

Appendices

Appendix I: Search strategy

Medline (Pubmed)

Search	Query	Records Retrieved
#1	(“developmental dysplasia of the hip” OR “congenital hip dislocation” OR “developmental dysplasia” OR “DDH” OR “hip dysplasia”) AND (“brasil*” OR “brazil*”)	105
#2	(“displasia do desenvolvimento do quadril” OR “luxação congênita de quadril” OR “displasia do desenvolvimento” OR “DDQ” OR “displasia do quadril”) AND (“brasil*” OR “brazil*”)	11

Web of Science

Search	Query	Records Retrieved
#1	ALL=("developmental dysplasia of the hip" OR "congenital hip dislocation" OR "developmental dysplasia" OR "DDH" OR "hip dysplasia") AND ALL=("brasil*" OR "brazil*")	192
#2	ALL=(“displasia do desenvolvimento do quadril” OR “luxação congênita de quadril” OR “displasia do desenvolvimento” OR “DDQ” OR “displasia do quadril”) AND ALL=(“brasil*” OR “brazil*”)	31

Scopus

Search	Query	Records Retrieved
#1	ALL("developmental dysplasia of the hip" OR "congenital hip dislocation" OR "developmental dysplasia" OR "DDH" OR "hip dysplasia") AND (TITLE-ABS-KEY-AUTH("brasil*" OR "brazil*") OR AFFIL("brasil*" OR "brazil*"))	470

#2	ALL(“displasia do desenvolvimento do quadril” OR “luxação congênita de quadril” OR “displasia do desenvolvimento” OR “DDQ” OR “displasia do quadril”) AND (TITLE-ABS-KEY-AUTH("brasil*" OR "brazil*") OR AFFIL("brasil*" OR "brazil*"))	132
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Biblioteca Virtual em Saúde

Search	Query	Records Retrieved
#1	((developmental dysplasia of the hip) OR (ddh) OR (congenital hip dislocation) OR (hip dysplasia) OR (developmental dysplasia)) AND ((af:(brasil*)) OR (af:(brazil*)) OR (brasil*) OR (brazil*))	311
#2	((displasia do desenvolvimento do quadril) OR (luxação congênita de quadril) OR (displasia do desenvolvimento) OR (DDQ) OR (displasia do quadril)) AND ((af:(brasil*)) OR (af:(brazil*)) OR (brasil*) OR (brazil*))	257

Biblioteca Digital Brasileira de Teses e Dissertações

Search	Query	Records Retrieved
#1	(Todos os campos:"developmental dysplasia of the hip" OU Todos os campos:"congenital hip dislocation" OU Todos os campos:"developmental dysplasia" OU Todos os campos:"hip dysplasia" OU Todos os campos:"DDH")	293
#2	(Todos os campos:"displasia do desenvolvimento do quadril" OU Todos os campos:"luxação congênita de quadril" OU Todos os campos:"displasia do desenvolvimento" OU Todos os campos:"displasia do quadril")	184

