

doi: 10.1111/1753-6405.12117

Prevalence and correlates of overweight and obesity in adult Australian general practice patients

Sze Lin Yoong, Mariko Carey, Robert Sanson-Fisher

Priority Research Centre for Health Behaviour, The University of Newcastle, New South Wales; Hunter Medical Research Institute, New South Wales

Catherine D'Este

Priority Research Centre for Health Behaviour, The University of Newcastle, New South Wales; Centre for Clinical Epidemiology and Biostatistics, The University of Newcastle, New South Wales; Hunter Medical Research Institute, New South Wales

Overweight and obesity are major public health problems, with more than 60% of Australians aged over 18 years reported to be overweight and obese.¹ Excess weight is associated with a variety of chronic conditions managed in primary care.² Thus, general practitioners (GPs) are well-placed to intervene with their overweight or obese patients.

While GPs can play a key role in the management of excess weight, they often under-recognise these conditions in their patients.³ Previous studies have identified associations between demographic and lifestyle behaviours and obesity in non-general practice samples.^{4,5} There is, however, limited information regarding obesity-related correlates in general practice patients. Identifying patient characteristics associated with being overweight and obese can provide GPs with an indication of who is likely to benefit from assistance with managing their weight and follow-up screening for weight-related conditions.

This study examined the prevalence and correlates of overweight and obesity in 3,349 patients from 12 general practices located in three urban Australian cities.⁶ A research assistant invited adult patients presenting for their appointment to complete a touchscreen computer survey. Patients reported their demographic characteristics; weight and height; whether they undertook sufficient physical activity to meet guidelines, assessed using a one-item measure "As a rule, do you do at least half an hour of moderate or vigorous exercise (such as walking or sport) on five or more days a week?";⁷ smoking status; depression (defined as score of ≥ 10 on the Patient Health Questionnaire-9 (PHQ-9)⁸); alcohol intake and perceived risk of mortality.

A large proportion of the sample was female (61%), 29% were aged over 65 years and 39% had a concession card. Thirty per cent of males and 23% of females were obese, with the prevalence of obesity highest in males aged 45–54 years (35%) and females aged 55–65 years (33%). Thirty-five per cent of the sample was overweight (43% male, 29% female). Results from the multinomial logistic regression analyses indicate that those older (aged 45–64 years), with a PHQ-score ≥ 10 , reporting insufficient exercise, reporting higher or much higher perceived risk of mortality, and those who had seen their GP ≥ 7 times in the past 12 months had higher odds of being obese, with normal weight as the reference group. Males aged 35 years or older, and those reporting insufficient exercise, had increased odds of being overweight.

Similar to findings from population studies,^{2,4} age was significantly associated with increased odds of overweight and obesity. Associations between obesity and depression have also previously been reported.^{9,10} Those who reported not meeting physical activity guidelines had increased odds of being overweight and obese. While the current study

did not attempt to quantify overall time spent in physical activity, other studies have reported that increased television viewing and sedentary times, as well as reduced physical activity time, increases risk of being obese.^{4,11} It is encouraging to note that undertaking 30 minutes of regular exercise may be associated with reduced odds of overweight and obesity. This suggests that GPs should play a more active role in encouraging their overweight and obese patients to meet physical activity guidelines.

As those who are obese are more likely to present with chronic conditions requiring monitoring, findings that those who had seen their GP seven or more times in the past year were at increased odds of being obese, compared to those who had seen their GP zero to three times, is not surprising. These findings highlight the potential benefit of using general practice as a setting for weight management interventions, given that obese patients present more frequently to their doctor and have increased awareness of their health risks. While general practice represents a promising area for weight loss interventions, it is recognised that long-term weight loss in those who are obese is difficult to achieve. Early interventions to prevent weight gain in those at increased odds of being overweight (males, aged ≥ 35 years and reporting insufficient exercise) may represent a promising strategy in the prevention of obesity. Supporting GPs' delivery of appropriate weight loss interventions to their obese patients may also represent a useful strategy in reducing the overall burden of disease associated with obesity.

References

1. Australian Bureau of Statistics. 4842.0.55.001 - Overweight and Obesity in Adults in Australia: A Snapshot, 2007–08. Canberra (AUST): ABS; 2011 [cited 2013 Jun 24]. Available from: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4842.0.55.0012007%E2%80%9308>
2. Britt H, Miller GC, Charles J, Henderson J, Bayram C, Pan Y, et al. General Practice Activity in Australia 2009–10. *General Practice Series No.: 27*. Catalogue No.: GEP27. Canberra (AUST): Australian Institute of Health and Welfare; 2010 [cited 2013 Jun 24]. Available from: <http://www.aihw.gov.au/publication-detail/?id=6442472433>
3. Bramlage P, Wittchen HU, Pittrow D, Kirch W, Krause P, Lehnert H, et al. Recognition and management of overweight and obesity in primary care in Germany. *Int J Obes Relat Metab Disord*. 2004;28(10):1299–308.
4. Cameron AJ, Welborn TA, Zimmet PZ, Dunstan DW, Owen N, Salmon J, et al. Overweight and obesity in Australia: the 1999–2000 Australian Diabetes, Obesity and Lifestyle Study (AusDiab). *Med J Aust*. 2003;178(9):427–32.
5. Hemiup JT, Carter CA, Fox CH, Mahoney MC, Hemiup JT, Carter CA, et al. Correlates of obesity among patients attending an urban family medical center. *J Natl Med Assoc*. 2005;97(12):1642–8.
6. Yoong SL, Carey M, Sanson-Fisher R, Russell G, Mazza D, Makeham M, et al. Touchscreen computer health assessment in Australian general practice patients: a cross-sectional study protocol *BMJ Open*. 2012;2(4). pii: e001405. doi: 10.1136/bmjopen-2012-001405.
7. Rose SB, Elley CR, Lawton BA, Dowell AC. A single question reliably identifies physically inactive women in primary care. *N Z Med J*. 2008;121(1268):U2897.
8. Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. *J Gen Intern Med*. 2001;16(9):606–13.
9. Onyike CU, Crum RM, Lee HB, Lyketsos CG, Eaton WW. Is Obesity Associated with Major Depression? Results from the Third National Health and Nutrition Examination Survey. *Am J Epidemiol*. 2003;158(12):1139–47.
10. Roberts RE, Deleger S, Strawbridge WJ, Kaplan GA. Prospective association between obesity and depression: evidence from the Alameda County Study. *Int J Obes Relat Metab Disord*. 2003;27(4):514–21.
11. Salmon J, Bauman A, Crawford D, Timperio A, Owen N. The association between television viewing and overweight among Australian adults participating in varying levels of leisure-time physical activity. *Int J Obes Relat Metab Disord*. 2000;24(5):600–6.

Correspondence to: Ms Sze Lin Yoong, Priority Research Centre for Health Behaviour, The University of Newcastle, University Drive, Callaghan, NSW 2308; e-mail: Sze.Yoong@newcastle.edu.au