

## AB020. Prevalence and risk factors for overweight among Chinese adolescents

Junjie Huang<sup>1,2</sup>, Vera M. W. Keung<sup>1</sup>, Calvin K. M. Cheung<sup>1</sup>, Amelia S. C. Lo<sup>1</sup>, Sze Chai Chan<sup>2</sup>, Wing Sze Pang<sup>2</sup>, Lancelot W. H. Mui<sup>1,2</sup>, Albert Lee<sup>1,2</sup>, Martin C. S. Wong<sup>1,2,3,4,5</sup>

<sup>1</sup>Centre for Health Education and Health Promotion, Faculty of Medicine, The Chinese University of Hong Kong, Hong Kong SAR, China; <sup>2</sup>Jockey Club School of Public Health and Primary Care, Faculty of Medicine, The Chinese University of Hong Kong, Hong Kong SAR, China; <sup>3</sup>The School of Public Health, Peking University, Beijing, China; <sup>4</sup>The School of Public Health, The Chinese Academy of Medical Sciences and The Peking Union Medical Colleges, Beijing, China; <sup>5</sup>The School of Public Health, Fudan University, Shanghai, China

*Correspondence to:* Martin C. S. Wong, MD, MPH. Professor, JC School of Public Health and Primary Care, Faculty of Medicine, The Chinese University of Hong Kong, Hong Kong SAR, China; Chair, NCD Research Group, APRU Global Health Program, APRU International University Centre, Unit 902, Cyberport 2, 100 Cyberport Road, Hong Kong; Postgraduate Education Centre, Prince of Wales Hospital, Room 407, 4/F, 30-32 Ngan Shing Street, Shatin, N.T., Hong Kong, China. Email: wong\_martin@cuhk.edu.hk.

**Background:** Obesity has emerged as a significant public health concern worldwide, particularly with the escalating prevalence among adolescents. This study endeavors to explore the correlation between overweight status and various demographic characteristics alongside health-related parameters in Chinese adolescents.

**Methods:** A self-administered survey was distributed to 30 primary schools and 25 secondary schools. A descriptive analysis was conducted to demonstrate the proportions of characteristics and the prevalence of overweight among students with various characteristics. Separate binary regression models were set up to examine the association with the outcome variables (overweight) and the aforementioned factors. In this study, overweight is defined as over 120% of median weight-for-height local growth charts.

**Results:** We have collected a total of 4,884 responses. The

prevalence of overweight was 17.3% and 16.8% for primary school grade 4 (mean age: 10.06 years) and secondary school grade 3 (mean age: 15.28 years) students respectively. According to the multivariate logistic regression, the male sex was associated with an increased risk of being overweight in both groups [primary: adjusted odds ratio (aOR): 2.55, 95% confidence interval (CI): 1.77–3.67; p2 hours of gaming during weekdays: aOR: 1.64, 95% CI: 1.07–2.51, P=0.024] and not having breakfast on a daily basis (aOR: 2.00, 95% CI: 1.32–3.03, P=0.001). In the secondary school group, a higher risk of being overweight was associated with poor perceived academic performance (aOR: 1.51, 95% CI: 1.10–2.08, P=0.011), higher life satisfaction (family) (aOR: 1.13, 95% CI: 1.01–1.26, P=0.032), and higher consumption of processed or preserved meat (aOR: 1.49, 95% CI: 1.06–2.11, P=0.023). Besides, moderate-to-vigorous physical activity was associated with a lower risk of being overweight (1–4 days: aOR: 0.74, 95% CI: 0.55–0.99, P=0.043; 5–7 days: aOR: 0.52, 95% CI: 0.33–0.83, P=0.006).

**Conclusions:** There was a substantial prevalence of overweight among school children. A healthy lifestyle should be promoted to students and parents, such as having regular physical activity, consuming healthy food, and eating breakfast regularly.

**Keywords:** Overweight; obesity; students; adolescent; healthy

### Acknowledgments

*Funding:* The study was funded by the Quality Education Fund Thematic Network on Healthy Schools (No. EDB/QEF22/17/7), Hong Kong SAR.

### Footnote

*Conflicts of Interest:* All authors have completed the ICMJE uniform disclosure form (available at <https://jphpe.amegroups.com/article/view/10.21037/jphe-2023-apru-ab020/coif>). The authors have no conflicts of interest to declare.

*Ethical Statement:* The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. The study was conducted in accordance with the Declaration of Helsinki (as revised in 2013). This study was approved by Survey and Behavioural Research Ethics [No. SBRE(R)-22-008], The Chinese University of Hong Kong, Hong Kong SAR,

and informed consent was obtained from all individual participants.

*Open Access Statement:* This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the

original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-2023-apru-ab020

**Cite this abstract as:** Huang J, Keung VMW, Cheung CKM, Lo ASC, Chan SC, Pang WS, Mui LWH, Lee A, Wong MCS. AB020. Prevalence and risk factors for overweight among Chinese adolescents. *J Public Health Emerg* 2024;8:AB020.