

## Public Health 2

Chairpersons: L Indar, S Persaud

## O – 22

**Estimating the prevalence of depression in a sample of Type 2 diabetic patients in Trinidad**

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**Objective:** Depression may affect blood glucose control, which may consequently lead to the development of diabetic complications. It is therefore important to estimate the prevalence of depression in diabetic patients. The objective of this study was to estimate the prevalence of depression in a sample of persons with Type 2 diabetes in Trinidad and to examine associations with anxiety, age and gender.

**Subjects and Methods:** Data were collected from 200 Type 2 diabetic clients at hospitals and diabetic clinics in Trinidad using a self-administered questionnaire. The questionnaire measured their anxiety using the Zung anxiety scale and depression symptomology was measured using the Centre for Epidemiologic Studies-Depression (CES-D) scale, developed specifically to identify depression in the general population. The mean age of participants was 55 years (SD = 15.9). Descriptive analyses of frequencies and percentages were used to determine prevalence and bivariate correlational analyses were used to determine associations.

**Results:** Prevalence of high depressive symptoms was 68% for the study sample. Among the participants who exhibited elevated depressive symptoms, 61% were female and 39% were male. Presence of high depressive symptoms was unrelated to age, but significantly related to anxiety  $r(194) = 0.36, p < 0.001$  and gender  $r(195) = 0.17, p < 0.05$ .

**Conclusion:** Reducing diabetes-related depression and anxiety and establishing better coping abilities regarding diabetes distress should be a healthcare priority for the management of Type 2 diabetes. Efforts should be made to specifically address depression among diabetic women.

## O – 23

**Can arterial wave augmentation in young adults account for variability of cardiovascular risk in different British ethnic groups?**

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**Objective:** We tested if arterial function indices, pulse wave velocity (PWV; details presented previously) and augmentation index (AIx), which both powerfully predict cardiovascular outcomes independently of blood pressure (BP), and their determinants from childhood may underlie ethnic variability in cardiovascular (CV) risk as young adults in the London 'DASH' (Determinants of young Adult Social well-being and Health) longitudinal study, United Kingdom (UK).

**Methods:** DASH, at <http://dash.sphsu.mrc.ac.uk/>, includes representative samples of six main British ethnic groups. Pulse wave velocity and AIx were recorded using the Arteriograph device at ages 21–23 years in a sub-sample ( $n = 666$ ); psychosocial, anthropometric and BP measures were collected then and in two previous surveys at ages 11–13 years and 14–16 years. For  $n = 334$ , physical activity (PA) was measured over five days (ActivPal).

**Results:** Unadjusted values and regression models for PWVs were similar or lower in ethnic minority than in White UK young adults, while AIx was higher – Caribbean (14.9; 95% CI 12.3, 17.0, %), West African (15.3; 12.9, 17.7, %), Indian (15.1; 13.0, 17.2, %) and Pakistani/Bangladeshi (15.7; 13.7, 17.7, %), compared with White UK (11.9; 10.2, 13.6, %). In multivariate models adjusted for gender, central systolic BP, height and heart rate, Indian and Pakistani/Bangladeshi young adults had higher AIx ( $\beta = 3.35, 4.20$ , respectively,  $p < 0.01$ ) than White UK, with a similar trend for West Africans and Caribbeans, borderline

statistically significant ( $p = 0.07$ ). Physical activity, psychosocial or deprivation measures were not associated with AIX, with borderline associations from brachial BP but no other childhood variables.

**Conclusion:** Augmentation index at this age, rather than arterial stiffness, may be a useful tool for testing components of excess CV risk across ethnic groups.

#### O – 24

##### **Peripheral arterial disease prevalence in a population-based sample of people with diabetes in Barbados**

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**Objective:** To determine the prevalence of peripheral arterial disease (PAD) in a population-based sample of people with diabetes in Barbados.

**Subjects and Methods:** A representative sample of the population ( $\geq 25$  years) was selected by multistage sampling. People with a previous diagnosis of diabetes or a single fasting blood glucose  $\geq 7$  mmol/L or glycated haemoglobin ( $\text{HbA}_{1c}$ )  $\geq 6.5\%$  were evaluated by history (Edinburgh claudication questionnaire) and by examination using a handheld Doppler ultrasound to determine the ankle brachial pressure index (ABI) and arterial waveform.

