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| **PUBLICATIONS THAT INCLUDED AN INTERVENTION COMPONENT** | | | | | | | | | | | | |
| Author | Title | year | country | sex | setting | study design | sample analysed | age sample analysed | quant outcome | cut-offs and reference | prevalence (%) |
| Ahmed, F.; Khan, M. R.; Akhtaruzzaman, M.; Karim, R.; Marks, G. C.; Banu, C. P.; Nahar, B.; Williams, G. | Efficacy of twice-weekly multiple micronutrient supplementation for improving the hemoglobin and micronutrient status of anemic adolescent schoolgirls in Bangladesh | 2005 | Bangladesh | girls | rural | randomized, double-blind, experimental trial | 178 | 14-18y | Micro deficiency: anemia, iron, vit C, folic acid, vit B12, vit A, vit B2 | Hb<120 g/L13  Serum ferritin <12 ng/mL  Plasma vitamin C < 0.29 mg/dL  RBC folic acid < 140 ng/mL  Serum vitamin B12 < 200 pg/mL Serum retinol <30.0 ug/dL11 EGRAC >= 1.4 | Multiple micronutrient tablets group: less anemic, decreased prevalences of vit A and C and riboflavin deficiencies. Iron and folic acid tablets group: less anemic. |
| Ahmed, F.; Khan, M. R.; Akhtaruzzaman, M.; Karim, R.; Williams, G.; Torlesse, H.; Darnton-Hill, I.; Dalmiya, N.; Banu, C. P.; Nahar, B.  Ahmed, F.; Khan, M. R.; Akhtaruzzaman, M.; Karim, R.; Williams, G.; Banu, C. P.; Nahar, B.; Darnton-Hill, I. | Long-term intermittent multiple micronutrient supplementation enhances hemoglobin and micronutrient status more than iron + folic acid supplementation in Bangladeshi rural adolescent girls with nutritional anemia.  Effect of long-term intermittent supplementation with multiple micronutrients compared with iron-and-folic acid supplementation on Hb and micronutrient status of non-anaemic adolescent schoolgirls in rural Bangladesh | 2010 | Bangladesh | girls | rural | randomized, double-blind controlled trial | 324 | 11-17y | Micro deficiency: anemia, vit C, folic acid, vit A, B2 | Hb<120 g/L13  Plasma vitamin C <16.5 umol/L  RBC folic acid <317 umol/L  Serum retinol <1.05 umol/L11 EGRAC >= 1.4 | Multiple micronutrient tablets group 1: less anemic, decreased prevalences of vit A, B2 and C and folate deficiencies. Multiple micronutrient tablets group 2: less anemic, decreased prevalences of vit A, B2 and C and folate deficiencies. Iron and folic acid tablets group : less anemic, decreased prevalence of folate deficiency and vit A deficiency. |
| Garg, M. K.; Marwaha, R. K.; Khadgawat, R.; Ramot, R.; Obroi, A. K.; Mehan, N.; Gupta, N.; Madan, R. | Efficacy of vitamin D loading doses on serum 25-hydroxy vitamin D levels in school going adolescents: an open label non-randomized prospective trial | 2013 | India | both | Not reported | non-randomized  prospective trial | 482 | 10-15y | Micro deficiency: vit D | Serum 25(OH)D <50 nmol/l | less vitamin D deficiency |
| Goyle,  Goyle, A.; Prakash, S.  Goyle, A.; Prakash, S.  Goyle, A.; Prakash, S.  Goyle, A.; Prakash, S.  Goyle, A.; Prakash, S. | Effect of micronutrient fortified biscuit supplementation on the weight, height and BMI of adolescent girls.  Effect of supplementation of micronutrient fortified biscuits on haemoglobin and serum iron levels of adolescent girls from Jaipur city, India.  Effect of supplementation of micronutrient fortified biscuits on serum total proteins and vitamin A levels of adolescent girls (10-16 years) of Jaipur city, India.  Efficacy of multi-micronutrient fortified biscuits on urinary iodine levels of adolescent girls from Jaipur, India.  Iron status of adolescent girls (10-15 years) attending a government school in Jaipur city, Rajasthan, India.  Serum total proteins and vitamin A levels of adolescent girls (10-15 years) attending a government school in Jaipur city, India | 2012 | India | girls | slum | randomised control trial 1608 & 1609) baseline data part of a randomised control trial | 107 | 10-16y | Height-for-age | Vishveshwara Rao’s classification | less stunted |
| BMI-for-age | BMI Zscores of WHO reference 20073 | less thin |
| Micro deficiency:  anemia, iodine vit A | Hb<12g/dl13  Urinary iodine <100 mg/L19  Serum retinol <10 mcg/dl | less anemic, less iodine deficiency, less vit A deficiency. Anemia at baseline 96.3%.  Vit A def at baseline 1.8% |
| Hettiarachchi, M.; Liyanage, C.; Wickremasinghe, R.; Hilmers, D. C.; Abrams, S. A. | The efficacy of micronutrient supplementation in reducing the prevalence of anaemia and deficiencies of zinc and iron among adolescents in Sri Lanka | 2008 | Sri Lanka | both | Not reported | randomised control trial | 774 | 12-16y | Height-for-age | <-2SD from median of CDC 20005 | No effect on stunting |
| Micro deficiency: anemia, zinc | Not reported | less anemia and zinc deficiency |
| Hyder, S. M.; Haseen, F.; Khan, M.; Schaetzel, T.; Jalal, C. S.; Rahman, M.; Lonnerdal, B.; Mannar, V.; Mehansho, H. | A multiple-micronutrient-fortified beverage affects hemoglobin, iron, and vitamin A status and growth in adolescent girls in rural Bangladesh | 2007 | Bangladesh | girls | rural | randomised control trial | 989 | mean age 12y | Micro deficiency: anemia, vit A, zinc | Hb <120 g/L.  Serum retinol <0.70 umol/L  Serum zinc <10.7 umol/L | less anemia, less vit A deficiency. No effect on zinc deficiency |
| Khadgawat, R.; Marwaha, R. K.; Garg, M. K.; Ramot, R.; Oberoi, A. K.; Sreenivas, V.; Gahlot, M.; Mehan, N.; Mathur, P.; Gupta, N. | Impact of vitamin D fortified milk supplementation on vitamin D status of healthy school children aged 10-14 years | 2013 | India | both | Not reported | randomised control trial | 713 | 10-14y | Micro deficiency: vit D | Serum 25(OH)D <20 ng/ml21 | less vit D deficiency |
| Muthayya, S.; Thankachan, P.; Hirve, S.; Amalrajan, V.; Thomas, T.; Lubree, H.; Agarwal, D.; Srinivasan, K.; Hurrell, R. F.; Yajnik, C. S.; Kurpad, A. V. | Iron Fortification of Whole Wheat Flour Reduces Iron Deficiency and Iron Deficiency Anemia and Increases Body Iron Stores in Indian School-Aged Children | 2012 | India | both | urban and rural | randomised control trial | 401 | 6-15y (mean age 10.4y) | Micro deficiency: anemia | Hb<12g/dl13 | less anemia |
| Prakash, Vaidya Balendu; Prakash, Shyam; Sharma, Rajesh; Pal, Sanjoy K. | Sustainable effect of Ayurvedic formulations in the treatment of nutritional anemia in adolescent students | 2010 | India | both | Not reported | randomised control trial | 1167 | 11-18y | Micro deficiency: anemia | Hb<12g/dl13 | less anemia |
