Food and body weights

What is the cost of a healthy diet? Using diet data from the UK Women's Cohort Study

1. Michelle A Morris1,
2. Claire Hulme2,
3. Graham P Clarke1,
4. Kimberley L Edwards4,
5. Janet E Cade1

+ Author Affiliations

1. 1Nutritional Epidemiology Group, School of Food Science and Nutrition, University of Leeds, Leeds, UK
2. 2Leeds Institute of Health Sciences, University of Leeds, Leeds, UK
3. 3School of Geography, University of Leeds, Leeds, UK
4. 4Centre for Sports Medicine, School of Medicine, University of Nottingham, Queens Medical Centre, Nottingham, UK

1. Correspondence to Michelle A Morris, Nutritional Epidemiology Group, School of Food Science and Nutrition, University of Leeds, Leeds LS2 9JT, UK; m.morris@leeds.ac.uk

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Abstract

Background A healthy diet is important to promote health and well-being while preventing chronic disease. However, the monetary cost of consuming such a diet can be a perceived barrier. This study will investigate the cost of consuming a range of dietary patterns.

Methods A cross-sectional analysis, where cost of diet was assigned to dietary intakes recorded using a Food Frequency Questionnaire. A mean daily diet cost was calculated for seven data-driven dietary patterns. These dietary patterns were given a healthiness score according to how well they comply with the UK Department of Health’s Eatwell Plate guidelines. This study involved ∼35,000 women recruited in the 1990s into the UK Women’s Cohort Study.

Results A significant positive association was observed between diet cost and healthiness of the diet (p for trend >0.001). The healthiest dietary pattern was double the price of the least healthy, £6.63/day and £3.29/day, respectively. Dietary diversity, described by the patterns, was also shown to be associated with increased cost. Those with higher education and a professional or managerial occupation were more likely to consume a healthier diet.
Conclusions A healthy diet is more expensive to the consumer than a less healthy one. In order to promote health through diet and reduce potential inequalities in health, it seems sensible that healthier food choices should be made more accessible to all.

Risk of overdose and death following codeine prescription among immigrants

1. Joel G Ray1,2,3
2. Simon Hollands1,3
3. Tara Gomes1
4. Marcelo L Urquia1,2,3
5. Erin M Macdonald1
6. Ping Li1
7. Muhammad M Mamdani1,2,3
8. David N Juurlink1,2
9. for The Canadian Drug Safety and Effectiveness Research Network

Author Affiliations

1. Institute for Clinical Evaluative Sciences, University of Toronto, Toronto, Ontario, Canada
2. Department of Medicine, University of Toronto, Toronto, Ontario, Canada
3. Keenan Research Centre, Li Ka Shing Knowledge Institute, St. Michael’s Hospital, Toronto, Ontario, Canada

Correspondence to Dr Joel G Ray, Department of Medicine, St. Michael’s Hospital, 30 Bond Street, Toronto, Ontario, Canada MSB 1W8; rayj@smh.ca

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Abstract

Background Immigrants may be at a higher risk of adverse drug reactions, in that poor language proficiency reduces individuals understanding of drug label instructions. Additionally, there are reports of severe or fatal toxicity due to CYP2D6 ultrarapid hepatic metabolism of codeine to morphine among some ethnic groups, especially those from Eastern Africa.
Methods Between 2002 and 2012 we conducted a population-based cohort study among residents of Ontario, Canada. We used administrative health databases that linked immigrants and Canadian-born individuals to both prescription medication use and emergency department visits and hospital admissions. The primary composite outcome was the risk of drug overdose or all-cause mortality within 30 days of codeine prescription, comparing patients from various world regions to Canadian-born individuals. A secondary analysis stratified by codeine dose and ability to speak English and/or French.

Results There were 553,504 individuals exclusively prescribed codeine. Relative to an incidence rate of 57.1/100,000 person-days among Canadian-born codeine recipients, those who migrated from various world regions were at a lower risk of drug overdose or death. For example, Eastern Africans had an adjusted HR of 0.60 (95% CI 0.31 to 1.17) on controlling for potential confounders such as age, sex, income and physician visits. Patients unable to speak English or French who were prescribed codeine were at a lower risk of the composite outcome relative to those proficient in either language (adjusted HR 0.63, 95% CI 0.54 to 0.74).

Interpretation Overdose and death following the institution of codeine therapy are not more commonly observed among immigrants from world regions with a high prevalence of ultrarapid CYP2D6 status relative to those born in Canada. Lower proficiency in English or French also did not appear to heighten the risk.

