

## **SUPPORTING INFORMATION**

**Prevalence of overweight and obesity among Brazilian adolescents over time: a systematic review and meta-analysis**

**Table S1.** Search strategy by database.

**PUBMED:** "Overweight" [Mesh] OR "Overweight" [Title/Abstract] OR "Obesity" [Mesh] OR "Obesity" [Title/Abstract] OR "Pediatric Obesity" [Mesh] OR "Pediatric Obesity" [Title/Abstract] OR "Obesity, Pediatric" [Title/Abstract] OR "Childhood Obesity" [Title/Abstract] OR "Obesity, Childhood" [Title/Abstract] OR "Childhood Onset Obesity" [Title/Abstract] OR "Obesity, Childhood Onset" [Title/Abstract] OR "Child Obesity" [Title/Abstract] OR "Obesity, Child" [Title/Abstract] OR "Childhood Overweight" [Title/Abstract] OR "Childhood Overweights" [Title/Abstract] OR "Overweight, Childhood" [Title/Abstract] OR "Obesity in Childhood" [Title/Abstract] OR "Infant Obesity" [Title/Abstract] OR "Obesity, Infant" [Title/Abstract] OR "Infant Overweight" [Title/Abstract] OR "Overweight, Infant" [Title/Abstract] OR "Infantile Obesity" [Title/Abstract] OR "Obesity, Infantile" [Title/Abstract] OR "Adolescent Obesity" [Title/Abstract] OR "Obesity, Adolescent" [Title/Abstract] OR "Obesity in Adolescence" [Title/Abstract] OR "Adolescent Overweight" [Title/Abstract] OR "Overweight, Adolescent" [Title/Abstract] OR "Body Mass Index" [Mesh] OR "Body Mass Index" [Title/Abstract] OR "Index, Body Mass" [Title/Abstract] OR "Quetelet Index" [Title/Abstract] OR "Index, Quetelet" [Title/Abstract] OR "Quetelet's Index" [Title/Abstract] OR "Quetelets Index" [Title/Abstract] **AND** Brazil [Mesh] OR Brazil\* [Title/Abstract] OR Brazil [Title/Abstract] OR "Minas Gerais" [Title/Abstract] OR "São Paulo" [Title/Abstract] OR "Espírito Santo" [Title/Abstract] OR "Rio de Janeiro" [Title/Abstract] OR Bahia [Title/Abstract] OR Pará [Title/Abstract] OR "Mato Grosso" [Title/Abstract] OR "Mato Grosso do Sul" [Title/Abstract] OR Goiás [Title/Abstract] OR "Rio Grande do Sul" [Title/Abstract] OR Ceará [Title/Abstract] OR Pernambuco [Title/Abstract] OR "Santa Catarina" [Title/Abstract] OR Amazonas [Title/Abstract] OR Maranhão [Title/Abstract] OR Tocantins [Title/Abstract] OR Piauí [Title/Abstract] OR Rondônia [Title/Abstract] OR Roraima [Title/Abstract] OR Paraná [Title/Abstract] OR Acre [Title/Abstract] OR Amapá [Title/Abstract] OR Paraíba [Title/Abstract] OR "Rio Grande do Norte" [Title/Abstract] OR Alagoas [Title/Abstract] OR Sergipe [Title/Abstract] OR "Distrito Federal" [Title/Abstract] **AND** "Child"[Mesh] OR "Child"[Title/Abstract] OR "Children"[Title/Abstract] OR "Adolescent"[Mesh] OR "Adolescent"[Title/Abstract] OR "Adolescents"[Title/Abstract] OR "Adolescence"[Title/Abstract] OR "Teens"[Title/Abstract] OR "Teen"[Title/Abstract] OR "Teenagers"[Title/Abstract] OR "Teenager"[Title/Abstract] OR "Youth"[Title/Abstract] OR "Youths"[Title/Abstract] OR "Adolescents, Female"[Title/Abstract] OR "Adolescent, Female"[Title/Abstract] OR "Female Adolescent"[Title/Abstract] OR "Female Adolescents"[Title/Abstract] OR "Adolescents, Male"[Title/Abstract] OR "Adolescent, Male"[Title/Abstract] OR "Male Adolescent"[Title/Abstract] OR "Male Adolescents"[Title/Abstract] \***AND** Prevalence [Mesh] OR Prevalence