| Rahman, A. S.; Ahmed, T.; Ahmed, F.; Alam, M. S.; Wahed, M. A.; Sack, D. A. | Double-blind cluster randomised controlled trial of wheat flour chapatti fortified with micronutrients on the status of vitamin A and iron in school-aged children in rural Bangladesh | 2015 | Bangladesh | both | rural | randomised control trial | 352 | 6-15y (mean age 10.4y) | Micro deficiency: anemia, vit A | Hb <115 g/L-1 for children <12 years and <120 g/L-1 for those 12 years  Serum retinol <0.70 mmol L-1 | less vit A deficiency. No effect in anaemia status |
| Thomas, R.; Srinivasan, R.; Sudarshan, H. | Nutritional status of tribal children and adolescents in rural south India: the effect of an NGO delivered nutritional programme | 2013 | India | both | rural | cross-sectional | 410 | 5-17y (mean age 12.3y) | Height-for-age | <3rd percentile of WHO reference 20073 | not effective on stunting |
| BMI-for-age | <5th percentile of WHO reference 20073 | not effective on thinness |
| Vir, S. C.; Singh, N.; Nigam, A. K.; Jain, R. | Weekly iron and folic acid supplementation with counseling reduces anemia in adolescent girls: a large-scale effectiveness study in Uttar Pradesh, India | 2008 | India | girls | Not reported | pre-post interventional study | Not reported | 10-19y | Micro deficiency: anemia | Hb <12 g/dL | less anemia |

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| **PUBLICATIONS THAT DID NOT INCLUDE AN INTERVENTION COMPONENT** | | | | | | | | | | | | |
| Author | Title | year | country | sex | setting | study design | sample analysed | age sample analysed | quant outcome | cut-offs and reference | prevalence (%) |
| Agrahar-Murugkar, D. | Nutritional status of Khasi schoolgirls in Meghalaya, India | 2005 | India | girls | rural | cross-sectional | Not reported | 10-12y | Height-for-age | <-2SD from median of CDC 20005; 95% of the median, Waterlow’s classification7 | Stunting 7% (CDC); stunting 46% (Waterlow) |
| Agrawal, V. K.; Agrawal, P.; Dharmendra, | Prevalence and determinants of xerophthalmia in rural children of Uttarpradesh, India | 2013 | India | both | rural | cross-sectional | 296 | 10-15y | Micro deficiency: vit A | Conjunctival xerosis  when accompanied by Bitot’s spots10 | Vit A def 8.9% in 10-12y, and 11.6% in 13-15y |
| Ahmed, F.; Hasan, N.; Kabir, Y. | Vitamin A deficiency among adolescent female garment factory workers in Bangladesh | 1997 | Bangladesh | girls | urban | cross-sectional | 388 | 12-19y | Micro deficiency: vit A | Serum retinol <0.70 mmol/l | Vit A def 14.2% |
| Ahmed, F.; Khan, M. R.; Islam, M.; Kabir, I.; Fuchs, G. J. | Anaemia and iron deficiency among adolescent schoolgirls in peri-urban Bangladesh | 2000 | Bangladesh | girls | peri-urban | cross-sectional | 548 | 11-16y | Height-for-age | <3rd percentile of NCHS reference1 | Stunting 28% |
| BMI-for-age | <5th percentile of WHO reference 19952 | Thinness 13.5% |
| Micro deficiency: anemia | Hb<120 g/l14 | Anemia 27% |
| Ahmed, F.; Khan, M. R.; Banu, C. P.; Qazi, M. R.; Akhtaruzzaman, M.  Ahmed, F.; Khan, M. R. | The coexistence of other micronutrient deficiencies in anaemic adolescent schoolgirls in rural Bangladesh  Extent of multiple micronutrient deficiencies in anemic adolescent schoolgirls in rural Bangladesh | 2008 | Bangladesh | girls | rural | cross-sectional | 310 | 14-18y | Height-for-age | <3rd percentile of WHO reference 19952 | Stunting 33.4% |
| BMI-for-age | <5th percentile of WHO reference 19952 | Thinness 8.4% |
| Micro deficiency: folic acid, vit B12, B2, vit C, vit A | Hb<120 g/l14  RBC folate <317 nmol/l23  Serum vitamin B12 <150 pmol/l  EGRAC >=1.4  Plasma ascorbic acid <11.4 µmol/l  Serum retinol <0.70 µmol/l11 | Folic acid def 24.8%, Vit B12 def 6.8%, Vit B2 def 89%, Vit C def 2%, and Vit A def 4.1%. |
| Ahmed, F.; Rahman, A.; Noor, A. N.; Akhtaruzzaman, M.; Hughes, R. | Anaemia and vitamin A status among adolescent schoolboys in Dhaka City, Bangladesh | 2006 | Bangladesh | boys | Not reported | cross-sectional | 381 | 11-16y | Height-for-age | <-2SD from median of CDC 20005 | Stunting 8% |
| BMI-for-age | <-2SD from median of CDC 20005 | Not reported |
| Micro deficiency: anemia, vit A | Hb<115g l-1 for 11-year-olds, <120 g l-1 for 12–14-year-olds and <130 g l-1 for 15–16-year-olds13 Serum retinol <0.70µmol11 | Anemia 7%, and vitamin A def 1.5% |
| Allen, A.; Allen, S.; Rodrigo, R.; Perera, L.; Shao, W.; Li, C.; Wang, D.; Olivieri, N.; Weatherall, D. J.; Premawardhena, A. | Iron status and anaemia in Sri Lankan secondary school children: A cross-sectional survey | 2017 | Sri Lanka | both | Not reported | cross-sectional | 5912 | 11-19y | Micro deficiency: anemia | Hb <11.5 g/dl in children <12 years, Hb <12.0 g/dl in females ≥12 years and males aged 12-14 years, and Hb <13.0 g/dl in males aged 15 years and above12 | Anemia 4.6% in girls, and 1% in boys |
| Amarnath, M.; Lakshmanrao, N. | Anemia among adolescent girls in tribal area of Visakhapatnam district in Andhra Pradesh | 2013 | India | girls | Not reported | cross-sectional | 270 | 10-19y | Micro deficiency: anemia | Hb <12gms/dl | Anemia 89% |
| Amatya, B.; Shrestha, N. | Prevalence of Malnutrition in a Rural Residential Sanskrit School in Baglung, Nepal | 2017 | Nepal | boys | rural | cross-sectional | 41 | 8-19y (mean age 13y) | Height-for-age | <-2SD of WHO reference 20073 | Stunting 53.3% |
| BMI-for-age | <-2SD of WHO reference 20073 | Thinness 14% |
| Ameer, S. R.; Ahmad, S. R.; Chandrasekhar, A. | Assessment of underweight and its determinants among school going adolescents in Hyderabad, India | 2018 | India | both | Not reported | cross-sectional | 763 | 13-16y | BMI-for-age | Not reported | Thinness 52.7% |
| Aziz, S.; Noor, W.; Majeed, R.; Amanullah Khan, M.; Qayum, I.; Ahmed, I.; Hosain, K. | Growth centile charts (Anthropometric measurement) of Pakistani pediatric population | 2012 | Pakistan | both | urban and rural | cross-sectional | 9147 | 3-16y (mean age 10.9y) | Height-for-age | <-2SD from median of CDC 20005 | Stunting 14.4% in girls, and 15% in boys |
| Banerjee, S. R.; Chakrabarty, S.; Vasulu, T. S.; Bharati, S.; Sinha, D.; Banerjee, P.; Bharati, P. | Growth and nutritional status of Bengali adolescent girls, India | 2009 | India | girls | peri-urban | cross-sectional | 527 | 10-18y | Height-for-age | 95% of the median, Waterlow’s classification7 | Stunting 65.5% |
