

Abnormal oral habits in the children of war veterans

S. Yassaei* / M. Rafieian** / R. Ghafari***

Any kind of stress has a negative effect on the mood of people and stress resulting from war is no exception. Stress from war has not only has effects on war veterans but also on the families. Children of these families have been more susceptible to abnormal oral habits. In this observational, analytical and historical research, attempts have been made to determine the prevalence of abnormal oral habits in the children of war veterans (martyrs, freed prisoners of war and war cripples) and compare them with a control group. In this study of 520 children aged between 7 and 11 years were (238 in the study group and 282 in the control group), information was gathered via a questionnaire completed by the mothers of the students. Analysis of the received information showed that the prevalence of para functional and abnormal oral habits was more in the study group ($P=0.005$). The prevalence rate was highest in children, whose family members had been both crippled and freed prisoners of war, while the rate was lowest in children whose parents had been only prisoners of war without any lasting physical injury. Most of these children had acquired these habits at the age of seven and these abnormal habits were most prevalent in children aged eight and nine.

J Clin Pediatr Dent 29(3): 189-192, 2004

INTRODUCTION

Oral habits are patterns of muscle contractions, which are of a complicated nature and inflict unnatural forces on teeth, jaws, muscles and neuromuscular system. These include thumb sucking, nail biting and lip chewing, clenching and bruxism. Since the mouth is one of the primary areas for expressing sentiments, it is also one of the most important areas for pacification of sentiments and stress, both in children and adults. The stimulation of this area by fingers, tongue or nails can be considered as an action of pacification.¹

Factors such as anxiety, stresses of day-to-day life and sickness of parents can exert psychological pressure, and Ingerslev,² Gumley³ and Jalaalian⁴ have studied effects of these factors on oral habits in the past with similar results.

Stress and trauma due to war can not only directly harm war veteran individuals, but indirectly harm their families too. It can therefore be said that children belonging to such families are more susceptible and acquire abnormal oral habits more than the normal population.

Considering the fact that abnormal oral habits have ill effects on the dentoalveolar structure,⁵ it is necessary to take major steps and care to cure these habits and prevent complications, which can be achieved only with proper statistical information.

MATERIALS AND METHODS

This observational, analytical historical cohort was performed in the year 2000 in the city of Yazd, Iran. Samples included students aged between 7 and 11 years studying in two schools wherein girls and boys sections were different. From the total of 600 students, 80 students did not participate due to the age factor or reluctance of parents. From the 520 students selected, 238 belonged to families of war veterans (case group) and 282 to families of non-war veterans (control group). All of the students were between 7 and 11 years.

The independent variables included age, kind of sacrifice and percentage of harm inflicted during the war. The dependent variables included introversion, thumb sucking, nail biting and lip chewing, and the age at commencement of habit.

Prior permission was obtained from 'The Martyrs Institute' and 'The Educational Office of Yazd'. With good co-operation of the schools' employees,

* S. Yassaei, DDS, MS, Department of Orthodontics, Shahid Sadoughi University of Medical Sciences and Health Services, Yazd, Iran.

** M. Rafieian, MD, Department of Psychiatry, Shahid Sadoughi University of Medical Sciences and Health Services, Yazd, Iran.

*** R. Ghafari, DPS, dentist.

Send all correspondence to Dr. S. Yassaei, Department of Orthodontics, School of Dentistry, Daheye Fajr, BLV. Emarn Ave., P.O. Box: 89195/165, Yazd, Iran.

Email: syassaei@yahoo.com

Table 1. The prevalence of abnormal oral habits in both groups of study

Type of habit	Case group n=238		Control group n=282		Pvalue
	Positive	% Positive	Positive	% Positive	
Thumb sucking	6	2.52	3	1.06	0.176 F
Finger sucking	10	4.20	3	1.06	0.023 F
Nail biting	37	15.55	34	12.06	0.248 ch
Tongue sucking	0	0	5	1.77	0.066 F
Lip chewing	14	5.8	11	3.9	0.293 ch
Sleep bruxism	41	17.23	37	13.12	0.191 ch
Bruxing events	31	13.03	25	8.87	0.127 ch
ParaFunctional activity	62	26.05	45	15.95	0.005 ch
Total oral habits	101	42.44	85	30.14	0.005 ch

F: Fisher exact test ch: chi square

invitations were dispatched to the mothers of the children and details about the study and the questionnaire were explained to them in several sessions. The completed questionnaires were gathered and the information was statistically analyzed using Chi Square and Fisher exact tests.

