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KNOWLEDGE AND ATTITUDES OF ANGANWADI WORKERS TOWARDS ORAL PARAFUNCTIONAL HABITS– A CROSS SECTIONAL SURVEY

Dr. D J Veeresh	Professor, Department of Public Health Dentistry, Bapuji dental college and hospital, Davangere, Karnataka, India.
Dr Puja C Yavagal	Professor, Department of Public Health Dentistry, Bapuji dental college and hospital, Davangere, Karnataka, India.
Dr. J. Mahesh	Senior Lecturer, Department of Public Health Dentistry, JKK Nattraja Dental College, Komarapalayam, Namakkal District, Tamilnadu, India.
Dr. S Pranav	Intern, Bapuji dental college and hospital, Davangere, Karnataka, India..
Dr. K K Viswa Teja	Intern, Bapuji dental college and hospital, Davangere, Karnataka, India.
Dr. C T Navya	Intern, Bapuji dental college and hospital, Davangere, Karnataka, India.

ABSTRACT

Anganwadi worker (AW) is the principal worker in the Integrated Child Development Services (ICDS) project in India. She should have the basic knowledge to recognize and assess the oral health problems of children. Literature search revealed very few studies which have assessed the awareness regarding parafunctional habits among Anganwadi workers. The aim of the study is to assess the knowledge and attitude regarding oral parafunctional habits among Anganwadi workers in Davanagere city.

METHODS AND MATERIAL: A Descriptive Cross sectional Questionnaire Survey was conducted among whole sample of 127 registered Anganwadi workers from 5 training centers in Davanagere city. Knowledge and attitude regarding oral parafunctional habits was assessed among the study subjects using self-administered, validated questionnaire. Questionnaire consisted of 14 closed ended questions with responses placed in three point Likert scale.. Data (Descriptive statistics) was expressed in terms of percentages.

RESULTS: Majority of Anganwadi workers(78%) were aware of oral parafunctional habits. Majority of them considered only finger sucking habit as abnormal. Surprisingly majority of them (more than 50%) considered Lip sucking, Biting objects, Nail biting, Tongue protraction, Bruxism, Mouth breathing and Use of pacifier or baby bottle by children above three years of age as normal habits. Majority (>70%) of them believed that Para functional habits interfere with normal growth/ development of face and jaws and cause pain in the jaw joint. More than 60% of Anganwadi workers believed that para functional habits lead to malocclusion and teeth wear. Very few (around 13%) were unaware of effects of Parafunctional habits on oral health.

CONCLUSIONS: Majority of the Anganwadi workers were aware of oral parafunctional habits but surprisingly except for use of pacifier or baby bottle by children above three years of age Majority of workers showed a favourable attitude towards prevention and interception of such habits and expressed the need to get educated towards the same.

KEYWORDS : Anganwadi workers, Oral parafunctional habits, preschool children

INTRODUCTION

Oral habits could be functional or parafunctional. The first result from repeating a normal function while the second are acquired by practicing a non-functional or unnecessary action. Parafunctional habits interfere with the normal growth pattern of the jaws, the development of occlusion and cause malocclusion. Parafunctional habits that have been observed with the highest prevalence are finger and lip sucking; biting (objects, onychophagia, cheilophagia and tongue protraction), bruxism and mouth breathing. However, impact could be different depending on their prevalence, intensity, duration and direction.[1] Prolonged pacifier habits are associated with the development of posterior cross bites and prolonged digit habits with increased overjet,[2-4] but both are associated with an increased prevalence of reduced overbite and anterior open bite.[2] There have also been reports of digit deformities developing as a result of prolonged digit sucking, requiring surgical correction.[5] Speech can be affected with tooth position: Laine found a significant relationship between increased over jet and distortions of the "s" sound. With regard to anterior open bite, research has shown that speech is commonly defective, often presenting with a lisp.[6] If these problems are not diagnosed until the patient is in the permanent dentition it can be complex, time-consuming, and costly to correct the problem and it will usually require fixed brace treatment carried out by a specialist orthodontist. In severe cases, it can even require orthognathic surgery[7] Although the incidence of parafunctional habits varies considerably between different countries, these comforting habits are common in children in many populations. According to a study done by Krishnappa et al (2015) the prevalence of deleterious oral habits across the state of Karnataka was 6%. In Davanagere city the prevalence of parafunctional habits among 10-16year olds was 8 % with mouth breathing (4%) and thumb sucking habit (4%).[8]

Anganwadi worker (AW) is the principal worker in the Integrated Child Development Services (ICDS) project in India. She provides a package of basic health services like supplementary nutrition, immunization, health check-up, referral, health education and nonformal education services to nursing mothers, other women (15- 45 years)and children below 6 years of age.9As childrensupervisors, Anganwadi workers should have the basic knowledge to recognize and assess the oral health problems of children. Literature search revealed very few studies which have assessed the awareness regarding parafunctional habits among Anganwadi workers. Hence a study is planned with the aim of assessing the knowledge and attitude regarding oral parafunctional habits among Anganwadi workers in Davanagere city. The research question was what is the knowledge and attitude regarding oral parafuntional habits among Anganwadi workers in Davangere city? The objective of the study was to assess the knowledge and attitude regarding oral parafunctional habits among Anganwadi workers in Davanagere city.

