

Handling Children Dental Caries through Parents Awareness on Community Service

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Abstract. Elementary school children have been categorized as high risk caries group. Maintaining dental health of elementary school need parents' role on making dental care decisions. Srandol Kulon Elementary School and Meteseh Elementary School are 2 elementary schools assisted by Poltekkes Kemenkes Semarang. Two schools located at urban and rural area therefore they have different characteristics of parents. Community service was carried out in 2 elementary schools with the aim to find differences of parental involvement in the promotion, prevention and treatment of children's dental health. Screening was done in class III, then their parents with children who have caries were counseled and educated about dental health. The parents were also given information about children's dental health plan treatment. Informed consent was given to parents in children who would be curated (fillings and extractions). Parent participation in Srandol Elementary School was higher than Meteseh. There was a change in the composition of caries prevalence, increasing in the number of filling permanent and milk teeth (f and F) and extracted (e). Parents' awareness of the importance of treating caries in children as early as possible is higher in Srandol Kulon Elementary School compared to SD Meteseh. Besides, the level of education and parents' socio-economic influenced parents' attitudes in giving decisions of dental treatments.

Keywords: Community service, parental involvement, prevalence of caries.

1 Introduction

National research[1][2] of Health 2013 has found that the dental caries prevalence among children in Indonesia has increased 13,7%. DMF-T index among 12 years old children has increased from 0.91 to 1.4. It means that there are 140 decays among 100 children nowadays[3]. This condition happened[4-6] due to the lackless participation of parents and their children in maintaining their teeth[7-10]. Besides, the high consumption of sweet and sticky snacks in school could be the trigger of dental caries [8]. Due to this condition, the community service program could be the other solution to reduce the dental caries among school children. Community service program is one of the university program to interfere the risk community in handling their problems. Through this program, this risk community was given promotive, preventive and simple curative treatments freely (without any charge of payment). This program was designed to solve the community health problems in order to develop national wellbeing [3]. The target of this program was 110 students of two elementary school students (Srandol Kulon and Meteseh Elementary School Semarang) and their parents. Indicators success of the community service activities are:

- a. Changing student behavior about brushing teeth

- b. Filling the Permanent teeth's caries among grade III elementary school students
- c. Extracting the Milk teeth with physiological persistence and resorption
- d. The involvement of parents by signing an informed consent that shows parents' attention to their child's dental care

Purpose of the program was to compare parent's awareness of their children dental health related to promotive, preventive and curative program and to change the composition of caries prevalence from decay to filling and extraction of milk teeth

2 Methodology

Community Service Program is a yearly program and as a part of lecture obligation to community. Handling dental caries of children is very crucial to decrease prevalence caries at Indonesia. Community service involved three programs : Promotive, Preventive and Simple Curative. The promotive activities were given to the parents and students. The preventive and simple curative treatments were given to the students only. All these activities were implemented in school. Simple clinic equipments were brought into class which was designed as "clinic". The target of this program was 110 students of two elementary school students (Sronдол Kulon and Meteseh Elementary School Semarang) and their parents. The activities were :

a. Promotive activities

Students' parents were taught about maintaining children's dental health. They were informed about the growth of teeth process, dealing with mixed dentition period, handling mixed dentition problems and the right way on brushing the teeth. The position and condition of teeth in mixed dentition period could be a trigger of having a decay. Parents should know how to monitor their children in maintaining their teeth during this periode. Their concern was so important that could prevent dental caries in this period[2]. Students were also taught about the importance of caring their teeth and the right way on brushing their teeth.

b. Preventive activities

Students brushed their teeth together in the right way under guidance of dental nurse's students. After brushing their teeth, they were examined for screening their dental problems. The indexes used to measure caries experience are DMF-T (Decay Missing Filling Teeth) for permanent teeth and def-t (decay extraction filling teeth) for milk teeth [4].

c. Simple curative treatments

The treatments given were simple filling with GIC (Glass Ionomer Cement), milk teeth extractions and refferal treatments by dentists and dental nurses. The priorities of treatments were filling the email and dentin decay and extracting the milk teeth. Not all decay teeth could be filled out due to its severity[1] so some of them were refereed for the next treatment in *Puskesmas* (Government Community Health Centre). Some untreated carious teeth - even they could give problems in eating and sleeping, malnutrition and alterations in growth and

development - could not be extracted due to the period time of permanent growth which replaced them[9]. Parents whose children had simple curative treatments had to fill informed consent which indicate their awareness of children dental health. The sequence of this community service activities was:

- a. Screening for all third grade students of Sronol Kulon Elementary School (urban area) and Meteseh Elementary School (rural area)
- b. Reporting students' data which required dental care to the Principal
- c. Inviting all parents and students to be given education about dental health
- d. Parents signed an informed consent indicating they expressed no objection on their children's dental treatments
- e. Children were given demonstrations on how to brush their teeth and did the right procedure of brushing their teeth on mass tooth-brushing activities
- f. Simple curative actions were taken: extraction of milk teeth, filling the caries of milk teeth and permanent teeth and scaling
- g. Making reports to the school

3 Results and Discussion

The change of prevalence caries were reported on the table below:

Table 1. Student's Teeth Condition Before and After Community Service Treatments

	Teeth	Before	Treatment				After	Note
			F	Ext	Ref	Obs		
Filling Indication	Milk Teeth	65	35		23	7	30	↓ 53.8%
	Permanent Teeth	95	29		66		66	↓ 30.5%
Extraction Indication	Milk Teeth	64		55		9	9	↓ 85.9%
	Permanent Teeth	37		0	37		37	0%
Total Dental Problems		261					142	

F : filling

EXT : Extraction

REF : Refferal

OBS : Observation



Mass Tooth Brushing



Screening Dental Problems



Parents' Promotive



Tooth-Brushing Demonstration



School Headmaster's Support



Parent Informed Consent (Parents Signatures)

These three activities of community service could decrease the filling and extraction indications on milk teeth (53.8% and 85.9%) and the decays on permanent teeth around 30.5%. Not all the problems could be done completely in this study. There were 119 dental problems handled completely from 261 found dental problems. In other word, solved dental problems were around 45.59%. The untreated teeth or unsolved dental problems were referred to Puskesmas. If this community service was implemented every year, the dental caries prevalence among children would decrease optimally.

Parent's awareness of the two elementary school was quite different. Parents from Elementary School Sron dol Kulon which located at urban area were more aware of their children's dental health. Only 5 of 60 parents who disagree (92% agree) on having curative treatments for their children while from 50 parents from Elementary School Meteseh 30 parents gave agreement (60% agreed) by signing informed consent. Parents from Elementary of School Sron dol Kulon which located at urban area has higher level of education compared to parents from Elementary School Meteseh which located at rural area. Socio Economic status (SES) of parents at urban area were relative higher than parents from rural area. According to Wen and Kaneda (2010), China has different level of SES and urban community has more access to health services. Most parents from urban school worked as government employee, doctor and entrepreneur while parents at rural area worked as market seller or opened shop at home. Education level and socioeconomic status influence parental knowledge and thus related with their attitude on dental health.

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4 Conclusion

Based on community service which implemented at two school at Semarang we could conclude:

- a. Parent's involvement at children dental health are important to handling dental caries.
- b. Parents awareness are higher at urban area than rural area
- c. Around 45.59% of dental problems are solved, which indicated by increase of permanent teeth filling and extraction of deciduous teeth (resorption physiologist and persistency)

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