

Research Report

## Level of Knowledge of Clean and Healthy Living Behavior and Screening of Dental Malocclusion to Enhance Quality of Life Related to Dental and Oral Health In Medowo I and II Elementary School Students

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### ABSTRACT

**Background:** The elementary school period is a golden age for instilling the values of clean and healthy living behaviour (CHLB) and has the potential as an agent of change to promote CHLB in schools, families and communities so as to create quality human resources in the future. Currently children are very vulnerable to dental and oral health, because at that age there is a transition or change of teeth, namely from deciduous teeth to permanent teeth, for that special attention needs to be given to dental and oral health so that the growth and development of teeth can be maintained properly. **Purpose:** to enhance knowledge of CHLB and screening of dental malocclusion in an effort to improve the quality of life related to dental and oral health. **Methods:** 116 participants from grades 3-5 elementary school students. Data was collected by means of intraoral examination and filling out pre-test and post-tests questionnaires. Furthermore, an analysis of the frequency distribution data was carried out by mean of statistical analysis **Results:** male students had higher caries (59 people) and those who were not caries (4 people), compared to girls (47 people) and those who were not caries (6 people). CHLB knowledge level is good (86.8%), moderate (8.2) low (5%). **Conclusion:** caries in boys is higher than in girls and all respondents' knowledge of CHLB is good.

**Keywords:** Good-Well Being; Malocclusion; Caries; Medicine; Children Health

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### INTRODUCTION

Elementary school is a golden age for instilling clean and healthy living behaviour (CHLB) values and has the potential as an agent of change to promote CHLB in the school, family and community environment so that quality human resources will be created later.<sup>1</sup> Children are very vulnerable to dental and oral health, because at that age there is a transition or change of teeth, namely from primary teeth to permanent teeth, for that special attention needs to be given to dental and oral health so that the growth and development of teeth can be maintained properly.<sup>2</sup>

It is widely recognized that dental caries is one of the most common preventable oral health problems in children.<sup>3</sup> Dental caries is very common and has a negative impact on children's quality of life, and is a major public health problem worldwide.<sup>4</sup> The severity of caries is one of the causes of malocclusion.<sup>5</sup> Malocclusion can be caused by dentocraniofacial growth abnormalities. This growth abnormality can be caused by the condition of the teeth, upper jaw and/or lower jaw (skeletal), a combination of teeth and jaw (dentoskeletal).<sup>6</sup> Based on the results of Basic

Health Research states that caries will increase with age. It shows that the DMFT index in the 12 to 14 year age group is 1.4 while the 15 year to 24 year age group is 1.8% and continues to increase with increasing age. The prevalence of dental caries in Indonesia was 53.2%, while the prevalence of active caries in East Java Province in 2013 was 76.2%. This figure shows that the prevalence of active dental caries in East Java Province exceeds the national prevalence of only 43.4%.<sup>7</sup>

The high incidence of caries may be due to the low level of knowledge of children about how to brush their teeth properly. A total of 82.9% have a high level of dental health knowledge and 17.1% have a low level of dental health knowledge. In this case, a good level of knowledge about dental health is expected to encourage the formation of good dental health behavior.<sup>8</sup> The status or degree of dental and oral health in elementary school children is determined by various factors such as: knowledge and behavior of parents, the environment and health services. To support health efforts in order to achieve optimal health status (healthy living) through the CHLB program, efforts in the field of dental and oral health also need attention,

especially elementary school children in every elementary school. The dental and oral health of children in Indonesia is still very concerning, so it needs serious attention from health workers.<sup>9</sup> Thus, the aim of this study is to enhance knowledge of CHLB and screening of dental malocclusion in an effort to improve the quality of life related to dental and oral health.

**MATERIALS AND METHODS**

This type of research is a quantitative descriptive study with a cross sectional design. Respondents in this study were students of SD Meodwo II and Medowo I as many as 116 people. The sampling technique is total sampling. The method used is intraoral examination and filling out pre-test and post-test questionnaires regarding CHLB which is filled in by students in grades 3-5. Then, the distribution and frequency results were analysed.

**RESULTS**

Table 1 shows that 47 female students experienced caries and 6 students who did not have caries. There were 59 male students who had caries and 10 who did not have caries. Table 2 shows that after being given health education to respondents, respondents with good knowledge became 86.8%, moderate 8.2% and low 5%.

**Table 1.** Overview of the distribution of caries incidence by gender

		Caries		Total
		Caries	Caries-Free	
Gender	Girl	47	6	53
	Boy	59	4	63
	Total	106	10	116

**Table 2.** Overview of frequency distribution based on CHLB knowledge

Knowledge	Frequency	Percentage (%)
Good	83	86.8
Moderate	20	8.2
Low	13	5
Total	116	100

**DISCUSSION**

Based on gender, male school children had a higher caries frequency than female children, namely 57 people. This is because more girls have the habit of brushing their teeth before going to bed.<sup>10</sup> Boys experience caries more than girls. This is because boys tend to have higher activity, which triggers hunger and increased appetite, but they are not selective in choosing food.<sup>10</sup> Dental caries and its complications have more severe and extensive consequences in primary teeth than in permanent teeth.<sup>11</sup> Extensive and untreated dental caries has many consequences, including altered distribution of functional occlusal contacts and reduced mastication or asymmetrical mastication; Long-term unilateral mastication, in turn, leads to impaired facial growth, which in turn results in facial-tooth deformity and malocclusion.<sup>12</sup> Malocclusion can occur in a sagittal and vertical direction. Sagittal and vertical changes occur when the growth period ends in various malocclusions. Skeletal malocclusion is usually associated with dental malocclusion. The sagittal discrepancy is manifested as a skeletal Class I, II, or III malocclusion. Vertical discrepancies appear in the form of a normodivergent, hypodivergent, or hyperdivergent profile.<sup>13</sup>

Not only maintaining dental health, from an early age children must be taught to live clean and healthy. CHLB knowledge is categorized into good, sufficient, and poor categories. Table 2 shows the results that respondents' knowledge of CHLB is categorized as good as many as 116 respondents 86.8%. Knowledge is an element in shaping one's own behavior. Knowledge about healthy living can also come from external factors such as the habits of parents, family, friends, community, and teachers. School CHLB is part of a healthy community movement program through a family approach. Nationally, in 2017 the number of healthy families in Indonesia was 1.7%.<sup>14</sup> Factors that influence a person's health behavior are determined by predisposing factors, enabling factors and reinforcing factors.<sup>15</sup>

CHLB in the school environment has eight indicators, namely washing hands using running water and using soap, consuming healthy snacks in the school canteen, using clean and healthy latrine facilities, exercising regularly, eradicating mosquito larvae in schools, not smoking in the school environment, measuring weight and height, as well as throwing garbage in the place provided.<sup>16</sup>

School CHLB is one form of health behavior in its implementation can be determined by these factors. Predisposing factors consist of knowledge which is something that needs to be known about the concept of health, illness or health. The knowledge that students need to have about CHLB includes understanding the importance of implementing 8 school CHLB indicators, the benefits and impacts if CHLB is not carried out. In addition to the knowledge required, attitude is also an important part that allows students to carry out CHLB. Attitude is something that students need to pay attention to at school as a material for character building. Good character consists of good knowledge, attitudes and thoughts so that students can

make habits in behaving as well as in the implementation of CHLB.<sup>17</sup>

## CONCLUSION

It was concluded that caries in boys was higher than girls and all respondents' knowledge of CHLB was in the good category, but there were still respondents who lacked knowledge, so further action was needed through counselling, motivation and being a role model for implementing CHLB in schools and improvement of maintaining the dental health of elementary school children.

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