Evidence Table H3. Child BMI percentile measures

| **Author, year** | **Setting** | **Level** | **Adult/Child** | **Measure type** | **Child BMI Percentile Measure\*** |
| --- | --- | --- | --- | --- | --- |
| **Natural Experiment Studies** |  |  |  |  |  |
| Anderson, 20131 | School | US/Federal | Child | NR | NR |
| Barroso, 20095 | School | State/Regional | Child | Measured by trained staff | Standard Measure |
| Coffield, 201127 | School | US/Federal | Child | Measured by trained staff | Self-reported height and weight were taken from the child’s first state-issued drivers license obtained between the ages 15 and 19 years. |
| Datar, 201638 | School | Local | Child | Measured by trained staff | Height and weight measurements were also collected by the study staff during visits to the original 12 installations |
| Datar, 201638 | School | Local | Child | Self-reported | Both child and parent reports of the child’s height (in feet and inches) and weight (pounds) were obtained for all children via the child and parent surveys |
| Fox, 200949 | School | US/Federal | Child | Measured by trained staff | Standard Measure |
| Fung, 201352 | School | Other country | Child | Measured by trained staff | Standard Measure |
| Gleason, 200956 | School | US/Federal | Child | Measured by trained staff | Standard Measure |
| Heelan, 201563 | School | Local | Child | Measured by trained staff | Standard Measure |
| Hennessy, 201464 | School | State/Regional | Child | Self-reported | parent-reported child height and weight |
| Herrick, 201265 | After school or summer school | Non-Governmental | Child | Measured by trained staff | Standard Measure |
| Kern, 201479 | School | Local | Child | NR | NR |
| Kim, 201282 | School | State/Regional | Child | Self-reported | NSCH survey |
| Madsen, 201193 | School | State/Regional | Child | Other | BMI data retrieved from FITNESSGRAM collected data |
| Madsen, 201594 | School | Non-Governmental | Child | Other | Student-level fitness data from Fitnessgram assessment |
| Nanney, 2014103 | School | State/Regional | Child | Self-reported | Minnesota Student Survey (MSS) |
| Nanney, 2016104 | School | Local | Child | Self-reported | Questionnaire |
| Oh, 2015108 | Community or neighborhood , School | US/Federal | Child | Self-reported | parent-reported weight and height of child in NSCH |
| Parsons, 2014111 | School | Local | Child | Measured by trained staff | School nurses collected |
| Peterson, 2015112 | After school or summer school, School | State/Regional | Child | Measured by trained staff | Standard Measure |
| Sanchez-Vaznaugh, 2010126 | School | Local | Child | Other | Fitnessgram test |
| Schwartz, 2016128 | School | Local | Child | Measured by trained staff | standard weight and height measurement by physical education teacher |
| Sekhobo, 2014129 | Early childhood education | Local | Child | Measured by trained staff | measured by trained WIC staff |
| Sturm, 2010134 | School | US/Federal | Child | Measured by trained staff | height and weight were measure by study staff of the Early Childhood Longitudinal Study—Kindergarten Cohort |
| Taber, 2011136 | School | State/ Regional | Child | Measured by trained staff | Standard Measure |
| Taber, 2012137 | School | Other country | Child | Measured by trained staff | Standard Measure |
| von Hippel, 2015147 | School | US/Federal | Child | Other | FitnessGram assessment |

| **Author, year** | **Setting** | **Level** | **Adult/Child** | **Measure type** | **Child BMI Percentile Measure** |
| --- | --- | --- | --- | --- | --- |
| **Experimental Studies** |  |  |  |  |  |
| Bonvin, 2013173 | Early childhood education or daycare | Other country | Child | Measured by trained staff | Standard Measure |
| Coleman, 2012178 | School | Non-Governmental | Child | Measured by trained staff | Standard Measure |
| Crespo, 2012180 | Community or neighborhood , School | Local | Child | Self-reported | Calculated percentile from self-report (via parents) |
| Dzewaltowski, 2009187 | School | Local | Child | Measured by trained staff | Standard Measure |
| Foster, 2008199 | School | Local | Child | Measured by trained staff | Standard Measure |
| Gatto, 2017202 | School | Local | Child | Other | Height was measured with a free-standing stadiometer (Seca, Birmingham, UK) and weight and percent body fat via bioelectrical impedance (Tanita TBF 300A, Arlington Heights, IL, USA). |
| Hendy, 2011212 | School | Local | Child | Measured by trained staff | Standard Measure |
| Jago, 2011216 | School | US/Federal | Child | Measured by trained staff | Standard Measure |
| Jago, 2011216 | School | Non-Governmental | Child | Measured by trained staff | Standard Measure |
| Kastorini, 2016223 | School | Other country | Child | Self-reported | self-reported weight and height |
| Lent, 2014228 | School | Non-Governmental | Child | Measured by trained staff | Standard Measure |
| Madsen, 2013235 | After school or summer school | Non-Governmental | Child | E.H.R. | E.H.R. |
| Pope, 2016249 | School | Local | Child | Measured by trained staff | health screenings IN PHYS ED |
| Pate, 2005245 | School | Non-Governmental | Child | Measured by trained staff | Standard Measure |
| Reilly, 2006251 | Early childhood education or daycare | Other country | Child | Measured by trained staff | Standard Measure |
| Story, 2012261 | School | State/Regional | Child | Measured by trained staff | Standard Measure |
| Wendel, 2016267 | School | State/Regional | Child | Measured by trained staff | Standard Measure |
| **Other Study Designs** |  |  |  |  |  |
| de Silva-Sanigorski, 2011282 | Early childhood education or daycare | Non-Governmental | Child | Measured by trained staff | Standard Measure |
| Heelan, 2009285 | School | State/Regional | Child | Measured by trained staff | BMI percentile |
| Naul, 2012288 | School | Other country | Child | Measured by trained staff | Standard Measure |

BMI=Body Mass Index; E.H.R.=electronic health record; No.=Number; NR=not reported; US=United States

**\*** Standard measure” refers to the standardized method for calculating BMI, BMI-z score, and BMI-percentile as stated by the Centers for Disease Control and Prevention (CDC).295, 296