

## INTRODUCTION

International immigration is critical strategy for Canada's social and economic development. Foreign-born Canadians were estimated to 13 millions in 2006 and immigration accounts for 60% of the country's population growth (Chui et al. 2008).

Immigrants arrive to Canada with fewer chronic conditions and better health compared to general population; however, they experience a rapid deterioration in their health after arrival (Setia et al. 2009). This creates additional costs and challenges on the health care system.

### OBJECTIVES:

To explore differences in nutrition and health related indicators between Canadians immigrants and non immigrants; as well as across immigrant groups.

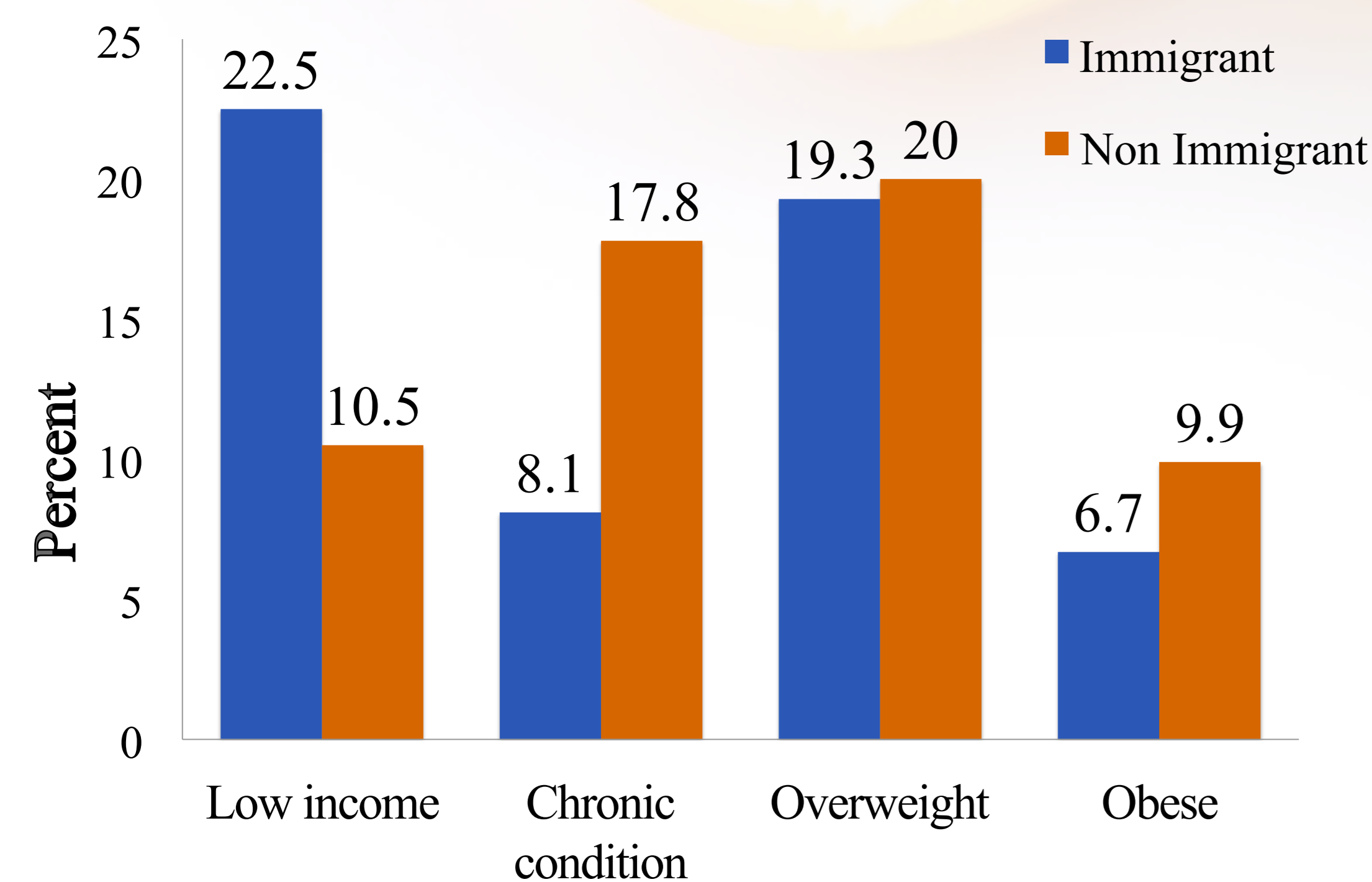
## METHODS

Data were retrieved from 2004 Canadian Community Health Survey cycle 2.2 Nutrition. Of 35,107 participants, there were 12,859 aged 2 to 17 of which only 566(4.4%) were from immigrant households.

Information collected from participants included (but not limited to): socio-demographic characteristics, height and weight, physical activities, sedentary activities, health conditions, selected food groups consumption, energy and nutrient, and food security.

