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## Research Article

# Awareness towards Orthodontic Treatment in Central Indian School Children

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**Abstract:** The aim of present study is to assess the awareness towards orthodontic treatment among school children's of Bilaspur Chhattisgarh, India. The survey was carried out in selected schools in all the district head quarters. A total sample of 3024 children from 25 schools was surveyed between the age group of 9-16 years. A pre-structured self-administered questionnaire consisting of 15 questions with multiple answers were given to the children after the clinical examination to assess their knowledge and awareness towards Orthodontic treatment. One-way ANOVA reveals' a significant difference among the mean scores of knowledge about orthodontic treatment among the age groups of the children. F value of 2.17 was found to be significant at .043 levels. Scheffe's post hoc-test indicates that 9 year old children have a lesser knowledge (1.14), 15 and 16 year old children have a higher knowledge of (1.27). Findings confirmed that there is a positive increase in awareness towards orthodontic treatment among school children's.
**Keywords:** orthodontic treatment, school children's, awareness..

## INTRODUCTION

Oral health can affect the general health, well-being, education and development of children. In many of the countries, large number of parents and children are unaware of the knowledge about the causes, occurrence and prevention of most of the common oral diseases. One of the most common dental problems in mankind along with dental caries, gingival disease, and dental fluorosis is malocclusion [1]. Planning orthodontic treatment within a public health system requires information on the prevalence and distribution of malocclusions[2]. A malocclusion is defined as an irregularity of the teeth or a malrelationship of the dental arches beyond the range of what is accepted as normal[3]. Maloccluded teeth can cause psychosocial problems related to impaired dentofacial aesthetics[4].

The benefits of orthodontic treatment are prevention of tissue damage, improvement in aesthetics and physical function. The uptake of orthodontic treatment is influenced by the desire to look attractive, self-esteem and self -perception of dental appearance[5].

Awareness is the state or quality of being aware of something. There is a need to identify the awareness levels of children with respect to oral health and the orthodontic treatment as children play an important role in inculcating healthy lifestyle practices to last for a lifetime. Pre-adolescents and adolescents would be benefitted with the knowledge about orthodontic treatment since early orthodontic treatment could be advantageous in preventing further malocclusion complications. Furthermore, knowledge about age related patient concerns may guide and assist the orthodontist in educating potential patients and their parents and in providing advice [6].

Thus, the study was conducted to find out the awareness towards orthodontic treatment among school children's of Bilaspur Chhattisgarh, India.

## MATERIAL AND METHOD

A survey was conducted among the schools of Bilaspur, Chattishgarh, India. A total of 3024 school children's, of age group between 10-16 years were included in the study.

Schools were selected from a list of schools provided by the Chhattisgarh Higher Primary and Secondary Education Board. A total of 25 schools all over Bilaspur were surveyed during June to September 2014. Ethical committee clearance was taken to conduct the study & consent was obtained from the parents of all patients. Exclusion criteria used were- history of previous orthodontic treatment, rampant caries, multiple missing teeth, mutilated malocclusion and other craniofacial anomalies like cleft lip and palate, facial hemiatropy, cleidocranial dysplasia etc.

A pre-structured self-administered questionnaire consisting of 15 questions with multiple answers were given to the children after the clinical examination to assess their knowledge and attitude [awareness] towards Orthodontic treatment. The responses of the children to the questions were recorded on a 3 point Likert scale [a. yes, b. no, c. don't know]. An oral health lecture was given to all the children in the school to create awareness about Dental health and Orthodontic treatment. The awareness levels were measured in a three point Likert scale as follows. 1- Poor awareness level 2- Moderate awareness level 3- Good awareness level.

## RESULTS AND DISCUSSION

Globally, there has been an increase in awareness of Orthodontics as a dental specialty in children as well as adults [7-8]. A similar trend has been reported in Nigeria with an associated increase in Orthodontic care [9]. In a developing country like India, malocclusion is still not considered to be a dental problem because more priority is given to the treatment of dental caries and periodontal diseases due to pain experienced by them. Most malocclusion cases are still not treated properly due to ignorance of patients, parents, inadequacy of resources, lack of knowledge about malocclusion and other influencing factors like literacy rate and socio-economic status. The level of dental health knowledge, positive dental health attitude, and dental health behavior are interlinked and associated with the level of education and income as demonstrated by studies in the past [10-15]. Attitudes and perceptions towards dental appearance differ among populations and among individuals[16]. Although age-related changes in malocclusion concerns ideally should be studied longitudinally, the present study allowed comparison between different age groups by means of a cross-sectional study. Such a study can give an indication of changing attitudes toward malocclusion with age. Malocclusion has an impact on the social and the psychological behavior of an individual, hence knowledge on how individuals perceive and react to malocclusion in a community is necessary for effective orthodontic treatment and care. Both boys and girls exhibited same level of awareness in relation to Orthodontic treatment as shown in Table 4. Bhavneet Kaur [17] studied the level of dental awareness in parents of pre-school children in the Indian context which revealed a poor level of dental awareness in those parents. In our survey, we found a moderate awareness in children towards dental awareness.

