**Supplemental Table 1.** Characteristics of the included studies.

| **First author and publication year** | **Country** | **Sample size** | **Age range, and mean (years)** | **Percentage of male (%)** | **Weight status screening tools** | **Self-reported prevalence of overweight and/or obesity (%)** | **Measured prevalence of overweight and/or obesity (%)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Aasvee,2015 | Estonian | 3379 | 11 to 15 | 47.17 | IOTF | 13.5 | 17.08 |
|  |  |  |  |  |  | 16.38 for male | 19.51 for male |
|  |  |  |  |  |  | 10.92 for female | 14.85 for female |
|  |  |  |  |  |  | 15.31 for age 11 | 20.26 for age 11 |
|  |  |  |  |  |  | 14.03 for age 13 | 17.34 for age 13 |
|  |  |  |  |  |  | 11.32 for age 15 | 13.53 for age 15 |
| Abalkhail,2002 | Saudi | 1167 | 9 to 21, 13.9 | 49.10 | The National  Health and Nutrition Examination Survey | 24.9 | 25.7 |
|  |  |  |  |  |  | 14.54 for overweight | 13.03 for overweight |
|  |  |  |  |  |  | 10.36 for obesity | 12.67 for obesity |
| Bae,2010 | Korea | 379 | NA | 58.04 | The Korean children and adolescents growth charts | 10.6 | 15.3 |
|  |  |  |  |  |  | 13.64 for male | 18.64 for male |
|  |  |  |  |  |  | 6.3 for female | 10.7 for female |
| Beck,2012 | USA | 123 | 11.2 | NA | CDC | 29 | 35 |
| Brault,2015 | Canada | 752 | 8 to 12, 10.34 | 44.00 | IOTF | 15.29 | 16.88 |
|  |  |  |  |  |  | 11.7 for overweight | 13.16 for overweight |
|  |  |  |  |  |  | 3.59 for obesity | 3.72 for obesity |
| Brener,2003 | USA | 2032 | 12 to 19 | 47.10 | CDC | 29.7 | 47.4 |
|  |  |  |  |  |  | 14.8 for overweight | 21.4 for overweight |
|  |  |  |  |  |  | 14.9 for obesity | 26 for obesity |
| Brettschneider,2011 | Germany | 3468 | 11 to17 | 51.67 | The national German reference | 15.1 | 17.7 |
|  |  |  |  |  |  | 14.3 for male | 17.7 for male |
|  |  |  |  |  |  | 15.9 for female | 17.7 for female |
| Chan,2013 | China | 1614 | 6 to 18 | 41.57 | The Hong Kong local reference | 19.52 | 20.57 |
|  |  |  |  |  |  | 12.12 for overweight | 13.17 for overweight |
|  |  |  |  |  |  | 7.4 for obesity | 7.4 for obesity |
|  |  |  |  |  |  | 24.9 for male | 25.6 for male |
|  |  |  |  |  |  | 15.7 for female | 16.9 for female |
| Charalampos,2009 | Cypriot | 579 | 15.2 | 31.26 | The unoccupied area of Cyprus reference | 18 | 22.28 |
|  |  |  |  |  |  | 15.37 for overweight | 18.65 for overweight |
|  |  |  |  |  |  | 2.6 for obesity | 3.63 for obesity |
|  |  |  |  |  |  | 26.7 for male | 29.9 for male |
|  |  |  |  |  |  | 13.7 for female | 18.6 for female |
| Chau,2013 | France | 1559 | 9.9 to 18.7, 13.0 | 49.90 | The French adolescents reference | 35.6 | 36.11 |
|  |  |  |  |  |  | 25.5 for overweight | 25.5 for overweight |
|  |  |  |  |  |  | 10.1 for obesity | 10.6 for obesity |
| Dalton III,2014 | USA | 1509 | 14.9 | 50.70 | CDC | 38.9 | 46.4 |
|  |  |  |  |  |  | 43.4 for male | 50.5 for male |
|  |  |  |  |  |  | 34.3 for female | 42.3 for female |
| De Vriendt,2009 | Belgium | 982 | 10 to 18, 13.5 | 51.63 | IOTF | 12.8 | 14.4 |
