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THE EMPOWERMENT OF LITTLE DENTISTS AND PARENTS AS THE EFFORT TO CHANGE THE TOOTH BRUSHING BEHAVIOUR OF SD 2 SAYAN, UBUD STUDENTS IN ORDER TO IMPROVE THEIR ORAL HYGIENE Regina Tedjasulaksana, Maria M. Nahak, Ni Nengah Sumerti, and Ni Made Widhiasti Lecturers Polytechnic of Health Denpasar Denpasar, Bali
ABSTRACT Tooth disease nowadays that has high prevalence level among the children of primary school in Indonesia includes mouth and teeth disease as much as 74.4%, as the effect of the lack of oral hygiene care.

the empowerment of the society has a purpose to improve the ability of the society to behave healthily, to solve the health problems independently, to be active in any health building, and to become the activator in realizing the development in health vision. The purpose of this research is to improve the oral hygiene of SD 2 SayanUbud students by carrying out the correct daily tooth brushing program led by the little dentists and parents guidance This experimental study with pre-post test without control group design was implemented using 68 students total population to identify the difference tooth brushing behavior and oral hygiene before and 21 days after tooth brushing program at school and at home.

The datas were analyzed using Wilcoxon test. The result showed that the tooth brushinh behaviour and oral hygiene of students before and after tooth brushing program at school and at home were different significantly ($p < 0.05$).

The correlations between students' tooth brushing behaviour and oral hygiene before and after correct tooth brushing program at school and at home was analyze using Spearman test showed different significantly ($p < 0.05$). The conclusion is that little dentists and parents are able to change the tooth brushing behavior into the correct

one and thus improve the oral hygiene of SD 2 Sayan, Ubud students.

Key words: empowerment, tooth brushing behaviour, oral hygiene Correspondence:

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reginatedjasulaksana@yahoo.com marianahak@rocketmail.com INTRODUCTION Tooth

disease nowadays that has high prevalence level among the children of primary school in Indonesia includes mouth and teeth disease as much as 74.4%, as the effect of the lack of oral hygiene care(1).

Among the children, the caries that are not cared have caused their low body mass index, anemia, sleep disorder, and as the result, the decrease of the children's life quality(2). Children who have decay, abscesses, and chronic dental pain are more frequently absent from school. Children who are in pain from tooth decay cannot concentrate on, nor excel in, their school work and are unable to actively participate in their learning environments(3).

Based on the research result of basic health in 2013(4), it is shown that the correct tooth brushing behaviour among Balinese people aged more than 10 years old only reached 4.1%, while the research result of Basic Health in 2007(5), reached only 10.9%. It shows that there is a decrease in the right tooth brushing behaviour among the citizens aged 10 years old or more(1).

Behaviour has important role to influence oral health status(6). Health is not just about something to know or to realize or to take up, but also something to do in daily life, so that the aim of health education to make the society have healthy behaviour to themselves can be implemented(7).

National health system stated that the empowerment of the society has a purpose to improve the ability of the society to behave healthily, to solve the health problems independently, to be active in any health building, and to become the activator in realizing the development in health vision(8), which can begin in each family as the smallest unit of the society. Parents are the basic founder of their children's health behavior(9).

The realization of society empowerment is also needed in the school environment through the peer group approach by preparing the students to actively become the motivator of healthy and clean life, either in the school environment, family or in the society as well(10). One of the resolutions from The 60th World Health Assembly (WHA) by World Health Organization (WHO) in 2007 is developing and implementing the

mouth and teeth health promotion together with the prevention of mouth and teeth disease as a part of health promotion event in school by focusing on Clean and Health Living Behaviour (PHBS) and the practice of personal health care at school, by implementing the daily tooth brushing program at school(1).

The fundamental needs of the implementation of the school health effort are: 1) school aged society (6 – 18 years old) is the biggest part of Indonesian citizens (about 29%), estimated that 50% of them are school aged kids, 2) developing and growing aged children are believed to be trained and led more easily, and 3) health education through school society is the most effective one amongst all efforts to make healthy living behavior for the society in general, since the school society has the high percentage, organized so that can be reached easily, sensitive to education and modernization, and also spreading up the modernization(11).

Thus, children have been taught to be discipline to clean their mouth and teeth wholly in their early childhood(12). The purpose of this research is to improve the oral hygiene of SD 2 SayanUbud students by carrying out the correct daily tooth brushing program led by the **little dentists and parents** guidance.

MATERIAL AND METHOD This experimental research using the pre-post test without control group design took place at SD Negeri 2 Sayan, Ubud, Bali. This research used the total population **of Grade 1 to 3** students as many as 68 students. The classes chosen are based on **the School Dental Health** Unit (UKGS) strategies in implementing the prevention to mouth and teeth disease through the daily tooth brushing program at least for students of grade 1, 2, and 3(13).