## RESULTS

Figure 1: Characteristics of Immigrant vs. Non-Immigrant Children

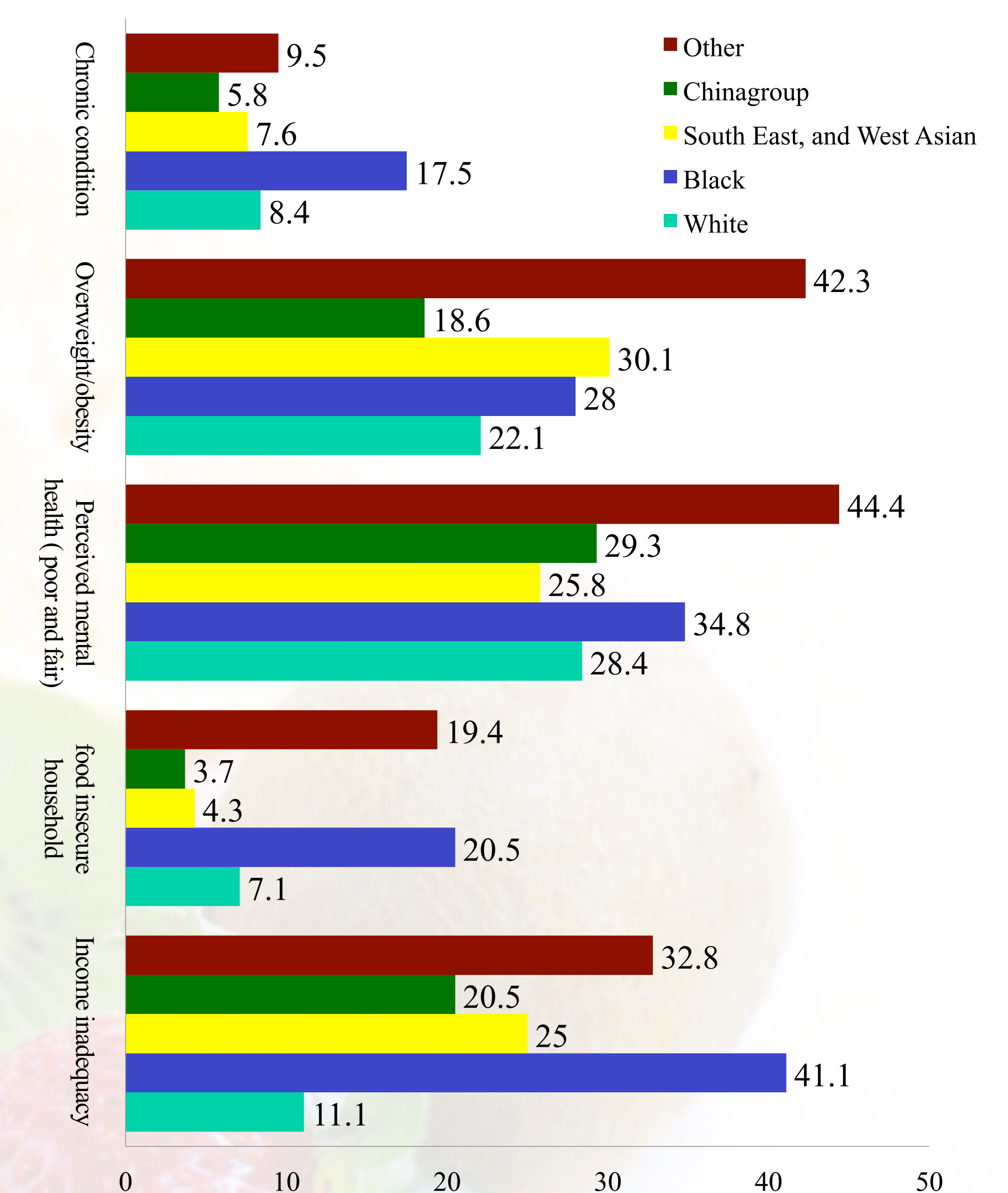


## RESULTS

Table 1: Immigrant Weight status by selected characteristics and lifestyle variables

	Neither overweight nor obesity (BMI < 25)	Overweight/ Obesity (BMI ≥ 25)	P-difference
<b>Sex</b>			
Boys	71.6	28.4	0.181
Girls	76.4	23.6	---
<b>Household income</b>			
Low	22	20.5	0.454
Middle/High	78	79.5	---
<b>Immigrant category</b>			
Recent (less than 5 years of Residence in Canada)	74.8	25.2	0.42
Ancient (equal or greater than 5 in Canada)	73.3	26.7	---
<b>Perceived mental health</b>			
Poor to fair	28.8	40.8	0.103
Good to excellent	71.2	59.2	---
<b>Food Security Status</b>			
Food secure	91.1	92.3	0.46
Food insecure	8.9	7.7	---
<b>Physical Activity Index</b>			
Inactive	78.3	21.7	0.832
Moderate	82.6	17.4	---
Active	80.7	19.3	---
<b>Leisure Activity</b>			
Participate	98.2	97.6	0.405
Does not participate	1.8	2.4	---
<b>Fruit and Vegetable Consumption</b>			
Low (<5 portions)	74.3	25.7	---
Average (5 – 10 portions)	75	25	---
High (>10 portions)	74.4	25.6	---

Figure 2: Health related variables within Immigrant Groups (%)



## DISCUSSION & CONCLUSION

Immigrant children compared to non-immigrants tend to have: **lower income, less chronic conditions, lower measured BMI** and spend more time in physical activities (figure 1). There were **no significant difference** in terms of related variables between normal weight group and overweight/obesity group; however, those in the latter group tend to rate their mental health as poor to fair compared to normal weight group (table 1; **41% vs. 29%**). It was found that White immigrants tend to be **the largest consumers of calcium** compared to other immigrants and their nutrient consumption resembles that of general population and immigrants in general tend to underestimate their weight with the greatest difference observed for white immigrants (data not shown). Among immigrant groups, Blacks are observed to have the **most chronic conditions and most income inadequacy** (figure 2). Some findings show insignificant difference between categories ( $P>0.05$ ); however, this can be attributed to **incomparable sample sizes** (survey included 12859 children of which only 566 were from immigrant households).

**CONCLUSION:** These findings give indications for policy-makers regarding prevention programs for immigrants (i.e. targeting osteoporosis in certain groups due to calcium deficiencies). Further research needs to be done to adjust for sample sizes and also include correlation studies to compare the relationship between various variables.

## REFERENCES

- Chui T, 2008. *Canada's ethnocultural mosaic, 2006 census.*
- Santé Canada, 2006. *Canadian Community Health Survey, cycle 2.2, Nutrition (2004)*
- Setia MS, 2009. Convergence of body mass index of immigrants to the Canadian born population: evidence from the National Population Health Survey (1994–06). 24:611–23

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