

Nutrition

Chairpersons: D Ramdath, T Ferguson

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Misalignment of perceived weight with actual body mass index in The Bahamas

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Objectives: To assess the correspondence of weight perception *versus* actual body mass index (BMI) category.

Design and Methods: A prospective case notes review of adults in an internal medicine practice was done from April 2007 to May 2008. Quantitative analysis used the Statistical Package for the Social Sciences.

Results: Of 674 patients, 64.5% were female. Overall, the mean age was 54.1 (± 14.7) years; 8.7% claimed “obesity”, 45.2% “overweight”, 1.1% “big boned”, 43.3% “normal” and 1.7% “underweight”. Mean BMI was 30.4 (± 6.8) kg/m² and was unrelated to gender or age; 40.6% of the variance in participants’ actual BMI was explained by self-perceived BMI ($r_{sp} = -0.637$, $p < 0.001$, $n = 609$). Of 53 morbidly obese, 32.2% claimed obesity, 58.5% overweight, 1.9% big boned and 7.5% normal. Of 230 obese, 11.3% claimed obesity, 70.0% overweight, 1.3% big boned and 17.4% normal weight. Of 174 overweight, 2.9% claimed obesity, 41.4% overweight, 1.7% big boned and 54.0% normal. Of 145 with normal BMI, 11.0% said overweight, 83.5% normal and 5.5% underweight. Of seven underweight, 14.3% claimed obesity, 71.4% claimed normal weight and 14.3% underweight. Mean waist circumference for males was 40.1 (± 0.4) inches and 37.1 (± 0.3) inches for females ($p < 0.001$).

Conclusion: Patients predominantly underestimated BMI. A significant number were in fact overweight, obese or morbidly obese.

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Acanthosis nigricans is associated with higher waist circumference and body mass index in adolescent children in Trinidad

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Objective: To examine the association between acanthosis nigricans (AN), body mass index (BMI) and waist circumference in adolescent children in Trinidad.

Design and Methods: In a cross-sectional study, adolescent children ($n = 296$) aged 11–16 years, from five secondary schools in North-east Trinidad were examined for the presence of AN on the neck. Waist circumference and BMI as indices of obesity were measured. Adolescents were classified by gender for BMI for age according to the World Health Organization (WHO) 2007 criteria. Waist circumference was categorized into tertiles defined by the following thresholds: low ≤ 66.2 cm, middle ≥ 66.3 cm and ≥ 75.1 cm and high ≥ 75.4 cm.

Results: Acanthosis nigricans was present in 24.2% of adolescent children and 41.6% were either overweight or obese. Body mass index for age and waist circumference in tertiles were both significantly associated with AN ($p < 0.001$). Acanthosis nigricans significantly correlated with BMI for age ($p < 0.001$) and waist circumference in tertiles ($p < 0.001$). The majority of adolescents with AN were also overweight or obese for age (88.9%) and this finding occurred in the highest tertile for waist circumference (72.9%).

Conclusion: Acanthosis nigricans is associated with increased waist circumference, being overweight and/or obese and age in adolescents in Trinidad. With early detection of these indicators, focussed weight management can lower the risk of obesity and pre-diabetes.

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Healthy eating practices: Perceptions, facilitators and barriers among caregivers of primary school children in North East Trinidad

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Objective: To explore perceptions, facilitators and barriers of healthy eating behaviours among caregivers of primary school aged children.

Design and Methods: A purposive sampling design was used to select primary school children caregivers/parents from four different communities in North East Trinidad. They were recruited *via* the school system with letters containing the research purpose and background. Four focus groups were conducted between May and June 2012. Each focus group had an average of five participants and lasted for approximately 60 minutes. The participants were asked to define healthy eating, identify healthy foods and describe their concerns regarding healthy eating. The interview questions were developed and validated by the research team members. The data were transcribed and analysed for themes.

Results: Twenty-three caregivers (78% female) participated in the study. The participants' defined healthy foods as vegetables, starchy foods, porridge, tea, fibre, foods low in fat. They also acknowledged that food cost and availability, parent's inability to influence children to consume fruits and vegetables, cultural practices related to meat and legumes, and social barriers such as the use of punishment are some major challenges impeding healthy eating.

Conclusion: Our study demonstrated that several barriers exist to healthy eating among primary school children in Trinidad. Community health professionals, nutritionists and school teachers need to play a more prominent role in teaching children and parents about the benefits of healthy eating. Future studies need to address the barriers to health eating. This might help to reduce the growing obesity prevalence in Trinidad.

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Nutrition and physical activity among youth aged 12–19 years in Aruba – Findings from the Youth Health Survey 2012

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Objective: To assess risk and protective factors related to the youth 12–19 years.

Design and Methods: A random representative sample of all public secondary school-going youth was surveyed. Questions concerned nutrition, physical activity and sedentary lifestyle.