RESULTS

1.06% of the children in the control group (total of 282) and 2.52% of the children in the case group (total of 238) were addicted to thumb sucking. The difference of variable in the two groups was examined using Fisher exact test, which was not significant as shown in Table 1 (P value 0.176). When the prevalence of thumb sucking and sucking of other fingers were studied in combination, 1.06% in the control group and 4.2% in the case group were habituated. The difference in the prevalence of finger sucking in combination with thumb sucking was significant as determined by Chi square test as shown in Table 1 (P value =0.023).

12.06% of children in the control group and 15.5% of children in the case group were habituated to nail biting, but the distribution of frequency differences in the two groups was not significant as shown in Table 1 (P value=0.248).

The prevalence of lip chewing was 9.3% in the control group and 5.88% in the case group. The frequency differences were not significant with Chi square test as shown in Table 1 (P value 0.293).

1.77% of children in the control group, while none of the children in the case group had the habit of tongue sucking, but the difference was not significant according to Fisher exact test (P value =0.077).

13.2% of children in the control group and 17.23% of children in the case group had sleep bruxism, the difference of which was not significant. 25 children in the control group and 31 children in the case group ground and pressed their teeth consciously during the day. Thus, the prevalence of bruxing events was more in the

case group, but the frequency difference was not significant (P value 0.127).

This study of the complete parafunctional activity during sleep and wakefulness, 15.95% of children in the control group and 26.05% of children in the case group were habituated to it. The distribution of frequency in both the groups were significant according to Chi square test (P value 0.005), (Table 1).

From among the children in the case group, the least prevalence of abnormal oral habits was observed in children belonging to families of freed prisoners of war (P.O. W), but this difference was not significant among the other three groups (Table 2).

Table 2. The prevalence of abnormal habits in children of case group.

Type of devotion	Total	Positive Case	% positive case
Both war cripples and Freed prisoners	35	17	48.57
War cripples	143	65	45.45
Martyrs	16	7	43.75
Freed prisoners	44	12	27.27
Total	238	101	42.44

A completely significant relationship was observed between oral habits, introversion and self-straining such that 46 of the 80 introvert children had abnormal oral habits (Table 3).

Table 3. The prevalence of abnormal oral habits in both groups of study in relation with Introversion and Self-destructive attitude.

Introvert And Self-destruction	Oral habits		
	Total	For oral habits	Percentage
Positive	80	46	57.5
Negative	440	140	31.82

Table 4. The prevalence of abnormal oral habits in both groups of study in terms of gender.

Gender Group	Boys			Girls			Pvalue
	Total	Positive case Habit	Percentage of Positive cases	Total	Positive case habit	Percentage of Positive cases	
Control	119	38	31.93	163	47	28.83	0.57
Case	105	39	37.14	133	62	46.62	0.14
Total	224	77	34.37	296	109	36.82	

Out of the 154 children, who had specified their age at commencement of the habit, only 16.85% had started their habits at 7 years of age. Graph 1 shows the height of the prevalence of oral habits at age 8 in both the groups. Graph 2 shows the frequency of oral habits of 186 children during the summer holidays, wherein 53.79% continued with their habits, 32.25% gave up the habits and 13.98% reduced the habits.

DISCUSSION

Statistical analyses showed that the prevalence of abnormal oral habits in children of war veterans was higher than that in children of non-veteran families. The prevalence of thumb sucking was more in the case group (P value =0.176). The prevalence of finger sucking (either finger or thumb) was also more in the case group, and this was statistically significant (P value =0.023). Prolonged finger sucking after the age of 4 is usually a sign of hurt feelings and sentiments, and the child sucks a finger to achieve relief.²⁶

In a study by Jalaalian in 1989 on 405 six year olds in Tehran, it was concluded that internal worries, being away from parents and significant events in the family have extreme effects on the etiology of this habit.⁴ In fact, children in the case group of this study had either one of the above-mentioned characteristics. Therefore, results of this study confirmed the findings of Jalaalian.

