

DELETERIOUS ORAL HABITS IN A GROUP OF CHILDREN FROM A PUBLIC SCHOOL IN SAO PAULO CITY

Hábitos orais deletérios em um grupo de crianças de uma escola da rede pública na cidade de São Paulo

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ABSTRACT

Purpose: characterize deleterious oral habits based on questionnaires answered by parents of children of 3 to 5 years old, enrolled in an public educational institution in São Paulo. **Methods:** all of the children parents or tutors received the questionnaires and Consent form and they had a maximum time of 2 weeks to return the completed forms. We have sent 290 questionnaires to parents of all preschoolers of a municipal child education school. The criteria for inclusion were: volunteer participation, after Reading and signing the Consent forms. The exclusion criteria were failing to fill all the items on the questionnaire. We received the return of 120 questionnaires, from which 13 were not considered according to the exclusion criteria, and 107 questionnaires were selected from the total amount of the children seeing. **Results:** based on the present results oral breathing was the most frequent habit, present in 48,60% of the sample, and the least frequent was labial sucking, present in only 3,70% of the sample. The statistical analysis showed that the majority of the parents did not recognize their children oral habits as deleterious. **Conclusion:** the habits most frequent found between 3 and 5 years old were oral breathing, the use of bottle, nail biting, bruxism and biting objects.

KEYWORDS: Suction; Nail Biting; Breast Feeding; Pacifiers; Child Day Care Centers

■ INTRODUCTION

Habit is a certain automatism of acquired behavior, which often becomes unconscious and permanent personality of the subject¹.

Some habits persist after the child's oral phase, carried in the oral region of way deleterious and harmful to the health, it can promote changes in dental tissue, bone and muscle, resulting in changes in the pattern of orofacial growth as well as bringing harm to phonoarticulatory²⁻⁴.

Survey conducted observed that the most habits in the group with aged from three to five years were: mouth breathing, use of bottle, nail biting, onychophagy and bruxism⁵⁻¹⁰.

Several articles discuss the influence of such habits on the speech organs. To Sakashita et al.¹¹ and Mendes et al.¹², the result of these practices are

directly related to three important factors called Triad Graber, namely, intensity, frequency and duration of the habit.

Santos et al.⁸ conducted a cross-sectional study in daycare and pre-schools, with 1.190 children of both genders, aged between three and five years, where were found the prevalence of 40.2% of non-nutritive sucking habits, which were 27.7% of pacifier sucking and 12.5% of finger sucking.

No were found searches indicating that mouth breathing is among the most occurring habits in children, but when this habit is searched separately by Felcar et al.¹³ the result of prevalence of mouth breathing is 56.8 %.

In the study by Galvao et al.⁷ in 106 children in public and private schools, the most harmful oral habits found in the range of aged from 4 to 6 years were the bottle and pacifier use.

In a study on the occurrence of oral habits conducted by Vasconcelos et al.⁹ with 970 children present in a park, it was observed that 60.8 % of children had oral habits, the most prevalent is

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Conflict of interest: non-existent

nail-biting (44.6 %) followed by teeth grinding habit (bruxism) (12.6%), finger sucking (9.7%) and pacifier use (7.4%). It was also observed that 457 children had only one kind of habit, 117 had two kinds of habits and 16 had three types of habits simultaneously.

Zapata et al.¹⁰ conducted a study in a school with children with aged from four to six years and concluded that 83.1 % of children had some oral habits, the most common being the pacifier use, bottle and nail-biting. In the same study it was observed that 44.7 % of these children had abnormalities of dental occlusion.

The great importance in this survey is identify the occurrence of deleterious oral habits in certain groups of children so that appropriate interventions and guidelines for the elimination of these habits can be performed.

The aim of this study was to characterize the deleterious oral habits since of questionnaires answered by the parents / tutors of children with aged from 3 to 5 years, from an institution of education in public schools in the city of São Paulo.

■ METHODS

The present study is of nature cross-sectional and was conducted after approval from the Ethics Committee in research of home institution under numbering 003 / 12.

For the study we used the Authorization term of Institution, the Term of Free and Informed Consent and oral habits questionnaire which was developed

by the researchers in accordance with the literature captured.

Initially 290 questionnaires were sent to parents / tutors of all preschoolers a municipal daycare centre in the city of São Paulo.