**EMBASE:** 'obesity'/exp/mj OR 'adolescent obesity'/exp/mj OR 'childhood obesity'/exp/mj OR 'paediatric obesity':ab,ti OR 'pediatric obesity':ab,ti OR 'adiposity':ab,ti OR 'alimentary obesity':ab,ti OR 'body weight, excess':ab,ti OR 'nutritional obesity':ab,ti OR 'overweight':ab,ti OR 'body mass'/exp/mj OR 'BMI (body mass index)':ab,ti OR 'body ban mass':ab,ti OR 'body mass index':ab,ti OR 'Quetelet index':ab,ti **AND** Brazil/exp/mj OR Brazil:ab,ti OR 'Minas Gerais':ab,ti OR 'São Paulo':ab,ti OR 'Espírito Santo':ab,ti OR 'Rio de Janeiro':ab,ti OR Bahia:ab,ti OR Pará:ab,ti OR 'Mato Grosso':ab,ti OR 'Mato Grosso do Sul':ab,ti OR Goiás:ab,ti OR 'Rio Grande do Sul':ab,ti OR Ceará:ab,ti OR Pernambuco:ab,ti OR 'Santa Catarina':ab,ti OR Amazonas:ab,ti OR Maranhão:ab,ti OR Tocantins:ab,ti OR Piauí:ab,ti OR Rondônia:ab,ti OR Roraima:ab,ti OR Paraná:ab,ti OR Acre:ab,ti OR Amapá:ab,ti OR Paraíba:ab,ti OR 'Rio Grande do Norte':ab,ti OR Alagoas:ab,ti OR Sergipe:ab,ti OR 'Distrito Federal':ab,ti **AND** 'child'/exp/mj OR 'children':ab,ti OR 'adolescent'/exp/mj OR 'teenager':ab,ti \***AND** Prevalence/exp OR Prevalence:ab,ti

**LILACS:**

**ENGLISH:** a) **Title** - (ti:(("Overweight" OR "Obesity" OR "Pediatric Obesity" OR "Childhood Obesity" OR "Child Obesity" OR "Childhood Overweight" OR "Obesity in Childhood" OR "Infant Obesity" OR "Infant Overweight" OR "Infantile Obesity" OR "Adolescent Obesity" OR "Obesity in Adolescence" OR "Adolescent Overweight" OR "Body Mass Index")) AND (ti:(Brazil)) AND (ti:(("Child" OR "Children" OR "Adolescent" OR "Adolescents" OR "Adolescence" OR "Teens" OR "Teen" OR "Teenagers" OR "Teenager" OR "Youth" OR "Youths" OR "Female Adolescent" OR "Female Adolescents" OR "Male Adolescent" OR "Male Adolescents")))). b) **Abstract** - (ab:(("Overweight" OR "Obesity" OR "Pediatric Obesity" OR "Childhood Obesity" OR "Child Obesity" OR "Childhood Overweight" OR "Obesity in Childhood" OR "Infant Obesity" OR "Infant Overweight" OR "Infantile Obesity" OR "Adolescent Obesity" OR "Obesity in Adolescence" OR "Adolescent Overweight" OR "Body Mass Index")) AND (ab:(Brazil)) AND (ab:(("Child" OR "Children" OR "Adolescent" OR "Adolescents" OR "Adolescence" OR "Teens" OR "Teen" OR "Teenagers" OR "Teenager" OR "Youth" OR "Youths" OR "Female Adolescent" OR "Female Adolescents" OR "Male Adolescent" OR "Male Adolescents")))).

**PORTUGUESE:** a) **Title** - (ti:(Sobrepeso OR Obesidade OR "Obesidade pediátrica" OR "Obesidade infantil" OR "Sobrepeso infantil" OR "Sobrepeso pediátrico" OR "Obesidade na adolescência" OR "Sobrepeso na adolescência" OR "Índice de massa corporal")) AND (ti:(Criança OR Crianças OR Adolescente OR Adolescentes OR Adolescência OR Juvenil OR Jovem OR Jovens OR Infância)) AND (ti:(Brasil)). b) **Abstract** - (ab:(Sobrepeso OR Obesidade OR "Obesidade pediátrica" OR "Obesidade infantil" OR "Sobrepeso infantil" OR "Sobrepeso pediátrico" OR "Obesidade na adolescência" OR "Sobrepeso na adolescência" OR "Índice de massa corporal")) AND (ab:(Criança OR Crianças OR Adolescente OR Adolescentes OR Adolescência OR Juvenil OR Jovem OR Jovens OR Infância)) AND (ab:(Brasil)).

**SCIELO:**

**ENGLISH:** (ti:(ab:(("Overweight" OR "Obesity" OR "Pediatric Obesity" OR "Childhood Obesity" OR "Child Obesity" OR "Childhood Overweight" OR "Obesity in Childhood" OR "Infant Obesity" OR "Infant Overweight" OR "Infantile Obesity" OR "Adolescent Obesity" OR "Obesity in Adolescence" OR "Adolescent Overweight" OR "Body Mass Index")) AND (ab:(Brazil)) AND (ab:(("Child" OR "Children" OR "Adolescent" OR "Adolescents" OR "Adolescence" OR "Teens" OR "Teen" OR "Teenagers" OR "Teenager" OR "Youth" OR "Youths" OR "Female Adolescent" OR "Female Adolescents" OR "Male Adolescent" OR "Male Adolescents")))))