The prevalence of finger sucking in this study was less than that of the study by Baer and Lester⁷ (control 1.06%, case=4.2%). This difference could be due to the fact that the use of non-nutritious sucking foods for children is more in industrialized countries because of the life style and economical stresses.⁸

The prevalence of nail biting was more in the case group, but this was not statistically significant (P value =0. 248). This significance could be achieved in the future by increasing the total number of samples in the

study. The results confirmed the findings of Finn, who had concluded that nail biting is a kind of reaction for getting rid of worries and sensitive, nervous children usually have such kind of habits.⁹

The prevalence of lip chewing was more in the case group, but this was not statistically significant (P value=0.293). The information received was not enough for comparison in the two groups.

When a child suffers from something, either consciously or unconsciously, their feelings show as signs of bruxism or clenching.¹⁰ These two processes occur simultaneously in many people and as the separation of these two is difficult, these two conditions are termed as ‘Bruxing events’.¹¹

Sleep bruxism and bruxing events in the wakeful state when considered separately were not significant from the statistical point of view, but when considered together (parafunctional activity), the prevalent rate was higher in the case group and this difference was completely significant (P value =0. 005).

Hathaway reports that bruxism is the result of stress and results in more clenching.¹² In a study done on 337 twelve year olds, Ingerslev concluded that stress is a very important etiological factor responsible for bruxism.³ This study therefore confirms the results of both Hathaway and Ingerslev that stress plays an important role in the development of parafunctional activities.

15.95% in the control group and 26.05% in the case group showed parafunctional activities. Hick and his colleagues reported bruxism in 15% of children.¹³ Bruxism has been reported between 25 and 50% in some studies.¹¹

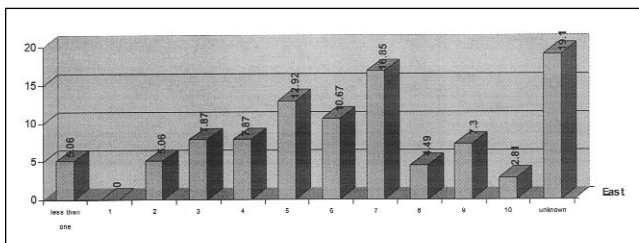


Figure 1. Frequency distribution of starting age of abnormal oral habits in affected children.

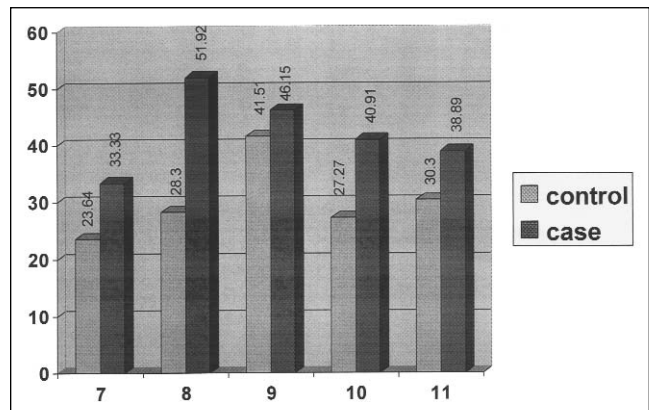


Figure 2. Difference in frequency distribution of oral habits between two groups of study in terms of age.

Overall, the case group had more significant abnormal oral habits than the control group (P value=0.005).

MacPharlin showed that the death of family members or injury to parents caused psychological harm in children.¹⁴ Children usually acquire oral habits to reduce their psychological stresses.¹⁵

Hence, according to the conceptualizations mentioned above, one can conclude that stress resulting from war and the presence of martyrs and war veterans in families have caused emotional and behavioral difficulties in children and the prevalence of abnormal oral habits in these groups has been more.

From among the children in the case group, the prevalence of abnormal oral habits in children whose parents had been prisoners of war without any lasting physical injury was the least (27.27%), and the prevalence rate was highest in those children, whose parents had been both prisoners of war and crippled (48.57%). The prevalence rate in children of war cripples was 45.45% and 43.75% in children of martyrs. The difference in the prevalence rate was not statistically significant which could have been the case if the number of samples had been more.

