

# **THE IMPACT OF TOOTH PUPPET THEATER TOWARD THE IMPROVEMENT OF CHILDREN DENTAL AND ORAL HEALTH KNOWLEDGE IN TK HIJRIYAH III PALEMBANG**

## **Abstract**

drg. Bertha Aulia\*, Arizka Suraida\*\*

Department of Dental Public Health, Dentistry Courses of Sriwijaya University

Tooth puppet theater is a play performance used hand puppets and the characters are three kinds of teeth (i.e. insisivus, caninus, molar), germ, dentist, and child. This play is performed by several people by using dental health comic plot. Those characters are specially designed by using colorful flannel cloth to attract children's attention, so does the puppet stage. Through this theater performance, it is expected to stimulate children's imagination to make them comprehend the material easily. This research aimed to figure out the impact of dental and oral health education through tooth puppet theater media toward children's knowledge of dental and oral health in TK Hijriyah III Palembang. Its research method is quasi experimental which applies pretest-posttest with control group design. It was done in TK Hijriyah III Palembang. Its sample is 21 students, which was taken from 42 students, as experiment group, while the rest 21 as control group by using speech method. The taken data was the score of pretest and posttest questioner result. It was analyzed by using ANOVA test. The statistic result showed there is an improvement of children's knowledge after the intervention. There is significant difference in children's knowledge about dental and oral health which was given the intervention by using tooth puppet theater media and speech method ( $p < 0.05$ ). The conclusion that could be drawn is dental and oral health education through tooth puppet theater impacts the improvement of children's knowledge.

***Keywords: dental and oral health education, puppet theater, knowledge.***

## **INTRODUCTION**

In dentistry, the biggest obstacle is tooth carries. It is common problem in tooth and oral health in Indonesia, it means that it is a high level prevalence health problem which cover whole area and society.

Carries is an infectious disease which suffered by almost 95% world population. Health Department data shows carries prevalent in Indonesia reached 60-80% of population, it also occupies sixth position of disease with most common disease<sup>1</sup>. In 2009 the carries prevalent of children under 5 years old in Indonesia reached 85%. In 2003 World Health Organization (WHO) declared that children in the world who suffer from caries reached 60-90%.

In order to optimize health scale of the society, there is health attempt by using conservation approach, health improvement, disease prevention, curing, and rehabilitation which held comprehensively and continuously. Health attempt is every activity to nourish and improve the society health done by the government, society itself, or the collaboration between government and the society.<sup>3,4</sup>

It is better when the education of dental and oral health is given as early as possible, i.e. around 4-5 years old since dental problem will be more complex in line with the age. When a child is in the middle childhood, the risk of having carries is higher. There are many kinds of snacks at school. Those sweet snacks and drinks threaten children's dental health.<sup>5</sup> Moreover, the education of dental and oral health is given as prevention before eruption of permanent teeth. Since they start to erupt around 6-7 years old.<sup>6</sup>

Education is held in line with children age and growth. Education is supported by method, material, and media. The most suitable method for children is play and learn. Therefore, it is very important to choose educative game devices as a learning source which can serve knowledge and improve their ability.

4-5 year old children is already able to tell a simple story, they are eager to know so they are eager to learn, they also have high imagination, such as pretending to read a book for their dolls. Their interest is used to deliver dental and oral health education to them by using educative game devices with media-based, i.e. dolls or puppets.

Tooth puppet theater is a play which uses puppets played by several people. The puppets are made of bright color flannel, besides they can be moved by entering a hand inside them that will make them more alive and interesting for children. This play can trigger children's imagination and make them comprehend the material easily. The material given is simple, i.e. the introduction of kinds of teeth, their functions, how to keep dental and oral health, and the causes of carries.

## **RESEARCH METHOD**

It is quasi experimental research which uses *pre-post test with control group*. It was done in TK Hijriyah III Palembang on 12, 19, 26 September – 3 October 2011.

Its sample is taken from the population, 42 students, i.e. 21 students in experiment group which applied puppets theater media and 21 students in control which applied speech method.

The procedure of the research was divided into 4 visits. In the first visit, children were given questioner to score children's knowledge deals with dental and oral health before intervention was given. Then they were given the intervention, i.e. education of dental and oral health. Experiment group used puppets theater media and control group used speech method which used dental study media. In the second and third visits they were give the same intervention as in the first one. While in the last visit their knowledge deals with dental and oral health were evaluated through questioner. The taken data were knowledge score before and after treatment. The data were analyzed by using descriptive analysis and statistic test.

## RESULT AND DISCUSSION

According to result, most of the samples (80.95%) were lack of knowledge deal with dental and oral health before the illumination (table 4.2), and based on the prior survey only 11 of 42 children do not have carries, while the rest, i.e. 73.8%, have carries.