Manual search of Revista Brasileira Ortopedia

Records retrieved - 19

Manual search of Acta Ortopedia Brasileira

Records retrieved - 4

Appendix II: Studies ineligible following full-text review

1. Ahmed E, Mohamed AH, Wael H. Surgical treatment of the late - presenting developmental dislocation of the hip after walking age. *Acta Ortop Bras.* 2013;21(5):276-80.
Reason for exclusion: wrong population.
2. Andrade MN, Avila PES, Bossini ES. Tratamento fisioterapêutico da displasia do desenvolvimento do quadril: revisão bibliográfica. *Rev Para Med.* 2015;29(1):45-50.
Reason for exclusion: wrong population.
3. Bertol P, Ishida A, Macnicol MF. Tratamento da displasia do desenvolvimento do quadril pela técnica de Salter isolada ou associada à osteotomia do fêmur. *Rev Bras Ortop.* 2004;39(5). 232-44.
Reason for exclusion: wrong population.
4. Bertol P, Macnicol MF. Tratamento cirúrgico da displasia acetabular residual em portadores de luxação congênita do quadril. *Rev Bras Ortop.* 1996;31(1):11-6
Reason for exclusion: wrong population.
5. Schott PCM. Developmental dysplasia of the hip and dysplastic dislocation of the hip. *Rev Bras Ortop.* 2000;35(1/2):1-6.
Reason for exclusion: wrong study design.
6. Duarte ML, Motta GGB, Rodrigues NVM, Chiovatto ARS, Chiovatto ED, Iared W. Ultrasound techniques for the detection of developmental dysplasia of the hip: a systematic review and meta-analysis. *Sao Paulo Med J.* 2023;141(2):154-67.
Reason for exclusion: wrong study design.
7. Souza BGS, de Melo TE, Resende TM, da Silva RCR, Crus SA, de Oliveira VM. Developmental dysplasia of the hip: do the responsible for screening know what to do? *Acta Ortop Bras.* 2016;24(6):312-7.
Reason for exclusion: wrong population.
8. Forlin E, da Cunha LAM, Figueiredo DC. Treatment of developmental dysplasia of the hip after walking age with open reduction, femoral shortening, and acetabular osteotomy. *Orthop Clin N Am.* 2006;37:149-160.
Reason for exclusion: wrong study design.
9. Guarniero R. Displasia do desenvolvimento do quadril: atualização. *Rev Bras Ortop.* 2010;46(2):116-21.
Reason for exclusion: wrong study design.

10. Matos MA, Almedia ND, Hocevar LS, Tartaglia A, Salles C, de Souza AJ. One stage procedure for developmental dysplasia of the hip in patients aged eight years or older. Systematic review and meta-analysis. *Acta Ortho Belg.* 2023;81(1):45-50.
Reason for exclusion: wrong population.
11. Matos MA. Avaliação ultra-sonográfica pelo método de graf no quadril infantil. *Rev Assoc Med Bras.* 2006;52(1):53-5.
Reason for exclusion: wrong study design.
12. Rodrigues VB, Valério J, Zaniolo F, Deeke M, Pedroni M, Schuroff A. Osteotomia periacetabular do quadril para tratamento da displasia residual: resultados preliminares. *Rev Bras Ortop.* 2018;53(3):332-6.
Reason for exclusion: wrong study design.
13. Schott PCM. Displasia do desenvolvimento do quadril e luxação displásica do quadril. *Rev Bras Ortop.* 2000;35(1/2):1-6.
Reason for exclusion: wrong study design.
14. Silva MS, Fernandes ARG, Cardoso FN, Longo CH, Aihara AY. Radiography, CT, and MRI of hip and lower limb disorders in children and adolescents. *Radiographics.* 2019;39:779-94.
Reason for exclusion: wrong study design.
15. Vasyl S, Viktor F. Modified Salter pelvic osteotomy for the DDH treatment. *Acta Ortop Bras.* 2023;31(1):e259040.
Reason for exclusion: wrong population.
16. Lage LAA, Rodrigues LEA, Stump XMGRG, Guarniero R, Peixinho M. A tomografia axial computadorizada na luxação congênita do quadril. *Rev Bras Ortop.* 1990;25(8):282-7.
Reason for exclusion: wrong study design.
17. Wertheimer LG, Lopes SLF. Embriologia e desenvolvimento da articulação do quadril em relação à luxação congênita. *Rev Bras Ortop.* 1968;3(2-3):75-82
Reason for exclusion: wrong study design.
18. Ishida A, Milani C, Kuwajima SS, Filho JL, Ortore PG. *Acta Ortop Bras.* 1994;2(2):67-9.
Reason for exclusion: wrong study design

Appendix III: Data extraction instrument

Article Title

Author(s)

Publication year

Study design

Number of patients

Level of evidence

Region of Brazil

Healthcare setting (public or private)

Category of study (epidemiology, screening, diagnosis, treatment, outcomes)

Is Pubmed indexed?

Is a master's or doctoral thesis?