**PORTUGUESE:** (ti:(ab:(Sobrepeso OR Obesidade OR "Obesidade pediátrica" OR "Obesidade infantil" OR "Sobrepeso infantil" OR "Sobrepeso pediátrico" OR "Obesidade na adolescência" OR "Sobrepeso na adolescência" OR "Índice de massa corporal")) AND (ab:(Criança OR Crianças OR Adolescente OR Adolescentes OR Adolescência OR Juvenil OR Jovem OR Jovens OR Infância)) AND (ab:(Brasil))))

**Table S2.** Summary and characteristics of included studies (n=151).

Study	Type of study	First year of data collection	Age range (years)	City, state or region	Criteria of diagnosis	Sample size	Number of girls (%)
Da Veiga et al., 2004* <sup>(38)</sup>	CS, household survey	1974	10-19	Southeast and Northeast regions	IOTF	40493	20681 (51)
De Vasconcelos Chaves et al., 2010* <sup>(39)</sup>	CS, Army database	1980	17-19	26 Brazilian states and Federal District	WHO 95	3,705,984	0
Da Veiga et al., 2004* <sup>(38)</sup>	CS, household survey	1989	10-19	Southeast and Northeast regions	IOTF	6469	3173 (49)
De Vasconcelos Chaves et al., 2010* <sup>(39)</sup>	CS, Army database	1990	17-19	26 Brazilian states and Federal District	WHO 95	3,318,628	0
Sawaya et al., 1995 <sup>(40)</sup>	CS, household survey	1990	10-18	São Paulo (SP)	WHO 83	682	308 (45)
Caliman et al., 2006* <sup>(41)</sup>	CS, Army database	1995	17-19	Viçosa (MG)	CDC 2000	1324	0
Chiara et al., 2003 <sup>(42)</sup>	CS, household survey	1995	12-18	Rio de Janeiro (RJ)	IOTF	502	238 (47)
Da Veiga et al., 2004* <sup>(38)</sup>	CS, household survey	1996	10-19	Southeast and Northeast regions	IOTF	3934	1948 (50)
Peres et al., 2008 <sup>(43)</sup>	CO, birth cohort	1997	15	Pelotas (RS)	WHO 95	888	408 (46)
Silva and Malina, 2003 <sup>(44)</sup>	CS, school-based survey	1997	14-15	Niterói (RJ)	Himes e Dietz, 1994	323	200 (62)
Anjos et al., 2003 <sup>(45)</sup>	CS, school-based survey	1999	10-17	Rio de Janeiro (RJ)	IOTF	1913	954 (50)
Lancarotte et al., 2010 <sup>(46)</sup>	CS, school-based survey	1999	10-19	São Paulo (SP)	Must	1861	NI
De Vasconcelos Chaves et al., 2010* <sup>(39)</sup>	CS, Army database	2000	17-19	26 Brazilian states and Federal District	WHO 95	1,745,871	0
Caliman et al., 2006* <sup>(41)</sup>	CS, Army database	2000	17-19	Viçosa (MG)	CDC 2000	1289	0

Frainer et al., 2011 <sup>(47)</sup>	CS, household survey	2000	10-18	Salvador (BA)	Conde e Monteiro	426	207 (49)
Freitas Junior et al., 2008 <sup>(48)</sup>	CS, school-based survey	2000	10-18	Presidente Prudente (SP)	IOTF	951	439 (46)
Nobre et al., 2006 <sup>(49)</sup>	CS, school-based survey	2000	10-14	São Paulo (SP)	Must	2125	1073 (50)
Farias Júnior et al., 2003 <sup>(50)</sup>	CS, school-based survey	2001	15-18	Florianópolis (SC)	IOTF	1832	925 (50)
De Souza Ferreira et al., 2008 <sup>(51)</sup>	CS, school-based survey	2001	12-19	Metropolitan area, Rio de Janeiro (RJ)	IOTF	561	383 (68)
Terres et al., 2006 <sup>(52)</sup>	CS, household survey	2001	15-18	Pelotas (RS)	IOTF	960	497 (52)
Campagnolo et al., 2008 <sup>(53)</sup>	CS, household survey	2002	10-19	São Leopoldo (RS)	WHO 95	722	429 (59)
Del Duca et al., 2010 <sup>(54)</sup>	CS, school-based survey	2002	15-19	Santa Catarina	IOTF	5028	2984 (59)
Kuschnir et al., 2009 <sup>(55)</sup>	CS, school-based survey	2002	13-14	Nova Iguaçu (RJ)	CDC 2000	2858	1433 (50)
Rodrigues et al., 2006 <sup>(56)</sup>	CS, school-based survey	2003	10-14	Vitória (ES)	IOTF	380	203 (53)
Amorim et al., 2006 <sup>(57)</sup>	CS, school-based survey	2003	11-14	Minas gerais (MG)	IOTF	1719	861 (50)
Barros et al., 2014 <sup>(58)</sup>	CS, school-based survey	2003	15-19	Niterói (RJ)	WHO 07	530	353 (67)
Campos et al., 2006 <sup>(59)</sup>	CS, school-based survey	2003	10-19	Fortaleza (CE)	Must	1158	555 (48)
Costa et al., 2007 <sup>(60)</sup>	CS, school-based survey	2003	14-19	Toledo (PR)	WHO 95	2562	1423 (56)
Dutra et al., 2006 <sup>(61)</sup>	CS, household survey	2003	10-19	Pelotas (RS)	WHO 95	810	403 (50)
Gomes et al., 2009 <sup>(62)</sup>	CS, household survey	2003	10-19	Niterói (RJ)	WHO 07	523	NI