**Tabel 4.2. The level of children's knowledge deal with dental and oral health before the illumination**

Knowledge deal with dental and oral health categories	Control	Experiment
Good (76 - 100)	0 (%)	0 (%)
Average (60 - 75)	4 (19,05%)	4 (19,05%)
Poor (<60)	17 (80,95%)	17 (80,95%)
Total	21 (100%)	21 (100%)

Based on table 4.2, it can be concluded that the knowledge level of both control and experiment groups before the illumination were poor.

It is in line with behavior theory which states that human behavior (psychomotor) is influenced by knowledge (cognitive) and attitude (affective). Those three aspects are connected. The given information will be knowledge (cognitive), then comprehended into attitude (affective) which finally turn his preference and hopefully it can be applied into daily life (psychomotor).

In this research done the illumination through puppets theater (experiment group) and in the control group the illumination was through dental model and poster. After those two illuminations were done, both groups have progress in knowledge deal with dental and oral health (table 4.3). It was supported by anova test which shows significant difference  $p=0,000$  ( $p<0.05$ ) (tabel 4.5).

**Tabel 4.3. The level of children's knowledge deal with dental and oral health before the illumination**

Knowledge deal with dental and oral health categories	Control	Experiment
Good (76 - 100)	0 (0%)	15 (71,43%)
Average (60 - 75)	6 (28,57%)	6 (28,57%)
Poor (<60)	15 (71,43%)	0 (0%)
Total	21 (100%)	21 (100%)

**Tabel 4.5. Anova test result of control and experiment group before and after the illumination**

Illumination method	Significance
Speech and puppets theater	0,000

But the most significant is in the experiment group. Pair t-test result shows there is significant difference  $p=0,000$  ( $p<0,05$ ) (tabel 4.6), it means the illumination through puppets theater is more effective than dental model and poster method. In control group there is no children who has an improvement in knowledge deal with dental and oral health. While in the other group, most of the children (71,43%) has good knowledge deal with dental and oral health (table 4.3).

**Tabel 4.6. Pair t-test of both groups toward the knowledge deal with dental and oral health.**

Score	Significance
Pre test control - pre test experiment	0,534
Post test control - post test experiment	0,000

Puppets theater is not new stuff, its concept is the same as storytelling by using puppets. Storytelling is the most effective way to facilitate children with norms and ethics. Through storytelling, children are easy to absorb positive values because storytelling is not aimed to order and lecture. It is hopefully that the characters of puppets theater will be the good model for the children. Moreover by doing storytelling can be sharpen children's imagination as a preliminary of developing children's interest.

Actually in dentistry puppets theater method had never been used to transfer the important values to keep children dental and oral health. The illumination using puppets theater itself had been divided into three topics, i.e. kinds and functions of the teeth, the way to brush the teeth, and carries process. There are puppets characters and stage, which similar with the real teeth and mouth condition, to make the children comprehend the information easily.

Puppets theater is one of so many medias which can be used to educate the children earlier. It is an interesting show which can trigger their imagination to make them understand the material easily. The colorful puppets is used to fill visual type, the story fills auditory type, and it seems the children can mingled into the story because the puppets and the stage were made as similar as the real one fill kinesthetic type. Therefore the illumination through puppets theater is easier to be comprehended by the children, so the information is transformed well and can be applied in daily life.

## Conclusion

Children's knowledge increase after the illumination and the highest increase is reached by experiment group which was given through puppets theater. While control group, which given through dental study model, reached the increase though is lower than the experiment group.

## REFERENCES

1. Persatuan Dokter Gigi Indonesia. *Lakukan Perawatan Gigi Menyeluruh*. Jakarta. Page 1. Accessed 13 februari 2011, from [www.pdgi-online.com](http://www.pdgi-online.com).
2. Evy. 2009. *Kebiasaan Minum Susu Botol Picu Karies Gigi*. Kompas. Jakarta. Page 1. Accessed 13 february 2011, from <http://m.kompas.com>.
3. Departemen Kesehatan RI. 2009. *Sistem Kesehatan Nasional*. Jakarta. Page 23
4. Notoadmodjo, Soekidjo. 2007. *Promosi Kesehatan dan Ilmu Prilaku*. Jakarta : Rineka Cipta. Page 3-33, 56-70.
5. Laon, Marselly. 2010. *Pengaruh Pendidikan Kesehatan Gigi dan Mulut dengan Media buku Pop Up Terhadap Pengetahuan Anak Tentang Kesehatan Gigi dan Mulut*. Palembang. Universitas Sriwijaya. Page 3.
6. Maulani, C dan Enterprise, J. 2005. *Kiat Merawat Gigi Anak : Panduan Orang Tua dalam Merawat dan Menjaga Kesehatan Gigi Bagi Anak-Anaknya*. Jakarta : PT Elex Media Komputindo. Page 10.