All of the students did the program every day at school led by 10 little dentists who had been trained and monitored by the UKS teacher by ticking the checklist given. This research also involved all parents **of grade 1 to 3** students. Some meetings with parents were held to show them how to brush teeth correctly and so that they could guide their children how to brush their teeth correctly every day at home and ticking the monitoring check list for that.

Tooth brushing behaviour is scored through the skills or practice through the practical aptitude score, i.e., score taking which needs the target to demonstrate how to brush teeth correctly. The instrument used is a check-listed rubric. The score of the skills is qualified as the following criteria (Mendikbud)(14):

Aspects	Score
Preparing	
Doing correctly	1
Doing incorrectly	0
Practice/Action	
Doing correctly	1
Doing incorrectly	0
Finishing	
Doing correctly	1
Doing incorrectly	0

Qualifications of The Skills Scores

Score	Criteria
80 – 100	Very Good
70 – 79	

_Good __60 – 69 _Average __ < 60 _Need Guidance __ Score of the skill = (The total score ÷ maximum score) (100 The oral hygiene status of all grade 1 – 3 students was checked **before and after the** daily tooth brushing program at school and at home using Personal Hygiene Performance Modified index of Marten and Meskin.

The categories of oral hygiene status are(15): Score _Criteria __0 – 15 _Very Good __16 – 30 _Good __31 – 45 _Poor __46 – 60 _Bad __ The last score of tooth brushing behaviour **and oral hygiene status** were collected for 35 days after the program held at school and at home. The next research result data is analyzes using Wilcoxon test to find out the difference in students' tooth brushing behaviour and the difference in students' oral hygiene status **before and after the** program held at school and at home.

To get the correlation between the tooth brushing behaviour and students' oral hygiene **before and after the** tooth brushing program, Spearman test was used. RESULT The subject of the research included 68 students that held the correct daily tooth brushing program, at school led by the little dentists and at home led by their parents. Descriptive Analyzes Table 1.

The Scores of Students' Tooth Brushing Behaviour Before and After Tooth Brushing Program At School and At Home _N _Minimum _Maximum _Mean _Percent _SD __Tooth Brushing Behaviour (Before) Need Guidance Average Good Very Good Tooth Brushing Behaviour (After) Need Guidance Average Good Very Good _68 48 7 10 3 68 10 14 18 26 _1.00 1.00 _4.00 4.00 _1.53 2.88 _ 100.00 70.60 10.30 14.70 4.40 100.00 14.70 20.60 26.50 38.20 _ .91 1.09 __ Table 1.

shows **that there was an increase** of students' tooth brushing behaviour mean score after the correct tooth brushing program at school and at home. Table 2. The Scores of Students' Oral Hygiene (PHP-M) Before and After Tooth Brushing Program At School and At Home _N _Minimum _Maximum _Mean _Percent _SD __Oral Hygiene/PHP-M (Before) Bad Poor Good Very Good Oral Hygiene/PHP-M (After) Bad Poor Good Very Good _68 8 49 11 - 68 - 13 37 18 _1.00 2.00 _3.00 4.00 _2.04 3.07 _ 100.00 11.80 72.10 16.20 - 100.00 - 19.10 54.40 26.50 _ .91 1.09 __ Table 2.

shows **that there was a** decrease of students' PHP-M mean scores, which means that students' oral hygiene gets an increase after the correct tooth brushing program at school and at home. Multivariate Test Result Table 3. The Difference of Students' Tooth Brushing Behaviour Before and After Tooth Brushing Program At School and At Home _N _Mean Rank _Sum of Ranks _Sig.

(2-tailed) __Tooth Brushing Behaviour (Before) - Negative Ranks Tooth Brushing

Behaviour (After) Positive Ranks Ties Total 51 17 68 26.00 1326.00
 (p<0.05) Table 3. approves that students' tooth brushing behaviour after and before the correct tooth brushing program at school and at home has difference significantly in the trust level of 95%. Table 4. The Difference of Students' Oral Hygiene/PHP-M Before and After Tooth Brushing Program At School and At Home

_N	_Mean Rank	_Sum of Ranks	_Sig.
51	26.00	1326.00	.000

(2-tailed) Oral Hygiene/PHP-M (Before) - Negative Ranks Oral Hygiene/PHP-M (After) Positive Ranks Ties Total 47 20 68 14.00 24.72 1162.00
 (p<0.05) Table 4. approves that students' oral hygiene before and after the correct tooth brushing program at school and at home has different significantly in the trust level of 95%. Table 5.

