

The Effectiveness Of Tiktok In Increasing Parents' Knowledge About Cavities In Children

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ABSTRACT

Background: Impacted teeth is defined by the teeth are block the path of normal eruption due to several factors such as lack of space in arch of jaw or begin an obstruction of the path of tooth eruption. Tooth eruption occur in more than one tooth. The third molar are the most frequently impacted and generally found at the age of 18-25 years. The initial examination to determine the impacted tooth is panoramic radiographic. Panoramic radiography was choosen because its convenient to use, minimal radiation dosage, and easy to see all condition the tooth in jaw stucture only in one film. This study aim to determine the prevalence of mandibular third molar impaction on panoramic radiography examination at RSGM Soelastri in the range of age 18 to 25 years.

Method: The study type is observasional descriptive with longitudinal stiudy design. This design is look at the frequently of mandibular third molar impaction case in the range of 18 to 25 years at RSGM Soelastri through panoramic radiography picture. This study use the secondary data from panoramic radiography soft file which available at radiography room at RSGM Soelastri in January 2021 to January 2022.

Result: The result show that 81,2% the panoramic radiography picture there were impacted teeth where 27,4% were aged 18-19 years, 24,5% were aged 20-21 years, 22,2% were aged 22-23 years and 25,9% were aged 24-25 years.

Conclusion: This study conclusion that prevalence of impacted third molar mandibular at RSGM Soelastri in patient where aged 18 to 25 years between January 2021 to January 2022 was 212 case of a total 261 panoramic radiography picture with a percentage of 81.22%.

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INTRODUCTION

Dental and oral health is an important aspect of overall health, as disruptions to dental and oral health can affect a person's physical condition and quality of life. One of the common dental health problems in children is cavities. According to data from World Health Organization (WHO) in 2022, the prevalence of dental caries in children worldwide reached 514 million, with countries in Southeast Asia, including Indonesia, showing high rates ¹. Data from the Indonesian Dentists Association (PDGI) shows that around 89% of caries sufferers are children, and the results of Basic Health Research (RISKESDAS) 2018 showed the prevalence of cavities in early childhood reached 93%².

This condition shows that the knowledge possessed by parents about children's dental health is very important and plays a crucial role in efforts to prevent cavities, cavities are one of the most common dental health problems faced by children. By having a good and adequate knowledge of dental care, parents can be more effective in providing appropriate and appropriate supervision of their child's dental health, so as to prevent various dental and oral health problems that may occur in the future³. In today's digital age, where information is easily and quickly accessible, social media has evolved to become one of the main sources of information for many people, including parents who want to know more about their child's health. TikTok, as one of the most popular social media platforms among the public, offers a variety of interesting and informative educational content, which can be used to increase parents' knowledge about children's dental health⁴.

This study aims to determine the effectiveness of TikTok in increasing parents' knowledge about cavities in children. By utilizing a platform that is widely used by parents, it is hoped that information about dental health can be conveyed in an interesting and easy-to-understand way.

RESEARCH METHOD

This research was conducted on TKIT Harapan Umat and Pertiwi Purwantoro Kindergarten which have obtained ethical clearance from the Health Research Ethics Commission of dr. Moewardi Hospital with number 2.727/XI/HREC/2024. This research method uses *Quasi Experimental pre and post test with control group design*. The sampling technique was carried out by *the purposive sampling method*. The inclusion criteria include parents of kindergarten children aged 4-6 years who have *smartphones* and the TikTok application, while the exclusion criteria include parents who are uncooperative and do not follow the entire research process. The characteristics of the respondents used in this study consisted of age, occupation, and education. The respondents' knowledge variables were measured through a questionnaire consisting of the 11 questions that have been tested for validity and reliability. The knowledge studied is in accordance with the questionnaire grid which can be seen in table 1.