The inclusion criterion was determined voluntary participation, after reading and signing the informed consent form (ICF) by the parents or tutors of children with aged from 3 to 5 years. And as an exclusion criterion, failure to satisfy completely the oral habits questionnaire.

The choice of the studied age group gave up on the line of studies that believe that the deleterious oral habits must be abandoned before three years of age, causing less change to stomatognathic structures¹⁴⁻¹⁷.

During an event held at the school with parents / tutors of students, a lecture was held about the completion of the questionnaire to introduce the study and its purpose, beyond remove possible doubts and invite parents to participate. Then the teachers gave the oral habits questionnaire to all parents.

After the period of one week they had a return of 120 questionnaires, of which 13 were disregarded under the exclusion factor, so we obtained a population sample of 107 questionnaires, of which 49 % were related to female children and 51 % males (respectively , 52 girls and 55 boys)

Statistical tool

To perform the analysis of the data obtained in this study, we used the test of equality of two proportions, and P - value, which is the result of each statistical comparison at $P < 0.05$.

Name (Thebinitial) : _____
D.B.: ___/___/___
Grade: _____

Gender: () M () F
Age : _____
Date: ___/___/___ - SP

QUESTIONNAIRE

Check the characteristics you notice in the child:

1. Has the pacifier use habit?

() Yes () No

2. Has the habit to use a bottle feed?

() Yes () No

3. Has a finger suction habit (thumb suction)?

() Yes () No

4. Has a habit to suction objects (cloths, key chains, toys, etc.)?

() Yes () No

5. Has a lip suction habit?

() Yes () No

6. Has a habit to lip biting?

() Yes () No

7. Has a habit to nail biting?

() Yes () No

8. Has a habit of biting objects (pencil, nozzles pacifiers, cloths, etc.)?

() Yes () No

9. Has the habit of grinding the teeth, especially while sleeping?

() Yes () No

10. Has a habit of staying with her tongue between her teeth and / or lips?

() Yes () No

11. Has a habit to breathe through the mouth?

() Yes () No

Figure 1 - Questionnaire – Oral Habits

■ RESULTS

The results are organized as follows. First will be introduced the characterization of the age of the children, and then the results of the general occurrence of deleterious oral habits.

The overall mean age was 4.30 years overall, with 4.31 years (girls) and 4.29 years (boys) (Table 1).

It can be observed that the incidence of habits of nail biting and oral breathing, is slightly higher

in females and the habit of using bottle occurs in males and other habits have the same occurrence in both genders

For the occurrence “ Has the habit of Mouth breathing” (Table 2), it was observed that there is no statistical difference between the percentages of “yes and no”, since 48.6 % had the habit, and 51.4 % do not have this habit. It is observed that the occurrence of oral breathing is slightly higher in females.

Table 1 - Full Specification for Age

Age	Girls	Boys	General
Mean	4,31	4,29	4,30
Median	4	4	4
Standard Deviation	0,70	0,69	0,69
CV	16%	16%	16%
Q1	4	4	4
Q3	5	5	5
Min	3	3	3
Max	5	5	5
N	52	55	107
CI	0,19	0,18	0,13

Key: CV = Coefficient of variation

Q1 = 1^o Quartile

Q3 = 3^o Quartile

Min = The minimum value found in the sample

Max = The maximum value found in the sample.

N= Sample Size

CI = Confidence interval

Table 2 - Sample Distribution “Has the habit of Mouth breathing.”

Has the habit of Mouth breathing	Girls		Boys		General	
	N	%	N	%	N	%
Yes	26	50,0%	26	47,3%	52	48,6%
No	26	50,0%	29	52,7%	55	51,4%
P-value	1,000		0,567		0,682	

Test of Equality of Two Proportions and P – value

From the analysis of the occurrence of “ Has the habit of using bottle “ (Table 3), it was concluded that there is no statistically significant difference for “ not having the habit of using the bottle “, observed that 67.3 % of children practice this habit and practice with 32.7 % the predominant occurrence in males.

For analyses of occurrence of onychophagy (Table 4), it is concluded that there is statistically significant difference in the responses marked as “does not have the habit”. Only 31.8% of children practice this habit, and most (68.2%) did not the practice. The occurrence of this habit is slightly predominant in females.

Table 3 – Sample Distribution “ Has the habit to use a bottle’.