**Table -1: Gender distribution of the sample**

| Gender | No of children |
|---|---|
| Male | 1606 |
| Female | 1418 |
| Total | **3024** |

**Table-2: Age distribution of the sample**

| Age / gender | 10 years | 11 years | 12 years | 13 years | 14 years | 15 years | 16 years |
|---|---|---|---|---|---|---|---|
| Male | 44% | 54% | 51% | 56% | 51% | 52% | 64% |
| Female | 56% | 46% | 49% | 44% | 49% | 48% | 36% |

**Table 3: Questionnaire format to analyze the Awareness of children towards orthodontic treatment**

| | | |
|---|---|---|
| Awareness about Dentist/ Orthodontist | 1. Are you aware of a dentist?<br>2. Have you visited a dentist before?<br>3. Have you heard of an Orthodontist?<br>4. Are you aware that they align your teeth?<br>5. Have you noticed people having irregular teeth? | a. Yes,<br>b. No,<br>c. Don't know |
| Knowledge about irregular teeth | 6. Do you believe teeth should be properly aligned for a better facial appearance?<br>7. Do you know crooked teeth have ill effects?<br>11. Are you aware that few teeth may have to be removed for aligning irregular teeth? | a. Yes,<br>b. No,<br>c. Don't know |
| Awareness about braces/ Orthodontic treatment | 8. Have you seen people wearing braces?<br>9. Have you ever felt the need to wear braces?<br>10. Has anyone advised you to get your teeth aligned? | a. Yes,<br>b. No,<br>c. Don't know |
| Knowledge about Orthodontic treatment | 12. Does thumb-sucking has an effect on the front teeth alignment?<br>13. Did you know taking braces treatment at an earlier age would improve facial appearance?<br>14. Do you know the duration for braces treatment is longer than other dental procedures?<br>15. Do you know that orthodontic treatment is costly? | a. Yes,<br>b. No,<br>c. Don't know |

**Table-4: Awareness towards orthodontic treatment in boys and girls**

| Gender | Awareness of orthodontic treatment | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Awareness of Dentist / Orthodontist | | Knowledge about Irregular teeth | | Knowledge about Orthodontic treatment | | Awareness of Braces treatment | | Total | |
| | Mean | S.D | Mean | S.D | Mean | S.D | Mean | S.D | Mean | S.D |
| Boys | 2.56 | 1.23 | 3.14 | 1.12 | 1.55 | 1.15 | 1.53 | 0.80 | 8.11 | 2.94 |
| Girls | 2.32 | 1.12 | 3.45 | 1.54 | 1.32 | 1.16 | 1.54 | 0.78 | 8.33 | 2.99 |
| T test | 1.54 | | -2.55 | | 1.11 | | -0.73 | | -0.17 | |
| Sig(2-tailed) test | .115 | | .032 | | .179 | | .466 | | .861 | |

**Table-5: Awareness towards orthodontic treatment in 10-16 years age group of children**

| Age groups | Awareness of orthodontic treatment | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Awareness of Dentist/ Orthodontist | | Knowledge about Irregular teeth | | Knowledge about Orthodontic treatment | | Awareness of Braces treatment | | Total | |
| | Mean | S.D | Mean | S.D | Mean | S.D | Mean | S.D | Mean | S.D |
| 10 | 2.21[a] | 1.10 | 3.10[bc] | 1.42 | 1.14[a] | 1.09 | 1.65[abc] | 0.94 | 8.00[a] | 3.18 |
| 11 | 2.30[a] | 1.09 | 2.94[a] | 1.44 | 1.21[a] | 1.08 | 1.82[abc] | 0.92 | 8.06[ab] | 3.16 |
| 12 | 2.28[a] | 1.09 | 3.04[ab] | 1.42 | 1.16[ab] | 1.05 | 1.71[abc] | 0.93 | 8.13[ab] | 3.11 |
| 13 | 2.21[a] | 1.03 | 3.20[cd] | 1.34 | 1.22[ab] | 1.05 | 1.50[ab] | 0.90 | 8.28[abc] | 2.86 |
| 14 | 2.20[a] | 1.03 | 3.25[d] | 1.31 | 1.24[ab] | 1.03 | 1.42[a] | 0.86 | 8.31[bc] | 2.73 |
| 15 | 2.28[a] | 1.04 | 3.19[cd] | 1.34 | 1.27[b] | 1.07 | 1.67[abc] | 0.87 | 8.37[bc] | 2.86 |
| 16 | 2.28[a] | 1.00 | 3.28[d] | 1.38 | 1.27[b] | 1.05 | 1.64[abc] | 0.85 | 8.45[c] | 2.91 |
| Total | 2.25 | 1.06 | 3.12 | 1.38 | 1.21 | 1.06 | 1.64 | 0.90 | 8.21 | 2.97 |
| F value | 2.38 | | 11.02 | | 2.17 | | .914 | | 2.95 | |
| P value | .026 | | .000 (HS) | | .043 | | .484 | | .007 | |

