



# Effect of Illustrated Picture Book Counseling Method on Dental Caries Knowledge in Children Aged 10-12 Year at Raudhatul Jannah Martapura's Private Islamic primary School

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**Abstract.** Dental and oral health education is an attempt to influence a person's or society's behavior so that they have the ability and habit of engaging healthily in oral and dental health. Counseling using picture story books is an intriguing way for sharing health information, particularly to children.

The purpose of this study is to investigate how students aged 10 to 12 years old at Raudhatul Jannah Martapura's Private Islamic Primary School respond to counseling using the illustrated picture book method. The research being conducted serves as a quasi-experimental study using a one-group pretest-posttest design. In this study, 42 participants contributed. The total sampling approach was used, where the total number of respondents was 32. The results revealed that the average knowledge before counseling was 8.09 and 8.84 after counseling, which indicates a 0.75 gain in knowledge. The Wilcoxon Signed Rank Test showed that there was a significant effect on dental caries knowledge after counseling using the illustrated picture book method, with a p-value of 0.001, which is less than the significance level ( $\alpha$ ) of 0.05, based to the Paired Sample T-Test and Normality test.

In conclusion, there is the effect of counseling using the illustrated picture book approach on dental caries knowledge in children aged 10-12 years at Raudhatul Jannah Martapura's Private Islamic primary school. Future researchers are obligated to make changes to the story to make it more appealing and innovative in order to attract children's attention and keep them engaged.

**Keywords:** Dental Caries, illustrated picture book. knowledge

## 1 Introduction

Data states that 22.8% of Indonesia's population do not brush their teeth, and of the 77.2% who do, only 8.1% do it every time[1]. According to preliminary reports of dental polyclinic inspections to the Martapura Public Health Center in 2022 from January to September, the prevalence of dental caries is 11.21%, the prevalence of pulp and

apical tissue disease is 39.89%, the prevalence of gum and tissue disease periodontitis is 32.02%, the prevalence of dentofacial or widely recognized as malocclusion is 1.35%, and the prevalence of persistence is 15.53%. Around 2013, 24% of the population experienced dental and oral disorders, and 38% of those with dental and oral problems received medical care and therapy[1–3].

Dental and oral health professionals remain crucial in Indonesia to provide particular support to dental and oral health patients. This is a consequence of the Indonesian population's lack of concern for dental and oral health[2]. In Indonesia, more than 25.5% of children aged between the ages of 8 and 10 experience dental and oral problems. The condition has a negative effect on their health, growth, and development, as well as their future[3–5]. School-age children required more attention in maintaining oral health by counseling from doctors and other healthcare professionals[6, 7]. Dental and oral health education is a method to prevent dental and oral health problems in the future in order to achieve an improved level of health and dental and oral health knowledge[8].

Counseling activities using picture story books are an innovative approach to providing health information to children, particularly dental and oral health[9]. Adding attractive and appealing photographs usually makes readers thrilled and keeps them from becoming uninterested[10]. With the DMF-T index in students aged 10 to 12 years at the Raudhatul Jannah Martapura private madrasah have not as much information of dental caries, the outcome that can be taken from this background is that many students of the Raudhatul Jannah Martapura private Islamic elementary school aren't aware of the importance of maintaining oral health[11, 12].

Based on discussions with the Principal of Raudhatul Jannah Martapura's Private Islamic Primary School regarding dental and oral health education with the media Illustrated Picture Books. Teachers and local health professionals have never done illustrations, therefore researchers are interested in performing research at the school[13, 14].

## **2 Materials and Methods**

The purpose of this study is to investigate if there is an effect of the Illustrated Picture Book counseling approach on Dental Caries Knowledge in Children Aged 10-12 Years at Raudhatul Jannah Martapura's Private Islamic Primary School[15]. In this study, a faux experiment (similar to an experiment) was carried out or therapy provided in order to learn about the symptoms or effects that emerged as a result of specific treatments[16, 17]. The participants in this study were 42 children from Raudhatul Jannah Martapura's Private Islamic Primary School, aged 10 to 12 years. Total sampling was used to collect samples, that were determined to be representative of the population[15]

## **3 Results and Discussion**

Results of the research the effect of an illustrated picture book counseling method on dental caries knowledge in Raudhatul Jannah Martapura's Private Islamic Primary School Children Aged 10-12 Years.