Results: Data on 4765 respondents were used for analysis (F 2464, M 2301). Their mean age was 15.2 years. Of the respondents, 72.3% consumed fruits, (F 70.8%, M 74.0%) and 82.1% consumed vegetables (F 81.1%, M 83.1%) one or more times per day during the previous week. Most (77.7%) consumed at least one can of soda daily while 73.3% ate fast food at least once during the past seven days. While 78.5% (F 73.2%, M 84.4%) of the youth reported that they were engaged in some form of physical activity, only 10.5% complied with the national guidelines (60 minutes per day). In addition, almost all (97%) of the youth spent at least one hour on sedentary activities per day. Of the youth, 19.7% were overweight and 19.7% were obese.

Conclusions: Although more than half of the Aruban adolescents ate fruits and vegetables and a high percentage have stated that they engaged in physical activity, still only one in 10 adolescents complied with the national guidelines for physical activity. The percentage of soda and fast food intake was high. This may explain the high rate of overweight and obesity.

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Trends in obesity and other cardiovascular disease risk factors among elementary school children in the Turks and Caicos Islands (2008 – 2013)

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Objective: To measure cardiovascular disease (CVD) risk factors trends among Turks and Caicos Islands (TCI) school-aged children.

Design and Methods: A cross-sectional survey collected sociodemographic, health and nutritional status data from 1977 (996 male and 981 female) 10–15-year old high school (2008–2013) entrants. Cardiovascular disease risk factor trends for physical, lifestyle and biochemical indicators were assessed using SPSS (version 20). Comparisons of continuous (*eg* body mass index (BMI), blood pressure [BP] and cholesterol) and categorical variables (*eg* gender, nationality, obesity and cholesterol status) were conducted using one-way ANOVA and Chi-squared analyses, respectively.

Results: Overall, participants' mean age was 12.37 ± 0.70 years (boys 12.45 ± 0.69 years *vs* girls 12.29 ± 0.07 ; $p <$

0.001); 800 (40.4%) were overweight (17.2%) or obese (23.2%). Physically active participants ($n = 1396$) had lower mean, BMI ($p = 0.001$) and consumed more water (5.00 ± 2.56 vs 4.43 ± 2.42 servings per day; $p < 0.001$). Overall, 6% had elevated BP, which included more overweight/obese than normal/underweight (10% vs 4%; $p = 0.001$); 22% and 18% consumed ≥ 1 serving of fruits or vegetables daily, respectively; fewer overweight/obese (46.5% vs 53.5%; $p = 0.020$) consumed ≥ 1 serving of fruit daily. Approximately 13% (of subsample of 475) had cholesterol levels > 200 mg/dL. Indicators did not differ significantly among cohort years.

Conclusion: Obesity, physical inactivity, unhealthy diets and dyslipidaemia are public health concerns among TCI youths. Continued monitoring and healthy lifestyle promotion and school-based interventions are imperative to reduce future chronic disease burden and healthcare costs.

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Improving trend in anaemia status of Turks and Caicos elementary school children across the decades

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Objective: To examine anaemia trends among Turks and Caicos Island (TCI) youth over four decades (1974–2013).

Design and Methods: A cross-sectional survey compared anaemia status (haemoglobin < 12.0 g/dL) among three cohorts (2008, 2009 and 2013) of 788 (girls = 399 and boys = 389) high schools entrants, aged 9.5–15 years. Statistical analyses were performed using SPSS (version 20). Inter-cohort, nationality and gender comparisons were conducted. Comparisons were also made with TCI children similarly assessed in 1974.

Results: Most (59.6%) were born in TCI and resided there ≥ 5 years (84.8%). Mean age was 12.45 ± 0.71 years. Mean haemoglobin (Hb) was 13.00 ± 0.98 g/dL with boys (13.16 ± 0.05 g/dL) significantly higher ($p < 0.001$) than girls (12.84 ± 0.50 g/dL). Among the cohorts there was a significant ($p < 0.05$) increasing trend of mean Hb, ranging from 12.70 ± 0.98 g/dL (2008) to 13.37 g/dL (2013) with concomitant, significant ($p < 0.05$) decrease in mild anaemic (Hb 10.00–12.00 g/dL) cases (20.2% in 2008 to 6.8% in 2013). Slightly more girls (14.9% vs 11.0%) were mildly anaemic and included significantly more Haitian (22.8%) than TCI (10.9%) girls ($p = 0.006$); no moderate or severe anaemia (Hb 7–10.0 g/dL) cases were found in the current period, compared to 16% in 1974.

Conclusion: Absence of moderate and severe anaemia (Hb < 10.0 g/dL) coupled with increasing trend in mean Hb demonstrate significant improvement. Finding of significant gender difference in mean Hb and more mild anaemia among Haitian girls, highlight the need for ongoing targeted intervention and monitoring.

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