



Tooth brushing time table media as an effort to increase the independence of brushing teeth in preschool children

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ABSTRACT

Background: Based on the Basic Health Research in 2018, in Banten province, the population who have dental problems in the form of damaged teeth, cavities or pain in the 3 - 4 year old group with a percentage of 36.4% and the 3 - 4 year old group who do tooth brushing care with the correct time is only 1.1%. Therefore, it is necessary to provide dental health education to children using methods and learning media that are tailored to child development. One of the methods used is by monitoring toothbrushing using toothbrush time table media. **Objective:** analyzing toothbrush time table media as an effort to increase the independence of brushing teeth in preschool children **Methods:** This study used a quasi experiment with pretest and post test design, conducted on 77 students as respondents obtained using the total sampling technique. The type of data used is primary data, which is data obtained directly by measuring the level of children's tooth brushing independence. The instrument used was a tooth brushing independence checklist sheet. **Results:** The results of the study before and after using the toothbrush time table media on 77 respondents, with the category needing guidance as many as 64 students (83.1%), became excellent toothbrushing independence as many as 60 students (77.9%), and the mean of toothbrushing independence with the results of 47.9, namely the category needing guidance changed to 87.9 with an excellent category, with independence p-value of 0.001 ($p < 0.05$). **Conclusion:** The tooth brushing time table media can increase the independence of tooth brushing in preschool children.

INTRODUCTION

Dental and Oral Health Efforts states that, oral health is a healthy state of hard tissue and soft tissue of the teeth, as well as related elements in the oral cavity. This allows a person to eat, speak, and interact socially without experiencing dysfunction, aesthetic disturbances, or discomfort caused by disease, occlusion abnormalities, or tooth loss (Permenkes RI, 2015).

Oral health is one of the important things in the life of every individual including children, if damaged teeth and gums are not properly treated, it will cause pain in the masticatory part, and can interfere with other body health (Purnama et al., 2019). The mouth is a very good or ideal part for the development of bacteria. If the mouth is not cleaned properly, the food residue left behind along with the bacteria will increase and plaque will form or it can be said to be a colorless sticky layer. And if the plaque is not cleaned, it will damage the tooth enamel tissue and will subsequently make cavities and cause pain that causes discomfort (Yusmanijar & Abdulhaq, 2018).

Oral health problems in Indonesia are still a very important concern, especially in children's oral health problems. With this, it is necessary to improve the degree of oral health. Diseases that often occur in children are dental caries and gingivitis, which are caused by a lack of maintaining oral hygiene and a poor diet (Husna & Prasko, 2019).

According to the World Health Organization (WHO), dental caries in Asian countries, including Indonesia, occurs around 80 - 95% in children under the age of 18, especially during school age. It is estimated that about 90% of these cases occur in pre-school children, aged 4 - 5 years, and school-aged children, aged 6-8 years. This shows that most of the early childhood around the world has experienced dental caries (Ramdhanie et al., 2022).

Based on data from basic health research in 2018, the proportion of dental problems in Indonesia in the form of damaged teeth, cavities or pain is 45.3%. In the area or province of Banten, the population who have dental problems in the form of damaged teeth, cavities or pain is 48.5%. In the group of children

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aged 3 - 4 years with a percentage of 36.4% and the age group 5 - 9 years with a percentage of 54%, proving that children's dental problems in Indonesia need more attention (Kemenkes RI, 2018).

The oral health status of children is influenced by several factors, namely heredity, environment (physical and socio-cultural), behavior, and health services. Of these factors, behavioral factors have an important role in influencing oral health status. People play a very important role in shaping children's behavior. Parents will help guide children to have good behavior in maintaining oral health (Nugroho et al., 2019).

Tooth brushing behavior according to the results of the Basic Health Research (2018) states that, in Indonesia, 94.7% of those who brush their teeth every day are in the age range ≥ 3 years, but those who perform dental care correctly in the morning and night are 2.8%. And in the age group 3 - 4 years who take care of brushing their teeth with the correct time in the morning and night, namely only 1.1%. These results prove that the role of parents in guiding children to brush their teeth properly and correctly is needed, it can also increase children's independent behavior in brushing their teeth properly and correctly in the morning and night (Kemenkes RI, 2018).

Monitoring is a series of observations of activities to ensure that the strategies or steps taken are in accordance with procedures. Monitoring tooth brushing to increase the independence of brushing teeth in early childhood can be done using media such as the toothbrushing Time Table (Ratmini, 2018).

The tooth brushing time table media is a kind of model and learning media for teacher and parent assistance in the form of tooth brushing monitoring sheets that can monitor early childhood when brushing teeth. Forming early childhood independence in brushing teeth, it is necessary to provide education using the right method and supported by various media that can attract attention so that children are interested and able to brush their teeth properly (Purnama et al., 2020).

METHOD

This study uses quasi experiment with pretest and post test design. This study was conducted in preschool children using the total sampling method, so the total sampling in this study was 77 children. The place of research carried out was at Nurul Iman Islamic Kindergarten located at Ciater Tengah Rt 003/007 no 54, Kel. Ciater, Kec. Sepong, South Tangerang City, Banten. On May 2024.

The type of data used in this study is primary data, namely data obtained by researchers directly by measuring the level of independence of brushing teeth in preschool children. Respondents in this study performed tooth brushing activities before and after the use of toothbrush time table media for 10 days, which was monitored by parents at home. The instrument used is a tooth brushing independence checklist sheet and the tools used in this study are toothbrushes, toothpaste, and mouthwash cups. In this study, the data analyzed used the SPSS program with paired sample t tests. The data collection stages carried out by researchers are as follows:

1. The first day, make introductions to children, measure the independence of tooth brushing with a child's tooth brushing independence checklist sheet, and provide tooth brushing time table media.
2. Providing information related to research and the use of toothbrush time table to parents from the Whatsapp group of parents.
3. On the second day until the tenth day, children do tooth brushing activities at home by filling in the toothbrush time table media.
4. On the eleventh day, measure the children's toothbrushing independence using the toothbrush time table.

