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THE PREVALENCE OF ORTHODONTIC TREATMENT NEEDS IN INDIAN POPULATION: A SYSTEMATIC REVIEW

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ABSTRACT

AIM: *This systematic review assesses the literature regarding the need for orthodontic treatment in the Indian population between the age group of 7 to 25 years of age.*

BACKGROUND: *Electronic databases, including PubMed, Google scholar, Cochrane, DOAJ, Lilac and Scopus, were searched from July 2018 to January 2019, with hand searching of selected orthodontic journals undertaken to identify any missed-out records. Selection criteria included Indian population in various states of India with permanent or mixed dentition of age group 7 to 25 years where the Orthodontic treatment need was measured using IOTN and/or DAI. The quality of included studies was assessed with the use of the modified STROBE (Strengthening the Reporting of Observational studies in Epidemiology) approach. Inter-rater agreement of the review authors was used for the inclusion of primary articles, risk of bias assessment, and evaluation of the quality of evidence (modified STORBE).*

RESULTS: *A total of 654 articles were retrieved in the initial search. After the review process, 30 articles met the inclusion criteria. Sample sizes ranged from 106 to 1800 participants. Based on DAI, 75.90 % of the populations were in no need for treatment and 16.08 % in borderline need for treatment while definite need 5.76 % and severe need 2.24 % of treatment. The aesthetic component of IOTN is in accordance with the results of the DAI, wherein majority of the population (75.94 %) are in no need for treatment and only a minority (27.05 %) require some form of orthodontic treatment. But the results of the dental component of the IOTN state otherwise, wherein 44.15 % of the population needs no treatment while the other 55.83 % of authors have reported that they need treatment.*

CONCLUSIONS: *There appears to be a considerable proportion of the populations with handicapping malocclusion, where treatment is considered mandatory.*

CLINICAL SIGNIFICANCE: *by determining the evidence level supporting prevalence of treatment need, the requirement for man power and resource allocation that may be essential for the adolescence of India can be identified and provided. It also helps to identify the awareness amount the population about their dental health care and needs.*

KEYWORDS: *DAI, IOTN, Indian Population, Orthodontic Treatment Need, Adolescence*