**Results:** Of 236 participants (71.8% response rate, 33% male, mean age 60.1 years, range 30–96 years, mean  $\text{HbA}_{1c}$  7.6%), 50.8% had a previous diagnosis of diabetes and two had amputations. Six (2.5%) people were identified as having calf pain suggestive of claudication. Of the 236 participants, 17% (95% CI 12.2, 21.8) had PAD defined as an  $\text{ABI} \leq 0.9$  in at least one leg, and 20% (95% CI 15 to 25) an abnormal  $\text{ABI} (\leq 0.9 \text{ or } > 1.3)$ . For those with PAD,  $> 83\%$  had arterial waveforms (dorsalis pedis and/or posterior tibial) in the affected leg suggestive of atherosclerotic disease. Most people with a normal  $\text{ABI}$  had normal waveforms. Logistic regression showed that an abnormal  $\text{ABI}$  increased with age (10-year age band OR 1.7, 95% CI 1.3, 2.3) and decreased with male gender (OR 0.35, 95% CI 0.15, 0.81).

**Conclusions:** Seventeen of the surveyed population had PAD, but few had symptoms of claudication. Women with diabetes are at increased risk for PAD.

#### O – 25

##### **Is there a difference in dietary habits and exercise between health and non-health related groups?**

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**Objective:** The study investigated the knowledge, attitude and practices related to diet and exercise among health and non-health related professions in Trinidad.

**Subjects and Methods:** A cross-sectional study was conducted on 600 employed persons, between the ages of 16 and 65 years, from North, Central and South Trinidad, working in a wide range of professions and occupational sections. The data were analysed using Chi-squared and Fisher's exact test where applicable to identify significant differences among the occupational groups.

**Results:** A total of 562 persons were interviewed. There was a significant association between influence of family and friends and desire to exercise ( $\chi^2 = 11.158$ ,  $df = 4$ ,  $p$ -value = 0.024), eating two and a half cups of vegetables on a daily basis ( $\chi^2 = 13.461$ ,  $df = 5$ ,  $p = 0.016$ ) and exercising 3–5 times a week ( $\chi^2 = 16.857$ ,  $df = 5$ ,  $p = 0.005$ ) between the health and non-health occupational responders.

**Conclusion:** Both groups appeared to have similar knowledge about what to eat and how much exercise to undertake; however, there was a difference in friends and family influencing the decision to exercise. This seems intuitive since persons usually befriend like-minded individuals and individuals from their workplace. In terms of practices, health oriented professionals appear to put the knowledge about the consumption of vegetables and exercising into practice. These findings are useful for general practitioners/family physicians, employers and health educators to target their interventions.

#### O – 26

##### **The role of the home environment in reducing depression**

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**Objective:** Adult health risk behaviour and disease have their origins in adolescence. Positive youth development in the face of risk factors can occur when resiliency factors exist to mitigate the effects of these risk factors. This study

offered insights into to the role of a positive home environment and its association with depression in Jamaican youth 15–19 years of age and the subsequent association of depression with risk behaviours.

**Subjects and Methods:** Using data from a complex multi-stage survey design, the relationship and resiliency factors with depression was examined using binary logistic regression models.

**Results:** One of the resiliency factors identified which would offer protection from depression and engagement in risky behaviours was effective communication in the home. The study showed that Jamaican youth had low

mean scores for communication in the home (-0.018, SE 0.04, 95% CI 0.11, 0.08). Significantly more youth who had negative communication scores were classified as depressed (positive score 12.7% and 12.1% vs negative score 21.0% and 22.4%, respectively;  $p < 0.0001$ ). Adolescents who had a supportive home structure were 40% less likely to be depressed ( $p < 0.01$ ).

**Conclusion:** The results obtained strengthen the concept of promoting and providing interventions that reinforce the positive attributes of youth to prevent both depression and high-risk behaviours.