Table 1. Questionnaire Grid

P A R E N T A L K N O W L E D G E			
No.	Domain	Subdomains	No
	Items	Items	
1.	Factor	Characteristics of	1
	Cause	Substrate	2
	Tooth	Microorganism	3
	Perforated	Time	4
2.	Food	Examples of drinks	5
	Kariogenic	Kariogenic	
3.	Cavities Signs	Signs of cavities	6
4.	The Impact of Cavities	Impact on children with cavities	7, 8
5.	Manner Prevent Tooth Perforated	Routine control to dentist	9
		Right time to brush your teeth	10
		Use of fluoride toothpaste	11

Of the 11 questions according to the questionnaire grid in table 1, respondents who answered correctly were given a score of 1 and those who answered incorrectly were given a score of 0. The number of samples was calculated using the Slovin formula and 45 respondents were obtained with the division of a treatment group of 25 people at TK IT Harapan Umat and a control group of 20 people at Pertiwi Purwanto Kindergarten.

The treatment group received education through the sharing of TikTok links for 7 days, starting with a pretest on the first day, followed by the sharing of TikTok videos from the second to the sixth day. On the seventh day, parents were asked to fill out a checklist regarding their video viewing routine and conduct a post test to measure their knowledge. In the control group for only one day, starting with a *pretest*, followed by verbal education using the lecture method, and ending with a *post test* to measure parents' knowledge after education. Data analyzed with *Independent T-Test*.

RESULTS

This research has been carried out in December 2024 to the parents of students of TK IT Harapan Umat and Pertiwi Purwanto Kindergarten. From the results of the study, data on respondent characteristics were obtained which can be seen in table 2 and The average difference in knowledge in Table 3.

Table 2. Characteristic Respondens Group Treatment and Groups Control

Respondent Characteristics	Group Frequency Treatment	Group Frequency Control	Total (Presented)
<u>Age</u>			
26-30 Years	10 (40%)	7 (35%)	17 (37,7%)
31-35 Years	4 (16%)	4 (20%)	7 (15,5%)
36-40 Years	5 (20%)	5 (25%)	10 (22,2%)
41-45 Years	4 (16%)	3(20%)	8 (17,7%)
46-50 Years	2 (8%)	1 (5%)	3 (6,6%)
Total	25 (100%)	20 (100%)	45 (100%)
<u>Work</u>			
Mother	9 (36%)	5 (25%)	14 (31,1%)
Teacher	4 (16%)	3 (15%)	7 (15,5%)
Farmer	1 (4%)	2 (10%)	3 (6,67%)
Self employed	7 (28%)	8 (40%)	15 (33,3%)
Worker	4 (16%)	2 (10%)	6 (13,3%)
Total	25 (100%)	20 (100%)	45 (100%)
<u>Education</u>			
S2	0 (0%)	1 (5%)	1 (2,2%)
S1	9 (36%)	4 (20%)	13 (28,9%)
D3	2 (8%)	3 (15%)	5 (11,1%)
D1	0 (0%)	1 (5%)	1 (2,2%)
SMA	10 (40%)	4 (20%)	14 (31,1%)
SMP	3 (12%)	5 (25%)	8 (17,7%)
SD	1 (4%)	2 (10%)	3 (6,67%)
Total	25 (100%)	20 (100%)	45 (100%)

In table 3 below, it shows the average difference in knowledge between the treatment group and the control group with the largest difference value in the treatment group.

Table 3. Difference in Average Knowledge

	Average and Standard Deviation		
	Pretest	Posttest	Different
Group Treatment	7,6±1,98	10,56±1,67	2,96
Group Control	7,5±1,64	9,3±1,6	1,8

Next, a normality test was carried out using *Shapiro-Wilk* and the results of normal distributed data were obtained, so that the next test was carried out an *Independent Sample T-Test* with the results of the sig value. (2- tailed) of 0.002 ($p < 0.05$), it can be concluded that there is a significant mean difference between the knowledge of the treatment group and the control

DISCUSSION

This study uses a sample of parents of kindergarten children with 3 categories of characteristics, namely age, occupation, and education. Research results on the table of the average difference of knowledge showed an increase in knowledge in the treatment group and the control group after being educated. The greatest increase in knowledge was found in the treatment

group. The increase in knowledge in the treatment group was due to the provision of education about cavities in children using TikTok media. TikTok media is a video-based social media platform with many interesting features and music that can be easily understood to increase knowledge.

