

# INCREASING THE KNOWLEDGE ABOUT DENTAL AND ORAL HYGIENE IN PRESCHOOLERS AFTER COUNSELING BY USING DENTAL BUSY BOOK MEDIA

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**Abstract.** Busy book is a new form of media that is creative and innovative in developing children's abilities. The purpose of this study was to determine the level of children's knowledge about dental and oral hygiene after counseling with busy book media in preschool children at TK Wirya Kumara Batubulan in 2023. This type of research is descriptive research with the number of respondents as many as 34 preschool children, this research was conducted in April. The types of data used in this study are primary data and secondary data. The data collection method is through pre-test and post-test questionnaires which are then analyzed using univariate analysis. The results showed that the percentage of children's knowledge level about dental and oral hygiene before counseling was the highest percentage with sufficient criteria totaling 45% and increased to very good criteria totaling 100% after counseling. The average level of knowledge before counseling was 59.79 with insufficient criteria increased to 91.91 with very good criteria after counseling. The average level of knowledge in girls was greater than boys both before and after counseling. The conclusion of this study is that counseling using busy book media is can increasing knowledge about oral hygiene.

**Keywords:** Knowledge, Counseling, Busy Book, Preschool

## 1 INTRODUCTION

Teeth and mouth are one part of the body that must receive special attention as these parts can affect a person's health condition. Dental health is an integral part of public health, so it is necessary to improve abilities according to health developments in general. One of the causes of dental and oral health problems in the community is the behavioral factor or attitude of ignoring dental and oral hygiene. Based on data from the World Health Organization (WHO) in 2018 the prevalence of dental caries in children is 60-90%. while the 2018 Riskesdas prevalence of dental caries was 93% (Infodatin, 2019). This shows that parents' awareness of oral and dental health is still lacking (Wiradyan, 2018). Based on Riskesdas data for 2018 on average as many as 45.3% of Indonesian people experience dental and oral health problems in the form of broken teeth, cavities, and pain (Kemekes, 2018). A significant increase in dental and oral problems occurs in children aged 5-9 years (Q. F. Fitriyah et al., 2021). The data also shows that in Bali, 41.06% have broken teeth, cavities, and pain (Scarinci et al., 2015). In children with an age range of 5-9 years in Bali, 51.7% experienced broken teeth, cavities, and pain. In general, children are too lazy to brush their teeth, therefore

children still need the closest people, especially support from the family, as encouragement for children to brush their teeth (Naidu, R et al., 2015)

Parental support is very much needed in guiding, giving understanding, reminding, and providing facilities to children so that children can maintain oral hygiene. In addition, parents also have a significant role in preventing caries in children (Ayu G, 2016). Tooth brushing is a way that is generally known by the public to maintain oral hygiene. Parental support is very important in motivating children to brush their teeth by creating a fun brushing atmosphere so that children brush their teeth happily, making toothbrush activities with games so that they can stimulate children's desire to brush their teeth (A. R. Azhari, W. Haryani, and Almuji, 2022)

Due to the high probability that preschool-age children have random snacks such as sweet and sticky foods, they have a higher than-average risk of getting cavities. Because preschool-age children in general still show behaviors or practices that neglect dental health, this age group is very prone to dental and oral disorders (Notoatmodjo S, 2007). Dental and oral health education is one of a number of techniques to disseminate knowledge about dental and oral health (Sadler, J. (2005). The effectiveness of oral health education for school children is closely related to the educational approach and the learning media because it can promote learning and make it easier for students to understand the materials (Case-Smith, J, 2014). Media messages have the potential to be more engaging and easier to understand. The use of 'Busy Book' becomes one of the media options (Q. F. Fitriyah et al., 2021)].

Learning media is a means (tool) to disseminate information so that it can be received and understood accurately, simply, and easily understood by students (Danauwiyah N.M.,Dimiyati, 2022). Busy Book is a medium for playing in the form of a book made from flannel, in which there are additional variations using zippers, buttons on clothes, patchwork, and other variations. The 'Busy Book' is designed to provide colorful nuances so that it fosters interest and pleasure in children to participate in learning (Husna N. & Prasko P , 2019). The development of media for playing 'Busy Book' can be useful to provide fun learning, however, it is not forced to be used in the implementation of learning (Theprasetyo, 2016). 'Busy Book' is appropriate to be used in fine motor learning in children aged 4-5 years (Q. F. Fitriyah et al., 2021). Likewise, the statement from (Siregar.R, 2019) 'busy book' is a book that is generally made of flannel in which there are pictures that are intended to increase creativity in learning (Nilmayani Z. & Zulkifikri N, 2017). 'Busy Book' is a learning tool because it provides a series of simple exercises and games that can help children develop in many ways (Yulsoyofriend, 2010) (Case-Smith, J, 2014).

