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Injuries and violence in the Caribbean: How big is the problem?

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Objective: To quantify and characterize deaths from injuries and violence in the English- and Dutch-speaking Caribbean.

Design and Methods: The most recent year of available national cause-of-death data for each country for the period 2007–2013 was selected from the Caribbean Public Health Agency (CARPHA) regional mortality database. An analysis of regional causes of deaths by age and gender was completed. The crude injury death rate for each country, by gender, was also calculated followed by a descriptive analysis of the type of injuries contributing to death in each country.

Results: In the English- and Dutch-speaking Caribbean, annual deaths from injuries accounted for 11.5% of all deaths and four times as many men as women died from an injury. Among persons aged 15–44 years, 116 931 person-years of life were lost due to injuries. More males aged 1–44 years died from violence (one in four) than from any other cause. The injury death rate and the related causes varied substantially across countries within the region.

Conclusions: Understanding the current mortality profile of injury and violence in the region is critical to the development of effective and efficient interventions to address this problem. Variability of these profiles across the region suggests that more research is needed to inform development of age, gender and country-specific programmes.

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The social determinants of diabetes and cardiovascular disease risk factors in Barbados: Findings from the Health of the Nation study

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Objective: To describe the distribution of diabetes, hypertension and related behavioural and biological risk factors in adults in Barbados by gender, education and occupation.

Design and Methods: Multistage probability sampling was used to select a representative sample of the adult population (≥ 25 years). Participants were interviewed using standard questionnaires, underwent anthropometric and blood pressure measurements, and provided fasting blood for glucose and cholesterol measurements. Standard World Health Organization (WHO) definitions were used. Data were weighted for sampling and non-response, and age-adjusted for group comparisons.

Results: Study participation rate was 55%, with 764 women and 470 men. Prevalence of obesity was 33.8%, hypertension 40.6% and diabetes 17.9%. Compared with women, men were less likely to be obese (prevalence ratio 0.53; 95%CI 0.42, 0.67), diabetic (0.77; 0.61, 0.98), or physically inactive (0.47; 0.39, 0.57), but more likely to smoke tobacco (4.08; 2.48, 6.69) and binge drink alcohol (4.53; 2.70, 7.58). In women, higher educational level was significantly related to higher fruit and vegetable intake, more physical activity, less diabetes and less hypercholesterolaemia (p -values: 0.01–0.04). In men, higher education was significantly related only to less smoking. Differences by occupational category were limited to smoking in men and hypercholesterolaemia in women.

Conclusions: In this population, unlike in most high-income countries, gender appears to be a much stronger determinant of behavioural risk factors, and consequent obesity and diabetes, than education or occupation. These findings have major implications for meeting the commitments made in the 2011 Rio Political Declaration, to reduce health inequities.

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Education of health professionals for preventing diabetic foot ulceration: A systematic review

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Objective: To investigate the effects of education of healthcare professionals as an intervention for preventing diabetic foot ulceration.

Design and Methods: A Cochrane systematic review with comprehensive search for randomized controlled trials (RCTs) and quasi-experimental studies was carried out. Independent screening for inclusion/exclusion, risk of bias assessment and synthesis was done. Primary and secondary outcomes included the incidence of foot ulcers, amputations, infections, behaviour and knowledge change in healthcare professional.

Results: The search identified 183 studies, of which three met the inclusion criteria. There was no significant improvement in nurses' knowledge compared to controls when exposed to a specialized foot care training session. In a controlled before and after study, a foot care education intervention for healthcare staff had no risk reduction benefits to patient's incidence of foot ulceration (RR 1.17; 95% CI 0.96, 1.43) and amputations (RR 0.88; 95% CI 0.57, 1.38). However, patients treated in the foot care education clinic had lower risk of infections (RR 0.72; 95% CI 0.55, 0.97) compared to the control clinic. A multi-component diabetes care education package was effective in increasing the likelihood of foot examination among physicians compared to controls who did not receive this education (OR 13.47; 95% CI 7.51, 24.15).

Conclusions: This review found that studies on education of healthcare professionals for preventing diabetic foot ulceration are limited and inadequate to determine whether such interventions resulted in clinically important benefits. Further evidence from well conducted RCTs is still needed.

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NIL

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The relationship of breast milk intake as assessed with deuterium dilution on growth and body composition of infants in Jamaica at three months

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Objective: To determine the relationship between breast milk consumption with the pattern of growth and body composition in Jamaican infants at three months.

Design and Methods: A longitudinal observational study with 35 child-mother pairs, recruited from the postnatal ward of the University Hospital of the West Indies, was done. Body composition and breast milk intake were measured at six weeks using the mother to child deuterium dilution method. Standard anthropometry methods were used to assess growth at six weeks and three months.

