Mother's behavior and motivations for children oral health care in the Ammatoa Tribe of Kajang-Bulukumba, South Sulawesi-Indonesia

Yudha Rahina,^{1*} Rasmidar Samad,² Nursyamsi Djameluddin,² Surwandi Waliyanto³

Abstract

Objective: This study aimed to describe mother's behavior and motivation in caring of children oral health in Bulukumba District, South Sulawesi.

Material and Methods: This study aimed to describe mother's behavior and motivation in caring of children oral health in Bulukumba District, South Sulawesi.

Results: Mother's behavior show good results 11.11%, fair 55.56%,

and poor 33.33%. All mothers have good motivation. There is significant differences motivation before and after dental health education ($p=0.00$).

Conclusion: Just a little mothers have good behavior. Dental health care for children has not become a major concern for parents. All of mother have good motivation to change their unbeneficial behavior of oral health care for their children after having education.

Keywords: Behavior, Children, Mother, Motivation, Oral health care

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¹Department of Dental Public Health, Faculty of Dentistry, Mahasaraswati University, Denpasar, Indonesia

²Department of Dental Public Health, Faculty of Dentistry, Hasanuddin University, Makassar, Indonesia

³Department of Orthodontic, Faculty of Dentistry, Mahasaraswati University, Denpasar, Indonesia

Introduction

Dental caries and gingivitis are common oral diseases in children. Based on National dental health month 2017 activity in Indonesia showed, children aged of 5-6 years 74.4% were suffering caries (dmf-t 6.29), decay 5.64 per-child, and filling score close to zero. Most cavities were untreated.¹ A 3-year cohort study found that the highest incidence who had caries found in children who were 6 years old.²

Pre-schoolers can't care their own tooth. Given early age of children, parental support is needed to maintain children's dental health independently.³ The high prevalence of dental caries in children is partly due to the bad habits of the children and their parents or their carers.⁴ The efforts to provide dental and oral health services to children are carried out by providing communication, information and education to parents. Parents are actively involved in making children independent, maintaining and improving oral health optimally.

The Ammatoa customary tribe is an indigenous tribe that holds a closed tradition, which limits itself from modern interactions with outsiders, and upholds the beliefs of their ancestors. This tribe has rules, norms and habits that only apply among them. Study of oral health had never been done on them before.

The fact is that the knowledge of dental health among parents is not good enough.⁵ Parents

assume that cavities in children are very common,⁶ without realizing the adverse effects, especially for children.

Parental guidance to children is influenced by parents' motivation to behave in a healthy manner, contributing to the success of children's dental health care.⁷ Therefore, the knowledge of dental health in parents must be improved, so that they are aware and have a positive healthy behavior.

Material and Methods

This is a preliminary study conducted on mother in kajang who attended dental health education activities. There are 24 health cadres invited, all of whom were women, but 18 mothers who were eligible for sample because met the criteria having preschool aged children (4-6 years). They have never received dental health education (DHE) before. The samples were asked to fill out the informed consent first.

Structured interviews were used to determine behavior in dental care and motivations were using questionnaires. The behavioral and motivation variables are divided into poor, fair and good categories. DHE is given to increase motivation, and provided by 3 trained health professionals, used combination methods among lecture, demonstration, and dancing. The data were analyzed qualitatively. The motivation data were analyzed using the Wilcoxon signed ranks test.

*Correspondence to: Yudha Rahina, Department of Dental Public Health, Faculty of Dentistry, Mahasaraswati University, Denpasar, Indonesia
yudharahina@gmail.com

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Results

The demography data of respondents show in [table 1](#). Most mothers are in their thirties years old, high school graduates, housewives, and don't entrust childcare to others.

[Table 2](#) shows, there were mothers thinking caries was caused by caterpillars, doubted whether it could be prevented, and don't know when to start caring for child's teeth. Most mothers and children have no experience to dental treatment.

[Table 3](#) shows that there is a child who brushing only twice per-week, but 4 (22.22%) children do at the correct time, after breakfast and night time. All children brushing teeth by themselves, even they don't brush properly. Kid's toothbrush and toothpaste were not prepared by all respondents. There is a respondent doesn't provide snacks every day, also fruits and vegetables. The half of respondents let their children having bottle milk, some of them like checking their child's teeth. There are no mothers who take their children visit dentist regularly. Only a few 2 (11.11%) respondents have good behavior.