| Bansal, P. G.; Toteja, G. S.; Bhatia, N.; Vikram, N. K.; Siddhu, A.; Garg, A. K.; Roy, A. K.  Bansal, P. G.; Toteja, G. S.; Suman, R. | Deficiencies of serum ferritin and vitamin B12, but not folate, are common in adolescent girls residing in a slum in Delhi.  Plasma vitamin C status of adolescent girls in a slum of Delhi | 2015 | India | girls | slum | cross-sectional | 794 | 11-18y | Micro deficiency: anemia, folic acid, vit B12 and vit C. | Hb <120 g/L15  Serum folic acid <4ng/ml17  Vitamin B12 <203pg/ml17  Plasma vitamin C <0.2 mg/dL18 | Anemia 58.7%, folic acid def 5%, vit B12 def 63.3%, and Vit C def 6.3% |
| Bharthi, K.; Ghritlahre, M.; Das, S.; Bose, K. | Nutritional status among children and adolescents aged 6-18 years of Kolam tribe of Andhra Pradesh, India | 2017 | India | both | Not reported | cross-sectional | 571 | 10-18y | BMI-for-age | IOTF6 | Thinness 63% in girls, and 55.4% in boys |
| Bisai, S.; Bose, K.; Dikshit, S. | Underweight and stunting among slum children of Midnapore, India | 2009 | India | both | slum | cross-sectional | 210 | 10-18y | Height-for-age | <-2SD of NCHS reference1 | Stunting 56.9% in girls, and 41.4% in boys |
| Bose, K.; Bisai, S. | Nutritional status of rural adolescent school children in Paschim Medinipur, West Bengal | 2008 | India | both | rural | cross-sectional | 1094 | 11-18y | BMI-for-age | <5th percentile of NHANES4 | Thinness 25.2% in girls, and 41.8% in boys |
| Bose, K.; Bisai, S. | Prevalence of undernutrition among rural adolescents of West Bengal, India | 2008 | India | both | Not reported | cross-sectional | 2016 | 10-15y | BMI-for-age | <5th percentile of NHANES4 | Thinness 20.2% in girls, and 45.8% in boys |
| Bose, K.; Bisai, S.; Chakraborty, J.; Datta, N.; Banerjee, P. | Extreme levels of underweight and stunting among pre-adolescent children of low socioeconomic class from Madhyamgram and Barasat, West Bengal, India | 2008 | India | both | Not reported | cross-sectional | 130 | 10-12y | Height-for-age | <-2SD of NCHS reference1 | Stunting 50.8% in girls, and 53.6% in boys |
| Bose, K.; Mukhopadhyay, A. | Nutritional status of adolescent Bengalee boys | 2004 | India | boys | slum | cross-sectional | 502 | 10-16y | BMI-for-age | <5th percentile of NHANES4 | Thinness 37.6% |
| Caleyachetty, R.; Thomas, G. N.; Kengne, A. P.; Echouffo-Tcheugui, J. B.; Schilsky, S.; Khodabocus, J.; Uauy, R. | The double burden of malnutrition among adolescents: Analysis of data from the Global School-Based Student Health and Health Behavior in School-Aged Children surveys in 57 low- and middle-income countries | 2018 | South Asia: India, Pakistan, Sri Lanka | both | nationally representative | cross-sectional | 13107 | 12-15y | Height-for-age | <-2SD from median of WHO reference 20073 | Pakistan: stunting 7.1% and thinness 11.2%. India: stunting 14.6%, thinness 15.9%. Sri Lanka: stunting 25.6%, thinness 31.5%. |
| BMI-for-age | <-2SD from median of WHO reference 20073 |
| Chakrabarty, S.; Bharati, P. | Physical growth and nutritional status of the Shabar tribal adolescents of Orissa, India: A cross-sectional study | 2008 | India | both | Not reported | cross-sectional | 328 | 10-18y | BMI-for-age | <5th percentile of WHO reference 19952 | Thinness 35.8% in girls, and 54.4% in boys |
| Chakraborty, S.; Chopra, M.; Mani, K.; Giri, A. K.; Banerjee, P.; Sahni, N. S.; Siddhu, A.; Tandon, N.; Bharadwaj, D. | Prevalence of vitamin B-12 deficiency in healthy Indian school-going adolescents from rural and urban localities and its relationship with various anthropometric indices: a cross-sectional study | 2018 | India | both | urban and rural | cross-sectional | 2403 | 11-17y | Micro deficiency: vit B12 | Serum B12 <148 pmol L-1 | Vit B12 def 31% in girls, and 34.4% in boys |
| Choudhary, S.; Khichar, S.; Dabi, D.; Parakh, M.; Dara, P. K.; Parakh, P.; Vyas, S.; Deopa, B. | Urban Rural Comparison of Anthropometry and Menarcheal Status of Adolescent School Going Girls of Jodhpur, Rajasthan, India | 2016 | India | girls | urban and rural | cross-sectional | 327 | 11-16y | Height-for-age | CDC 20005 | Stunting 21.2% |
| BMI-for-age | CDC 20005 | Thinness 27% |
| Das, D. K.; Biswas, R. | Nutritional status of adolescent girls in a rural area of North 24 Parganas district, West Bengal | 2005 | India | girls | rural | cross-sectional | 143 | 10-19y | Height-for-age | <5th percentile of WHO reference 19952 | Stunting 37.8% |
| BMI-for-age | <5th percentile of WHO reference 19952 | Thinness 14.7% |
| Das, P.; Ray, S. K.; Joardar, G. K.; Dasgupta, S. | Nutritional profiles of adolescents in a rural community of Hooghly district in West Bengal | 2007 | India | both | rural | cross-sectional | 204 | 10-19y | Height-for-age | Not reported | Stunting 52.4% in girls, and 52.4% in boys |
| BMI-for-age | <5th percentile of NCHS reference1 | Thinness 18% in girls and 36.6% in boys |
| Das, S.; Bose, K. | Prevalence of thinness using new international cut-off points among Santal tribal children and adolescents of Purulia District, West Bengal, India | 2011 | India | both | Not reported | cross-sectional | 421 | 7-18y (mean age 11.3y) | BMI-for-age | IOTF6 | Thinness 44.6% in girls, and 38.2% boys |
| Datta Banik, S. | Menarche, nutritional status and body size in 10 to 12 year-old girls from Kashipur, Purulia, West Bengal, India | 2014 | India | girls | Not reported | cross-sectional | 100 | 10-12y | Height-for-age | WHO reference 20073 | Stunting 50% |
| BMI-for-age | WHO reference 20073 | Thinness 22% |
| de Lanerolle-Dias, M.; de Silva, A.; Lanerolle, P.; Arambepola, C.; Atukorala, S. | Micronutrient status of female adolescent school dropouts | 2012 | Sri Lanka | girls | urban and rural | cross-sectional | 613 | 15-19y | BMI-for-age | WHO reference 20073 | Thinness 32.8% |
| Micro deficiency: anemia, zinc | Hb <120 g/L13  Serum zinc <66μg/dl | Anemia 17%, and zinc def 28.8% |
| Debnath, M.; Tigga, P. L.; Mondal, N.; Sen, J. | Birth order, father's occupation and family size are strongly associated with thinness among bengalee adolescent girls of Darjeeling district, West Bengal (India) | 2016 | India | girls | Not reported | cross-sectional | 387 | 9-14y (mean age 11.5y) | BMI-for-age | IOTF6 | Thinness 23.8% |