According to (Muhson A, 2010) learning by using 'busy book' has several advantages, namely: 1) The teacher can easily determine teaching material, only needs to be adjusted between content and instruction, 2) The teacher can easily evaluate students because the activities contained in the book can explore ability of each child, 3) Children can immediately carry out the activities required in each busy book sheet, 4)

children's curiosity will arise and they tend to do it themselves without the assistance of their teacher, 5) the media is made from durable material in which it is made of flannel so it doesn't get dirty or torn easily, 6) The learning becomes fun and active, 7) learning becomes fun because there are lots of activities, and it provokes children's creativity to carry out existing activities better and systematically. Based on this background, the authors are interested in writing about Increasing the knowledge about dental and oral hygiene in preschoolers after counseling by using 'Dental Busy Book'. While, the lack of a 'busy book' is that it uses more visual senses and there are no audio and motion elements in it, another disadvantage is that it cannot reach a large audience.

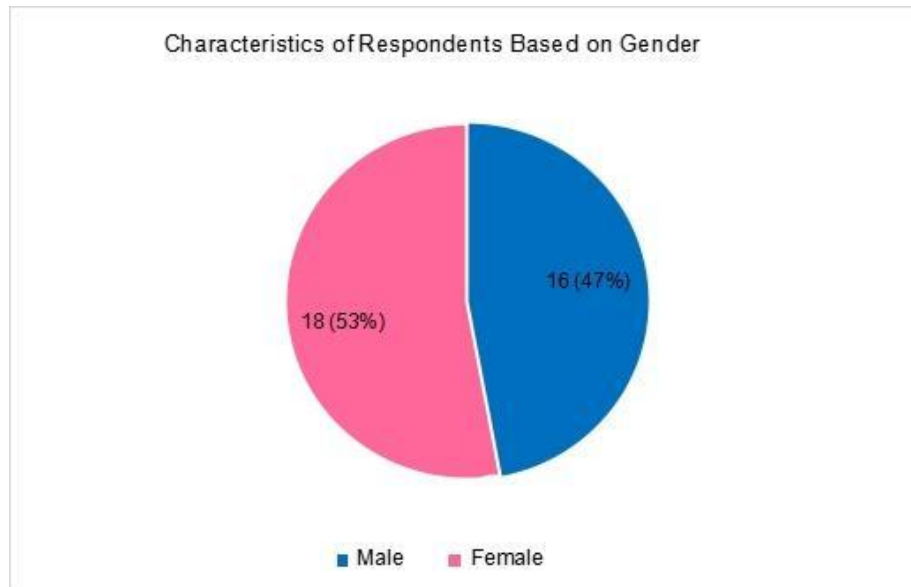
## **2 METHOD**

This research is descriptive research conducted at TK Wirya Kumara, Batubulan, Sukawati, Gianyar, Bali. The population in this study were 85 preschoolers. Sampling used a random sampling technique with a lottery method, in which each class was given a code letter A, B, C, D, E then written on paper and put into a bottle then shaken and the first 2 pieces of paper to come out of the bottle were chosen. Thus, classes A and B were chosen with a total of 34 children. Data about dental and oral hygiene knowledge was collected by distributing a pre-test to the children in the form of a question sheet, then followed by providing counseling by using a 'busy book' about dental and oral hygiene. After that, preschoolers were given a post-test in the form of a question sheet. Data were analyzed statistically through univariate analysis in the form of percentages and averages. Calculating the percentage of students who have knowledge about dental and oral hygiene before and after being given counseling by using the 'busy book' in preschoolers at TK Wirya Kumara in 2023 uses a number of categories, namely: 'very good', 'good', 'fair', 'poor', and 'very poor'. According to a statement from ( the level of knowledge is categorized into five categories with the following values: Very Good (score 80 – 100), Good (score 70 – 79), Fair (score 60 – 69), Poor (score 50 – 59) and Failed (score 0 - 49).