MATERIALS AND METHODS:

The present study is a descriptive Cross sectional Questionnaire Survey. The present survey was conducted among Anganwadi workers registered in the Integrated Child development Centre, Davangere (women and child development centre, Infant care and development office), consisting of approximately 127 registered

Anganwadi workers. The questionnaire was distributed to Anganwadi workers at the premises of their centers. All the registered Anganwadi workers who gave consent to participate and were registered in the Integrated child development center of Davanagere city. The Study sample was a whole sample. A schedule was prepared to distribute the questionnaire among Anganwadi workers at Centre 1- Aazad Nagar (PHC), Centre 2- Bharath Colony (Govt. School), Centre 3- S. M. K. Nagar (Govt. School), Centre 4- Barline, A. K. Colony (Govt. School) and Centre 5- K. T. J. Nagar (Govt. school). Ethical approval was obtained from the Institutional Review Board of Bapuji Dental College and Hospital, Davangere. Permission was obtained from the chief officer Integrated child development center, Davanagere to conduct the survey. Voluntary written informed consent was obtained from the study participants i.e. Anganwadi workers after explaining them about the purpose of conducting the survey. Data was collected using a self-administered Questionnaire. The Questionnaire was designed to assess the Knowledge and attitude regarding oral parafunctional habits among the Anganwadi workers. Questionnaire consisted of 14 closed ended questions with responses placed in three point Likert scale. Question number 4, 5, 6, 7, 8 and 9 were designed to assess the knowledge and question number 10, 11, 12, 13 and 14 were designed to assess the attitude. The questionnaire was designed in a local language and the translation was checked by back translation method.[12] The questionnaire was tested for content validity by five subject experts - Public health dentist, Pedodontist, Teacher, Pediatrician and Government Medical Officer. Questionnaire was assessed for relevance, simplicity, clarity and ambiguity. Content validity index for relevance was 0.90, clarity, simplicity and ambiguity was 0.81, 0.90 and 0.81 respectively. All the components had a CVI score more than 0.75 hence it was valid.[13]The questionnaire was also pilot tested and checked for internal consistencyand reliability after 24 hours. The Cronbach's alpha correlation[14] coefficient value was 0.756. The questionnaire was self-administered, 20 minutes time was given to Anganwadi workers to answer the questionnaire and return it back to the researcher. Dental Health education was provided to all the Anganwadi workers after collecting the questionnaire.

The data was compiled systematically in Microsoft Excel spreadsheet and subjected to statistical analyses using Statistical Package for Social Sciences (SPSS) software. Descriptive statistics was expressed in terms of percentages.

RESULTS:

The present cross-sectional survey involved 127 Anganwadi workers from 5 Anganwadi centers in Davanagere city.

Table 01:Response in Percentage based on Knowledge

Sl. No.	Question	Responses in percentage/ frequency	
	KNOWLEDGE		
1.	Are you aware of oral para functional habits?	Yes -78%	No- 22%
2.	Which of these habits among children do you consider abnormal	Consider Abnormal	Do not consider abnormal
	a) Finger sucking	52.8%	47.2%
	b)Lip sucking	38.6%	61.4%
	c)Biting objects	44.1%	55.9%
	d)Nail biting	44.9%	55.1%
	e)Tongue protraction	37.8%	62.2%
	f)Bruxism	38.6%	61.4%
	g)Mouth breathing	42.5%	57.5%
	h)Use of pacifier or baby bottle by children above three years of age	38.6%	60.4%
3.	Para functional habits interferes with normal growth/ development of face and jaws	Yes- 76.4%	No- 13.4%	don't know- 10.2%
4.	Para functional habits lead to malocclusion	68.5%	18.1%	13.4%
5.	Para functional habits cause pain in the jaw joint	77.2%	11.8%	11.0%
6.	Para functional habits lead to teeth wear	65.4%	22.0%	12.6%

Majority of Anganwadi workers(78%) were aware of oral parafunctional habits. Majority of them considered only finger sucking habit as abnormal. Surprisingly majority of them (more than 50%) considered Lip sucking, Biting objects, Nail biting, Tongue protraction, Bruxism, Mouth breathing and Use of pacifier or baby bottle by children above three years of age as normal habits (Table 2). Majority (>70%) of them believed that Para functional habits interfere with normal growth/ development of face and jaws and cause pain in the jaw joint. More than 60% of Anganwadi workers believed that para functional habits lead to malocclusion and teeth wear.Very few (around 13%) were unaware of effects of Parafunctional habits on oral health. More than 90% of Anganwadi workers felt that regular visits to dentist was necessary with this regard and para functional habits could be intercepted if identified. Majority (95.3%) of them expressed the need to get educated / trained regarding identifying oral parafunctional habits in order to recognize these among Anganwadi children and intercept their habits.