Rosa et al., 2006 <sup>(63)</sup>	CS, school-based survey	2003	12-17	Niterói (RJ)	CDC 2002	456	253 (55)
Pereira et al., 2018* <sup>(64)</sup>	CS, household survey	2003	12-19	São Paulo (SP)	WHO 07	360	NI
Pelegriani et al., 2010 <sup>(65)</sup>	CS, school-based survey	2004	10-17	Chapecó, Concórdia e Saudades (SC); Eral Grande (RS)	IOTF	1415	695 (49)
Araujo et al., 2010 <sup>(66)</sup>	CO, birth cohort	2004	11	Pelotas (RS)	WHO 95	4452	2260 (51)
Barbiero et al., 2009 <sup>(67)</sup>	CS, school-based survey	2004	10-18	Porto Alegre (RS)	WHO 95	511	282 (55)
Cintra et al., 2014 <sup>(68)</sup>	CS, school-based survey	2004	10-15	São Paulo (SP)	WHO 07	8019	4317 (55)
Detsch et al., 2007 <sup>(69)</sup>	CS, school-based survey	2004	14-18	São Leopoldo (RS)	IOTF	495	495 (100)
Thomaz et al., 2010 <sup>(70)</sup>	CS, school-based survey	2004	12-15	Salvador (BA)	WHO 07	2060	1168 (57)
Suñe et al., 2007 <sup>(71)</sup>	CS, school-based survey	2004	11-13	Capão da Canoa (RS)	IOTF	719	361 (50)
Goldani et al., 2013 <sup>(72)</sup>	CO, birth cohort	2004	10-11	Ribeirão Preto (SP)	IOTF	790	388 (49)
Toral et al., 2007 <sup>(73)</sup>	CS, school-based survey	2004	10-17	Piracicaba (SP)	CDC 2000	390	209 (54)
Aerts et al., 2010 <sup>(74)</sup>	CS, school-based survey	2005	10-18	Gravataí (RS)	IOTF	1442	707 (49)
Vanzelli et al., 2008 <sup>(75)</sup>	CS, school-based survey	2005	10-18	Jundiaí (SP)	IOTF	662	336 (51)
Santana et al., 2017* <sup>(76)</sup>	CS, household survey	2005	12-19	Duque de Caxias (RJ)	WHO 07	511	259 (51)
Fanhani et al., 2011 <sup>(77)</sup>	CS, school-based survey	2005	12-16	Maringá (PR)	Must	1212	NI
Flores et al., 2013* <sup>(78)</sup>	CS, school-based survey	2005	11-14	26 Brazilian states and Federal District	Conde e Monteiro	14069	6498 (46)

Oliveira et al., 2009 <sup>(79)</sup>	CS, household survey	2005	10-19	Gameleira (PE) and São João do Tigre (PB)	WHO 95	645	NI
Silva and Lopes, 2008 <sup>(80)</sup>	CS, school-based survey	2005	10-12	João Pessoa (PB)	IOTF	692	NI
Stabelini Neto et al., 2012 <sup>(81)</sup>	CS, school-based survey	2006	12-18	Curitiba, São Matheus and Jacarezinho (PR)	CDC 2000	582	295 (51)
Coelho et al., 2012 <sup>(82)</sup>	CS, school-based survey	2006	10-14	Ouro Preto (MG)	WHO 07	414	NI
Fernandes et al., 2007 <sup>(83)</sup>	CS, school-based survey	2006	11-17	Presidente Prudente (SP)	IOTF	807	445 (55)
Kac et al., 2012 <sup>(84)</sup>	CS, household survey	2006	15-19	26 Brazilian states and Federal District	WHO 06	1529	1529 (100)
Leal et al., 2012 <sup>(85)</sup>	CS, household survey	2006	10-19	Pernambuco (PE)	WHO 07	735	NI
Tassitano et al., 2009 <sup>(86)</sup>	CS, school-based survey	2006	14-19	Recife (PE)	IOTF	4210	2517 (60)
Flores et al, 2013* <sup>(78)</sup>	CS, school-based survey	2007	11-14	26 Brazilian states and Federal District	Conde e Monteiro	8327	3589 (43)
Pelegriani et al., 2007 <sup>(87)</sup>	CS, school-based survey	2007	14-18	Florianópolis (SC)	IOTF	653	418 (64)
Benedet et al., 2013 <sup>(88)</sup>	CS, school-based survey	2007	11-14	Florianópolis (SC)	IOTF	1590	837 (53)
Christofaro et al., 2014 <sup>(89)</sup>	CS, school-based survey	2007	10-17	Londrina (PR)	IOTF	1021	528 (52)
Da Silva et al., 2009 <sup>(90)</sup>	CS, school-based survey	2007	10-17	Rio grande do Norte (RN)	Conde e Monteiro	1701	801 (47)
Lourenço Silva et al., 2018 <sup>(91)</sup>	CS, school-based survey	2007	13-19	Rio de Janeiro (RJ)	WHO 07	1628	898 (55)
Fernandes et al., 2009 <sup>(92)</sup>	CS, school-based survey	2007	11-17	Presidente Prudente (SP)	IOTF	1779	824 (46)
Guedes et al., 2011 <sup>(93)</sup>	CS, school-based survey	2007	10-18	Vale do Jequitinhonha (MG)	WHO 07	3261	NI