| Durrani, N. U. R.; Ahmad, Z.; Abbas, K. A. | Nutritional and health status of school age children in Islamabad Capital Territory, Pakistan | 2007 | Pakistan | both | rural | cross-sectional | 108 | 11-14y | Height-for-age | <-2SD from median of WHO reference 19952 | Stunting 89.9% |
| Faizi, N.; Khan, Z.; Khan, I. M.; Amir, A.; Azmi, S. A.; Khalique, N. | A study on nutritional status of school-going adolescents in Aligarh, India | 2017 | India | both | Not reported | cross-sectional | 1456 | 13-15y | BMI-for-age | <-2SD from median of WHO reference 20073 | Thinness 2.6% in girls, and 2.9% in boys |
| Garg, P.; Kaur, S.; Gupta, D.; Osmond, C.; Lakshmy, R.; Sinha, S.; Kapil, U.; Sachdev, H. P. S. | Variability of thinness and its relation to cardio-metabolic risk factors using four body mass index references in school-children from Delhi, India | 2013 | India | both | Not reported | cross-sectional | 16245 | 5-18y (mean age 11.7y) | BMI-for-age | <-2SD from median of CDC 20005; IOTF6; <-2SD from median of WHO reference 20073; 5th percentile of IAP8 | Thinness in girls: CDC 10.3%, IOTF 9.4%, WHO 9%, IAP 6.5%; in males: CDC 17%, WHO 15%, Cole 10.5%, IAP 6.6% |
| Ghosh, J. R.; Bandyopadhyay, A. R. | Prevalence of thinness and overweight among urban adolescents of West Bengal, India | 2009 | India | both | urban | cross-sectional | 1153 | 9-17y | BMI-for-age | 5th percentile of WHO reference 19952 | Thinness 16.9% in girls, and 28.4% in boys |
| Ghosh, J. R.; Sarkar, A. | Prevalence of undernutrition among Santal children of Birbhum District, West Bengal, India | 2013 | India | both | rural | cross-sectional | 119 | 10-16y | Height-for-age | <-2SD from median of WHO reference 20073 | Stunting 31.1% in girls, and 17% in boys |
| BMI-for-age | <-2SD from median of WHO reference 20073 | Thinness 5.8% in girls, and 16% in boys |
| Gupta, A.; Gupta, S. | Prevalence of iron deficiency anaemia in healthy adolescent girls from low to medium socio-economic strata living in one of the fastest developing economies | 2018 | India | girls | slum | cross-sectional | 253 | 11-18y | Micro deficiency: anemia | Not reported | Anemia 86.6% |
| Gupta, A.; Kapil, U.; Ramakrishnan, L.; Pandey, R. M.; Yadav, C. P. | Prevalence of Vitamin B12 and Folate Deficiency in School Children Residing at High Altitude Regions in India | 2017 | India | both | Not reported | cross-sectional | 215 | 6-18y (mean age 13y) | Micro deficiency: folic acid and vit B12 | Serum folic acid <4ng/ml17  Serum vitamin B12 <203pg/ml17 | Folic acid def 1.5%, vit B12 def 7.4% |
| Gupta, V. K.; Maria, A. K.; Kumar, R.; Bahia, J. S.; Arora, S. | To study the prevalence of anaemia in young males and females with respect to the age, BMI, activity profile and the socioeconomic status in rural Punjab | 2011 | India | both | rural | cross-sectional | 1824 | 10-19y | Micro deficiency: anemia | Hb <13g/dl in males and  Hb <12g/dl in females | Anemia 87% in girls, and 88.7% in boys |
| Haboubi, G. J.; Shaikh, R. B. | A comparison of the nutritional status of adolescents from selected schools of South India and UAE: A cross-sectional study | 2009 | India | both | Not reported | cross-sectional | 1200 | 10-16y | Height-for-age | <3rd percentile of NCHS reference1 | Stunting 36.9% in girls, and 38.8% in boys |
| BMI-for-age | <5th percentile of NCHS reference1 | Thinness 50% in girls, and 64.6% in boys |
| Harun-Or-Rashid, M.; Khatun, U. F.; Yoshida, Y.; Morita, S.; Chowdhury, N.; Sakamoto, J. | Iron and iodine deficiencies among under-2 children, adolescent girls, and pregnant women of Bangladesh: association with common diseases | 2009 | Bangladesh | girls | nationally representative | cross-sectional | 355 | 13-19y | Micro deficiency: anemia, iodine | Hb<12 g/dL13  Urinary iodine <100µg/L19 | Anemia 24.8%, iodine def 38.4% |
| Hettiarachchi, M.; Liyanage, C.; Wickremasinghe, R.; Hilmers, D.; Abrams, S. | Nutrient intake and growth of adolescents in southern Sri Lanka | 2006 | Sri Lanka | both | Not reported | cross-sectional | 945 | 12-16y | Height-for-age | <-2SD from median of NCHS reference1 | Stunting 21.1% in girls, and 21.3% in boys |
| BMI-for-age | <5th percentile of CDC 20005 | Thinness 35.7% in girls, and 57.6% in boys |
| Hettiarachchi, M.; Liyanage, C.; Wickremasinghe, R.; Hilmers, D. C.; Abrahams, S. A. | Prevalence and severity of micronutrient deficiency: a cross-sectional study among adolescents in Sri Lanka | 2006 | Sri Lanka | both | Not reported | cross-sectional | 945 | 12-16y | Height-for-age | <-2SD from median of CDC 20005 | Stunting 17.5% in girls, and 19.5% in boys |
| BMI-for-age | <-2SD from median of CDC 20005 | Thinness 23.8% in girls, and 43.2% in boys |
| Micro deficiency: anemia, zinc, folic acid | Hb < 120.0 g/L  Serum zinc <9.95 μmol/L.  Serum folate <6.80 nmol/L | Anemia 58% in girls and 49.6% in boys.  Zinc def 58.3% in girls, and 51.5% in boys. Folic acid def 52.5% in girls, and 54.6% in boys. |
| Himaz, R. | Stunting later in childhood and outcomes as a young adult: Evidence from India | 2018 | India | both | Not reported | secondary data analysis of a longitudinal study | 1000 | children were aged 8, 12, 15 and 19. | Height-for-age | <-2SD from median of WHO reference 20073 | Stunting 30% at the age of 8. Less than half of the stunted children at 8 remained stunted at age 19 |
| Hussain, D. A. S.; Arefin, M. S.; Hussain, B.; Sarker, A. | Prevalence of iron deficiency anemia and its biochemical parameters among the selected school- going under-priviledged children in Dhaka City, Bangladesh | 2013 | Bangladesh | both | Not reported | cross-sectional | 164 | 10-18y | Micro deficiency: anemia | Hb <12.0 gm/dl | Anemia 66% |
| Jaacks, L. M.; Slining, M. M.; Popkin, B. M. | Recent trends in the prevalence of under- and overweight among adolescent girls in low- and middle-income countries | 2015 | India, Bangladesh and Nepal | girls | nationally representative | cross-sectional | Not reported | 15-18y | BMI-for-age | IOTF6 | Thinness 40% in India, 24% in Nepal and 24% in Bangladesh. |
| Jafar, T. H.; Qadri, Z.; Islam, M.; Hatcher, J.; Bhutta, Z. A.; Chaturvedi, N. | Rise in childhood obesity with persistently high rates of undernutrition among urban school-aged Indo-Asian children | 2008 | Pakistan | both | urban | cross-sectional | NHSP n=685; Karachi survey n= 637 | 11-14y | Height-for-age | <-2SD from median of NCHS reference1 | Stunting 15.3% in NHSP, and 11.9% in Karachi survey |
