

the 2009/10 survey was Prof. Candace Currie, University of St Andrews. For details, see <http://www.hbsc.org>.

Data Availability

The following information was supplied regarding data availability:

Health Behaviour in School-Aged Children: World Health Organization Collaborative Cross-National Survey 2009/10.

Dataset: HBSC-2009/10, ed.1.0. <http://hbsc-nesstar.nsd.no/webview/>

Supplemental Information

Supplemental information for this article can be found online at <http://dx.doi.org/10.7717/peerj.4330#supplemental-information>.

REFERENCES

- Anthony BJ, Wessler SL, Sebian JK. 2010. Commentary: guiding a public health approach to bullying. *Journal of Pediatric Psychology* 35(10):1113–1115 DOI 10.1093/jpepsy/jsq083.
- Bacchini D, Licenziati MR, Affuso G, Garrasi A, Corciulo N, Driul D, Tanas R, Fiumani PM, Di Pietro E, Pesce S, Crino A, Maltoni G, Iughetti L, Sartorio A, Deiana M, Lombardi F, Valerio G. 2017. The interplay among BMI z-score, peer victimization, and self-concept in outpatient children and adolescents with overweight or obesity. *Childhood Obesity* 13(3):242–249 DOI 10.1089/chi.2016.0139.
- Bacchini D, Licenziati MR, Garrasi A, Corciulo N, Driul D, Tanas R, Fiumani PM, Di Pietro E, Pesce S, Crinò A, Maltoni G, Iughetti L, Sartorio A, Deiana M, Lombardi F, Valerio G. 2015. Bullying and victimization in overweight and obese outpatient children and adolescents: an Italian multicentric study. *PLOS ONE* 10(11):e0142715 DOI 10.1371/journal.pone.0142715.
- Bowes L, Maughan B, Ball H, Shakoor S, Ouellet-Morin I, Caspi A, Moffitt TE, Arseneault L. 2013. Chronic bullying victimization across school transitions: the role of genetic and environmental influences. *Development and Psychopathology* 25(2):333–346 DOI 10.1017/S0954579412001095.
- Chester KL, Callaghan M, Cosma A, Donnelly P, Craig W, Walsh S, Molcho M. 2015. Cross-national time trends in bullying victimization in 33 countries among children aged 11, 13 and 15 from 2002 to 2010. *European Journal of Public Health* 25(suppl 2):61–64 DOI 10.1093/eurpub/ckv029.
- Cole TJ, Bellizzi MC, Flegal KM, Dietz WH. 2000. Establishing a standard definition for child overweight and obesity worldwide: international survey. *BMJ* 320(7244):1240–1243 DOI 10.1136/bmj.320.7244.1240.
- Cole TJ, Flegal KM, Nicholls D, Jackson AA. 2007. Body mass index cut offs to define thinness in children and adolescents: international survey. *BMJ* 335(7612):194 DOI 10.1136/bmj.39238.399444.55.
- Copeland WE, Wolke D, Angold A, Costello E. 2013. Adult psychiatric outcomes of bullying and being bullied by peers in childhood and adolescence. *JAMA Psychiatry* 70:419–426 DOI 10.1001/jamapsychiatry.2013.504
- Craig W, Harel-Fisch Y, Fogel-Grinvald H, Dostaler S, Hetland J, Simons-Morton B, Molcho M, de Mato MG, Overpeck M, Due P, Pickett W, HBSC Violence & Injuries Prevention Focus Group, HBSC Bullying Writing Group. 2009. A cross-national profile of bullying and