Guerra et al., 2013 <sup>(94)</sup>	CS, household survey	2007	10-19	Legal Amazonia (BR)	WHO 06	524	276 (53)
Pinto et al., 2010 <sup>(95)</sup>	CS, school-based survey	2007	10-14	Recife (PE)	IOTF	1405	800 (57)
Laus et al., 2013 <sup>(96)</sup>	CS, school-based survey	2007	14-19	Ribeirão Preto (SP); Pequeri, Goianá, Tabuleiro and Belmiro Braga (MG)	WHO 07	788	419 (53)
Vieira Cunha Lima et al., 2011 <sup>(97)</sup>	CS, school-based survey	2007	10-19	Natal (RN)	IOTF	432	209 (48)
Pereira et al., 2018* <sup>(64)</sup>	CS, household survey	2008	12-19	São Paulo (SP)	WHO 07	378	NI
Caran et al., 2018 <sup>(98)</sup>	CS, school-based survey	2008	15-19	Niterói (RJ)	WHO 07	487	299 (61)
Bispo et al., 2015 <sup>(99)</sup>	CS, household survey	2008	11-17	Belo Horizonte (MG)	WHO 07	1030	489 (47)
Souza et al., 2010 <sup>(100)</sup>	CS, school-based survey	2008	10-14	Salvador (BA)	WHO 95	694	366 (53)
Castro et al., 2012 <sup>(101)</sup>	CS, school-based survey	2008	10-19	Guarita, Iraí, Monte Caseros, Carreteiro, Ventarra, Nonoai, Cacique Doble, Carreteiro, Inhacorá, Ligeiro, Rio da Várzea and Serrinha (RS)	WHO 07	1803	872 (48)
Cunha et al., 2018 <sup>(102)</sup>	CS, household survey	2008	10-19	26 Brazilian states and Federal District	WHO 07	5266	2673 (51)
Cureau et al., 2012 <sup>(103)</sup>	CS, school-based survey	2008	14-18	Santa Maria (RS)	Conde e Monteiro	424	192 (45)
de Moraes et al., 2014 <sup>(104)</sup>	CS, school-based survey	2008	14-17	Maringá (PR)	IOTF	991	540 (54)
Silva et al., 2011 <sup>(105)</sup>	CS, school-based survey	2008	14-17	Midwest of Santa Catarina (SC) and North of Minas Gerais (MG)	IOTF	1065	599 (56)
Silva et al., 2013 <sup>(106)</sup>	CS, school-based survey	2008	14-19	Ponta Grossa (PR)	Conde e Monteiro	653	378 (58)
Polderman et al., 2011 <sup>(107)</sup>	CS, school-based survey	2008	12-17	Aracaju (SE)	IOTF	1002	560 (56)
Krinski et al., 2011 <sup>(108)</sup>	CS, school-based survey	2008	12-17	Vilhena (RO)	Conde e Monteiro	3118	1725 (55)



