Supplementary Material 1. Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	1
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	1
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	2
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	2
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	2
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	3
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	3
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	Supplementary sections 2–4
Selection of sources of evidence[†]	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	3
Data charting process[‡]	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	3
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	3
Critical appraisal of individual sources of evidence[§]	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	6, 7
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	4, 6

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	Figure 1
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	Tables 1, 2
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	Supplementary Table 2
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	Tables 1, 2
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	7–13
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	13–15
Limitations	20	Discuss the limitations of the scoping review process.	15
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	15
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	15

JBI, Joanna Briggs Institute; PRISMA-ScR, Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

*Where sources of evidence (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

[†]A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with information sources (see first footnote).

[‡]The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

[§]The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA extension for Scoping Reviews (PRISMA-ScR): checklist and explanation. Ann Intern Med 2018;169:467-73. https://doi.org/10.7326/M18-0850.

Supplementary Material 2

Database: Ovid MEDLINE® ALL <1946 to December 22, 2020>
 Search Strategy
1 Cephalometry/ (26,965)
2 exp Cone-Beam Computed Tomography/ (10,624)
3 (cephalogra* or cephalometr* or cone beam).mp. (44,833)
4 1 or 2 or 3 (44,833)
5 exp infant/ or exp child/ or adolescent/ or exp pediatrics/ (3,626,010)
6 (child* or pediatric* or paediatric* or prematur* or preterm* or perinat* or neonat* or neo nat* or newborn* or new born* or infan* or baby* or babies or toddler* or boy* or girl* or kid$1 or school* or juvenil* or underage* or under age* or teen* or minor$1 or youth$1 or adolescen* or pubescen* or puberty).mp. (4,918,655)
7 (neonat* or infan* or child* or adolescen* or pediatric* or paediatric*).mp,jw. (4,358,821)
8 5 or 6 or 7 (4,992,481)
9 st.fs. or reference standards/ or reference values/ (910,952)
10 (standard* or norm* or longitudinal).mp. (4,144,493)
11 9 or 10 (4,228,620)
12 exp dentistry/ or exp jaw/ or exp tooth diseases/ (524,501)
13 (alveolar* or craniofacial or "cranio facial" or dental or dentist* or dento* or mandib* or maxill* or jaw* or malocclusion* or occlusion* or orthodontic* or tooth or teeth).mp. (1,017,043)
14 (craniofacial or dental or dentist* or dento* or orofacial or orthodontic*).jw. (344,495)
15 or/12-14 (1,110,305)
16 4 and 8 and 11 and 15 (4,502)
17 (exp infections/ or exp neoplasms/ or exp musculoskeletal diseases/ or exp digestive system diseases/ or ankyloglossia/ or exp jaw diseases/ or exp mouth diseases/ or exp pharyngeal diseases/ or exp stomatognathic system abnormalities/ or exp temporomandibular joint disorders/ or exp respiratory tract diseases/ or exp otorhinolaryngologic diseases/ or exp nervous system diseases/ or exp eye diseases/ or exp cardiovascular diseases/ or exp "hemic and lymphatic diseases"/ or exp "congenital, hereditary, and neonatal diseases and abnormalities"/ or exp "skin and connective tissue diseases"/ or exp "nutritional and metabolic diseases"/ or exp endocrine system diseases/ or immune system diseases/ or exp "disorders of environmental origin"/ or exp "pathological conditions, signs and symptoms"/ or exp chemically-induced disorders/ or exp "wounds and injuries"/) not exp tooth diseases/ (14,467,104)
18 16 not 17 (3,171)