| Jani, R.; Salian, N.; Udipi, S.; Ghugre, P.; Lohia, N.; Haas, J.; Boy, E. | Folate status and intake of tribal Indian adolescents aged 10 to 17 years | 2015 | India | both | Not reported | cross-sectional | 224 | 10-17y | Micro deficiency: anemia, folic acid | Hb <120g/L15  RBC folate < 340 nmol/L16 | Anemia 43% in girls, and 31.3% in boys.  Folic acid def 48% in girls and 41% in boys. |
| Jayatissa, R.; Ranbanda, R. M. | Prevalence of challenging nutritional problems among adolescents in Sri Lanka | 2006 | Sri Lanka | both | nationally representative | cross-sectional | 6264 | 10-15y | Height-for-age | <3rd percentile of NCHS reference1 | Stunting 27.9% in girls, and 29.1% in boys. |
| BMI-for-age | <5th percentile of NCHS reference1 | Thinness 36.1% in girls, and 57.9% in boys |
| Micro deficiency: anemia, vit A | Hb<12.0 g/dL  Presence of Bitot’s spots10 | Anemia 11.2% in girls, and 11% in boys.  Vit A def 0.3% in girls, and 0.4% in boys |
| Johnson, A. R.; Balasubramanya, B.; Jaimol,; Shaiby, S. R.; Gifty,; Britto, R. D. | Body image perception and nutritional status of adolescents in a school in rural South India | 2015 | India | both | Not reported | cross-sectional | 118 | 10-19y | BMI-for-age | WHO reference 20073 | Thinness 26.6% in girls, and 43.6% in boys |
| Kabir, Y.; Shahjalal, H. M.; Saleh, F.; Obaid, W. | Dietary pattern, nutritional status, anaemia and anaemia-related knowledge in urban adolescent college girls of Bangladesh | 2010 | Bangladesh | girls | urban | cross-sectional | 65 | 15-19y | Height-for-age | <95% of NCHS reference1 | Stunting 63% |
| Micro deficiency: anemia, vit C | Hb<12.0 g/dl13  Vitamin C <0.29 mg/dl | Anemia 23%, vit C def 8% |
| Kanade, A. N.; Joshi, S. B.; Rao, S. | Undernutrition and adolescent growth among rural Indian boys | 1999 | India | boys | rural | longitudinal | 473 | 10-18y | Height-for-age | <90% of the median, Waterlow’s classification7 | Stunting ranged from 16.7% at the age of 18y and 67.2 at the age of 13 |
| Kapil, U.; Pandey, R.; Goswami, R.; Sharma, B.; Sharma, N.; Ramakrishnan, L.; Singh, G.; Sareen, N.; Sati, H.; Gupta, A.; Sofi, N. | Prevalence of Vitamin D deficiency and associated risk factors among children residing at high altitude in Shimla district, Himachal Pradesh, India | 2017 | India | both | Not reported | cross-sectional | 626 | 6-18y (mean age 13y) | Micro deficiency: vit D | Serum 25(OH)D <20 ng/ml20 | Vit D def 96.3% in girls, and 89.3% in boys |
| Kapil, U.; Pandey, R. M.; Sharma, B.; Ramakrishnan, L.; Sharma, N.; Singh, G.; Sareen, N. | Prevalence of Vitamin D Deficiency in Children (6-18 years) Residing in Kullu and Kangra Districts of Himachal Pradesh, India | 2018 | India | both | Not reported | cross-sectional | 1222 | 6-18y (mean age 13y) | Micro deficiency: vit D | Serum 25(OH)D <20 ng/ml20 | Vit D def in 91.5% in girls, and 70% in boys |
| Kapil, U.; Sareen, N. | Prevalence of ferritin, folate and vitamin B12 deficiencies amongst children in 5-18 years of age in Delhi | 2014 | India | both | Not reported | cross-sectional | Not reported | 12-18y | Micro deficiency: iron, folic acid, vit B12. | Serum ferritin < 12 ng/mL  Serum folate < 3 ng/mL  Serum B12 < 200 pg/mL | Iron def 55.0 %, folic acid def 30.7 % and vit B12 def 68.3 % |
| Kapoor, A.; Channa, N. A.; Soomro, A. M.; Tunio, S. A.; Khand, T. U.; Memon, N. | Malnutrition and clinical manifestations in school going children at district Tharparkar, Sindh, Pakistan | 2018 | Pakistan | both | Not reported | cross-sectional | 300 | 12-17y | Height-for-age | <-2SD from median of WHO reference 20073 | Stunting 32% in girls, and 34% in boys. |
| BMI-for-age | <-2SD from median of WHO reference 20073 | Thinness 16% in girls, and 34% in boys. |
| Micro deficiency: anemia | Not reported | Anemia 50.6% in girls, and 70% in boys. |
| Kawade, R. | Zinc status and its association with the health of adolescents: a review of studies in India | 2012 | India | girls | Not reported | cross-sectional | 630 | 10-16y | BMI-for-age | <5th percentile of IAP8 | Thinness 24% |
| Micro deficiency: anemia, zinc, vit A, vit C. | Hb<12 g/dl  Plasma zinc < 0.7mg/l  Plasma retinol <200 mg/l  Plasma vit C <0.2 mg/dl | Anemia 27.2%, zinc def 72.4%, vit A def 65.4%, vit C def 10.8% |
| Khan, A.; Burton, N. W.; Khan, S. R. | Double burden of overweight and underweight among school children of Dhaka city, Bangladesh | 2013 | Bangladesh | both | urban | cross-sectional | 898 | mean age 14.3y | BMI-for-age | WHO reference 20073 | Thinness 11.4% in girls, and 15.7% in boys |

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| Khan, M. R.; Ahmed, F. | Physical status, nutrient intake and dietary pattern of adolescent female factory workers in urban Bangladesh | 2005 | Bangladesh | girls | urban | cross-sectional | 1211 | 14-19y | Height-for-age | <3rd percentile of NCHS reference1 | Stunting 65% |
| BMI-for-age | <5th percentile of NCHS reference1 | Thinness 17% |
| Khan, Z.; Khan, I. M.; Amir, A.; Azmi, S. A.; Khalique, N. | A study on nutritional status of school-going adolescents in Aligarh, India | 2017 | India | both | Not reported | cross-sectional | 1456 | 13-15y | BMI-for-age | <-2SD from median of WHO reference 20073 | Thinness 2.6% in girls, and 2.9% in boys |
| Kini, S.; Kumar, M.; Usha Rani, S. P. | Assessment of nutritional status of school going children in rural Mangalore, south India: A cross sectional study | 2016 | India | both | rural | cross-sectional | 290 | 10-16y | Height-for-age | Not reported | Stunting 21.8% in girls, and 16.6% in boys |
| BMI-for-age | Not reported | Thinness 41% in girls, and 53.7% in boys |
| Kumar, A. K.; Siddhu, C. M.; Chandra, M. R.; Kishore, K. | Serum vitamin A level of secondary school children | 1976 | India | boys | Not reported | cross-sectional | 409 | 10-16y | Micro deficiency: vit A | Clinical signs of vitamin A deficiency | Vit A def 24% |
| Lamba, R., Jr.; Misra, S. K.; Agrawal, R.; Rana, R., Sr. | To study the prevalence of anemia and related biosocial factors among college going adolescent girls in urban Agra | 2014 | India | girls | urban | cross-sectional | 300 | 16-19y | Micro deficiency: anemia | Hb<12gm/dl15 | Anemia 65.3% |