## **3 RESULTS**

### **3.1 The characteristics of the research subjects**

Based on the results of the research conducted at TK Wirya Kumara, there were 34 children who were willing to be respondents. Of the 34 respondents, there were 16 boys and 18 girls in which female respondents were more than the male respondents (Figure 1)



**Fig. 1.** Characteristics of Preschoolers in TK Wirya Kumara in 2023

### 3.2 The result of observations on the research objects

The percentage of the knowledge level about dental and oral hygiene before and after counseling by using the 'busy book' in preschoolers at TK Wirya Kumara on April 2023 (Table 1).

**Table 1.** Frequency Distribution of Students with Levels of Knowledge about Dental and Oral Hygiene in Preschoolers Before and After Counseling by using 'Busy Book' at TK Wirya Kumara in 2023

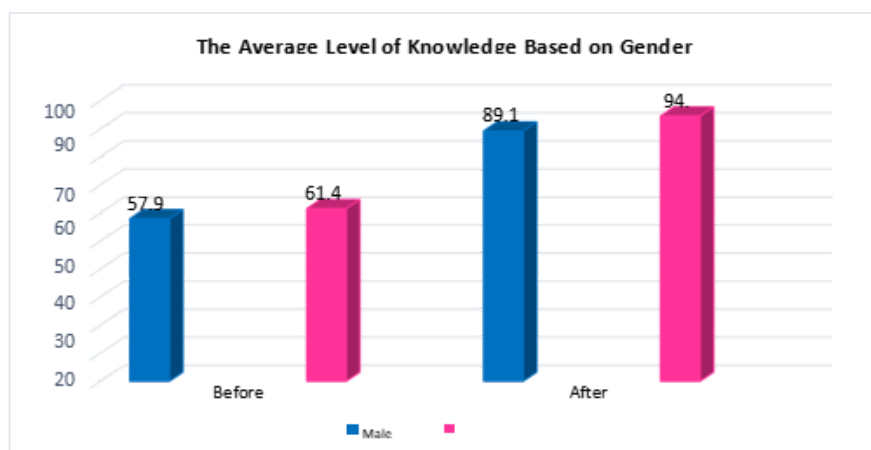
No	Criteria	Before Counseling		After Counseling	
		Student	%	Student	%
1.	Very good	0	0	34	100
2.	Good	7	20	0	0
3.	Fair	15	44	0	0
4.	Poor	5	15	0	0
5.	Very Poor	7	21	0	0
Total		34	100	34	100

Table 1 shows that before the counseling, the highest percentage was in ‘fair’ criteria, namely 15 children (45%), and there were 7 children (20%) with ‘very poor’ criteria. After the counseling, there was an increasing level of knowledge of preschoolers in which all of the respondents had a level of knowledge with ‘very good’ criteria. The average level of knowledge of preschoolers about dental and oral hygiene before and after counseling by using the ‘busy book’ at TK Wirya Kumara on April 2023. Table 2 shows that the average knowledge level increased from 59.79 before counseling which was categorized into ‘poor’ criteria to 91.91 after counseling which was categorized into ‘very good’ criteria.

**Table 2.** The Average Level of Knowledge of Preschoolers about Dental and Oral Hygiene Before and After Counseling by Using ‘Busy Book’ at TK Wirya Kumara in 2023

	Number of Students	Knowledge Level	Average Level of Knowledge	Criteria
Before Counseling	34	2032,97	59,97	Poor
After Counseling	34	3033,05	91,91	Very good

The average level of knowledge of preschoolers about dental and oral hygiene before and after counseling by using the ‘busy book’ at TK Wirya Kumara on April 2023 based on gender (Figure 2)



**Fig. 2.** The Average Level of Knowledge of Preschoolers about Dental and Oral Hygiene Before and After Counseling by Using ‘Busy Book’ at TK Wirya Kumara in 2023 based on Gender.

Figure 2 shows that girls have an average level of knowledge higher than boys both before and after counseling. Before counseling, the average level of knowledge of the girls was 61.47 (‘fair’ criteria) while the average level of knowledge after counseling was 94.50 (‘very good’ criteria).

#### 4 DISCUSSION

The increasing level of knowledge was a success of the counseling by using the ‘busy book’ which was interesting for the preschoolers so that the learning became fun

following the learning enthusiasm of the children. This research is in accordance with (Muhson A, 2010) which explained that the use of the 'busy book' that is strategic as teaching aid can provide successful and fun learning. This is in accordance with the statement of (Pariati, 2021), where the design of the 'busy book' with interesting content can make learning more enjoyable, so that the material becomes easier to be understood, and the contents of the book can be adjusted to the subject matter to be presented, thus making the 'busy book' as an effective learning tool.