The motivation change between before and after-DHE was very clear [table 4](#). All respondents have good motivation after-DHE [table 5](#). There is a significant difference between the motivation before and after DHE ($p=0$).

Discussion

All respondents are in productive age, so they can play a lot to improving family health. Almost all respondents are housewives. According to Hamadi,⁸ working parents have less time and tend to pay less attention for children's health.

Most of the respondents have secondary education, followed by bachelor and elementary level. People with higher education will have better knowledge.⁹ There were high education mother with good dental health knowledge, but have health

behavior improper.¹⁰

Oral hygiene will direct a person to hygiene and healthy behavior. Inability to maintain oral hygiene care can lead to dental caries.¹¹ Twice a day toothbrushing frequency is a good indicator of a healthy lifestyle in general.¹² Dental health tools is very limited and difficult to find. Not all children brushing teeth everyday. There is a child that brushing only twice per-week and do at shower time. Children who rarely brushing teeth were also reported by Suratri's,⁶ and while showering.^{10,13} Most of Indonesian used brushing teeth at shower. The twice showering, the twice toothbrushing.

Brushing teeth properly is the easiest prevention reducing dental caries. This study shows, all of children brush their own teeth, even improper. Actually, parents can start brushing their child's teeth as soon as tooth begin to grow. Starting at the age of 9, children can do without supervision.¹⁴ As Abdat's found, parents haven't behaved properly in dental health, children brush their own teeth without supervision.⁵ Based on Riskesdas (2013), Indonesian people who have ability brushing teeth properly is very low (2.3%).¹⁵

There are correlation between nutritional status and dental caries severity. Consuming snack without brushing teeth can increase the caries level.¹¹ Fruits and vegetables intake can reduce the risk of caries and good oral hygiene. Increasing the frequency of eating vegetables will lower the risk of caries than those children who rarely eat vegetables.¹⁶ This study, mothers (66.67%) allow children to get snacks more than twice per-day, and only 33.33% provide fruit and vegetables every day.

Mothers (50%) don't forbid their children having bottle milk, so as not fussy, especially given at bedtime. This habit is particularly harmful, because during sleep the saliva flow decreases. In Denpasar, the mothers allow their children having packaged drinks, bottled milk, snacking, and rarely provide vegetables and fruits.¹⁰

There is an interesting thing in this study, some mothers used to check children's teeth, but some don't, because their children have brushing teeth regularly, and children's dental caries is common. Routine dental examination of children makes it possible to find tooth decay earlier. That examination should be done since the first teeth appear (1 year-old).¹⁷ Mother's behavior in routine dental examinations for children every 6 months is poor. Children dental check-up to the dentist isn't a priority.

The DHE that was delivered turned out to provide knowledge and awareness to parents. They just realized, the long-term impact untreated caries in children, that the poor oral health condition can lead to stunting¹⁸ and intelligence distraction.¹⁷ There

Table 1 Responden's demography characteristics

	Range	Rate	n	(%)
Age (year)	23-46	36.72	18	100
Education level				
Elementary school			1	5.56
High school			13	72.22
Bachelor			4	22.22
Occupation				
Housewife			16	88.89
Worker			2	11.11
Parenting style				
Caring by other			0	0
Caring by herself			18	100

Table 2 Mother's knowledge of caries and dental treatment experience

	n	(%)
Mother's knowledge of caries		
why does caries happen?		
Uncleaned teeth	14	77.78
Bacteria	2	11.11
Caterpillar	2	11.11
Can caries be prevented		
Yes	16	88.89
Doubtful	2	11.11
How?		
Brushing teeth	11	61.11
Reducing sweet and sour foods	4	22.22
Provide balanced nutritional intake	1	5.56
Don't know	2	11.11
When do to start caring the child's teeth?		
The first tooth came out	5	27.78
As early as possible	6	33.33
The age of toddler (0-5 years)	3	16.68
Don't know	4	22.22
Dental treatment experience		
Mother's experience		
Ever	1	5.56
Never	17	94.44
Child's experience		
Ever	7	38.89
Never	11	61.11
Why get dental treatment (n=7)?		
Toothache	5	71.43
Persistent tooth	2	28.57
Who ask to visit dentist (n=7)?		
Mother	4	57.14
Kids	3	42.86
Why don't get dental treatment (n=11)?		
No complaint	11	100
The decision maker when mother was sick as a child		
Father	8	44.44
Mother	10	55.56
The decision maker when child is sick		
Father	2	11.11
Mother	16	88.89
Involve other	5	27.78

