

DESCRIPTION OF CHILDREN'S THUMB SUCKING HABIT IN KINDERGARTEN CIMAHI TENGAH INDONESIA

(GAMBARAN KEBIASAAN MENGHISAP IBU JARI ANAK DI TAMAN KANAK-KANAK KECAMATAN CIMAHI TENGAH INDONESIA)

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ABSTRACT

Thumb sucking is one of the most common oral habits in children. Thumb sucking could cause interference with the occlusion and jaw malformations which could lead to permanent teeth eruption if the problem persists. Thumb sucking habit causes contractions on the buccal and lips. Thumb sucking habit is a habit that is done more frequently compared to other oral habits, especially in the first year after birth. Based on that, research was done to find a thumb-sucking habits scheme for children aged 4-5 years in kindergarten in Central Cimahi District. This research is a descriptive study with a cluster random sampling method. The data were analyzed descriptively in a total sample of 236 parents of children aged 4-5 years in kindergarten in Central Cimahi District. The results showed 14 children (5.93%) had a thumb-sucking habit, eight children (57.14%) 4-year-old, six children (42.86%) were aged five years, seven boys (50%) and seven girls (50%), 2 mm overjet

was found in ten children (71.43%), duration of sucking <1 hour/day by seven children (50%), and the sucking condition while playing as many as six children (42.86%). The conclusion of the study is the incidence of the thumb-sucking habit in Cimahi District kindergarten is low; the majority of 4-year-old boys and girls tend the same, duration thumb-sucking habit <1 hour/day, with a distance of 2 mm and overjet is done during when they are playing around.

Keywords: oral habit; thumb sucking

ABSTRAK

Oral habits, salah satunya menghisap ibu jari, merupakan kebiasaan yang dilakukan di dalam rongga mulut. Menghisap ibu jari dapat menyebabkan gangguan oklusi gigi dan malformasi rahang jika terus berlanjut sampai erupsi gigi permanen. Kebiasaan menghisap ibu jari menyebabkan kontraksi dibagian bukal dan bibir. Menghisap ibu jari merupakan kebiasaan yang sering dilakukan dibanding kebiasaan oral lainnya terutama pada tahun pertama setelah kelahiran. Berdasarkan hal tersebut penelitian ini dilakukan dengan tujuan untuk mengetahui gambaran kebiasaan menghisap ibu jari anak usia 4-5 tahun di TK Kecamatan Cimahi Tengah. Penelitian ini merupakan penelitian deskriptif dengan metode cluster random sampling. Jumlah sampel sebanyak 236 orang tua yang mempunyai anak usia 4-5 tahun di TK Kecamatan Cimahi Tengah, data dianalisis secara deskriptif. Hasil penelitian menunjukkan 14 anak (5.93%) mempunyai kebiasaan menghisap ibu jari, 8 anak (57.14%) berusia 4 tahun, 6 anak (42.86%) berusia 5 tahun, 7 anak laki-laki (50%) dan 7 anak perempuan (50%), jarak overjet 2 mm sebanyak 10 anak (71.43%), durasi menghisap < 1 jam/hari sebanyak 7 anak (50%), dan kondisi menghisap saat bermain sebanyak 6 anak (42.86%). Kesimpulan hasil penelitian adalah insidensi kebiasaan menghisap ibu jari di TK Kecamatan Cimahi Tengah rendah, mayoritas berusia 4 tahun, laki-laki dan perempuan cenderung sama, durasi kebiasaan menghisap ibu jari <1 jam/hari,

dengan jarak overjet yaitu 2 mm dan dilakukan saat bermain.

Kata kunci: *kebiasaan buruk; menghisap ibu jari*

INTRODUCTION

Habits are automatic responses to specific situations, usually acquired through repetition and learning. Habits involving the oral cavity are referred to as oral habits.^{1,2} Oral habit is a normal part of child development.³ Freud divided the theory of personality development into several parts, namely: the oral phase, the anal phase, the phallic phase, the latency phase, and the genital phase. The oral phase begins at the age of 0-18 months, where the oral cavity is the focus, such as the pleasure of sucking and putting something in the mouth. Psychology considers that this habit is a symptom of an emotional disorder.⁴ Finger sucking, lip and nail-biting, bruxism, breathing through the mouth, pushing the tongue, and sucking on a pacifier are types of oral habits that children usually carry out during the developmental stage.^{1,5}