The children of parents with physical disabilities are more prone to psychological problems as they feel isolated from their peer group and are forced to accept responsibilities, which are too early for them.¹⁴

In a study that Shafizadeh conducted on 250 family members of freed prisoners of war in 1993, the prevalence of stress was 72.4%.¹⁶ In another study conducted by Ajkari and Arfai, behavioral disorders and anxiety problems in depressed mothers were significantly more than the control group.¹⁷

In this study, the relationship between abnormal oral habits and self-destructive attitude and introversion was significant, as 57.5% of these children had at least one abnormal oral habit. We can therefore conclude that isolated children have less self-confidence and when faced with any trivial problem, they develop a self-destructive attitude and abnormal oral habits. The results of this study confirm the results of the study done by Kawata.¹⁸

The prevalence of oral habits was highest in children aged 8 and 9 and it reduced in both groups with increasing age.

In the case group, the prevalence of oral habits was 46.62% in girls and 37.14% in boys, but this higher prevalent rate in girls was not significant (P value=0.14%).

In the control group, the prevalence rate was higher in boys (31.93%) than girls (28.83%), which was not statistically significant (P value=0.57)

Bagheri Yazdi and Boihari in a study done on 183 primary school students in 1996 reported a higher rate

of disorders in girls.¹⁹ In the opinion of Finn, the cause of abnormal oral habits is lack of deep affection.⁹ Thus, our findings confirm the findings of the other researchers.

From among the 154 children, who had specified their age at the start of the oral habits, 16.85% had acquired the habits at age 7. The lowest starting age was less than one year and the highest was 10 years. The reason that most children acquire abnormal oral habits at age 7 could be the fact that it is the age when children first go to school and stress factors at school, being away from the family and different behaviors of school instructors result in these habits. This view has been proposed by Ismaili.²⁰

It was also observed that during the summer holidays, the habits did not change in 53.5%, reduced in 13.98% and were completely given up in 32.25% of the children. Thus, it can be concluded that with the start of the summer holidays and end of stress factors at school, the oral habits are either given up completely or reduce significantly in a considerable number of affected children.

REFERENCES

1. Vogel LD. When children put their finger in their mouth, should parents and dentist care? *NYState J Den* 64: 48-53, 1998.
2. Brenchy ML. Is digit sucking of significance? *Brit J Dent* 171: 11-12, 1991.
3. Ingreslev H. Functional disturbances of the masticatory system in school children. *J Dent Child* 50: 445-50, 1983.
4. Jalalian A. The prevalence of thumb sucking and its effects in children aged of six years in Tehran. A Thesis for PhD in Dentistry Dept. at Shahid Beheshti University. No. 438, p18.
5. Jose SD. Habits effecting dental and maxillofacial growth and development. *Dent Clin N Am* 39: 857-60, 1995.
6. Johnson ED, Larson BE. Thumb sucking classification and treatment. *J Dent Child* 60: 392-8, 1993.
7. Baer PN, Lestor M, Thumb TH. The pacifier, the erupting tooth and a beautiful smile. *J Pedodont* 11: 115-119, 1987.
8. Nowak J. Conference report: Feeding and dentofacial development. *J Dent Restorative* 70: 159-160, 1991.
9. Finn, Sidney B. *Clinical pedodontics*. W.B. Saunders Co, pp. 370-380, 1998.
10. Sahafian A.A. Temporomandibular joint, Mashhad Ferdowsi University Publication pp 41,52, 1993.
11. Jafari PA. Translated by Arstopour K The control of temporomandibular disorders and occlusion. Mashhad: Astan Ghods Razavi publication, pp. 239-269, 1995.
12. Hathaway KM. Evaluation and management of maladaptive behaviors and psychological issue in temporomandibular disorder patients. *Dent Clin N Am* pp: 343-4, 1997.
13. Hicks RA, Keller SR, Nellis TA, et al. Arousability and bruxism in male and female college students. *Percept-Mot-Skills* pp. 6-8, 1992.
14. Askandari MR, Karam IS. A study of prevalence of post-stride rate of stress and behavioral disorders in of earthquake stricken children in Ardabil Province. Printed in the collection of psychiatry abstracts from The Third National Seminar on Behavioral Disorders of children in Zanjan Province, p. 42, 1997.
15. Larson EF. The prevalence and etiology of prolonged dummy and finger sucking habit. *Am J Orthodont* 87: 172-4, 1985.