*Note: F- Fisher's Value; P-Probability; HS-Highly significant; dfs= 6, 9498. Means with different superscripts are significantly different from each other as indicated by Scheffe's Post hoc test (Alpha=.05).

## CONCLUSION

School children exhibited a moderate level of awareness about Dentist and Orthodontist and knowledge about irregular teeth.

The school children had less awareness about Orthodontic treatment. 3. Both boys and girls showed same levels of awareness regarding Orthodontic treatment.

## REFERENCES


1. Dhar V, Jain A, Van Dyke TE , Kohli A; Prevalence of gingival diseases, malocclusion and fluorosis in school-going children of rural areas in Udaipur district . Journal of the Indian Society of Pedodontics and Preventive Dentistry, 2007; 25:103- 105.
2. Foster TD, Menezes DM; The assessment of occlusal features for public health planning purposes . American Journal of Orthodontics, 1976; 69:83- 90.
3. Walther DP, Houston WJB, Jones ML, Oliver RG; Walther and Houston's orthodontic notes . 5th edn . Wright , Oxford, 1994.
4. Kenealy P, Frude N, Shaw W; An evaluation of the psychological and social effects of malocclusion: some implications for dental policy making . Social Science & Medicine, 1989; 28:583-591.
5. Mandeep KB, Nirola A; Malocclusion Pattern In Orthodontic Patients. Indian Journal of Dental Sciences 2012; 4: 4, 20-22.
6. Siddegowda R, Rani; An Epidemiological Survey on Awareness towards Orthodontic Treatment in South Indian School Children. Open Journal of Dentistry and Oral Medicine, 2013; 1(1): 5-8.
7. Anitha G, Asiya B. Adult Orthodontics IJDA, 2010; 2: 96-99
8. Dacosta ON; The prevalence of malocclusion among a population of northern Nigerian school children. West African J Med,1999; 18: 91-96.
9. Chen MS; Children's preventive dental behavior in relation their mothers' socioeconomic status, health beliefs and dental behaviors. J DentChild, 1986; 53:105-9.
10. Al-Wahadni A M, Al-Omiri MK, Kawamura M; Differences in self-reported oral health behavior between dental students and dental technology/dental hygiene students in Jordan. J Oral Sciences 2004; 46:191-7.
11. Kawamura M, Iwamoto Y, Wright FA; A comparison of self-reported dental health attitudes and behavior between selected Japanese and Australian students. J Dent Education, 1997; 61:354- 60.
12. Barrieshi-Nusair K, Alomari Q, Said K; Dental health attitudes and behavior among dental students in Jordan. Community Dent Health, 2006; 23:147-51.
13. Kawamura M, Spadafora A, Kim KJ, Komabayashi T; Comparison of United States and Korean dental hygiene students using hiroshima university-dental behavioral inventory (HU-DBI). Int Dent, J 2002; 52:156-62.
14. Hamilton ME, Coulby WM; Oral health knowledge and habits of senior elementary school students. J Public Health Dent, 1991; 51: 212-9.
15. Kerosuo H , Laine T , Kerosuo E , Ngassapa D , Honkala E; Occlusion among a group of Tanzanian urban schoolchildren . Community Dentistry and Oral Epidemiology, 1988; 16 : 306 – 309
16. Nobile CG , Pavia M, Fortunato L, Angelillo IF; Prevalence and factors related to malocclusion and orthodontic treatment need in children and adolescents in Italy . European Journal of Public Health, 2007; 17:637 – 641.
17. Kaur B; Evaluation of oral health awareness in parents of preschool children. Indian Journal of Dental Research 2009; 20(4):463-465.