was a statistical significant relation between IQ and prevalence of moderate gingivitis.¹⁹ Motivation can be built, someone who has motivation will try to solve the problem until the goal is achieved.²⁰ No parent wants their child to be stunted and stupid. By chance, we met some tribal people were stunted. This allows why there is a difference in motivation between before and after DHE. Besides that the delivery of information in an attractive way makes a pleasant atmosphere. The I-Change Model theory assumes that motivation is also determined by the awareness factor which consists of cognizance, knowledge, risk perceptions and perceived cues; Preceding and information factors. The overt and covert behavior is determined by a person's motivation or intention to do certain behaviors.²⁰ Motivation has the

greatest influence on behavior in maintaining oral and dental hygiene. The stronger the motivation, the better the behavior in maintaining oral hygiene.²⁰ Incorrect understanding of dental and oral health on people is caused of insufficient knowledge. Parents are less motivated to take care of children's tooth because of lack of knowledge, apart from the cost factor.⁷

The Ammatoa tribe is located in an inland area surrounded by forests. There is only a path to their village, rocky on foot and no shoes. The tribe restricts itself from outside influences, the gate in the border is heavily guarded. No electricity, television, telephone and internet, these allow lack of knowledge, motivation and dental health behavior in the community.

There should be no gap regarding dental health information among society. Even the tribal people restrict themselves, their children go to an elementary school on the border. That school can be used as an information channels for them. In addition, dentists on duty at the nearest public health center can educate tribal people to jointly improve dental health behavior.

Conclusion

Just a little mother have good behavior. Dental health care for children has not become a major concern for parents. All of mother have good motivation to change their unbeneficial behavior of oral health care. Mother who previously had poor dental health behavior have good motivation to change their behavior after having dental health education.

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None.

Conflict of Interest

The authors report no conflict of interest.

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Table 3 Oral health care and mother's behavior

Oral health care behavior	n	(%)
Does the child brushing teeth		
Yes	18	100
No	0	0
Brushing teeth every day		
Yes	17	94.44
No	1	5.56
The brushing teeth time/frequency		
After breakfast and night, 2 times/day	4	22.22
Before school, 1 time/day	4	22.22
Night, 1 time/day	1	5.56
Shower time, 2 times/day	8	44.44
Shower time, 2 times/day	1	22.22
Does by himself?		
Yes	18	100
No	0	0
Does mother provide kid's tools?		
Toothbrush	10	55.56
Toothpaste	13	72.22
Dental floss	1	5.56
Tongue scraper	0	0
Mouthwash	0	0
Mother's behavior		
Provide snack		
Never	0	0
Not every-day	11	61.11
Every-day	6	33.33
Prohibit having bottle milk		
Yes	9	50.00
No	9	50.00
Checking child's teeth		
Yes	8	44.44
No	10	55.56
Visit dentist regularly		
Yes	0	0
No	18	100
Category		
Poor	6	33.33
Fair	10	55.56
Good	2	11.11

Table 4 Mother's motivation

	Before		After	
	n	(%)	n	(%)
Will provide toothbrush, toothpaste, mouthwash, dental floss and tongue scraper for kid	13	72.22	18	100
Will not let child brush his own tooth	0	0	16	88.89
Will help child brushing teeth after breakfast and night	9	50	18	100
Will rinse once after brushing teeth	0	0	16	88.89
Will limit sweet foods and drinks	1	5.56	18	100
Will provide fruits and vegetables every-day	6	33.33	18	100
Will prohibit child having bottle milk	9	50	18	100
Will visit dentist every 6 months for child's dental check-up	8	44.44	17	94.44

Table 5 Motivation category

Category/range	Before		After		p
	n	(%)	n	(%)	
Poor (0-3.9)	12	66.67	0	0	0.00*
Fair (4-7.9)	6	33.33	0	0	
Good (8-12)	0	0	18	100	

*Wilcoxon Signed Ranks Test: p<0.05; significant

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