The average knowledge level of preschoolers about dental and oral hygiene before counseling in TK Wirya Kumara Batubulan in 2023 was 59.79 which categorized into 'poor' criteria and increased to 91.91 with 'very good' criteria after counseling. The result of this study is in line with the results of the research conducted by (Mufliharsi, 2017), saying that there was a very significant effect of the use of 'busy book' as the media in learning, was effective to increase the initial reading skills of children aged 5-6 years before and after carrying out the experiment. Likewise, with the statement of (Ayu G, 2016) (Scarinci, N et al., 2015). Students showed interest in counseling because they did not only listen to the material provided but also practiced it. Besides, it is because they have never received counseling through the 'busy book', so the students became more actively involved in the counseling. Moreover, it allowed the preschoolers to develop thinking skills naturally through playing without realizing that they were participating in the lesson, making the story more fun and interesting for children (Wilson, L., McNeill, B., & Gillon, G. T, 2015). Besides, students also developed to be more independent because they are motivated by a strong curiosity to carry out the instructions without assistance from their teacher.

The average level of knowledge of preschoolers about dental and oral hygiene before counseling with the 'busy book' in TK Wirya Kumara in 2023, namely it was 57.91 with poor criteria for the knowledge level of the boys, meanwhile, it was 61.47 with fair criteria for the knowledge level of the girls. After the counseling, boys obtained an average of 89.16 while girls obtained 94.50 with very good criteria. In this research, it is possible that female students were more interested in learning and were smarter than male students. This is in accordance with (A . Sequeira, 2012) that intelligence is one of the factors that influence knowledge. The level of intelligence greatly influences the level of success and interest in learning, thus having a high tendency towards something of interest and a great desire will have an impact on the quality of learning outcomes in certain fields of study. Before counseling, only six children could answer the questions about how many times they brush their teeth at least in a day and how many movements are needed in brushing their teeth. However, after counseling, there was an increasing number from six people to 34 people who were able to answer the questions. Meanwhile, regarding the question about how many movements were done in brushing their teeth for some parts, there were only two children who answered correctly, then after being given counseling those who answered correctly became 22 children (WHO, 2023). This is because the respondents obtained

good information from the counselor by using the busy book (Azra aulia Ulfa and E. Rahmah, 2017). The availability of information through online media and a supportive atmosphere are just two of the many factors that influence a person's level of knowledge. The results of this study are in accordance with the statement of (Ayu G, 2016), which states that learning media functions as an intermediary instrument (means) to convey information so that the intended information can be delivered accurately, conveniently, accepted, and understood by the preschoolers. Educators use learning media and tools as a means to facilitate and giving explanation during teaching (Siregar.R, 2016) (Kelman, E., & Nicholas, A, 2017).

An interesting finding from this study is that using media such as busy books can increase promotive efforts in dental and oral hygiene counseling to preschool-aged children, but so that children understand more, especially on how to clean their teeth, the tooth brushing movement needs to be demonstrated using media eg dental Phantom . The use of various media can increase understanding (Azra aulia Ulfa and E. Rahmah, 2017). This is in accordance with the opinion of communication expert Edgar Dale with his theory of the Cone of Experience that in order to achieve optimum results from the learning process, one thing that is highly recommended is the use of direct media in the form of real objects or reality(Williamson, J., Hedges, H., & Jesson, R, 2023). The real object will provide a very important stimulus for the audience in learning various things, especially those concerning the development of certain skills. Through the use of real objects, learning activities can involve all of the audience's senses, especially the sense of touch. With the type of experience that best fits the needs and abilities of the audience groups they are facing and takes into account the learning situation, so that the learning process, the transfer of knowledge occurs more effectively and efficiently (A. D. Sari, I. Fazrin, and H. Saputro,2017)( Fleury, V. P et al., 2014)

## 5 CONCLUSION

Based on the results of the research on the knowledge in preschoolers about dental and oral hygiene before and after counseling by using the busy book at TK Wirya Kumara Batubulan, Sukawati, Gianyar in 2023, namely, before the counseling most of the respondents had a level of knowledge with 'fair' criteria, while all respondents had a level of knowledge with 'very good' criteria after the counseling. The average level of knowledge before the counseling was 59.79 with 'poor' criteria which was increased to 91.91 with 'very good' criteria after the counseling. The average level of knowledge of the girls was greater than the boys both before and after the counseling.

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