Results: Thirteen (37%) of the women were found to be exclusively breastfeeding with mean breast milk consumption of 956 ± 304 g day⁻¹. This contrasted with 22 women who were not exclusively breastfeeding with mean consumption of 704 ± 349 g day⁻¹ of milk intake and 526.7 ± 512.7 g day⁻¹ of non-milk intake. In the 35 infants, higher breast milk intake was positively associated with higher length, weight and fat free mass ($p = 0.03$) at both time points. Exclusively breastfed infants were taller ($p = 0.01$) and had larger head circumference ($p = 0.04$) at six weeks and three months when compared with mixed-fed infants.

Conclusion: The data suggested that exclusively breastfed infants were less likely to be shorter than mixed-fed infants. Infants who had greater intake of breast milk had a higher proportion of lean body mass. The effect of breast milk on length and lean tissue deposition could be related to less risk of developing obesity later in life.

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Maternal infant feeding styles and the risk for overweight in Caribbean infants

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Objective: To examine the role of maternal feeding styles on the risk of overweight in a cohort of Caribbean infants.

Design and Methods: Data from mother-child pairs participating in an intervention study from three Caribbean

islands were analysed. At recruitment, maternal and infant sociodemographic and anthropometric data were collected and maternal depression assessed using the Center for Epidemiology Studies (CES) depression scale questionnaire. At 12 months, feeding styles were assessed in mothers by questionnaire. Factor analysis yielded five feeding styles: uninvolved, indulgent, forceful, restrictive and responsive. Infant length and weight were measured using standardized protocols at 18 months and body mass index (BMI) Z-scores were calculated from World Health Organization 2006 growth charts. Z-scores ≥ 1 were classified as at risk for overweight. Associations between maternal feeding styles and risk for infant overweight were assessed using multilevel logistic regression accounting for country and clinic.

Results: Data from 366 mother-child pairs (mean age 26.08 ± 7.05 years, 55.5% high school graduates, 67.5% employed) were evaluated. No association was found between uninvolved, indulgent, forceful and responsive feeding styles with risk for infant overweight. Restrictive feeding was associated with increased risk for infant overweight ($\beta = 0.46$; 95% CI = 0.21, 0.72) and the association remained after adjustment for infant birth-weight, maternal age, education, socio-economic status and BMI ($\beta = 0.48$; 95% CI = 0.21, 0.74). This association strengthened after adjusting for maternal depression ($\beta = 0.55$; 95% CI = 0.27, 0.82).

Conclusion: Restrictive feeding increased the risk of infant overweight. Overweight/obesity prevention interventions focussing on identifying suitable maternal feeding control as well as larger studies aimed at understanding the underlying mechanisms for this association are important approaches to tackling childhood overweight.

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Health perceptions, behaviours and overweight/obesity status of Turks and Caicos elementary school children: A collaborative model to address nutrition and healthy lifestyles in the Turks and Caicos school curriculum

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Objective: To examine health perceptions, behaviours and overweight/obesity status of Turks and Caicos Islands (TCI) elementary school children.

Design and Methods: Baseline/pre-intervention data on knowledge, attitudes, practices and behaviours were collected *via* questionnaire and anthropometry to assess the impact of infusing healthy lifestyle practices into the curriculum of Grades 3–6 (three experimental and three controls).

Results: Assessments were conducted on 585 children (247 boys and 304 girls), mean (\pm SD) age 10.18 ± 1.17 years. Their mean number of after-school physical activities was 3.01 ± 2.31 . Two hundred and seventy-one children (48.6%) were overweight (21.7%) or obese (26.9%); significantly more girls were overweight/obese (60% vs 40%; $p = 0.026$). Few consumed fruits (35.8%) and vegetables (45.7%) ≥ 2 /day, while most consumed soda (75.9%) and fast food (89.7%) ≥ 1 /day. Logistic regression revealed consumers of ≤ 2 fruits/servings were 68% more likely to be overweight/obese (OR = 1.68). A unit increase in self-efficacy was associated with significant increases of 11% in physical activities ($p < 0.05$); 8% and 10% in the odds of eating ≥ 2 fruits and vegetables, respectively, ($p < 0.05$). A unit increase in perceived benefits of diet was associated with 5% increase in the odds of consuming ≥ 2 vegetables ($p < 0.05$).

Conclusion: Children's self-efficacy and health perceptions significantly impacted diet and physical activity, both well documented to prevent/reduce obesity. Therefore, a multifactorial approach to promote healthy lifestyles and prevent/reduce paediatric obesity and ultimately TCI's non-communicable diseases (NCD) burden and healthcare costs is imperative.