

## **The CHIRPY DRAGON intervention in preventing obesity in Chinese primary-school-aged children: A cluster-randomised controlled trial**

Male childhood obesity rates in China have grown by almost 27% from 1985 to 2015. Therefore, a clear need exists for more and better research on the best obesity prevention practices in developing countries. The aim of this study was to implement an effective prevention intervention in a lower- or middle-income country using a rigorous study design. Intervention components were as follows:

- Parents or guardians and their children attended separate “interactive education workshops” to educate them about obesity and help with goal setting
- Researchers worked with schools to create healthier lunches
- Families were taught interactive, physically active games and assigned to play them over weekends
- Researchers worked with schools to ensure students received at least an hour of exercise daily

“At 12 months (end of intervention period), the mean BMI z score was significantly lower in the intervention compared with the control group” suggesting the intervention was effective. It was also found to be cost effective. Children in the intervention group also tended to consume the recommended daily serving of fruits and vegetables, ate and drank fewer unhealthy foods and sugary drinks, participate in physical activity over the weekend and avoided sedentary behaviour. Not all children were impacted equally - “there was evidence that the intervention was particularly effective in girls and children who were overweight/obese at baseline.” This study is important as it used a very large sample size (1,586 children completed the study), took place in a middle-income country and addressed previously established weaknesses in school-based obesity intervention study designs. Although the promising results of this study suggest similar interventions could be applied to surrounding countries, similar studies conducted in high income countries did not see significant BMI z-score reductions. Limitations include the necessity of adapting materials intended for children in higher-income countries, missing data from a few secondary outcomes and inability to blind participants as to which group they were allocated to.

Reference: Li B, Pallan M, Liu WJ, et al. The CHIRPY DRAGON intervention in preventing obesity in Chinese primary-school-aged children: A cluster-randomised controlled trial. *PLoS Med.* 2019;16(11):e1002971. Published 2019 Nov 26. doi:10.1371/journal.pmed.1002971