| Laxmaiah, A.; Arlappa, N.; Balakrishna, N.; Mallikarjuna Rao, K.; Galreddy, C.; Kumar, S.; Ravindranath, M.; Brahmam, G. N. | Prevalence and determinants of micronutrient deficiencies among rural children of eight states in India | 2013 | India | both | rural | cross-sectional | 6616 | 12-17y | Micro deficiency: anemia | Hb<12gm/dl13 | Anemia 69.2% |
| Leroy, J. L.; Ruel, M.; Sununtnasuk, C.; Ahmed, A. | Understanding the determinants of adolescent nutrition in Bangladesh | 2018 | Bangladesh | both | nationally representative of rural Bangladesh | cross-sectional | 4093 | 10-20y | BMI-for-age | <-2SD from median of WHO reference 20073 | Thinness 16.7% in girls, and 22.3% in boys |
| Maiti, S.; Ali, K. M.; De, D.; Bera, T. K.; Ghosh, D.; Paul, S. | A comparative study on nutritional status of urban and rural early adolescent school girls of West Bengal, India | 2011 | India | girls | urban and rural | cross-sectional | 2545 | 10-14y | Height-for-age | <-2SD from median of NCHS reference1 | Stunting 32.5% |
| BMI-for-age | <-2SD from median of NCHS reference1 | Thinness 23.3% |
| Maiti, S.; Ghosh, D.; Paul, S. | Prevalence of thinness among early adolescent in rural school girls of Paschim Medinipur, West Bengal, India | 2011 | India | girls | rural | cross-sectional | 3693 | 10-14y | BMI-for-age | IOTF6 | Thinness 58.3% |
| Malhotra, A.; Passi, S. J. | Diet quality and nutritional status of rural adolescent girl beneficiaries of ICDS in north India | 2007 | India | girls | rural | cross-sectional | 209 | 11-21y (mean age 13.6y) | Height-for-age | <3rd percentile of NCHS reference1 | Stunting 29.7% |
| BMI-for-age | <5th percentile of NCHS reference1 | Thinness 30.6% |
| Mandot, S.; Mandot, D.; Sonesh, J. K. | Nutritional status of tribal (Garasia) school children of Sirohi district, Rajasthan, India | 2009 | India | both | Not reported | cross-sectional | 1131 | 10-16y | Height-for-age | <3rd percentile of NCHS reference1 & IAP9 | Stunting 48.1% in girls, and 47.8% in boys (NCHS) & 30.5% in girls, and  29.2% in boys (IAP) |
| BMI-for-age | <5th percentile of NCHS reference1 | Thinness 55.8% in girls and, 68.5% in boys |
| Mansur, D. I.; Haque, M. K.; Sharma, K.; Mehta, D. K.; Shakya, R. | Prevalence of underweight, stunting and thinness among adolescent girls in Kavre District, Nepal | 2015 | Nepal | girls | rural | cross-sectional | 617 | 10-16y | Height-for-age | <-2SD from median of WHO reference 19952 | Stunting 19% |
| BMI-for-age | <-2SD from median of WHO reference 19952 | Thinness 13% |
| Marwaha, R. K.; Tandon, N.; Reddy, D. R.; Aggarwal, R.; Singh, R.; Sawhney, R. C.; Saluja, B.; Ganie, M. A.; Singh, S. | Vitamin D and bone mineral density status of healthy schoolchildren in northern India | 2005 | India | both | urban | cross-sectional | 760 | 10-18y | Micro deficiency: vit D | Serum 25(OH)D <20 ng/ml21 | Vit D def 89.9% |
| Medhi, G. K.; Hazarika, N. C.; Mahanta, J. | Nutritional status of adolescents among tea garden workers | 2007 | India | both | Not reported | cross-sectional | 605 | 10-18y | Height-for-age | <3rd percentile of NCHS reference1 & IAP9 | Stunting 51.9% in girls, and 47.4% in boys (NCHS).  Stunting 29.1% in girls and 30.9% in boys (IAP) |
| BMI-for-age | <5th percentile of NHANES4 | Thinness 41.3% in girls, and 59.4% in boys |
| Mitra, M.; Kumar, P. V.; Chakrabarty, S.; Bharati, P. | Nutritional status of kamar tribal children in Chhattisgarh | 2007 | India | both | Not reported | cross-sectional | 44 | 10-12y | Height-for-age | <-2SD from median of NCHS reference1 | Stunting 65% in girls, and 66.7% in boys |
| Mondal, N. | Thinness as major underlying problem among adolescents of northeast India | 2014 | India | both | rural | cross-sectional | 1165 | 10-18y | BMI-for-age | IOTF6 | Thinness 46.9% girls, and 51.2% boys |
| Mondal, N.; Basumatary, B.; Kropi, J.; Bose, K. | Prevalence of double burden of malnutrition among urban school going Bodo children aged 5-11 years of Assam, Northeast India | 2015 | India | both | urban | cross-sectional | 268 | 10-11y | BMI-for-age | IOTF6 | Thinness 13.2% in girls, and 13.6% in boys |
| Mondal, N.; Sen, J. | Thinness is a major underlying problem among Indian children | 2010 | India | both | rural | cross-sectional | 929 | 10-12y | BMI-for-age | IOTF6 | Thinness 60.3% in girls, and 70.1% in boys |
| Mondal, N.; Sen, J. | Prevalence of undernutrition among children (5-12 years) belonging to three communities residing in a similar habitat in North Bengal, India | 2010 | India | both | Not reported | cross-sectional | 688 | 10-12y | Height-for-age | <-2SD from median of NCHS reference1 | Stunting 53% in girls, and 42% in boys |
| Mondal, N.; Sen, J. | Prevalence of stunting and thinness among rural adolescents of Darjeeling district, West Bengal, India | 2010 | India | both | rural | cross-sectional | 726 | 10-17y | Height-for-age | <3rd percentile of NCHS reference1 | Stunting 50.3% in girls, and 43.1% in boys |
| BMI-for-age | <5th percentile of NHANES4 | Thinness 32% in girls, and 52.1% in boys |
| Mondal, N.; Terangpi, M. | Prevalence of undernutrition among tribal adolescents of Karbi Anglong district of Assam, Northeast India | 2014 | India | both | Not reported | cross-sectional | 864 | 10-17y | Height-for-age | <3rd percentile of NCHS reference1 | Stunting 50.2% in girls, and 50.1% in boys |
| BMI-for-age | <5th percentile of NHANES4 | Thinness 14.9% in girls, and 12.5% in boys |
| Mushtaq, M. U.; Gull, S.; Khurshid, U.; Shahid, U.; Shad, M. A.; Siddiqui, A. M. | Prevalence and socio-demographic correlates of stunting and thinness among Pakistani primary school children | 2011 | Pakistan | both | urban and rural | cross-sectional | 187 | 11-12y | Height-for-age | <-2SD from median of WHO reference 20073 | Stunting 18.7% |
| BMI-for-age | <-2SD from median of WHO reference 20073 | Thinness 17.1% |
| Niranjala, A. M. S.; Gunawardena, N. S. | Nutritional Status of Adolescent Females in Estates in Haliela, Sri Lanka | 2011 | Sri Lanka | girls | Not reported | cross-sectional | 524 | 13-16y | BMI-for-age | <5th percentile of NCHS reference1 | Thinness 39.1% |