There was a difference in the average difference *between the pretest and posttest* of cavity knowledge in the treatment group of 2.96, while the treatment group was 1.8. It can be concluded that the treatment group experienced a significant change in knowledge, because the treatment group was educated using TikTok media while the control group was only given verbal education with lectures. Tiktok is one of the platforms to provide health information in the form of interesting videos. The advantages of TikTok as a medium of providing information are in the form of short videos with visuals and various interesting features, and TikTok has group. Wide accessibility so that it can be accessed by all ⁹. TikTok can be an effective medium in conveying dental health information to parents. This increase in knowledge is due to the appeal of video content that is presented in an attractive and easy-to-understand manner. A good parent's knowledge of dental health can help them provide proper care and supervision of a child's dental health³.

Basically, this TikTok application can foster a sense of pleasure for its users. The emergence of TikTok began as a lip-sync video, as well as various features such as face effects, and others that TikTok has to attract attention. With a short duration, users will not get bored to scroll to see various content uploaded by other users

⁸. TikTok is a medium that makes learning materials that are initially abstract or difficult to see in real terms, can be packaged to be more real and attractive so that it is easier to understand⁹.

The results of *the pretest and posttest* analysis of knowledge using *the Independent Sample T-Test* showed a value of $P=0.002$ ($p<0.05$), meaning that there was a difference between the difference between *the pretest and posttest* scores in the treatment group and the control group, namely there was a significant increase in knowledge after being given education about cavities in children using TikTok media. Therefore, it can be concluded that TikTok is effective in increasing parents' knowledge about cavities in children. Thus, the use of TikTok as a dental health education medium can be an effective strategy to increase awareness person old about The importance of children's dental care, as well as preventing dental health problems such as cavities⁶. Research Ini Line with Previous research showing that TikTok can Used to Improving health knowledge among the community⁴. TikTok not only serves as an entertainment platform, but also as an educational tool that can increase parents' knowledge about children's dental health, which in turn can contribute to improving children's dental and oral health in Indonesia¹⁰. In research by Indahsari *et al.*¹¹ shows that social media, including TikTok, can be used to improve knowledge and attitudes adolescent towards health. Thing this shows the great potential of TikTok as a tool for disseminating health information that is beneficial to parents and children. In addition, research by Kazeminia *et al.*¹² emphasizes the importance of proper dental health education to prevent future dental health problems.

Therefore, it is important for healthcare workers to utilize the TikTok platform in an effort to increase parents' knowledge about children's dental health, as well as to develop engaging and informative content that can be easily accessed by the wider community¹³. Thus, it is hoped that a

generation can be created that is more aware of the importance of dental and oral health, and is able to implement healthy behaviors in daily life¹⁴.

This research was only conducted in two Private Kindergartens, namely TKIT Harapan Pertiwi Ummah and Kindergarten in Purwantoro District, Wonogiri Regency, Central Java. This research was conducted in only one sub-district location, and the results of this study may not fully represent conditions in other areas or throughout Indonesia. With a limited sample, the findings of this study may not be generalizable to the broader population. This study only measured how effective TikTok was in increasing parental knowledge, regardless of whether the increased knowledge was also followed by changes in parental behavior in caring for children's dental health. This is a limitation of research, because increased knowledge does not necessarily go hand in hand with changes in action.

CONCLUSION

Based on the results of the study, it can be concluded that TikTok has proven to be effective in increasing parents' knowledge about cavities in children. Further research suggests conducting the same research in different places and looking at changes in parents' behavior in caring for children's dental health after getting education through TikTok.

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