**Table 1. Average knowledge before getting counseling using the Illustrated Picture Book Method**

Illustrated Picture Book Extension Method	<i>Mean</i>	<i>Median</i>	<i>Mode</i>	<i>Standard Deviation</i>	<i>Min.</i>	<i>Max.</i>
Before Counseling	8.09	8,50	9	1,748	3	10

The data shown in Table 1, the mean knowledge before counseling using the illustrated picture book approach obtained from the 32 respondents was 8.09, the median was 8.50, the mode was 9, the standard deviation was 1.748, the minimum was 3 and the highest was 10.

**Table 2. Average knowledge after getting counseling using the Illustrated Picture Book Method**

Illustrated Picture Book Extension Method	<i>Mean</i>	<i>Median</i>	<i>Mode</i>	<i>Standard Deviation</i>	<i>Min.</i>	<i>Max.</i>
After Counseling	8,84	9,00	9	1,298	4	10

As shown in Table 2, the mean knowledge after counseling using the illustrated picture book approach obtained from the 32 respondents was 8.94, the median was 9.00, the mode was 9, the standard deviation was 1.298, the minimum was 4 and the maximum was 10.

**Table 3. Data Normality Analysis Before and After the Illustrated Picture Book Method**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	Df	Say.	Statistic	Df	Say.
Before Counseling	.198	32	.003	.862	32	.001
After Counseling	.298	32	.000	.755	32	.000

The data shown in Table 3, the normality test used to evaluate the normality of the data before and after counseling. The value that was identified is the Shapiro-Wilk test, which resulted in data before counseling 0.001 and after counseling 0.000. The findings of the two data sets indicate, indicating that the data is abnormal. If the data is not

normally distributed, the Paired Sample T-Test cannot be performed; as a substitute, the Wilcoxon Signed Ranks Test can be used.

**Table 4. Data Normality Analysis Before and After the Illustrated Picture Book Method**

<i>Mean</i>		<i>Wilcoxon Signed Rank Test</i>
Before Counseling	After Counseling	
8.09	8.84	0.001

Based on what was found from table 4 shows that analyzing the effect of counseling before and after using the illustrated picture book media method, it has been shown that the average value between knowledge before and after counseling was 8.09 and 8.84. By using the Wilcoxon Signed Rank Test with a confidence level of 95% or an error level of 5%, a significance ( $p$ ) of 0.001 is reached, implying that it is below alpha 0.05%, while 0.001 < 0.05 suggests that  $H_0$  is rejected and  $H_a$  is accepted. In other words, it can be concluded that there is a difference in knowledge about dental caries in students aged 10-12 years at Raudhatul Jannah Martapura's Private Islamic primary school before and after counseling using the illustrated picture book method[18].

Due to the fact that children have a strong imagination, picture storybook media tends to be highly beneficial for educators to utilize and provide for children, and storybooks will likely improve children's knowledge[19]. Previous study stated that picture story books were still widely circulated in society, but research to examine the effect of story books on knowledge was rarely conducted[20]. Other articles conducted stated that there were differences in scores before and after the knowledge of children who were given counseling using storybook media[21].

Another research investigation on the effect of counseling on dental caries in children aged 10-12 years at Raudhatul Jannah Martapura's Private Islamic primary school with the illustrated picture book counseling method discovered that this illustrated picture book counseling indicates certain facts or ideas, regarding personal or experience, so that the reader can easily identify himself through their feelings and actions through his description[22].

As an outcome, it could be one of the attractions for children to apply in everyday life. According to the frequency distribution data, there is an improvement in the average value of knowledge before and after the illustrated book method for the delivery of information that has been carried out[23, 24].

Enhancing information through illustrated picture books will enhance children's memory. Picture stories are light in nature and help readers understand what the author aims to convey with appealing pictures combined by supporting or continuous text[25–27].

## 4 Conclusion

The conclusion is that counseling using the illustrated picture book approach has an effect on caries knowledge in students aged 10 to 12 years old at Raudhatul Jannah Martapura's Private Islamic primary school[12, 16, 28]. Children get from continued

reading or recalling of picture books in terms of increasing their vocabulary. It is expected that by developing this illustrated story book, children will gain insight into increasing knowledge and the benefit of illustrated picture book media on dental caries knowledge[29–31]. It is recommended that dental and oral health workers should expand the services they provide service activities, particularly promotion programs, such as continually counseling with the UKGS program or dental and oral health care programs, especially for dental caries concerns, and for future students who are looking for counseling using the picture book method[32–34]. As an example, counseling media must be included in relationship to other media such as monopoly media and the way of performing theatrical[35].

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