Becker da Silva et al., 2019 <sup>(109)</sup>	CS, school-based survey	2008	12-14	São José (SC)	WHO 07	2042	1115 (55)
Flores et al., 2013* <sup>(78)</sup>	CS, school-based survey	2009	11-14	16 Brazilian states	Conde e Monteiro	2196	1039 (47)
Fiuza et al., 2017 <sup>(110)</sup>	CO, birth cohort	2009	10-17	Cuiabá (MT)	WHO 07	1716	846 (49)
Romero et al., 2015 <sup>(111)</sup>	CS, school-based survey	2009	10-14	Piracicaba (SP)	WHO 07	454	243 (54)
Araujo et al., 2010 <sup>(112)</sup>	CS, school-based survey	2009	11-19	26 Brazilian states and Federal District	WHO 07	58971	32316 (55)
Farias et al., 2012 <sup>(113)</sup>	CS, school-based survey	2009	14-18	Rio Branco (AC)	CDC 2000	741	401 (54)
Santana et al., 2013 <sup>(114)</sup>	CS, school-based survey	2009	11-17	Salvador (BA)	WHO 07	1494	852 (57)
Miranda et al., 2014 <sup>(115)</sup>	CS, school-based survey	2009	10-19	Goianá, Tabuleiro, Belmiro Braga e Pequeri (MG)	WHO 07	445	255 (57)
Leal et al., 2020 <sup>(116)</sup>	CS, school-based survey	2009	13-19	São Paulo (SP)	WHO 07	1156	565 (49)
Lock et al., 2020 <sup>(117)</sup>	CS, school-based survey	2009	12	Porto Alegre (RS)	WHO 07	1528	758 (50)
Santana et al., 2017* <sup>(76)</sup>	CS, household survey	2010	12-19	Duque de Caxias (RJ)	WHO 07	301	154 (51)
Neto et al., 2015 <sup>(118)</sup>	CS, school-based survey	2010	10-17	Vitória de Santo Antão (PE)	CDC 2000	2866	1554 (54)
Castilho et al., 2014 <sup>(119)</sup>	CS, school-based survey	2010	11-18	Campinas (SP)	WHO 07	2011	NI
Cecon et al., 2017 <sup>(120)</sup>	CS, school-based survey	2010	10-19	Viçosa (MG)	WHO 07	2123	1411 (66)
Raphaelli et al., 2011 <sup>(121)</sup>	CS, school-based survey	2010	10-18	Barão do Triunfo (RS)	WHO 95	377	177 (47)
da Cruz et al., 2013 <sup>(122)</sup>	CS, school-based survey	2010	11-15	Alegre (ES)	WHO 07	524	277 (53)

de Oliveira et al., 2016 <sup>(134)</sup>	CS, school-based survey	2010	10-14	Juiz de Fora (MG)	WHO 07	403	218 (54)
Souza et al., 2017 <sup>(123)</sup>	CS, school-based survey	2010	11-19	Palmeira das Missões (RS)	WHO 06	3662	NI
Vasconcellos et al., 2013 <sup>(124)</sup>	CS, school-based survey	2010	10-18	Niterói (RJ)	WHO 07	4546	3082 (68)
de Moraes et al., 2019 <sup>(125)</sup>	CO, school-based survey	2010	10-19	Rio de Janeiro (RJ)	WHO 07	809	374 (46)
Franceschin et al., 2020 <sup>(126)</sup>	CS, school-based survey	2010	13-19	Rio de Janeiro (RJ)	WHO 07	1015	542 (53)
Monteiro et al., 2016 <sup>(127)</sup>	CS, household survey	2011	13-19	Caracol (PI)	WHO 07	1088	569 (52)
Carneiro et al., 2017 <sup>(128)</sup>	CS, school-based survey	2011	12-18	Goiânia (GO)	WHO 07	1169	621 (53)
Christofaro et al., 2016 <sup>(129)</sup>	CS, school-based survey	2011	14-17	Londrina (PR)	IOTF	1231	716 (58)
Coutinho et al., 2014 <sup>(130)</sup>	CS, school-based survey	2011	10-19	São Paulo (SP)	WHO 07	1618	814 (50)
Cureau et al., 2014 <sup>(131)</sup>	CS, school-based survey	2011	14-19	Santa Maria (RS)	IOTF	1132	610 (54)
Guedes et al., 2014 <sup>(132)</sup>	CS, school-based survey	2011	15-18	Francisco Sá (MG)	WHO 07	1538	1036 (67)
de Pinho et al., 2014 <sup>(133)</sup>	CS, school-based survey	2011	11-17	Montes Claros (MG)	WHO 07	535	364 (68)
Finato et al., 2013 <sup>(134)</sup>	CS, school-based survey	2011	11-14	Caxias do Sul (RS)	Conde e Monteiro	1230	606 (49)
Fortes et al., 2013 <sup>(135)</sup>	CS, school-based survey	2011	10-15	Juiz de fora (MG)	WHO 07	562	299 (53)
Graup et al., 2014 <sup>(136)</sup>	CS, school-based survey	2011	10-17	Uruguaiana (RS)	IOTF	1455	741 (51)