Has the habit to use a bottle	Girls		Boys		General	
	N	%	N	%	N	%
Yes	16	30,8%	19	34,5%	35	32,7%
No	36	69,2%	36	65,5%	72	67,3%
P-value	<0,001		0,001		<0,001	

Test of Equality of Two Proportions and P – value

Table 4 – Sample Distribution “ Has a nail biting habit”

Has a nail biting habit	Girls		Boys		General	
	N	%	N	%	N	%
Yes	18	34,6%	16	29,1%	34	31,8%
No	34	65,4%	39	70,9%	73	68,2%
P-value	0,002		<0,001		<0,001	

Test of Equality of Two Proportions and P – value

The question about ‘Has a habit of teeth grinding (bruxism)’ (Table 5), after analyzing the occurrence was concluded that there is statistically significant difference for “not having teeth grinding habit (bruxism)”, 30.8% of children have this habit, but most do not own being the percentage of 69.2% of children. The found occurrence was balanced in both genders

Table 5 - Sample Distribution “Has a bruxism habit”

Has a bruxism habit	Girls		Boys		General	
	N	%	N	%	N	%
Yes	16	30,8%	17	30,9%	33	30,8%
No	36	69,2%	38	69,1%	74	69,2%
P-value	<0,001		<0,001		<0,001	

Test of Equality of Two Proportions and P – value

For occurrence “Has a habit of object biting” (Table 6), it was concluded that there is statistically significant difference for “not having the habit of changing objects” because 72.9% of parents said that children do not have this habit, against a minority of 27.1% of children who owns it. The occurrence was found balanced in both genders.

Table 6 – Sample Distribution “ Has a habit to biting objects”

Has a habit to biting objects	Girls		Boys		General	
	N	%	N	%	N	%
Yes	14	26,9%	15	27,3%	29	27,1%
No	38	73,1%	40	72,7%	78	72,9%
P-value	<0,001		<0,001		<0,001	

Test of Equality of Two Proportions and P – value

■ DISCUSSION

According to the results in this study the characterizations of some habits were discarded because of the low percentage values (between 3% and 14% respectively between 4:15 kids), so were prioritized the essential habits found (highest occurrences between 27 % and 48.60%, respectively between 29 and 52 children), these being oral breathing (48.60%), bottle (32.70%), nail biting (32%), bruxism (30.80%) and biting objects (27%).

The results of the different studies vary depending of the types of deleterious oral habits in children, however a large part agree with Galvão et al.⁷ noted that the most habits found in children are resulting of bottle and pacifier use, beyond onychophagy, confirming to some extent with the data obtained in this study. The use of pacifiers did not had a significant and relevant result.

Mouth breathing is a habit that has been found with balanced occurring in both genders, but the frequency and duration were predominant in males. No research value were found indicating that mouth breathing is among the most occurring habits in children, but when this habit is searched separately by Felcar et al.¹³ that the prevalence of mouth breathing is 56.8%, value relatively similar to our study (48.60%).

The habit of mouth breathing can interfere with craniofacial growth, favoring the following physical characteristics: elongated face, droopy eyes, dark circles, sagging of the entire musculature of the face, lips parted and dry, sagging cheeks, tongue in hypotonic lower position or between teeth, dental malocclusion and narrow palate, deep and high¹⁸.

To Lusvarghi¹⁹ and Carvalho²⁰, the mouth breathing habit don't oxygenate the brain effectively and this can lead the individual to show changes in behavior, such as restless sleep, difficulty concentrating, irritability and fatigue, and may thus result in a poor academic performance.

The intervention for the use of nasal breathing should be performed by a multidisciplinary team. To Marchesan²¹ first of all the mouth breathing should be evaluated by an otorhinolaryngologist doctor as plays the role of diagnosing the cause and dictate the best treatment if the cause of mouth breathing is a result of dental abnormalities or facial skull, the orthodontist should take the needed to do a procedures of a correction, The physiotherapist will work with changes in posture and the speech therapist will re-educate the altered functions and shall ensure the training and awareness of nasal breathing

The second habit more found was the bottle use (32.70%) to be abandoned at most up to 18 months of child²². Must be observed the permanence of this

deleterious oral habit, since it is known that should be abandoned because there is no need of suction power, that is, since these children have the ability to use the cup for drinking liquid, for example. However, the findings of this study corroborate the study of Galvão et al.⁷, where the bottle-feeding of children aged 36 months, also showed a high percentage of occurrences, reaching 56% in groups aged between four and six years.