|  |  |  |  |  |  | 11.6 for overweight | 12.8 for overweight |
|  |  |  |  |  |  | 1.2 for obesity | 1.6 for obesity |
| Domingues,2011 | Portugal | 713 | 10 to 19, 13.6 | 50.49 | IOTF | 24.2 | 29.8 |
|  |  |  |  |  |  | 18.9 for overweight | 22.6 for overweight |
|  |  |  |  |  |  | 5.3 for obesity | 7.2 for obesity |
| Drake,2013 | USA | 407 | 12 to 18 | 53.07 | CDC | 31.2 | 36.1 |
|  |  |  |  |  |  | 16.5 for overweight | 15.2 for overweight |
|  |  |  |  |  |  | 14.7 for obesity | 20.9 for obesity |
| Ekström,2015 | Sweden | 1698 | 15.7 to 19, 16.5 | 47.64 | IOTF | 11.84 | 15.89 |
|  |  |  |  |  |  | 10.54 for overweight | 13.6 for overweight |
|  |  |  |  |  |  | 1.3 for obesity | 2.59 for obesity |
| Elgar,2005 | United Kingdom | 418 | 16.3 | 45.45 | IOTF | 16.7 | 23.1 |
|  |  |  |  |  |  | 13.9 for overweight | 18.7 for overweight |
|  |  |  |  |  |  | 2.8 for obese | 4.4 for obese |
|  |  |  |  |  |  | 16.8 for male | 23.2 for male |
|  |  |  |  |  |  | 16.7 for female | 23 for female |
| Enes,2009 | Brazil | 360 | 10 to 14, 12 | 47.50 | WHO | 38.34 | 27.04 |
|  |  |  |  |  |  | 42.7 for male | 25.2 for male |
|  |  |  |  |  |  | 34.4 for female | 28.7 for female |
|  |  |  |  |  |  | 13.13 for overweight | 13.91 for overweight |
|  |  |  |  |  |  | 29.57 for obesity | 11.29 for obesity |
| Fonseca,2010 | Portugal | 462 | 14 | 49.57 | IOTF | 25.5 | 27.1 |
|  |  |  |  |  |  | 17.5 for overweight | 18 for overweight |
|  |  |  |  |  |  | 8 for obesity | 9.1 for obesity |
|  |  |  |  |  |  | 28.8 for male | 26.6 for male |
|  |  |  |  |  |  | 22.3 for female | 27.5 for female |
|  |  |  |  |  |  | 21.97 for age 12 | 22.8 for age 12 |
|  |  |  |  |  |  | 25.9 for age 14 | 25.18 for age 14 |
|  |  |  |  |  |  | 27.5 for age 16 | 31.1 for age 16 |
| Fortenberry,1992 | USA | 725 | 14 to 20, 17.28 | 22.21 | 90th percentile | 10.07 | 10.34 |
|  |  |  |  |  |  | 9.9 for male | 10.5 for male |
|  |  |  |  |  |  | 10.1 for female | 10.3 for female |
| Gebremariam,2014 | Norway | 828 | 12.9 | 48.55 | IOTF | 11.59 | 10.99 |
|  |  |  |  |  |  | 12 for male | 10.6 for male |
|  |  |  |  |  |  | 11.2 for female | 11.4 for female |
| Ghosh-Dastidar,2016 | USA | 475 | 12 to 13, 13.1 | 54.00 | CDC | 23.8 | 28 |
|  |  |  |  |  |  | 15.2 for overweight | 17.3 for overweight |
|  |  |  |  |  |  | 8.6 for obesity | 10.7 for obesity |
|  |  |  |  |  |  | 20.1 for male | 25.2 for male |
|  |  |  |  |  |  | 20.5 for female | 31.3 for female |
| Giacchi,1998 | Italy | 133 | 15 to 17 | 61.65 | The Recommended Dietary Allowances (L.A.R.N.-1996) | 9.2 | 18 |
|  |  |  |  |  |  | 7.6 for overweight | 15.1 for overweight |
|  |  |  |  |  |  | 1.5 for obesity | 3 for obesity |
|  |  |  |  |  |  | 12.2 for male | 21.9 for male |
|  |  |  |  |  |  | 4 for female | 11.8 for female |
| Hauck,1995 | USA | 536 | 12 to 19, 14.6 | 47.40 | The National Health and Nutrition Examination Surveys | 28.36 | 33.96 |
| Himes,2004 | USA | 3797 | 12 to 18 | 50.99 | CDC | 25.47 | 32.64 |
|  |  |  |  |  |  | 15.5 for overweight | 19.31 for overweight |