The habit of finger-sucking is one of the habits often experienced and carried out by children at a growing age.⁶ Finger sucking habit will not have an impact on dental occlusion and jaw malformations

such as anterior open bite, protrusive and proclination of the maxillary anterior teeth if stopped before the eruption of the incisors permanent when the age of 5-6 years. Thumb sucking is one of the etiology of dental malocclusion if this habit continues until the eruption of the permanent incisors.⁷ Rakosi conducted a study of 693 children who had the habit of sucking their fingers; 60% had stopped this habit after two years of age. Most of this group had normal dental occlusion, whereas 40% of children who had the habit of finger-sucking more than four years of age had malocclusion.⁸ Research conducted by Wael showed a prevalence of finger sucking of 22.15% occurring at the age of 6-12 years, which is the period of mixed teeth and permanent teeth.⁹ Foster conducted a study of children aged 2.5 years, and the results show that 33% of children suck their thumb or other fingers.¹⁰ There is also a study in Indonesia conducted by Aves et al. on 137 students aged 6-13 years, found 52 students had oral habits, and the distribution of their thumb-sucking habit was around 7.7

%1 Research conducted by Natheer on preschool children aged 4-5 years out of 712 children found 128 children had the habit of thumb-sucking.¹¹

According to data from the Cimahi City Education Office, Central Cimahi District has the most significant number of children aged 4-5 years between North and South Cimahi Districts. Based on the data above, the researcher was interested in the prevalence of the thumb-sucking habit of children aged 4-5 years in Kindergarten, Central Cimahi District.

METHOD

Research Design

This research is a descriptive study using a cluster random sampling technique. This study used the cluster as a kindergarten in the Central Cimahi District, Indonesia. According to data from the Cimahi City Education Office, Central Cimahi District has 37 kindergartens. A random system was used to determine six kindergarten schools in Central Cimahi District according to the number of samples needed by the researcher.

Number of Sample

The number of samples in this study was determined using a categorical descriptive formula:

$$n = \frac{Z_{\alpha^2} \times P \times Q}{d^2}$$

The required number of samples was obtained, namely 227 parents of kindergarten students with children aged 4-5 years.

The sample in this study were parents and children who met the following inclusion criteria: parents (mothers) are willing to fill out the questionnaire, have children aged 4-5 years, children have maxilla and mandibular primary incisors without loss of incisal surfaces of primary incisors. The exclusion criteria were as follows: Having oral habits other than thumb sucking or not being present at the time of the study.

Data Analysis

This research will be analyzed descriptively. Data analysis using Microsoft excel, then the data is presented in the form of tables and narratives.

RESULT

This study took 236 parents with children aged 4-5 years as a research sample, and only 14 children had the habit of thumb-sucking.

Incidence of thumb sucking habit in Kindergarten, Central Cimahi District Indonesia (Table 1).

Table 1. Incidence of thumb sucking

Thumb sucking habitual	Percentage (%)	
	f	
Yes	14	5.93
No	222	94.07
Total	236	100.00

Fourteen children who had the habit of thumb-sucking in this study consisted of seven boys and seven girls, respectively. (Table 2).

Table 2. Description of children gender who have a habit of thumb sucking

Gender	Thumb sucking habitual	
	Yes	
	f	Percentage (%)
Boys	7	50
Girls	7	50
Total	14	100

Description of the age of children who have the habit of thumb-sucking. (Table 3). Fourteen children had thumb-sucking habits in this study, more children aged four years than those aged five years. There is a decrease in the number of children who have the habit of thumb-sucking as they age.

Table 3. Description of the age of children who have the habit of thumb sucking

Age (years)	Thumb sucking habitual	
	f	Percentage (%)
4	8	57.14
5	6	42.86
Total	14	100.00

Overview of overjet and duration of thumb sucking.

Children who still have the habit of thumb sucking at preschool age usually experience temporary malocclusion in primary teeth, such as increased overjet anterior open bite, procline upper incisors, and buccal or posterior crossbite. Frequency, intensity, and duration of thumb sucking can affect overjet. (Table 4)

Table 4. Overview of overjet and duration of thumb sucking

Duration of thumb sucking (hour/day)	Overjet	f	Percentage (%)
< 1	2 mm	7	50
1	2 mm	3	21.42
1	3 mm	2	14.28
4-6	4 mm	1	7.14
> 6	4 mm	1	7.14
Total		14	100

Description of the child's condition when sucking the thumb. (Table 5).

Table 5. An overview of the child's condition when sucking the thumb

Thumb sucking condition	f	Percentage (%)
Play	6	42.86
Sleep	5	35.71
Scolded	1	7.14
Hungry/thirsty	1	7.14
At all times	1	7.14
Total	14	100

DISCUSSION

The results obtained by the researchers in this study indicate that the prevalence of thumb sucking in Kindergartens Central Cimahi District is low. This research was conducted in Karad district, India, regarding the prevalence of thumb sucking in children aged 6-12 years

with a total sample of 240 children and found 36 children (4.4%) who have a habit of thumb sucking.^{12,13} However, a study in Mexico stated that in 111 children aged 3-5 years, the prevalence of finger sucking was found to be 26.1%.¹⁴ There were differences between the study conducted by the researchers, the study in Karad district of India, and the study conducted in Mexico.