Barretto et al.²³ states that there is no consensus on methods for the elimination of habits and for this reason it is important that the child be accompanied by a multidisciplinary team. Moreover, it is of utmost importance that a work of guidance be performed with family and educators of children.

The bottle can be used for up to 18 months of a child's life and should have orthodontic and appropriate nozzle for the consistency of the liquid offered, as well the original hole preserved²².

The third habit more found was the onychophagy, with occurrence of 32% in children of sample, this value is little higher when compared with the study of Zapata et al. (2010) that characterized the occurrence of onychophagy in 23% of children with aged between four and six years.

This habit can affect the teeth and tissues of the oral cavity in several ways²⁴. For example, the creation of cross-bite or intrusion of dental elements with more incidence in the incisors²⁵.

To Westling²⁶, this habit can cause pain and dysfunction in the temporo mandibular articulations (TMA), resulting of overload created because of this habit.

For patients who present initially onychophagy, therapy should have as principal objective the awareness of patient to have a desire to give it up²⁷.

The fourth habit more found was a bruxism (30,80%) these values confirm the study of Johanns et al.²⁸, who the occurrence of bruxism found was 29,85% in children between three and six years, these authors still relate that the great level of bruxism occurrence can be related to the high level of stress in children.

The fifth habit more occurrent was the object biting, found in 27% of the sample, this value is low when compared with the study of Araujo et al.²⁹, who obtained a occurrence of 74% of the children studied.

Habits related with masticatory muscles (onychophagy, lips and cheeks biting, bruxism, among others) result in hyperfunction of the masseter muscles, temporal and pterygoid medial and lateral, and may result in decreased muscle coordination, and possible feelings of pain³⁰.

Statistical results evidence that the most quantity of parents pointed that the children don't have any

deleterious oral habit in your occurrence. However the knowledge of occurrence of these habits, independent of a bigger incidence or no, must be considered by health professionals and education that act in educational ambient so they can develop and implement strategies for prevention and elimination of them, once that in this survey was identified that deleterious oral habits are present in the children. Noting what was Presented we observed the importance of the performance of a multidisciplinary team, because the deleterious oral habits can cause various health issues. It is extremely

important that health professionals and educational ambient stay tuned to this issue by starting this way different strategies to increase awareness to people about the effects of these practices, because the best intervention is prevention.

■ CONCLUSION

The survey concluded that the most found habit in the aged from three to five years was the oral breathing, bottle use, onychophagy, bruxism and object biting.

RESUMO

Objetivo: caracterizar os hábitos orais deletérios a partir de questionários respondidos pelos pais/responsáveis por crianças de três a cinco anos de idade, de uma instituição de ensino da rede pública, na cidade de São Paulo. **Métodos:** todos os responsáveis pelos alunos receberam os questionários e o Termo de Consentimento. Foi dado o prazo máximo de uma semana para que pudessem devolvê-los devidamente preenchidos. Enviou-se 290 questionários aos pais/responsáveis de todos os pré-escolares de uma Escola Municipal de Educação Infantil. Os critérios de inclusão foram: participação voluntária, após a leitura e assinatura do Termo de Consentimento Livre e Esclarecido (TCLE) pelos pais ou responsáveis de crianças com idade entre três e cinco anos. O critério de exclusão foi o não preenchimento por completo do questionário de hábitos orais. Após o prazo definido, obteve-se a devolução de 120 questionários, dos quais 13 foram desconsiderados segundo o fator de exclusão, logo, foram selecionados 107 questionários, sendo este, o número total da amostra. **Resultados:** a partir dos resultados obtidos observou-se que o hábito com maior ocorrência foi a respiração oral, presente em 48,60% da amostra, e o hábito citado com menor ocorrência foi a sucção labial, presente em apenas 3,70% da amostra. Os resultados estatísticos evidenciaram que a grande maioria de pais assinalaram que as crianças não possuem hábitos orais deletérios. **Conclusão:** os hábitos mais encontrados na faixa etária de três a cinco anos foram o uso da respiração oral, uso da mamadeira, onicofagia, bruxismo e mordedura de objetos.

DESCRITORES: Sucção; Hábito de Roer Unhas; Aleitamento Materno; Chupetas; Creches

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