- victimization among adolescents in 40 countries. *International Journal of Public Health* **54**(S2):216–224 DOI [10.1007/s00038-009-5413-9](https://doi.org/10.1007/s00038-009-5413-9).
- Currie C, Molcho M, Boyce W, Holstein B, Torsheim T, Richter M. 2008.** Researching health inequalities in adolescents: the development of the Health Behaviour in School-Aged Children (HBSC) family affluence scale. *Social Science & Medicine* **66**(6):1429–1436 DOI [10.1016/j.socscimed.2007.11.024](https://doi.org/10.1016/j.socscimed.2007.11.024).
- Elgar FJ, Pfortner TK, Moor I, De Clercq B, Stevens GW, Currie C. 2015.** Socioeconomic inequalities in adolescent health 2002–2010: a time-series analysis of 34 countries participating in the Health Behaviour in School-aged Children study. *Lancet* **385**(9982):2088–2095 DOI [10.1016/s0140-6736\(14\)61460-4](https://doi.org/10.1016/s0140-6736(14)61460-4).
- Elgar FJ, Roberts C, Tudor-Smith C, Moore L. 2005.** Validity of self-reported height and weight and predictors of bias in adolescents. *Journal of Adolescent Health* **37**(5):371–375 DOI [10.1016/j.jadohealth.2004.07.014](https://doi.org/10.1016/j.jadohealth.2004.07.014).
- Fanti KA, Henrich CC. 2015.** Effects of self-esteem and narcissism on bullying and victimization during early adolescence. *Journal of Early Adolescence* **35**(1):5–29 DOI [10.1177/0272431613519498](https://doi.org/10.1177/0272431613519498).
- Farmer VL, Williams SM, Mann JI, Schofield G, McPhee JC, Taylor RW. 2017.** Change of school playground environment on bullying: a randomized controlled trial. *Pediatrics* **139**(5):e20163072 DOI [10.1542/peds.2016-3072](https://doi.org/10.1542/peds.2016-3072).
- Fernandez S, Pritchard M. 2012.** Relationships between self-esteem, media influence and drive for thinness. *Eating Behaviors* **13**(4):321–325 DOI [10.1016/j.eatbeh.2012.05.004](https://doi.org/10.1016/j.eatbeh.2012.05.004).
- Gage NA, Prykanowski DA, Larson A. 2014.** School climate and bullying victimization: a latent class growth model analysis. *School Psychology Quarterly* **29**(3):256–271 DOI [10.1037/spq0000064](https://doi.org/10.1037/spq0000064).
- Haines J, Neumark-Sztainer D, Hannan PJ, van den Berg P, Eisenberg ME. 2008.** Longitudinal and secular trends in weight-related teasing during adolescence. *Obesity* **16**(Suppl 2):S18–S23 DOI [10.1038/oby.2008.447](https://doi.org/10.1038/oby.2008.447).
- Himes JH, Hannan P, Wall M, Neumark-Sztainer D. 2005.** Factors associated with errors in self-reports of stature, weight, and body mass index in Minnesota adolescents. *Annals of Epidemiology* **15**(4):272–278 DOI [10.1016/j.annepidem.2004.08.010](https://doi.org/10.1016/j.annepidem.2004.08.010).
- Jeong S, Kwak D-H, Moon B, San Miguel C. 2013.** Predicting school bullying victimization: focusing on individual and school environmental/security factors. *Journal of Criminology* **2013**:1–13 DOI [10.1155/2013/401301](https://doi.org/10.1155/2013/401301).
- Ladd GW, Ettekal I, Kochenderfer-Ladd B. 2017.** Peer victimization trajectories from kindergarten through high school: differential pathways for children's school engagement and achievement? *Journal of Educational Psychology* **109**:826–841 DOI [10.1037/edu0000177](https://doi.org/10.1037/edu0000177).
- Latner JD, Ebnetter DS, O'Brien KS. 2012.** Residual obesity stigma: an experimental investigation of bias against obese and lean targets differing in weight-loss history. *Obesity* **20**(10):2035–2038 DOI [10.1038/oby.2012.55](https://doi.org/10.1038/oby.2012.55).
- Lian Q, Zuo X, Mao Y, Luo S, Zhang S, Tu X, Lou C, Zhou W. 2017.** Anorexia nervosa, depression and suicidal thoughts among Chinese adolescents: a national school-based cross-sectional study. *Environmental Health and Preventive Medicine* **22**(1):30 DOI [10.1186/s12199-017-0639-2](https://doi.org/10.1186/s12199-017-0639-2).
- Lumeng JC, Forrest P, Appugliese DP, Kaciroti N, Corwyn RE, Bradley RH. 2010.** Weight status as a predictor of being bullied in third through sixth grades. *Pediatrics* **125**(6):e1301–e1307 DOI [10.1542/peds.2009-0774](https://doi.org/10.1542/peds.2009-0774).