| Padhy, G. K.; Mishra, R. N.; Das, S.; Sahu, K. | A study on assessment of health status of school children of eastern Bhubaneswar, India | 2013 | India | both | Not reported | cross-sectional | 604 | 10-16y | Height-for-age | <3rd percentile of NCHS reference1 | Stunting 28% in girls, and 22.4% in boys |
| Pal, A.; Pari, A. K.; Sinha, A.; Dhara, P. C. | Prevalence of undernutrition and associated factors: A cross-sectional study among rural adolescents in West Bengal, India | 2017 | India | both | rural | cross-sectional | 560 | 10-17y | Height-for-age | <-2SD from median of WHO reference 19952 | Stunting 58.4% in girls, and 48.8% in boys |
| BMI-for-age | <5th percentile of NHANES4 | Thinness 50.9% in girls, and 46.6% in boys |
| Pandav, C. S.; Mallik, A.; Anand, K.; Pandav, S.; Karmarkar, M. G. | Prevalence of iodine deficiency disorders among school children of Delhi | 1997 | India | both | Not reported | cross-sectional | 1684 | 10-14y | Micro deficiency: iodine | Urinary iodine <100ug/L | Iodine def 23.6% |
| PanterBrick, C.; Todd, A.; Baker, R. | Growth status of homeless Nepali boys: Do they differ from rural and urban controls? | 1996 | Nepal | boys | urban and rural | cross-sectional | 150 | 12-14y | Height-for-age | <-2SD from median of NCHS reference1 | Stunting 68% |
| Pasi, A. L.; Hanchate, M. S.; Pasha, M. A. M. | Study of health profile of adolescent girls in Kurnool district of Andhra Pradesh-India | 2013 | India | girls | rural | cross-sectional | 589 | 10-19y | Micro deficiency: anemia | Hb < 12 gm/dl14 | Anemia 41.9% |
| Patel, S. A.; Narayan, K. M.; Cunningham, S. A. | Unhealthy weight among children and adults in India: urbanicity and the crossover in underweight and overweight | 2015 | India | both | nationally representative | cross-sectional | Not reported | 15-18y | BMI-for-age | <-2SD from median of WHO reference 20073 | Thinness 11.3% in girls, and 25.5% in boys |
| Prashant, K.; Shaw, C. | Nutritional status of adolescent girls from an urban slum area in South India | 2009 | India | girls | slum | cross-sectional | 223 | 10-18y | Height-for-age | <3rd percentile of NCHS reference1 & IAP8 | Stunting 47% (NCHS) and 28.3% (IAP) |
| BMI-for-age | <5th percentile of IAP8 | Thinness 20.6% |
| Radhika, M. S.; Swetha, B.; Kumar, B. N.; Krishna, N. B.; Laxmaiah, A. | Dietary and nondietary determinants of nutritional status among adolescent girls and adult women in India | 2018 | India | girls | rural | cross-sectional | 3930 | 10-19y | BMI-for-age | <-2SD from median of WHO reference 20073 | Thinness 27% |
| Rah, J. H.; Christian, P.; Shamim, A. A.; Arju, U. T.; Labrique, A. B.; Rashid, M. | Predictors of stunting and thinness in post-menarcheal adolescent girls in rural Bangladesh | 2009 | Bangladesh | girls | rural | cross-sectional | 456 | 12-19y | Height-for-age | <-2SD from median of CDC 20005 | Stunting 47% |
| BMI-for-age | <5th percentile of CDC 20005 | Thinness 11.9% |
| Rao, K. M.; Balakrishna, N.; Laxmaiah, A.; Venkaiah, K.; Brahmam, G. N. | Diet and nutritional status of adolescent tribal population in nine states of India | 2006 | India | both | tribal and rural | cross-sectional | 12789 | 10-17y | Height-for-age | <-2SD from median of NCHS reference1 | Stunting 46% in tribal girls, 39% in rural girls, and 42.4% in tribal boys, 39% in rural boys. |
| BMI-for-age | <5th percentile of NHANES4 | Thinness 41.7% in tribal girls, 40.1% in rural girls, and 62.9% in tribal boys, 66.9% in rural boys |
| Rawat, R.; Kumar, S.; Bindhu, S. A. | Sociodemographic correlates of malnutrition among school aged children in an urban slum in India: a cross-sectional study | 2015 | India | both | slum | cross-sectional | 217 | 10-14y | BMI-for-age | <5th percentile of CDC 20005 | Thinness 54.3% |
| Rengma, M. S.; Bose, K.; Mondal, N. | Socio-economic and demographic correlates of stunting among adolescents of Assam, North- east India | 2016 | India | both | Not reported | cross-sectional | 1818 | 10-18y | Height-for-age | <-2SD from median of WHO reference 20073 | Stunting 37.8% in girls, and 48.4% in boys |
| Roy, S.; Barman, S.; Mondal, N.; Sen, J. | Prevalence of stunting and thinness among adolescent girls belonging to the rajbanshi population of West Bengal, India | 2016 | India | girls | Not reported | cross-sectional | 500 | 9-18y | Height-for-age | <3rd percentile of NCHS reference1 | Stunting 39.6% |
| BMI-for-age | <5th percentile of NHANES4 | Thinness 26% |
| Sahu, M.; Bhatia, V.; Aggarwal, A.; Rawat, V.; Saxena, P.; Pandey, A.; Das, V. | Vitamin D deficiency in rural girls and pregnant women despite abundant sunshine in northern India | 2009 | India | girls | Not reported | cross-sectional | 121 | mean age 14.3y | Micro deficiency: vit D | Serum 25(OH)D <50 nmol/l | Vit D def 88% |
| Selvarani, P. | Prevalence of anaemia and its association with demographic factors among adolescent girls in Coimbatore district, India | 2017 | India | girls | urban and rural | cross-sectional | 605 | 13-16y | Micro deficiency: anemia | Hb<12gms/dl15 | Anemia 55.7% |
| Shahabuddin, A. K. M.; Talukder, K.; Talukder, M. Q. K.; Hassan, M. Q.; Seal, A.; Rahman, Q.; Mannan, A.; Tomkins, A.; Costello, A. | Adolescent nutrition in a rural community in Bangladesh | 2000 | Bangladesh | both | rural | cross-sectional | 906 | 10-17y | Height-for-age | Not reported | Not reported |
| BMI-for-age | Not reported | Not reported |
| Micro deficiency: anemia | Hb <12.0 g/dl for males 10-15 y, Hb <13.0 g/dl for males >15 y,  Hb <11.5 g/dl for females 10-15 y,  Hb <12.0 g/dl for females >15 y | Anemia 65% girls, and 96% boys |
| Shridevi, K.; Nageshwara Rao, R.; Madhavi, P.; Chandra Sekhar, K.; Deotale, P. G. | A study of nutritional status of adolescent girls of social welfare hostels in and around Vijayawada city | 2015 | India | girls | Not reported | cross-sectional | 181 | 13-17y | Micro deficiency: anemia | Not reported | Anemia 98.3% |
| Sikdar, M. | Prevalence of malnutrition among the Mising children of Northeast India: A comparison between four different sets of criteria | 2012 | India | both | Not reported | cross-sectional | 102 | 10y | BMI-for-age | <-2SD from median of WHO reference 20073 & IOTF6 & <5th percentile of NHANES4 & <5th percentile CDC 20005 | Thinness 24% (WHO), 20% (IOTF), 34% (NHANES) and 34% (CDC) in girls. Thinness 7.6% (WHO) 17.3% (IOTF), 25% (NHANES), and 28.8% (CDC) in boys. |
