12 months	20	2.10 (.41)	
12 months or older	87	2.38 (.35)	
<b>Child's Dental Health Status</b>			$t(102) = 2.10; p = 0.03$
Fair or poor	12	2.10 (.44)	
Excellent, very good, or good	92	2.35 (.36)	
<b>Brushing Frequency</b>			$t(105) = 2.16; p < 0.0001$
Less than twice a day	47	2.17 (.36)	
Twice a day or more	60	2.46 (.34)	

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<b>Dental Visit by Child</b>			$t_{(95)} = 2.26; p = 0.02$
Never, not yet	51	2.26 (.42)	
Yes, at least once	46	2.45 (.32)	

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Note. Comparisons based on  $t$ -tests or one-way ANOVA

**Table 4: Logistic Regression of Brushing Twice Daily Versus Less Often on Dental Attendance and TTK-14 Average Score**

<b>Variable</b>	<b>Odds Ratio</b>	<b>95% CI</b>	<b>p value</b>
Number of children (one vs. more)	1.61	0.60, 4.34	0.35
Child's age (< 12 vs. 12+ months)	1.61	0.43, 5.97	0.48
Parent's age (< 20 vs. 20+ years)	0.74	0.23, 2.39	0.61
Ever been to dentist (yes vs. no)	1.48	0.56, 3.90	0.42
Knowledge (TTK14 score)	7.15	1.89, 26.97	0.004

Note. N = 95. Number of children in the family, child's age and parent's age were included in the model as covariates because they were significantly associated with brushing frequency in bivariate analyses.

## Appendix

### Things to Know about Baby Teeth

Here are some messages that might help parents take care of their baby's teeth.

For each one, mark if you: a) didn't know that before; b) sort of knew that, or c) knew that for sure.

Circle one answer for each item

	Didn't Know	Sort of Know	Know for Sure
<b>Begin brushing with water as soon as baby has a tooth.</b>	DK	Sort of	Sure
<b>Use a small, soft toothbrush.</b>	DK	Sort of	Sure
<b>Brush 2 times each day.</b>	DK	Sort of	Sure
<b>Brush the front and back of the teeth.</b>	DK	Sort of	Sure
<b>When your baby is about 24 months old, use a small amount of toothpaste with fluoride.</b>	DK	Sort of	Sure
<b>There are 20 baby teeth total.</b>	DK	Sort of	Sure
<b>All 20 baby teeth come in by age 4 years.</b>	DK	Sort of	Sure
<b>While your child is young, brush for your child or go over their brushing if they try to do it by themselves.</b>	DK	Sort of	Sure
<b>Broken baby teeth can be caused by cavities.</b>	DK	Sort of	Sure
<b>By the time your child has all his/her teeth, brush for about 2 minutes total.</b>	DK	Sort of	Sure
<b>Baby teeth hold the space for permanent teeth to come in straight.</b>	DK	Sort of	Sure
<b>Mothers can pass the germs that cause cavities to their babies by sharing spoons or licking pacifiers.</b>	DK	Sort of	Sure
<b>The best predictor of cavities in adult teeth is cavities in baby teeth.</b>	DK	Sort of	Sure
<b>Doctors and dentists say take your baby to a dentist for a check-up around age 1.</b>	DK	Sort of	Sure
<b>Learn if your home's water has fluoride in it. If not, talk with a doctor or dentist about how to get enough to protect your baby's teeth.</b>	DK	Sort of	Sure