- Olweus D. 1994.** Bullying at school: basic facts and effects of a school based intervention program. *Journal of Child Psychology and Psychiatry* **35**(7):1171–1190
DOI [10.1111/j.1469-7610.1994.tb01229.x](https://doi.org/10.1111/j.1469-7610.1994.tb01229.x).
- Olweus D. 2013.** School bullying: development and some important challenges. *Annual Review of Clinical Psychology* **9**(1):751–780 DOI [10.1146/annurev-clinpsy-050212-185516](https://doi.org/10.1146/annurev-clinpsy-050212-185516).
- Paxton RJ, Valois RE, Drane JW. 2004.** Correlates of body mass index, weight goals, and weight-management practices among adolescents. *Journal of School Health* **74**(4):136–143
DOI [10.1111/j.1746-1561.2004.tb06617.x](https://doi.org/10.1111/j.1746-1561.2004.tb06617.x).
- Puhl RM, King KM. 2013.** Weight discrimination and bullying. *Best Practice & Research Clinical Endocrinology & Metabolism* **27**(2):117–127 DOI [10.1016/j.beem.2012.12.002](https://doi.org/10.1016/j.beem.2012.12.002).
- Puhl RM, Luedicke J. 2012.** Weight-based victimization among adolescents in the school setting: emotional reactions and coping behaviors. *Journal of Youth and Adolescence* **41**(1):27–40
DOI [10.1007/s10964-011-9713-z](https://doi.org/10.1007/s10964-011-9713-z).
- Puhl RM, Luedicke J, Heuer C. 2011.** Weight-based victimization toward overweight adolescents: observations and reactions of peers. *Journal of School Health* **81**(11):696–703
DOI [10.1111/j.1746-1561.2011.00646.x](https://doi.org/10.1111/j.1746-1561.2011.00646.x).
- Ranta K, Kaltiala-Heino R, Pelkonen M, Marttunen M. 2009.** Associations between peer victimization, self-reported depression and social phobia among adolescents: the role of comorbidity. *Journal of Adolescence* **32**(1):77–93 DOI [10.1016/j.adolescence.2007.11.005](https://doi.org/10.1016/j.adolescence.2007.11.005).
- Reulbach U, Ladewig EL, Nixon E, O'Moore M, Williams J, O'Dowd T. 2013.** Weight, body image and bullying in 9-year-old children. *Journal of Paediatrics and Child Health* **49**(4):E288–E293
DOI [10.1111/jpc.12159](https://doi.org/10.1111/jpc.12159).
- Rigby K, Smith PK. 2011.** Is school bullying really on the rise? *Social Psychology of Education* **14**(4):441–455 DOI [10.1007/s11218-011-9158-y](https://doi.org/10.1007/s11218-011-9158-y).
- Shetgiri R. 2013.** Bullying and victimization among children. *Advances in Pediatrics* **60**(1):33–51
DOI [10.1016/j.yapd.2013.04.004](https://doi.org/10.1016/j.yapd.2013.04.004).
- Smith PK, Madsen KC, Moody JC. 1999.** What causes the age decline in reports of being bullied at school? Towards a developmental analysis of risks of being bullied. *Educational Research* **41**(3):267–285 DOI [10.1080/0013188990410303](https://doi.org/10.1080/0013188990410303).
- Stapinski LA, Araya R, Heron J, Montgomery AA, Stallard P. 2015.** Peer victimization during adolescence: concurrent and prospective impact on symptoms of depression and anxiety. *Anxiety, Stress, & Coping* **28**(1):105–120 DOI [10.1080/10615806.2014.962023](https://doi.org/10.1080/10615806.2014.962023).
- Sutter C, Nishina A, Adams RE. 2015.** How you look versus how you feel: associations between BMI z-score, body dissatisfaction, peer victimization, and self-worth for African American and white adolescents. *Journal of Adolescence* **43**:20–28 DOI [10.1016/j.adolescence.2015.05.002](https://doi.org/10.1016/j.adolescence.2015.05.002).
- Tippett N, Wolke D. 2014.** Socioeconomic status and bullying: a meta-analysis. *American Journal of Public Health* **104**(6):e48–e59 DOI [10.2105/ajph.2014.301960](https://doi.org/10.2105/ajph.2014.301960).
- Wang J, Iannotti RJ, Luk JW. 2010.** Bullying victimization among underweight and overweight U.S. youth: differential associations for boys and girls. *Journal of Adolescent Health* **47**(1):99–101
DOI [10.1016/j.jadohealth.2009.12.007](https://doi.org/10.1016/j.jadohealth.2009.12.007).
- Wang J, Iannotti RJ, Nansel TR. 2009.** School bullying among adolescents in the United States: physical, verbal, relational, and cyber. *Journal of Adolescent Health* **45**(4):368–375
DOI [10.1016/j.jadohealth.2009.03.021](https://doi.org/10.1016/j.jadohealth.2009.03.021).
- Wilson ML, Viswanathan B, Rousson V, Bovet P. 2013.** Weight status, body image and bullying among adolescents in the Seychelles. *International Journal of Environmental Research and Public Health* **10**(5):1763–1774 DOI [10.3390/ijerph10051763](https://doi.org/10.3390/ijerph10051763).

- Yngve A, De Bourdeaudhuij I, Wolf A, Grjibovski A, Brug J, Due P, Ehrenblad B, Elmadfa I, Franchini B, Klepp K-I, Poortvliet E, Rasmussen M, Thorsdottir I, Perez Rodrigo C. 2008.** Differences in prevalence of overweight and stunting in 11-year olds across Europe: The Pro Children Study. *European Journal of Public Health* **18**(2):126–130 DOI [10.1093/eurpub/ckm099](https://doi.org/10.1093/eurpub/ckm099).
- Zequinão MA, de Medeiros P, Rosário HRVd, Pelegrini A, Lopes L, Pereira B, Cardoso FL. 2017.** Association between body dissatisfaction and bullying in children of socioeconomically vulnerable areas. *Porto Biomedical Journal* **2**(6):260–264 DOI [10.1016/j.pbj.2017.04.010](https://doi.org/10.1016/j.pbj.2017.04.010).