|  |  |  |  |  |  | 9.97 for obesity | 13.33 for obesity |
|  |  |  |  |  |  | 26.6 for male | 32.3 for male |
|  |  |  |  |  |  | 24.3 for female | 33 for female |
| Jansen,2005 | The Netherlands | 499 | 11 to 14 | 53.00 | IOTF | 18 | 33 |
| Lee,2013 | Korea | 420 | 10.5 | 50.48 | The Korean National Growth Charts | 18.5 | 23 |
|  |  |  |  |  |  | 19.8 for male | 26.9 for male |
|  |  |  |  |  |  | 14.8 for female | 19 for female |
| Legleye,2014 | France | 303 | 17 to 18 | 53.80 | IOTF | 9.52 | 17.84 |
|  |  |  |  |  |  | 8.87 for overweight | 15.54 for overweight |
|  |  |  |  |  |  | 0.66 for obesity | 2.3 for obesity |
|  |  |  |  |  |  | 11 for male | 19 for male |
|  |  |  |  |  |  | 7.8 for female | 16.5 for female |
| Linhart,2010 | Israel | 532 | 13 to 14 | NA | CDC | 13.65 | 15.8 |
|  |  |  |  |  |  | 9.7 for overweight | 9.6 for overweight |
|  |  |  |  |  |  | 3.95 for obesity | 6.2 for obesity |
| Morrissey,2006 | USA | 416 | 10 to 16 | 59.13 | CDC | 40.48 | 44.09 |
|  |  |  |  |  |  | 21 for overweight | 21.9 for overweight |
|  |  |  |  |  |  | 19.5 for obesity | 22.2 for obesity |
| Pérez,2015 | USA | 24221 | 15.2 | NA | CDC | 32.1 | 34.15 |
|  |  |  |  |  |  | 34.5 for age 13.7 | 36 for age 13.7 |
|  |  |  |  |  |  | 29.7 for age 16.7 | 32.3 for age 16.7 |
|  |  |  |  |  |  | 17.55 for overweight | 17.2 for overweight |
|  |  |  |  |  |  | 14.55 for obesity | 16.95 for obesity |
| Rasmussen,2013 | Denmark | 1606 | 11 to 15 | 49.25 | WHO | 9.01 | 14.4 |
|  |  |  |  |  |  | 10.97 for male | 15.64 for male |
|  |  |  |  |  |  | 7.06 for female | 13.17 for female |
| Robinson,2014 | USA | 92 | 10.16 | 41.3 | CDC | 30.4 | 31.5 |
| Rodrigues,2013 | Brazil | 97 | 14 to 19, 16 | 59.00 | WHO | 26 | 22 |
|  |  |  |  |  |  | 19 for overweight | 12 for overweight |
|  |  |  |  |  |  | 7 for obesity | 10 for obesity |
| Seghers, 2010 | Belgium | 798 | 8 to11, 9.3 | 49.87 | IOTF | 12.6 | 15.3 |
|  |  |  |  |  |  | 10.8 for overweight | 13 for overweight |
|  |  |  |  |  |  | 1.8 for obesity | 2.3 for obesity |
| Wang,2002 | Australia | 572 | 15 to 19 | 51.57 | IOTF | 10.31 | 22.2 |
|  |  |  |  |  |  | 8.04 for overweight | 16.8 for overweight |
|  |  |  |  |  |  | 2.27 for obesity | 5.4 for obesity |
|  |  |  |  |  |  | 18.3 for male | 25.1 for male |
|  |  |  |  |  |  | 11.9 for female | 19.1 for female |
| Yoshitake,2012 | Japan | 358 | 10 to 14, 12 | 54.19 | IOTF | 11.87 | 12.15 |
|  |  |  |  |  |  | 13.92 for male | 14.43 for male |
|  |  |  |  |  |  | 9.45 for female | 9.45 for female |
|  |  |  |  |  |  | 10.98 for age 10.5 | 10.98 for age 10.5 |
|  |  |  |  |  |  | 13.6 for age 13.5 | 14.56 for age 13.5 |
| Zhou,2010 | China | 1726 | 12 to 16 | 47.62 | IOTF | 9 | 14.1 |
|  |  |  |  |  |  | 7.5 for overweight | 11.4 for overweight |
|  |  |  |  |  |  | 1.5 for obesity | 2.5 for obesity |

Notes: CDC = the Centers for Disease Control and Prevention standard criteria; IOTF = the International Obesity Task Force standard criteria; WHO = the World Health Organization standard criteria.