- Then the data before and after are analyzed using excel which is described in the form of tables and percentages to obtain an overview of the variables studied.



Figure 1. First Sheet Design Front and Back Page



Figure 2. Second Sheet Design Front and Back Pages

RESULT

Table 1. Distribution of Independence in Brushing Teeth Before and after Given the Toothbrush Time Table Media

Independence	Before		After	
	F	%	F	%
Very good	3	3.9	60	77.9
Good	3	3.9	11	14.3
Enough	7	9.1	4	5.2
Needs Guidance	64	83.1	2	2.6
Total	77	100	77	100

Based on data from table 1, the results obtained before being given the toothbrush time table media with a sample size of 77 students, the results obtained with the category of independence of brushing teeth

are very good as many as 3 students (3.9%), the independence of brushing teeth is good as many as 3 students (3.9%), the independence of brushing teeth is sufficient as many as 7 students (9.1%) and the independence of brushing teeth needs guidance as many as 64 students (83.1%). After being given the toothbrush time table media, the results obtained with the category of independence of brushing teeth are very good as many as 60 students (77.9%), the independence of brushing teeth is good as many as 11 students (14.3%), the independence of brushing teeth is sufficient as many as 4 students (5.2%), and the independence of brushing teeth needs guidance as many as 2 students (2.6%).

Table 2. Different test in tooth brushing independence before and after the use of tooth brushing time table media

Variable		Mean	p-value
Independence	Pre-test	47.9	0.001
	Pos-test	87.2	

Table 2 shows that the results of the paired sample t-test analysis obtained a independence p-value of 0.001 ($p < 0.05$), meaning that the toothbrush time table media is effective in increasing the independence of brushing teeth of preschool children.

DISCUSSION

The results of research and data analysis on the description of the independence of brushing teeth with the toothbrush time table media before being given the toothbrush time table media obtained the results of the most categories, namely, the category of independence of brushing teeth needs guidance as many as 64 students out of 77 students with a percentage of 83.1%. However, after being given the toothbrush time table media, the most category results were obtained, namely the category of independence in brushing teeth very well as many as 60 students out of 77 students with a percentage of 77.9%, with p-value of 0.001 ($p < 0.05$), this shows that the use of toothbrush time table media can significantly increase the independence of brushing teeth in children at Nurul Iman Ciater Islamic Kindergarten.

This significant increase is in line with previous research by (Purnama et al., 2020) with the title "Teacher and Parent Assistance Model as an Effort for Tooth Brushing Behavior in Preschool Children" which shows that monitoring and parental assistance for 10 days using time table media is effective in increasing the independence of brushing teeth of preschool children. With the results before the use of media amounting to 0.000 ($p < 0.05$) which means that the teacher and parent assistance model is effective in improving the teeth brushing skills of preschool children (Purnama et al., 2020).

This research is in line with research conducted by Wanda in 2023 with the title "Parental Monitoring of Tooth Brushing Habits in Children Using the Time Table Method at SD Alam Ar Ridho" obtained results with a sample of 78 respondents mostly in the good category, namely 56 respondents (72%) to a good category, namely 67 respondents (86%). This states that the use of time tables as a companion tool can provide significant stimulation in the learning process of children (Wanda et al., 2023).

According to (Sa'diya, 2017) independence is an attitude that is formed through various processes that a person experiences during his development. In the process towards independence, a person learns to deal with different situations in each social environment to be able to think and act appropriately in dealing with all situations. common activities that help children absorb and shape the way they think and the way they behave in society are adults or older friends.

According to (Ngatemi, 2020) early childhood does not yet have independence in brushing teeth. Early childhood who are not independent in brushing their teeth have a worse dental hygiene status than those who are independent. Children's independence can be seen through daily activities, namely by instilling independence in children through brushing their teeth properly and correctly by doing it themselves. The formation of independence in brushing teeth in children must be done in everyday life without feeling forced. According to (Hasan et al., 2021) learning media can be described as media that contain information or instructional messages and can be used in the learning process. Learning media is media that conveys messages or information that contains learning objectives or objectives. Learning media is very important to help learners acquire new concepts, skills and competencies. According to (Susan & Bhutani, 2020) Time table media used in monitoring children's tooth brushing for 10 days, is a list or plan that organizes the order of time for various activities, events, or tasks. The toothbrush time table media is made as a companion for parents in shaping the behavior or habits of a child in brushing teeth properly and correctly and to develop the independent ability of early childhood in brushing teeth using

appropriate methods so as to attract children's attention and children can learn to brush their teeth effectively. According to (Khasanah et al., 2019) explains that parents play an important role in providing assistance and supervision. Children who receive consistent supervision and assistance from parents tend to have better brushing skills. To improve tooth brushing skills in children, it is necessary to have an active role from parents, teachers, and the social environment in providing appropriate education, supervision, and support. The use of interesting and interactive educational media can also help children develop good tooth brushing skills. In addition, considering children's health and psychological factors is also important in helping them form good and correct brushing habits.

CONCLUSION

Based on the results of research on the description of the independence of brushing teeth with the toothbrush time table media in preschool children, it proves that the tooth brushing time table media, as a companion for children in brushing their teeth at home can increase the independence of brushing the teeth of respondents.

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