Guedes et al., 2013 <sup>(137)</sup>	CS, local program survey	2011	11-17	Montes Claros (MG)	IOTF	1560	811 (52)
Sousa Júnior et al., 2013 <sup>(138)</sup>	CS, school-based survey	2011	14-17	Floriano (PI)	IOTF	395	201 (51)
Oliveira et al., 2018 <sup>(139)</sup>	CS, school-based survey	2011	14-19	Pernambuco (PE)	IOTF	6264	3737 (60)
Rosini et al., 2015 <sup>(140)</sup>	CS, school-based survey	2011	11-14	Guabiruba (SC)	WHO 07	419	NI
Pitanga et al., 2019 <sup>(141)</sup>	CS, household survey	2011	15-18	Camaçari (BA)	IOTF	613	338 (55)
Anjos et al., 2017 <sup>(142)</sup>	CS, school-based survey	2012	10-17	15 Brazilian states	WHO 07	2681	1338 (50)
Cavalcanti et al., 2016 <sup>(143)</sup>	CS, school-based survey	2012	15-19	Campina Grande (PB)	CDC 2000	559	330 (59)
D'Avila et al., 2015 <sup>(144)</sup>	CS, school-based survey	2012	11-14	Florianópolis (SC)	WHO 07	962	574 (60)
Neves et al., 2015 <sup>(145)</sup>	CS, school-based survey	2012	10-14	Juiz de Fora (MG)	WHO 07	411	220 (54)
Lopes et al., 2018 <sup>(146)</sup>	CS, school-based survey	2012	10-17	Itaipu Lake region (PR)	IOTF	3849	2027 (53)
Guimarães et al., 2013 <sup>(147)</sup>	CS, school-based survey	2012	12-17	Curitiba (PR)	IOTF	572	326 (57)
Iepsen et al., 2014 <sup>(148)</sup>	CS, school-based survey	2012	13-19	Canguçu, São Lourenço do Sul, Pelotas, Piratini, Cerrito (RS)	IOTF	510	301 (59)
Rodrigues et al., 2015 <sup>(149)</sup>	CS, school-based survey	2012	10-19	Picos (PI)	WHO 07	320	192 (60)
Almeida Santana et al., 2017 <sup>(150)</sup>	CS, school-based survey	2012	10-13	Recife (PE)	CDC 2000	392	193 (49)
Aranha et al., 2020 <sup>(151)</sup>	CS, school-based survey	2012	10-17	Barcelos (AM)	WHO 07	745	NI

Costa et al., 2020 <sup>(152)</sup>	CS, school-based survey	2012	12-18	Cuiabá (MT)	WHO 07	1335	NI
Silva et al., 2020 <sup>(153)</sup>	CS, school-based survey	2012	10-17	26 Brazilian states and Federal District	WHO 07	6843	2705 (40)
Bloch et al., 2016 <sup>(11)</sup>	CS, school-based survey	2013	12-17	26 Brazilian states and Federal District	WHO 07	73399	40675 (55)
Vieira et al., 2015 <sup>(154)</sup>	CS, school-based survey	2013	12-18	Natal (RN)	WHO 07	347	250 (72)
D'Avila et al., 2017 <sup>(155)</sup>	CS, school-based survey	2013	12-19	Palmeira das Missões (RS)	WHO 95	784	450 (57)
Enes et al., 2018 <sup>(156)</sup>	CS, school-based survey	2013	10-19	Piracicaba (SP)	WHO 07	525	318 (61)
Paes-Silva et al., 2018 <sup>(157)</sup>	CS, school-based survey	2013	12-19	Recife (PE)	WHO 07	411	251 (61)
Guilherme et al., 2015 <sup>(158)</sup>	CS, school-based survey	2013	10-14	Paranavaí (PR)	Conde e Monteiro	566	279 (49)
Alberti et al., 2019 <sup>(159)</sup>	CS, school-based survey	2013	10-19	Joaçaba (SC)	WHO 07	2172	1166 (54)
da Silva et al., 2019 <sup>(160)</sup>	CS, household survey	2013	12-17	Curitiba (PR)	Conde e Monteiro	495	251 (51)
Pereira et al., 2017 <sup>(161)</sup>	CS, school-based survey	2014	10-17	Imperatriz (MA)	WHO 06	473	260 (55)
Silva et al., 2016 <sup>(162)</sup>	CS, school-based survey	2014	10-19	26 Brazilian states and Federal District	Conde e Monteiro	2162	635 (29)
de Araujo et al., 2017 <sup>(163)</sup>	CS, school-based survey	2014	11-17	Fortaleza (CE)	WHO 07	1182	573 (48)
Carmo et al., 2018 <sup>(164)</sup>	CS, school-based survey	2014	17-18	São Luís (MA)	WHO 07	405	225 (56)
Fradkin et al., 2018 <sup>(165)</sup>	CS, school-based survey	2014	10-13	Acopiara, Cachoeirinha, Camocim, Crato, Florianópolis, Iguacu, Manaus, Porto Alegre, Quezada, and Ubajar	CDC 2000	1738	881 (51)