Estimated DDH prevalence

Sex of patients

Race of patients

Fetal presentation at birth

Other conditions noted

Family history of DDH

Considered risk factors

Clinical exam at birth

Criteria for selective ultrasonography

Use of imaging in diagnosis

Method of ultrasound examination

Rate of late diagnosed DDH

Age at initiation of treatment

Time between diagnosis and treatment

Treatment strategies

Incidence of successful closed reduction

Incidence of post-treatment subluxation

Incidence of post-treatment avascular necrosis

Incidence of post-treatment acetabular dysplasia

Incidence of secondary procedures

Appendix IV: [Characteristics of included studies](#)

References	Study category	Study design	Number of patients	Level of evidence	Region of Brazil	Journal	PubMed index
Bitar, 1951 [65]	Treatment, Outcome	Case series	32	IV	Southeast	Revista Brasileira de Cirurgia	Yes
Arena, 1976 [22]	Screening, Diagnosis	Prospective cohort	2,964	IV	Southeast	Revista Brasileira de Ortopedia	No
Sobrinho et al., 1982 [66]	Treatment, Outcome	Case series	36	IV	South	Revista Brasileira de Ortopedia	No
da Cunha et al., 1985 [67]	Treatment, Outcome	Case series	44	IV	Southeast	Revista Brasileira de Ortopedia	No
Napoli et al., 1985 [45]	Treatment, Outcome	Case series	11	IV	Southeast	Revista do Hospital da Clínicas	Yes
Steglich et al., 1984 [68]	Treatment, Outcome	Case series	98	IV	South	Revista Brasileira de Ortopedia	No
Volpon and Filho, 1985 [23]	Epidemiology, Treatment, Outcomes	Cross-sectional/case series	16,429	IV	South	Revista Brasileira de Ortopedia	No

Guarniero et al., 1986 [33]	Diagnosis	Case series	17	IV	Southeast	Revista do Hospital da Clínicas	Yes
Guarniero et al., 1986 [69]	Diagnosis	Case series	25	IV	Southeast	Revista Brasileira de Ortopedia	No
Guarniero et al., 1988 [24]	Screening	Cross-section nal	9	III	Southeast	Revista Brasileira de Ortopedia	No
Bertol, 1987 [70]	Treatment, Outcome	Case series	37	IV	South	Revista Brasileira Ortopedia	No
Preuss et al., 1988 [71]	Treatment, Outcome	Case series	18	IV	South	Revista Brasileira de Ortopedia	No
Bertol and Monteggia, 1990 [72]	Treatment, Outcome	Case series	19	IV	South	Revista Brasileira de Ortopedia	No
Palhas et al., 1991 [27]	Diagnosis	Cross-section nal	28	III	Midwest	Revista Brasileira de Ortopedia	No
Herbert et al., 1992 [73]	Screening, Diagnosis	Cross-section nal	369	IV	South	Revista Brasileira de Ortopedia	No

Milani et al., 1993 [34]	Screening, Diagnosis	Comparative cross-sectional	200	IV	Southeast	Revista Brasileira de Ortopedia	No
Queiroz et al., 1993 [40]	Treatment, Outcome	Case series	66	IV	Midwest	Revista Brasileira Ortopedia	No
Volpon et al., 1994 [74]	Treatment, Outcome	Case series	34	IV	Southeast	Acta Ortopedia Brasileira	No
Milani et al., 1995 [61]	Treatment, Outcome	Retrospective cohort	26	III	Southeast	Revista Brasileira de Ortopedia	No
da Rocha et al., 1995 [75]	Treatment, Outcome	Case series	14	IV	South	Revista Brasileira de Ortopedia	No
Milani et al., 1996 [63]	Treatment, Outcome	Case series	23	IV	Southeast	Revista Brasileira de Ortopedia	No
Milani et al., 1996 [76]	Treatment, Outcome	Case series	23	IV	Southeast	Revista Brasileira de Ortopedia	No
Angelini et al., 1997 [39]	Treatment, Outcome	Case series	54	IV	Southeast	Revista Brasileira de Ortopedia	No
Meyer et al., 1997 [29]	Screening, Diagnosis	Retrospective cohort	314	III	South	Acta Ortopedia Brasileira	No

