Self-reported anthropometric data

To the Editor:

In the January/February 2010 issue of the CJPH, Linder et al.¹ report data from the *Tomorrow Project*, comparing self-perception of weight to actual measurement. In this study, the measurement of weight, body mass index (BMI) and waist circumference (WC) was carried out and reported by the participants themselves. Of course doing so, as indicated by the authors, would tend to render participants more aware of their weight.

More importantly, while some studies have shown that self-reporting of anthropometric data can be valid and accurate,² the sample studied includes people most at risk of under- or over-reporting their weight. It has been shown that the psychosocial stigma associated with obesity has a significant impact upon self-esteem and self-perception among overweight individuals. Studies involving populations of obese participants consistently report mis-reporting of height and weight,³⁻⁵ rendering the self-measured BMI an unreliable measure. So, while the participants may have shown a high level of concordance between perceived and self-reported weight, this might be an artefact of the methodology used rather than actual agreement between perceived and measured weight. Using the self-measured and self-reported BMI as the comparative measure must be interpreted with a great degree of caution.

Stephen J.C. Hearps
Department of Family Practice
University of British Columbia
Vancouver, BC

REFERENCES

1. Linder J, McLaren L, Lo Siou G, Csizmadi I, Robson PJ. The epidemiology of weight perception: Perceived versus self-reported actual weight status among Albertan adults. *Can J Public Health* 2010;101(1):56-60.
2. Kushi LH, Kaye SA, Folsom AR, Soler JT, Prineas RJ. Accuracy and reliability of self-measurement of body girths. *Am J Epidemiol* 1988;128(4):740-48.
3. Dekkers JC, van Wier ME, Hendriksen JJ, Twisk JW, van Mechelen W. Accuracy of self-reported body weight, height and waist circumference in a Dutch overweight working population. *BMC Med Res Methodol* 2008;28(8):69.
4. Shields M, Gorber SC, Tremblay MS. Estimates of obesity based on self-report versus direct measures. *Health Rep* 2008;19(2):61-76.
5. Paeratakul S, White MA, Williamson DA, Ryan DH, Bray GA. Sex, race/ethnicity, socioeconomic status, and BMI in relation to self-perception of overweight. *Obes Res* 2002;10(5):345-50.

Reply

Dear Editor:

We read with interest and welcomed the comments by Mr. Hearps on our paper (Linder et al., 2010). We would like to clarify, however, that we did not ask participants to estimate their body mass index (BMI), but rather provided detailed instructions on the measurement of height, weight and waist circumference. We then asked participants to describe themselves as 'underweight', 'about the right weight' or 'overweight'. We estimated BMI from self-reported measured height and weight, and using Canadian guidelines compared the BMI weight status classification with the participants' perceptions of 'weight status'. Our objective was to understand whether or not participants describe their weight status appropriately as this task requires the ability to correctly assess adiposity (not obvious from an absolute measure alone) and also to have some appreciation for its link to health status. In our study, participants clearly increased their awareness of their own absolute weight, height and waist circumference, but they did not necessarily improve their ability to identify excess adiposity. Even with this 'best case' scenario, a large number of higher-risk participants perceived themselves to be 'about the right weight' despite being at increased risk due to waist size. In addition, a large proportion of women within the recommended BMI range described themselves as overweight. Hence, our message is that there needs to be an increase in public education pertaining to the assessment of weight status and health risks associated with excess adiposity. We thank Mr. Hearps for his comments and for adding to the discussion of this important issue.

Jordana Linder,¹ Lindsay McLaren,¹ Geraldine Lo Siou,²
Ilona Csizmadi,² Paula Robson²

1. Department of Community Health Sciences, University of Calgary, Calgary, AB
2. Alberta Health Services – Cancer Care, Population Health Research, Calgary, AB