Food and body weights

Influences of the neighbourhood food environment on adiposity of low-income preschool-aged children in Los Angeles County: a longitudinal study

1. M Pia Chaparro
2. Shannon E Whaley
3. Catherine M Crespi
4. Maria Koleilat
5. Tabashir Z Nobari
6. Edmund Seto
7. May C Wang

+ Author Affiliations

1. Centre for Health Equity Studies (CHESS), Stockholm University and Karolinska Institute, Stockholm, Sweden
2. Department of Community Health Sciences, UCLA Fielding School of Public Health, Los Angeles, California, USA
3. Public Health Foundation Enterprises-Special Supplemental Nutrition Program for Women, Infants and Children (PHFE-WIC), Irwindale, California, USA
1. Correspondence to Dr M Pia Chaparro, CHESS|Centre for Health Equity Studies, Stockholm University and Karolinska Institute, Sveavägen 160, Floor 5, 109 61 Stockholm, Sweden; pia.chaparro@chess.su.se

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Abstract

**Background** Few studies have examined the association between the food environment and adiposity in early childhood, a critical time for obesity prevention. The objective of this study was to examine the longitudinal association between neighbourhood food environment and adiposity among low-income preschool-aged children in a major metropolitan region in the USA.

**Methods** The study sample was 32 172 low-income preschool-aged children in Los Angeles County who had repeated weight and height measurements collected between ages 2 and 5 years through a federal nutrition assistance programme. We conducted multilevel longitudinal analyses to examine how spatial densities of healthy and unhealthy retail food outlets in the children’s neighbourhoods were related to adiposity, as measured by weight-for-height z-score (WHZ), while controlling for neighbourhood-level income and education, family income, maternal education, and child’s gender and race/ethnicity.

**Results** Density of healthy food outlets was associated with mean WHZ at age 3 in a non-linear fashion, with mean WHZ being lowest for those exposed to approximately 0.7 healthy food outlets per square mile and higher for lesser and greater densities. Density of unhealthy food outlets was not associated with child WHZ.

**Conclusions** We found a non-linear relationship between WHZ and density of healthy food outlets. Research aiming to understand the sociobehavioural mechanisms by which the retail food environment influences early childhood obesity development is complex and must consider contextual settings.

 Substance use, addiction and mental health
Employment status and mental health among persons with and without a disability: evidence from an Australian cohort study

1. A Milner¹,
2. A D LaMontagne¹;³;
3. Z Aitken¹,
4. R Bentley³,
5. A M Kavanagh³

Abstract

Background Unemployment and economic inactivity are associated with worse mental health in the general population, but there is limited understanding of whether these relationships are different for those persons with mental or physical disabilities. The aim of this study was to assess whether there were differences in mental health by labour force status among persons with and without disabilities.

Method Over eight annual waves of the Household, Income and Labour Dynamics in Australia (HILDA) survey, a total of 2379 people with disabilities and 11417 people without disabilities were identified. Mental health using the Mental Component Summary (MCS) from the Short Form 36 was modelled as a function of labour force status using
fixed-effects regression models to control for time invariant confounding. Differences between those with and without disabilities were assessed by including an interaction term in regression models.

**Results** After finding evidence of effect modification, regression models were stratified by disability status. After adjustment, unemployment and economic inactivity were associated with a $-1.85$ (95% CI $-2.96$ to $-0.73$, $p=0.001$) and $-2.66$ (95% CI $-3.46$ to $-1.86$, $p<0.001$) reduction in scores of the MCS among those with a disability. For those without a disability, there were smaller declines associated with unemployment ($-0.57$, 95% CI $-1.02$ to $-0.12$, $p=0.013$) and economic inactivity ($-0.34$, 95% CI $-0.64$ to $0.05$, $p=0.022$).

**Conclusions** These results suggest a greater reduction in mental health for those persons with disabilities who were unemployed or economically inactive than those who were employed. This highlights the value of employment for people with disabilities.
Abstract

Background Studies have shown that immigrants residing in Spain have lower risks of delivering low birthweight (LBW) and preterm babies despite their socioeconomic disadvantages (the healthy migrant paradox). However, less is known about other important perinatal outcomes derived from birth weight and gestational age such as macrosomia and post-term birth. This paper aims to compare the main indicators related to birth weight and gestational age (LBW, macrosomia, preterm and post-term) for immigrants and Spaniards.

Methods Cross-sectional study based on the Spanish vital statistics for years 2009–2011. Multinomial regression models were performed to obtain crude and adjusted ORs and their 95% CIs.

Results After adjusting for known confounders, compared with Spaniards, most immigrant groups show lower or not significantly different risks of delivering LBW (OR between 0.65 and 0.87) or, more exceptionally, preterm babies (between 0.75 and 0.93). However, most of them also show higher risks of delivering macrosomic (OR between 1.21 and 2.58) and post-term babies (OR between 1.11 and 1.50). Mothers from sub-Saharan Africa show a higher risk in all perinatal outcomes studied.

Conclusions The immigrant health paradox should be carefully assessed in comprehensive terms. Together with a predominantly lower risk of LBW, most immigrants have a higher risk of macrosomia, post-term and preterm births. These results have policy-making implications since studying the right tail of the birth weight and gestational age distributions implies considering a different set of risk factors.