

ORIGINAL RESEARCH

Orthodontic Treatment Needs Of 12-Year-Old School-Going Children In A Known Population: A Cross-Sectional Study.

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Abstract

Background: This study was conducted to assess the Orthodontic Treatment Needs of 12-year-old School-going Children in a known population.

Material and methods: A descriptive survey using a cross-sectional approach was going to be conducted among the schoolchildren of a known community. The sample size for the prevalence study was figured up with the help of a method for determining sample size. The prevalence rate was maintained at a constant level of 40%, while the relative precision was maintained at 0.12. The total number of subjects in the sample was one hundred.

Results: The greatest number of participants came from public schools as opposed to private schools, both those that receive and those that do not receive financial assistance. 11 out of 50 boys needed definite treatment, 9 needed moderate treatment and 5 needed mild treatment. Among girls, 8 needed definite treatment whereas 4 and 5 needed mild and moderate treatment.

Conclusion: It was concluded that 42% of the subjects were in need of orthodontic treatment.

Keywords: children, school, orthodontic, treatment.

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Introduction

Oral health connects with other health systems of the body. Good oral health is important for overall well-being of an individual. Oral health is a critical component of health and hence, must be included in the provision of health care and the design of community-based programs.¹ Improving the health and well-being of every individual will help in improving the public health of the country. Public health is nothing but a consolidation of interdisciplinary approaches of epidemiology, biostatistics, and health services. Malocclusion is a misalignment or incorrect relation between the teeth of the two dental arches when they approach each other as the jaws close. Malocclusion is the most common oral health problem along with dental caries, gingivitis, and dental fluorosis.²

Hence, this study was conducted to assess the Orthodontic Treatment Needs of 12-year-old School-going Children in a known population.

Material and methods

A descriptive survey using a cross-sectional approach was going to be conducted among the schoolchildren of a known community. The sample size for the prevalence study was figured up with the help of a method for determining sample size. The prevalence rate was maintained at a constant level of 40%, while the relative precision was maintained at 0.12. The total number of subjects in the sample was one hundred. Children aged 12 years old who attended schools that were sampled and who gave both informed consent from their parents and informed assent to take part in the study were considered eligible for inclusion in the research. Subjects having a history of previous orthodontic treatment, rampant caries or any other craniofacial anomalies and syndromes were excluded from the study. The data were imported into the Statistical Package for the Social Sciences for Windows version 16, where the statistician performed the tasks of cleaning, coding,

recoding, crosschecking, as well as processing and analysis.

Results

Gender	Number of subjects	Percentage
Males	50	50%
Females	50	50%
Total	100	100%

Out of 100 subjects, 50 were males and 50 were females.

Table 2: Number of subjects along with need of orthodontic treatment.

Gender	Little need	Moderate need	Definite need
Boys	05	09	11
Girls	04	05	08

The greatest number of participants came from public schools as opposed to private schools, both those that receive and those that do not receive financial assistance. 11 out of 50 boys needed definite treatment, 9 needed moderate treatment and 5 needed mild treatment. Among girls, 8 needed definite treatment whereas 4 and 5 needed mild and moderate treatment.

Discussion

Children at the age of 12 have a good capacity to recall, retrieve, as well as apply information connected to certain experiences and events in their lives. According to some schools of thought in psychology, victims of bullying are frequently socially isolated and suffer from a variety of psychological conditions, including anxiety and depression.³ During childhood, taunting and name calling can leave effects on a person that might persist well into adulthood. People who are content with their facial look and, presumably, their dental appearance, appear to have better levels of self-confidence and self-esteem than those who are unsatisfied with their facial appearance. This may be because dental appearance is closely related to facial appearance.⁴ The presence of severe malocclusions was linked to sentiments of worthlessness, shame, and inferiority.⁵ Hence, this study was conducted to assess the Orthodontic Treatment Needs of 12-year-old School-going Children in a known population. In this study, out of 100 subjects, 50 were males and 50 were females. The greatest number of participants came from public schools as opposed to private schools, both those that receive and those that do not receive financial assistance. 11 out of 50 boys needed definite treatment, 9 needed moderate treatment and 5 needed mild treatment. Among girls, 8 needed definite treatment whereas 4 and 5 needed mild and moderate treatment. In the present study, 42% of the subjects were in need of orthodontic treatment. A similar study in Travancore population⁶ reported 53.3% in need of orthodontic treatment. However, studies done by Singh et al,⁷ Amado et al⁸ showed 68.4 and 83.8% in need of orthodontic therapy. This difference could be because the latter studies were done on the higher age-range subjects. Also, since the latter studies are done

on subjects in Himachal Pradesh and Kerala, there might be racial differences. Yadav S et al⁹ assessed the need for orthodontic treatment using the Index of Orthodontic Treatment Need (IOTN) between the 12–14-year-old students of Kanpur schools and to evaluate the difference in orthodontic treatment need and demand in terms of genders in Dental Health Component (DHC) and Aesthetic Component (AC). Materials and Methods: A cross-sectional descriptive study was accomplished on 305 subjects (120 male and 185 female) students aged 12–14 years, were clinically examined. DHC was evaluated by a calibrated examiner. AC was determined using 10 standard photographs shown to students. Data were analyzed using chi-squared test to determine differences in treatment needs between subgroups of the subjects. Results: There was a definite need for orthodontic treatment amongst the females (42.7%) than the males (35%). The results of the present study unveil that 72.3% subjects demanded orthodontic treatment from the study sample (51.8% using the DHC-IOTN component and 92.3% using the AC-IOTN) component which means that demand exceeds need. Conclusion: According to DHC of the IOTN, approximately one-third of the population had a definite need for orthodontic treatment, and crowding was the most prevalent malocclusion.

Conclusion

It was concluded that 42% of the subjects were in need of orthodontic treatment.

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