_N	_Mean Rank	_Sum of Ranks	_Sig.
47	14.00	658.00	.000
20	24.72	494.40	.000

The Correlations Between Students' Tooth Brushing Behaviour and Oral Hygiene/PHP-M Before and After Tooth Brushing Program At School and At Home Spearman' rho

_N	_Correlation Coefficient	_Sig. (2 – tailed)
68	.29*	.016

Oral Hygiene/PHP-M (Before) - Tooth Brushing Behaviour (Before) .29* .016
 Oral Hygiene/PHP-M (Before) - Tooth Brushing Behaviour (After) .57* .000

Oral Hygiene/PHP-M (After) - Tooth Brushing Behaviour (After) .57* 1.00
 * (p<0.05) Table 5.

approves that there was a correlations between the tooth brushing behaviour with the oral hygiene of SD 2 Sayan, Ubud students before and after the correct tooth brushing program at school and at home in the trust level of 95%. DISCUSSION The correct tooth brushing behaviour of SD 2 Sayan, Ubud students before and after the tooth brushing program at school under guidance by little dentists and parents at home has shown the significant difference. This might happen because before the intervention, the students did not know how to brush their teeth properly.

According to Notoatmodjo, knowledge is the result of knowing, and this happens after someone use his/her senses to a definite object until he/she realizes in the sense of identifying the stimulus (object) that has been given(7). The knowledge obtained can develop an action or someone's behaviour which lasts longer than the behaviour which is not established from knowledge(16).

The knowledge or cognitive is a very important domain in building someone's action.

Those students have experienced the adoption process, i.e., they have new behaviour based on their knowledge, awareness, and attitude to the stimulus(9). The change or adoption of recent behaviour is a complex process and it takes a long time. Behaviour changes consist of 3 passages.

To get over those three passages, it takes a period as minimum as 21 days. **The first 7 days** are considered as the passage of building the knowledge and affecting the mind-set. The second 7 days are known as the passage of internalization to make a known behavior as the attitude pattern or habit.,

and the last 7 days are the passage of changing attitude into the new culture(17). Besides of the above reasons, that might happen because of the monitoring by the little dentists and the parents. According to Lawrence W Green, human health behaviour is affected by predisposing, enabling, and reinforcing factors(16).

Parents become one of the reinforcing factors while the existence of little dentists becomes the enabling factors. The **empowerment of little dentists and parents** becomes the implementation of society empowerment as the effort or process to build the concern, willingness, and capability of the society to support the realization of health behavior or action(9).

The research held by Yongpisanphop showed that the decrease of carries prevalence of three-year-old children was caused by the participation of parents in carrying the **tooth brushing activity to** their children before bedtime at night(18). The result of the research shows that the oral hygiene of SD 2 Sayan, Ubud grade 1 to 3 students increased which may be affected by having correct tooth brushing behaviour after doing the correct tooth brushing program every day by the **little dentists and parents** guidance, so that their teeth are prevented from plaque.

Tooth brushing behaviour become one of very important and effective healthy living behaviours in maintaining the oral health by doing prevention of plaque on the teeth(19). That is in accordance to Sariningsih's statement that tooth brushing behaviour is one of health behaviours which is very important and effective to oral health protection by preventing them from plaque growing on teeth.

The important things to notice in brushing teeth are the teeth, the tools, and the materials used, the time/frequencies of brushing the teeth, and also the way to brush the teeth(12). The increase of the students' oral hygiene may happen because of their parents' participation in controlling those students to brush their teeth at least twice a day appropriately using appropriate tools and material for brushing the teeth.

An intervention involving the oral health providers, the school personels, and children and their parents needs to be attempted to see what effect it could have on impact of school oral health education(20). Brushing the teeth will minimize the mixture between sucrose and bacteria so that it can prevent from the existing of carries.

The habit of brushing teeth after breakfast will minimize the growing of caries compared to the ones who never brush their teeth after breakfast, similar to the habit of brushing teeth before bed time at night that will minimize the growing of caries compared to the ones who do not brush teeth before bed time(21). WHO and FDI clearly stated that the use of toothpaste with fluoride is the most realistic way to minimize the growing of carries because it **has been used by** almost all people around the world and it is safe to use. Fluoride toothpaste will be the most effective when it is used twice a day(1).

Health is not just about something to know or to realize or to take up, but also something to do in daily life, so that the aim of health education to make the society have healthy behavior for them themselves can be implemented. The collective tooth brushing program is for enabling the daily tooth brushing program advocation at school based on the GyeongJu Declaration in The 4th Asian Declaration on **Oral Health Promotion for School Children** in September 2007, mainly considered for early childhood since behavior becomes habit, which will be easier to build in early childhood(1).

CONCLUSION The conclusion of this research is that **little dentists and parents** are able **to change the tooth brushing behavior** into the correct one and thus improve the oral hygiene of SD 2 Sayan, Ubud students. REFERENCES Kementerian Kesehatan RI, 2012, **Pedoman Usaha Kesehatan Gigi Sekolah (UKGS)**, Jakarta, **Direktorat Jenderal Bina Upaya Kesehatan, Kementerian Kesehatan RI**, p. 11-13, 15-16, 33-34, 51-52. Homsavath, A., et al.,

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