The prevalence of finger sucking is different in each study, influenced by many factors, including the time of birth of the child, the way of feeding the child, and socioeconomic status.¹⁵ The study was conducted by Rajchanovska and Ivanovska, which looked at the relationship between income, parental employment, and the habit's presence or absence—finger sucking. The results show a significant relationship between finger-sucking and parental income.¹⁶ Finger-sucking is common in Western countries but rare in Asian and African countries. It is related to cultural factors.¹⁷

The results obtained by the researchers showed no difference between genders in children who had the habit of thumb-sucking. This study differs from the results of a study conducted by Hamid et al. Of the 1000 children studied, 34 children (3.4%) had the habit of thumb-sucking, including 15 boys (44.12%) and 19 girls. (55.88%).¹⁸

Waely conducted another study in Al-Mahmoodia City, where 35 children had the habit of sucking their fingers, including 19 girls (54.28%) and 16 boys (45.71%).⁹

Different results in each study indicate that gender cannot be used as a determining factor in the thumb-sucking habit. Environmental factors can also play a role in the emergence of finger-sucking. Boys usually have more prolonged oral habits because boys dare to open up against family or community rules and parents not to do finger-sucking.^{18,19}

The results obtained by researchers are following several previous studies. Rajchanovska and Ivanovska stated that the habit of sucking fingers at the age of 3 years was 33.03% and 17.13% for children aged five years. Most of these habits were carried out at 1-2.5 years old.²⁰ Chopra et al. reported that of the 300 children studied, it was found that 75 children had the habit of sucking their fingers. This habit was found at the age of 0-3 years as many as 57 children (19%), 4-6 years as many as 12 children (4%), 7-11 years as many as six children (2%) and the rest had other oral habits. Conducted by Jajoo et al. regarding thumb-sucking habits found that the 5-7 year age group was 6.4%, the 8-10 year age group was 4.4%, and the 11-13 year age group was 0.3%.^{17,21}

The results of the studies above align with the theory put forward by Copra et al., which states that this habit will decrease with age and usually stop spontaneously.¹⁷ Casamassimo said that two-thirds of children with a habit of thumb-sucking usually stop at the age of 5 years.⁶

The results of this study indicate that children who have the habit of thumb sucking for 4-6 hours/day and more than 6 hours/day have an overjet of 4 mm. Research by Natheer on the prevalence of thumb sucking and its relationship with malocclusion in preschool children stated that as many as 95.6% had an overjet of 0-3 mm and 4.4% had an overjet of more than 3 mm. The prevalence of increased overjet distance is higher in children aged 3-12 years with thumb-sucking habits.¹¹ Another study by Kasparaviciene et al. described sagittal occlusion in children with oral habits. As many as 47 children (9.3%) had incisor relations. Edge-to-edge, 0-2 mm overjet in 205 children (40.8%), overjet > 2 mm in 232 children (46.1%), and overjet < 0 mm in 19 children (3.8%). Apart from the intensity, frequency, and duration of thumb sucking, other factors can influence it. These factors, namely the position of finger placement and orofacial muscle contractions, also affect the effects of thumb sucking. Done with a short duration

and high intensity will not cause a shift in gear position.^{22,23}

Children who still have the habit of sucking their thumb more than the average period need to know the cause. It is usually related to social or psychological problems and pleasure in children.^{4,7} In this study, the thumb-sucking habit is mainly done by children while playing. Apart from social or psychological issues and pleasure, this habit is carried out by children to entertain themselves when they feel hungry, afraid, anxious, want attention, sleepy, bored, feeling lonely and feeling insecure. These factors can lead to the habit of thumb-sucking, which will continue because it will make the child feel comfortable.^{2,24} Other causes relate to the lack of fulfilment of the need to suck because weaning is too fast, or it could be because the hole in the milk bottle is too big so the child doesn't have to work too hard to drink it.

CONCLUSION

Based on the results of this study, the incidence of thumb sucking in Kindergarten in Central Cimahi District is 5.93% Group of children who have the habit of thumb sucking, the majority are four years old, and girls and boys tend to be the same. The duration of the habit of thumb sucking is done at most less than 1 hour/day, with an overjet of 2 mm and done while playing. 2. It is necessary to provide dental

health education related to oral habits, such as home visits and further research is suggested with a broader age range to find out how many children still have the thumb-sucking habit, which serves as information in reducing the malocclusion rate.

CONFLICT OF INTEREST

There is no conflict of interest in the scientific articles written.

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