Supplementary Material 3

Database: Embase Classic+Embase <1947 to 2020 December 21>
  Search Strategy
1 Cephalometry/ (24,023)
2 Cone Beam Computed Tomography/ or Cone Beam Computed Tomography Scanner/ (20,004)
3 (cephalogra* or cephalometr* or cone beam).mp. (49,296)
4 1 or 2 or 3 (49,296)
5 exp juvenile/ or pediatrics/ (4,056,380)
6 (child* or pediatric* or paediatric* or prematur* or preterm* or perinat* or neonat* or neo nat* or newborn* or new born* or infan* or baby* or babies or toddler* or boy* or girl* or kid$1 or school* or juvenil* or underage* or under age* or teen* or minor$1 or youth$1 or adolescen* or pubescen* or puberty).mp. (5,676,501)
7 (neonat* or infan* or child* or adolescen* or pediatric* or paediatric*).mp,jw. (4,771,848)
8 5 or 6 or 7 (5,839,400)
9 standard/ or reference value/ or normal value/ (491,886)
10 (standard* or norm* or longitudinal).mp. (6,102,849)
11 9 or 10 (6,142,754)
12 exp dentistry/ or exp jaw/ or exp tooth disease/ (359,654)
13 (alveolar* or craniofacial or "cranio facial" or dental or dentist* or dento* or mandib* or maxill* or jaw* or malocclusion* or occlusion* or orthodontic* or tooth or teeth).mp. (1,258,407)
14 (craniofacial or dental or dentist* or dento* or orofacial or orthodontic*).jw. (329,755)
15 or/12-14 (1,358,544)
16 4 and 8 and 11 and 15 (4,217)
17 exp diseases/ not (exp tooth disease/ or exp jaw disease/) (24,740,841)
18 16 not 17 (3,128)

Supplementary Material 4

Scopus
Search run on December 23, 2020
5,378 records
(TITLE-ABS-KEY (cephalogra* OR cephalometr* OR "cone beam")) AND ((TITLE-ABS-KEY (child* OR pediatric* OR paediatric* OR prematur* OR preterm* OR perinat* OR neonat* OR "neo nat*" OR newborn* OR "new born*" OR infan* OR baby* OR babies OR toddler* OR boy* OR girl* OR kid OR school* OR juvenil* OR underage* OR "under age*" OR teen* OR minor OR youth OR adolescen* OR pubescen* OR puberty OR "to 18 years" OR "to 18 yrs") OR SRCTITLE (neonat* OR infan* OR child* OR adolescen* OR pediatric* OR paediatric*))) AND (TITLE-ABS-KEY (standard* OR reference* OR norm* OR longitudinal)) AND ((TITLE-ABS-KEY (*alveolar* OR craniofacial OR "cranio facial" OR dental OR dentist* OR dento* OR mandib* OR maxill* OR jaw* OR *occlusion* OR orthodontic* OR tooth OR teeth) OR SRCTITLE (craniofacial OR dental OR dentist* OR dento* OR orofacial OR orthodontic*)))

Supplementary Table 1. List of questions for quality appraisal

Q1. Was the research question or objective in this paper clearly stated?

Q2. Was the study population clearly specified and defined?

Q3. Were selection criteria clearly described and adequate?

Q4. Was follow-up length clearly described for longitudinal studies?
Were the age groups in the sample clearly described for the cross-sectional study?

Q5. Was a sample size justification, power description, or variance and effect estimates provided?

Q6. Was the measurement method clearly defined and appropriate?

Q7. Is the statistical analysis appropriate to answer the research question?

Q8. Was validity of cephalometric x-rays described?

Q9. Was reliability of cephalometric tracings described?

Q10. Were outcome data presented with exact P value, SD, SE, or CI?

SD, standard deviation; SE, standard error; CI, confidence interval.