Table 02: Response in Percentage based on Attitude

Sl. No.	Question	Responses in percentage/ frequency		
	ATTITUDE			
1	Are regular visits to dentist necessary with this regard	91.3%	6.3%	2.4%
2	If you recognize parafunctional habits among a child would you refer them to dentist	89.8%	7.1%	3.1%
3	Do you feel para functional habits can be intercepted if identified	94.5%	2.4%	3.1%
4	Do you feel prevention of oral parafuntional habits are equally important as prevention of dental caries and gum diseases	89.0%	8.7%	2.4%
5	Do you feel you need to get educated / trained regarding identifying oral parafunctional habits in order to recognize these among Anganwadi children and intercept their habits	95.3%	3.9%	0.8%

DISSUSSION

According to the study results,majority of the Anganwadi workers were aware of oral parafunctional habits but surprisingly except foruse of pacifier or baby bottle by children above three years of age all other habits like Lip sucking, Biting objects, Nail biting, Tongue protraction, Bruxism and Mouth breathing were considered as normal habits for preschool children by majority of Anganwadi workers. This may be due to the fact that majority of them were not aware of the intricacies of oral parafunctional habits and there was a lack of education to them with this regard.The study results could not be compared to other studies as this was the first study done to assess the knowledgeand attitudes of Anganwadi workers towards oral parafunctional habits as per the author's best knowledge.

Majority of workers showed a favorable attitude towards prevention and interception of such habits and expressed the need to get educated towards the same.[8,10-11]

Much attention has been directed towards oral para functional habits as possible causes of unbalanced functional forces on the developing dentition.[15] Unbalanced functional forces are potential

etiologic factors in the development of dento-skeletal abnormalities and hence possible etiologic factors in malocclusion.[15] This is based on the theory of craniofacial growth proposed by Moss in the 1960s in his "functional matrix theory," which holds that growth of the face occurs in response to the functional needs and effects of the soft tissues surrounding the bony structures of the maxilla and the mandible.[15] The activity of the masticatory muscles, the tongue and the muscles of the cheeks and lips play a major role in the developing occlusion and relapse of orthodontic treatment.[15]

Very few studies have been reported in the literature about the prevalence of deleterious oral habits in preschool childrenof Anganwadis in India.The findings of a study showed that 6% of children are involved in one or more deleterious oral habits. However, a high prevalence of 38% was observed among 11–13-year-old children in Karnataka[16].Tongue thrusting, mouth breathing and digit sucking were the most prevalent deleterious oral habits observed in few surveys done in India.[16,17,18,19]

Lopes *et al* [20] suggested that the longer the duration of breastfeeding the lower are the chances of developing deleterious oral habits. Further Moimaz *et al*[21] suggested that children with oral habits and with low rates of breastfeeding were more susceptible to malocclusions. High prevalence of oral parafunctional habits point out the need to design preventive and interceptive strategies at an early age especially at the grass root level in India. Training the Anganwadi worker to identify and intercept such habits may perhaps bring down the high prevalence rates as Anganwadi worker is the principal worker in the ICDS (Integrated Child Development System) Project in India.She provides a package of basic services like supplemental nutrition,immunization, health check ups ,referral,health education and non formal educational services to nursing mothers and children below six years of age.[22]literature search has shown that, training the Anganwadi workers in oral health results in improvement in the knowledge of the community whom they catered.[23-27] Educating the Anganwadi worker will produce a ripple effect of knowledge among the mothers in the community and teaching a mother is like teaching the entire family. Hence, assessing the level of knowledge and awareness among Anganwadi workers regarding the oral parafunctional habits followed by customizing the health education strategies to train them in identifying the parafunctional habits and intercepting them at an early age among children can effectively bring down the prevalence of oral parafunctional habits in Indian Population.

CONCLUSIONS:

Majority of the Anganwadi workers were aware of oral parafunctional habits but surprisingly except foruse of pacifier or baby bottle by children above three years of age all other habits like Lip sucking, Biting objects, Nail biting, Tongue protraction, Bruxism and Mouth breathing were considered as normal habits for preschool children by majority of Anganwadi workers. Majority of workers showed a favorable attitude towards prevention and interception of such habits and expressed the need to get educated towards the same.

RECOMMENDATIONS:

It is recommended that Anganwadi workers need to be educated regarding oral parafunctional habits and its early identification among children and trained to refer children with such habits to pediatric dentists in order to prevent and intercept the habits at an early stage.

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