Pacheco et al., 1997 [28]	Screening, Diagnosis	Prospective cohort	225	III	Southeast	Revista do Colégio Brasileiro de Cirurgiões	No
Milani et al., 1999 [77]	Treatment, Outcome	Case series	18	IV	Southeast	Revista Brasileira de Ortopedia	No
Milani et al., 1999 [78]	Outcome	Diagnostic accuracy	14	IV	Southeast	Revista Brasileira Ortopedia	No
Yoshiyasu et al., 1999 [79]	Treatment, Outcome	Prospective cohort	47	III	South	Revista Brasileira de Ortopedia	No
Milani et al., 2000 [80]	Epidemiology, Screening	Cross-sectio nal	200	IV	Southeast	Journal of Pediatric Orthopaedics B	Yes
Filho et al., 2003 [81]	Treatment, Outcome	Case series	18	IV	Southeast	Acta Ortopedia Brasileira	No
Dobashi et al., 2006 [43]	Treatment, Outcome	Case series	50	IV	Southeast	Acta Ortopédica Brasileira	No
Cordeiro et al., 2009 [42]	Treatment, Outcome	Cross-sectio nal	33	III	Southeast	Acta Ortopédica Brasileira	No
de Moura et al., 2009 [41]	Treatment, Outcome	Case series	30	IV	Southeast	Acta Ortopédica Brasileira	No

da Rocha et al., 2011 [82]	Treatment, Outcome	Case series	14	IV	Midwest	Revista Brasileira de Ortopedia	Yes
Jacobino et al., 2012 [83]	Screening, Diagnosis	Cross-sectional	222	IV	Southeast	Autopsy & case reports	Yes
Kotzias et al., 2014 [60]	Treatment, Outcome	Case series	21	IV	South	Revista Brasileira de Ortopedia	Yes
da Rocha et al., 2014 [59]	Treatment, Outcome	Case series	13	IV	Midwest	Revista Brasileira de Ortopedia	Yes
Teixeira et al., 2015 [31]	Screening, Diagnosis	Diagnostic accuracy	116	III	Southeast	European journal of radiology	Yes
Ferreira, 2017 [25]	Epidemiology, Screening	Cross-sectional	5,746	III	Midwest	Unpublished thesis	No
Maranho et al., 2017 [30]	Treatment, Outcome	Case series	25	IV	Southeast	Skeletal radiology	Yes
Massa et al., 2017 [84]	Outcome	Diagnostic accuracy	23	IV	Southeast	The bone & joint journal	Yes
Guarniero et al., 2018 [85]	Treatment, Outcome	Case series	19	IV	Southeast	Acta Ortopédica Brasileira	Yes

Barbosa et al., 2019 [50]	Screening, Diagnosis	Cross-sectional	35	III	South	Revista Brasileira de Ortopedia	Yes
Cruz and Volpon, 2019 [86]	Screening, Diagnosis	Cross-sectional	448	III	Southeast	Revista do Colégio Brasileiro de Cirurgiões	Yes
Gonzalez et al., 2019 [87]	Screening, Diagnosis	Prospective cohort	34	IV	Southeast	Acta Ortopédica Brasileira	Yes
Goiano et al., 2020 [88]	Epidemiology, Screening	Retrospective comparative	297	III	Southeast	Acta Ortopédica Brasileira	Yes
Motta et al., 2021 [26]	Epidemiology, Screening	Cross-sectional	678	III	Southeast	Revista Brasileira de Ortopedia	Yes
Souza et al., 2021 [64]	Epidemiology, Screening, Treatment	Ecological analytical	14,584	III	Whole country	Einstein	Yes
Ferreira et al., 2022 [89]	Epidemiology	Cross-sectional	1,150	III	Whole Country	Research, Society and Development	No

Motta et al., 2022 [32]	Epidemiology, Screening, Diagnosis	Diagnostic accuracy	1,98	III	Southeast	Journal of ultrasound in medicine	Yes
de Oliveira et al., 2023 [90]	Epidemiology	Cross sectional	1,481	III	Northeast	Revista Paulista de Pediatria	Yes
de Resende, unpublished data, 2023	Epidemiology, Treatment	Cross-sectio nal	51	III	Southeast	Revista Brasileira de Ortopedia	Yes