| Singh, N.; Mishra, C. P. | Nutritional status of adolescent girls of a slum community of Varanasi, India | 2001 | India | girls | slum | cross-sectional | 70 | 13-18y | Height-for-age | Not reported | Stunting 10% |
| Singh, R. K. | Lifestyle behavior affecting prevalence of anemia among women in EAG states, India | 2013 | India | girls | nationally representative | cross-sectional | 7863 | 15-19y | Micro deficiency: anemia | Hb <12 g/dl | Anemia 66% |
| Sinha, A.; Jonas, J. B.; Kulkarni, M.; Nangia, V. | Vitamin A deficiency in schoolchildren in urban central India: the central India children eye study | 2011 | India | both | urban | cross-sectional | 11601 | 7-21y (mean age 13y) | Micro deficiency: vit A | Bitot spots and/or subjective night blindness | Vit A def 6.5% |
| Siva, P. M.; Sobha, A.; Manjula, V. D. | Prevalence of anaemia and its associated risk factors among adolescent girls of central Kerala | 2016 | India | girls | Not reported | cross-sectional | 257 | 10-19y | BMI-for-age | WHO reference 20073 | Thinness 17.2% |
| Micro deficiency: anemia | Hb <12 gm/dl15 | Anemia 21% |
| Sunethra Atukorala, T. M.; De Silva, L. D. R. | Iron status of adolescent females in three schools in an urban area of Sri Lanka | 1990 | Sri Lanka | girls | urban | cross-sectional | 93 | 14-18y | Micro deficiency: anemia | Hb<12 g/dl | Anemia 7.5% |
| Tamanna, S.; Rana, M. M.; Ferdoushi, A.; Ishtiyaq Ahmad, S. A.; Rahman, M.; Rahman, A. | Assessment of nutritional status among adolescent Garo in Sherpur district, Bangladesh | 2013 | Bangladesh | both | Not reported | cross-sectional | 384 | 10-18y | Height-for-age | <-2SD from median of NCHS reference1 | Stunting 17.7% in girls, and 12.9% in boys |
| Tandon, B. N.; Ramachandran, K.; Nath, L. M.; Sood, N. N.; Gahlot, D. K.; Gupta, M. C.; Wali, J. P.; Sinha, S. N.; Hasteer, P. C.; Kutty, P. R. | Vitamin A nutritional status of rural community of Khol block in Haryana, North India. A collaborative study | 1975 | India | both | rural | cross-sectional | 555 | 10-19y | Micro deficiency: vit A | Night blindness and Bitot’s spots | Night blindness 11.2% and Bitot's spots 7.6% |
| Thoradeniya, T.; Wickremasinghe, R.; Ramanayake, R.; Atukorala, S. | Low folic acid status and its association with anaemia in urban adolescent girls and women of childbearing age in Sri Lanka | 2006 | Sri Lanka | girls | urban | cross-sectional | 276 | 15-18y | Height-for-age | 5th percentile of WHO reference 19952 | Thinness 18% |
| Micro deficiency: anemia, folic acid, vit B12 | Hb<120 g/l  Serum folic acid <3 ng/ml  Serum vitamin B12 <150 pg/ml | Anemia 31.1%, folic acid def 45.1%, and vit B12 def 0.44% |
| Toteja, G. S.; Singh, P.; Dhillon, B. S.; Saxena, B. N.; Ahmed, F. U.; Singh, R. P.; Prakash, B.; Vijayaraghavan, K.; Singh, Y.; Rauf, A.; Sarma, U. C.; Gandhi, S.; Behl, L.; Mukherjee, K.; Swami, S. S.; Meru, V.; Chandra, P.; Chandrawati,; Mohan, U. | Prevalence of anemia among pregnant women and adolescent girls in 16 districts of India | 2006 | India | girls | Not reported | cross-sectional | 4337 | 11-18y | Micro deficiency: anemia | Hb<120 g/L14 | Anemia 90.1% |
| Vashist, B. M.; Joyti, ; Goel, M. K. | Nutritional status of adolescents in rural and urban Rohtak, Haryana | 2009 | India | both | urban and rural | cross-sectional | 2000 | 13-16y | Height-for-age | NCHS reference1 | Stunting 11.7% in girls and 10.8% in boys |
| BMI-for-age | NCHS reference1 | Thinness 14.4% in girls, and 26.9% in boys |
| Vaze, N.; Gandhe, B. | Prevention of anemia in adolescent school girls of Nagpur, India | 2015 | India | girls | Not reported | cross-sectional | 3153 | 13-17y | Micro deficiency: anemia | WHO classification (Not reported) | Anemia 90.6% |
| Venkaiah, K.; Damayanti, K.; Nayak, M. U.; Vijayaraghavan, K. | Diet and nutritional status of rural adolescents in India | 2002 | India | both | rural | cross-sectional | 12124 | 10-17y | Height-for-age | <-2SD from median of NCHS reference1 | Stunting 39% |
| BMI-for-age | 5th percentile of NHANES4 | Not reported |
| Vijaya Kumar, U.; Budaya Kiran, M. S.; Lakshmana Rao, N. | A community study on prevalence and knowledge regarding anaemia among adolescent girls in a rural area of Rajahmundry, Andhra Pradesh | 2015 | India | girls | rural | cross-sectional | 215 | 11-18y | Micro deficiency: anemia | Hb<12gm/dl | Anemia 63.7% |
| Demographic and Health Surveys  Demographic and Health Surveys | ADOLESCENT NUTRITION 2000-2017: DHS DATA ON ADOLESCENTS AGE 15-19.  Adolescent Nutrition in Demographic and Health Surveys | 2018 | South Asia: Bangladesh, India, Maldives, Nepal, Pakistan | both | nationally representative | cross-sectional | Not reported | 15-19y | Height-for-age | <-2SD from median of WHO reference 20073 | Stunting 35.9% in South Asian girls |
| BMI-for-age | <-2SD from median of WHO reference 20073 | Thinness 10.9% in South Asian girls and, 21.6% in South Asian boys |
| Micro deficiency: anemia | Hb <12 gm/dl15 | Anemia 54% in South Asian girls, and 30.2% in South Asian boys |
| GSHS | Global School-based Student Health Survey Bhutan 2016 Fact Sheet | 2016 | Bhutan | both | nationally representative of all students | cross-sectional | 7576 | 13-17y | BMI-for-age | <-2SD from median | Thinness 1.3% in girls, and 3.1% in boys |
| GSHS | Global School-based Student Health Survey Maldives 2014 Fact Sheet | 2014 | Maldives | both | nationally representative of all students | cross-sectional | 3493 | 13-17y | BMI-for-age | <-2SD from median | Thinness 18.6% in girls, and 20.7% in boys |
| GSHS | Global School-based Student Health Survey Nepal 2015 Fact Sheet | 2015 | Nepal | both | nationally representative of all students | cross-sectional | 6529 | 13-17y | BMI-for-age | <-2SD from median | Thinness 7.7% in girls, and 14.4% in boys |
| GSHS | Global School-based Student Health Survey Afghanistan 2014 Fact Sheet | 2014 | Afghanistan | both | nationally representative of all students | cross-sectional | 2579 | 13-17y | BMI-for-age | <-2SD from median | Thinness 3.9% in girls, and 3% in boys |
| GSHS | Global School-based Student Health Survey Pakistan 2009 Fact Sheet | 2009 | Pakistan | both | nationally representative of all students | cross-sectional | 5192 | 13-15y | BMI-for-age | <-2SD from median | Thinness 9% in girls, and 12.3% in boys |

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