

Cost–utility and cost–benefit analyses of school-based obesity prevention program

The prevalence of childhood overweight and obesity is increasing in both emerging and developed countries and is a cause for economic concern. Particularly given its association with educational attainment, productivity, and health care costs incurred. School-based obesity intervention programmes are an effective strategy to address this but have yet to be evaluated in emerging economies. This study aimed to perform an economic evaluation of the nutrition-based comprehensive intervention study on childhood obesity in China (NISCOC).

NISCOC was conducted between 2009–2010 across six cities: Beijing, Shanghai, Chongqing, Guangzhou, Jinan, and Harbin. The intervention included nutrition education (NE) and physical activity (PA) interventions that were delivered separately in Beijing. Thirty schools across the remaining five cities received a combination of both NE and PA. A select number of schools acted as controls and did not receive any intervention. In total, 38 schools were reflected in study outcome measures (intervention costs, cases of adult obesity prevented, quality-adjusted life year saved, and productivity loss and medical costs averted).

In the study, all three school-based intervention measures for childhood obesity prevention were cost-effective. The cost-saving was highest for the comprehensive intervention, and the cost per additional year of life saved was lower. The cases of overweight and obesity prevented were three times higher than NE and ten times higher than PA alone. Having said so, the funds and resources to both initiate the project, train, implement and supervise delivers were highest at ¥398,851.8 (\$57,060.3).

In summary, “comprehensive school-based obesity intervention is a beneficial investment that is both cost-effective and cost saving,” These findings are valuable for countries beyond China.

Xu, H., Li, Y., Du, S., Zhang, Q., Liu, A., Sun, J. and Ma, G., 2020. Cost–utility and cost–benefit analyses of school-based obesity prevention program. BMC Public Health, 20(1).