Supplementary Table 2. Results of quality appraisal for each study in final selection

Study	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q 10	Total score
Jamison et al. (1982)[43]	1	1	1	1	0	1	1	1	1	1	9
Bishara et al. (1984)[1]	1	1	1	1	0	1	1	1	1	1	9
Ursi et al. (1993)[2]	1	1	1	1	0	1	1	0	1	1	8
el-Batouti et al. (1994)[41]	1	1	1	1	0	1	1	1	1	1	9
el-Batouli et al. (1995)[61]	1	1	1	1	0	1	1	1	1	1	9
Thilander et al. (2005)[39]	1	1	1	1	0	1	0	1	1	1	8
Stahl de Castrillon et al. (2013)[30]	1	1	1	1	0	1	1	1	1	1	9
Alió-Sanz et al. (2011)[45]	1	1	1	1	0	1	1	0	1	1	8
Hamamci et al. (2006)[44]	1	1	1	1	0	1	1	1	0	1	8
Jiménez et al. (2020)[28]	1	1	1	1	0	1	1	0	1	1	8
Chuang (2000)[27]	1	1	1	1	0	1	1	0	1	1	8
Bishara and Fernandez (1985)[51]	1	1	1	1	0	1	1	1	1	1	9
Bishara et al. (1990)[34]	1	1	1	1	0	1	1	0	1	1	8
El-Batran et al. (2008)[36]	1	1	1	1	0	1	1	0	1	1	8
Thilander et al. (1982)[42]	1	1	1	1	0	1	1	0	0	1	7
Humerfelt (1970)[32]	1	1	1	1	0	1	1	0	1	1	8
Obloj et al. (2008)[33]	1	1	1	1	0	1	1	1	1	1	9
Kilic et al. (2010)[55]	1	1	1	1	0	1	1	1	1	1	9
Hassan (2005)[53]	1	1	1	1	0	1	1	0	1	1	8
Hamdan and Rock (2001)[62]	1	1	1	1	0	1	1	1	1	1	9
Gleis et al. (1990)[54]	1	1	1	1	0	1	1	1	1	1	9
Aleksić et al. (2012)[35]	1	1	1	1	0	1	1	1	1	1	9
Huang et al. (1998)[48]	1	1	1	0	0	1	1	0	1	1	7
Alexander and Hitchcock (1978)[63]	1	0	1	1	0	1	1	0	1	1	7
Barter et al. (1995)[38]	1	1	1	1	0	1	1	1	1	1	9
Ajayi (2005)[47]	1	1	1	1	0	1	1	1	1	1	9
Folaranmi and Isiekwe (2013)[59]	1	1	1	1	0	1	1	1	0	1	8
Beugre et al. (2007)[64]	1	1	1	1	0	1	1	1	1	1	9
Kapila (1989)[49]	1	1	1	1	0	1	1	0	1	1	8
Sobreira et al. (2011)[25]	1	1	1	1	0	1	1	0	1	1	8
de Freitas et al. (2010)[65]	1	1	1	1	0	1	1	0	1	1	8
de Freitas et al. (2007)[50]	1	1	1	1	0	1	1	1	1	1	9
Janson et al. (2011)[52]	1	1	1	1	0	1	1	1	1	1	9
Vieira et al. (2014)[58]	1	1	1	1	0	1	1	0	1	1	8
Singh Rathore et al. (2012)[60]	1	1	1	1	0	1	1	1	1	1	9
Anuradha et al. (1991)[46]	1	1	1	1	0	1	1	0	1	1	8
Singh et al. (2019)[56]	1	1	1	1	1	1	1	1	1	1	10
Moldez et al. (2006)[31]	1	1	1	1	0	1	1	1	1	1	9
Zhao et al. (2013)[37]	1	1	1	1	0	1	1	0	1	1	8
Gu et al. (2011)[66]	1	1	1	1	0	1	1	1	1	1	9
Pan et al. (1996)[24]	1	1	1	1	0	1	1	0	0	1	7
Chang et al. (1993)[29]	1	1	1	1	0	1	1	0	1	1	8
AlShayea et al. (2022)[26]	1	1	1	1	1	1	1	1	1	1	10
Storniolo-Souza et al. (2021)[57]	1	1	1	1	0	1	1	1	1	1	9
Al-Taai et al. (2022)[40]	1	1	1	1	0	1	1	1	1	1	9