Gemelli et al., 2016 <sup>(166)</sup>	CS, school-based survey	2014	10-18	Porto Velho (RO)	CDC 2002	727	727 (100)
Pozza et al., 2018 <sup>(167)</sup>	CS, school-based survey	2014	10-15	Itatiba (SP)	WHO 07	2964	1500 (51)
Reuter et al., 2018 <sup>(168)</sup>	CS, school-based survey	2014	12-17	Santa Cruz do Sul (RS)	WHO 07	1200	679 (57)
Silva et al., 2018 <sup>(169)</sup>	CS, school-based survey	2014	14-19	São José (SC)	WHO 07	1132	613 (54)
Ulbricht et al., 2018 <sup>(170)</sup>	CS, school-based survey	2014	11-18	Curitiba (PR)	Conde e Monteiro	675	203 (30)
Guimarães et al., 2019 <sup>(171)</sup>	CS, school-based survey	2014	10-19	Picos (PI)	WHO 07	357	225 (63)
Moura et al., 2019 <sup>(172)</sup>	CS, school-based survey	2014	10-14	João Pessoa (PB)	WHO 07	1138	591 (52)
Marques et al., 2016 <sup>(173)</sup>	CS, school-based survey	2015	13-19	Itaqui (RS)	WHO 07	654	364 (56)
Ripka et al., 2017 <sup>(174)</sup>	CS, school-based survey	2015	12-17	South region	WHO 06	374	NI
Pereira et al., 2018* <sup>(64)</sup>	CS, household survey	2015	12-19	São Paulo (SP)	WHO 07	377	NI
Da Silva et al., 2018 <sup>(175)</sup>	CS, school-based survey	2015	11-17	Criciúma (SC)	WHO 07	583	300 (51)
Lourenço et al., 2018 <sup>(176)</sup>	CS, school-based survey	2015	14-19	Uberaba (MG)	IOTF	1009	555 (55)
Tebar et al., 2018 <sup>(177)</sup>	CS, school-based survey	2015	10-17	Presidente Prudente (SP)	IOTF	1011	557 (55)
Urbano da Silva et al., 2018 <sup>(178)</sup>	CS, school-based survey	2015	13-17	26 Brazilian states and Federal District	WHO 07	10926	5430 (50)
Farias et al., 2019 <sup>(179)</sup>	CS, school-based survey	2015	14-18	Porto Velho (RO)	WHO 07	2694	1482 (55)
Guttier et al., 2019 <sup>(180)</sup>	CO, birth cohort	2015	11	Pelotas (RS)	WHO 07	3182	1545 (49)

Ramos et al., 2019 <sup>(181)</sup>	CS, school-based survey	2015	10-14	Londrina (PR)	IOTF	394	207 (53)
da Silva et al., 2020 <sup>(182)</sup>	CS, school-based survey	2015	11-17	Curitiba (PR)	WHO 07	862	441 (51)
Cesar et al., 2020 <sup>(183)</sup>	CS, school-based survey	2015	10-19	Lapa (PR)	WHO 07	492	262 (53)
Schwertner et al., 2020 <sup>(184)</sup>	CS, school-based survey	2015	15-18	Florianópolis (SC)	IOTF	330	244 (74)
de Souza Dantas et al., 2018 <sup>(185)</sup>	CS, school-based survey	2017	12-18	Dourados (MS)	IOTF	578	392 (68)
Lima et al., 2020 <sup>(186)</sup>	CS, school-based survey	2017	14-19	Vale do Capibaribe (PE)	IOTF	1242	690 (56)

CS, Cross-sectional; CO, Cohort; IOTF, International Obesity Task Force; WHO, World Health Organization; CDC, Centers for Disease Control and Prevention; NI, not informed. **\*Studies that included individuals from more than one time period are presented separately in this table.**













Cesar, 2020	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	Low
da Silva, 2018	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	Low
da Silva, 2020	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	Low
Farias, 2019	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	Low
Guttier, 2019	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	Low
Lourenço, 2018	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	Low
Marques, 2016	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	Low
Ramos, 2019	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	Low
Ripka, 2017	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	Moderate
Schwertner, 2020	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES	Moderate
Tebar, 2018	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	Low
Urbano da Silva, 2018	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	Low
de Souza Dantas, 2018	NO	YES	YES	NO	YES	YES	YES	YES	YES	YES	Moderate
Lima, 2020	YES	NO	NO	YES	YES	YES	YES	YES	YES	YES	Moderate

<sup>†</sup>10-item tool divided in two domains – external validity (items 1-4) and internal validity (items 5-10). Each item receives a score of 1 (yes) or 0 (no). According to overall scores, a summary assessment deems a study to be at low (9-10), moderate (6-8) or high ( $\leq 5$ ) risk of bias. Reference: Hoy D, Brooks P, Woolf A, et al. Assessing risk of bias in prevalence studies: modification of an existing tool and evidence of interrater agreement. *Journal of Clinical Epidemiology* 2012;65:934-9.