

INPLASY

Risk factors of dental malocclusions

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Data extraction.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 02 March 2024 and was last updated on 02 March 2024.

INTRODUCTION

Review question / Objective What are the risk factors for the development of dental and skeletal malocclusions?

Condition being studied The condition being studied is the dental malocclusion which counts as one of the most prevalent dental conditions, ranking third among oral diseases after periodontal disease and dental caries according to the World Health Organization.

METHODS

Participant or population Patients with malocclusions without age or gender restrictions.

Intervention Literature search to identify potential risk factors for malocclusions.

Comparator Control group.

Study designs to be included Retrospective study, case control study, randomized controlled trials (RCT).

Eligibility criteria - Studies on risk factors and predisposing factors for dental malocclusions - Randomized and non-randomized clinical trials - Descriptive and analytical observational studies: case-control, cohort and cross-sectional studies as well as retrospective studies - Articles published between 2013 and 2023 Articles that met any of the following exclusion criteria were excluded. - Articles judged to be case studies, expert reports, letters, commentaries, editorials, systematic reviews and meta-analyses - Articles not meeting the objectives of our work based on abstract reading and critical reading of the fulltext. - Articles in languages other than English and French - Articles published before 2013.

Information sources PubMed, Science Direct, Cochrane, Web of science, Google scholar.

Main outcome(s) The main outcomes are: to determine the prevalence of various types of malocclusions, to determine the environmental, genetic and ethnic variables, which can help us detect these factors early on to treat patients efficiently.

Data management Chi square test; Fischer test; Regression test.

Quality assessment / Risk of bias analysis After determining the methodological quality of the 13 articles selected, we were able to determine through the strobe tool that 7 articles present a good methodological quality, 5 articles present an average methodological quality and 1 article with a mediocre methodological quality, which constitutes a risk of bias for our systematic review.

Strategy of data synthesis We have selected our articles based on reading the title, summary and full text, and the data has been selected based on: Author/year, type of study, means of acquisition, sample, gender, age, potential risk factors and critical analysis strategy.

Subgroup analysis in the light of the 13 articles, we have been able to determine the following subgroups risk factors related to genetic r factors: Down syndrome Risk factors related to environmental factors: breastfeeding, mouth breathing, digit sucking, infantile type of swallowing, caries, oral hygiene, premature birth.

Sensitivity analysis The sensitivity analysis has not been specified yet in our study protocol.

Country(ies) involved Italy, China, Bangladesh, Syria.

Keywords Corrective orthodontics-Orthodontics-Malocclusion-Risk factor.

Contributions of each author

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