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Estimated effects of climate variables on transmission of malaria, dengue and leptospirosis within Georgetown, Guyana

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Objective: To analyse meteorological data (temperature, rainfall and relative humidity) and vector-borne diseases (malaria, dengue and leptospirosis) to determine trends that may exist between and among variables within the Georgetown area.

Subjects and Methods: This study took on a retrospective approach which used data from the Ministry of Health and Ministry of Agriculture, Hydro-meteorological Department, to assess the true nature of the relationship between climate and vector-borne diseases (malaria, dengue and leptospirosis) within the Georgetown area. Correlation and regression analysis was done using SPSS version 13.

Results: The results yielded weak positive correlation between climate variables and vector-borne disease with strongest correlation between *P. falciparum* and *P. malariae*. Leptospirosis showed positive correlation with humidity and dengue showed positive correlation with all three climate variables measured. Projections showed that with a 1 increase in temperature, 1% increase in relative humidity and 50 mm increase in rainfall, there would be significant increases in malaria and leptospirosis.

Conclusion: There have been theories that suggest a connection between climate variables and vector-borne disease but conclusive evidence does not exist. In this present study, the need for research that yields more unwaering results is highlighted. There is no doubt that climate variables influence vector-borne diseases. Therefore, it is recommended that an interdisciplinary approach be taken to ensure reliability and foster a better understandig between climate variables and vector-borne diseases.
Prevalence of overweight and obesity and intentions of healthcare workers of the public community clinics on New Providence, The Bahamas

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Objective: To determine prevalence of overweight and obesity and weight control intentions of healthcare workers (HCWs) of the public community clinics on New Providence, The Bahamas.

Subjects and Methods: Using a cross-sectional study design, 163 HCWs of eight clinics were surveyed. Participants completed a questionnaire indicating weight control intentions and had weight, height and abdominal circumferences measured. Data were analysed using IBM SPSS, v 21.

Results: Of 163 participants, 92.0% (150) were females. Overall, mean (± SD) age was 44 (± 11.10) years. Healthcare workers were grouped into three main categories: physicians 8.0% (13), nurses 41.1% (67) and other HCWs 50.9% (83). The majority (68.5%; 111) of the participants had high-risk abdominal circumferences. Combined prevalence of overweight and obesity was 81.6% (133); 26.4% (43) were overweight and 55.2% (90) obese. Of the males, 23.1% (3) were overweight and 69.2% (9) obese. Of females, 26.7% (40) were overweight and 54.0% (81) obese. More than half (55.8%; 91) of the participants had high-risk abdominal circumferences. Combined prevalence of overweight and obesity was 81.6% (133); 26.4% (43) were overweight and 55.2% (90) obese. Of the males, 23.1% (3) were overweight and 69.2% (9) obese. Of females, 26.7% (40) were overweight and 54.0% (81) obese. More than half (55.8%; 91) of the participants had high-risk abdominal circumferences. Combined prevalence of overweight and obesity was 81.6% (133); 26.4% (43) were overweight and 55.2% (90) obese. Of the males, 23.1% (3) were overweight and 69.2% (9) obese. Of females, 26.7% (40) were overweight and 54.0% (81) obese. More than half (55.8%; 91) of the participants had high-risk abdominal circumferences.

Conclusions: Healthcare workers had high-risk abdominal circumferences. Prevalence of overweight and obesity was 81.6%. Many misperceived their BMI, were concerned about their BMI status and were inclined to make changes for a healthier weight.


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Objectives: To evaluate whether education attainment or occupation class was associated with the prevalence of tobacco smoking among Jamaican adults.

Subjects and Methods: This study was a secondary analysis of data collected from the Jamaica Health and Lifestyle Survey 2007–2008 (JHLS-II) and included participants who were 25–74 years old. Data on current tobacco smoking, highest educational attainment and usual occupation were collected using an interviewer-administered questionnaire. Poisson regression models were used to estimate sex-specific, age-adjusted prevalence and prevalence ratios (PR).

Results: Analyses included 2299 participants (696 men, 1603 women) with mean age of 42.9 years. Prevalence of current smoking among men and women was 25.8% and 7.8%, respectively (p < 0.001). Age-adjusted prevalence of current smoking in men was highest in the primary education group (36.5%) and lowest in the post-secondary education group (10.2%), p (trend) = 0.003. Among women, prevalence was highest among those with junior secondary education (10.2%) and lowest among those with primary education (4.7%), p (trend) = 0.014. Using post-secondary education as the reference category, age-adjusted PR showed statistically significant two- to three-fold higher prevalence of current smoking for all the lower education groups among men. Prevalence ratios for women were lower and not statistically significant. Disparity patterns for occupation were similar, with statistically significant higher age-adjusted prevalence among men in the lower occupational categories, but not among women.

Conclusion: There are large socio-economic disparities in tobacco smoking among men, but less so among women in Jamaica. Interventions to reduce smoking should consider these socio-economic disparities.