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Risk of spontaneous preterm birth in relation to maternal depressive, anxiety and stress symptoms

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Objective: To examine the risk of preterm birth (PTB) in relation to maternal psychiatric symptoms during pregnancy in Peruvian women.

Methods: This case control study included 479 PTB cases and 480 term controls. In-person interviews were conducted to assess women's depressive, anxiety and stress symptoms using the Patient Health Questionnaire (PHQ-9) and the Depression Anxiety Stress Scales (DASS-21). Multivariable logistic regression procedures were used to estimate adjusted odds ratios (aOR) and 95% confidence intervals (CI).

Results: Compared with women reporting no or minimal depressive symptoms, the aOR (95% CI) for PTB associated with consecutive severity of depressive symptoms based on the PHQ-9 assessment method were as follows: mild 2.22 (95% CI 1.64-3.00) and moderate-severe 3.67 (95% CI 2.09-6.46). The corresponding aORs for mild, moderate, and moderate-severe depressive symptoms based on the DASS-21 assessment were, 1.00 (reference), 3.82 (95% CI 1.90-7.66) and 2.90 (95% CI 1.66-5.04), respectively. A positive gradient was observed for the odds of PTB with severity of anxiety ($p_{\text{trend}} < 0.001$) and stress symptoms ($p_{\text{trend}} < 0.001$).

Conclusions: The odds of PTB are increased in pregnant Peruvian women with psychiatric symptoms. Efforts to screen and treat affected women may modify risks of PTB and possibly other associated disorders.

Risk of spontaneous preterm birth in relation to maternal exposure to intimate partner violence during pregnancy

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Objective: Intimate partner violence (IPV) is increasingly recognized as an important cause of maternal and perinatal morbidity. We assessed the relation between IPV and risk of spontaneous preterm (PTB) among Peruvian women.

Methods: The study was conducted among 479 pregnant women who delivered a preterm singleton infant (<37 weeks gestation) and 480 controls (≥37 weeks gestation). Participants exposure to physical and emotional violence during pregnancy was collected during in-person interviews conducted after delivery and while patients were in hospital. Odds ratios (aOR) and 95% confidence intervals (CI) were estimated from logistic regression models.

Results: The prevalence of any IPV during pregnancy was 52.2% among cases and 34.6% among controls. Compared with those reporting no exposure to IPV, women reporting any exposure had a 2-fold increased risk of PTB (OR=1.99; 95%CI: 1.52-2.61). Emotional abuse in the absence of physical violence was associated with a 1.6-fold (95%CI: 1.21-2.15) increased risk of PTB. Emotional and physical abuse during pregnancy was associated with a 4.7-fold increased risk of PTB (95%CI: 2.74-7.92). Associations of similar directions and magnitudes were observed when PTB were sub-categorized according to clinical presentation or severity.

Conclusion: Our findings and those of others, supports recent calls for coordinated global health efforts to prevent violence against women.

Balance as a Risk Factor for Stroke Symptoms in Community-dwelling Adults in Da Nang, Viet Nam

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Objective: In a random sample of community-dwelling adults in Da Nang, Viet Nam, we sought to measure the association between balance problems and stroke symptoms.

Methods: We surveyed 1,621 adults age 35 and older in six regions of Da Nang focusing on two variables: balance and stroke symptoms. Balance was assessed as the ability to complete side by side, semi-tandem, and tandem stands for a period of 10 seconds. Stroke symptoms were self-reported with binary responses to questions on the presence of sudden painless weakness on one side, sudden numbness on one side, loss of speech, loss of linguistic understanding, and two questions on vision loss. We used multivariate logistic regression procedures to estimate adjusted odds ratios (OR) and 95% confidence intervals (CI).

Results: After adjusting for demographic and behavioral factors, side-by-side (OR: 6.11; 95% CI: 2.03-18.37), semi-tandem (OR: 2.79; 95% CI: 1.06- 7.30) and tandem stands (OR: 3.88; 95% CI:1.48-10.18) were found to significantly increase the risk of having reported stroke symptoms. All three balance stands displayed a strong association with the individual stroke symptoms of weakness, numbness, and communication with the side-by-side stand as the strongest. Balance was not associated with the questions on vision.

Conclusion: These results suggest that balance stands may be used to identify individuals at a high risk for stroke in community settings in low resource countries. Longitudinal research looking at relationships between balance and stroke symptoms is needed to determine the temporality between the variables and to develop prevention measures in low resource countries like Viet Nam.

Gait speed and stroke symptoms in adults in Da Nang, Viet Nam

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Objective: To examine the relationship between gait speed and stroke symptoms in Viet Nameese adults.

Methods: 1621 Vietnamese adults aged 35 and older in Da Nang, Viet Nam participated in this study.

Data on demographics, socio-economic status, and history of disease and health behaviors, as well as anthropometry, blood pressure, cognitive and physical function were collected using a questionnaire and clinical exam. Bivariate logistic regression was used to calculate the odds ratios (OR) and confidence intervals (CI) for risk of stroke symptoms by speed (in seconds) to walk 15 feet at a usual and fast pace.

Results: Gait speed at both fast and usual paces were highly correlated with stroke symptoms in bivariate analysis ($p < 0.001$). When stratified by gender, the associations remained significant ($p < 0.001$), except for gait at fast pace for males which was slightly less significant ($p = 0.032$). After controlling for demographics, gait speed at both a usual and fast pace was associated with an increased risk of reporting stroke symptoms. Individuals in the slowest quartile of gait at usual pace (> 5.385 seconds) had almost a three-fold increased risk of stroke symptoms (OR=2.76, 95%CI: 1.55-4.94) and individuals in the slowest quartile of gait at fast pace (> 4.175 seconds) had a more than two-fold increased risk of stroke symptoms (OR=2.20, 95%CI: 1.27-3.82).

Conclusion: Study results indicate that gait speed, as determined by a 15 feet walk test at usual and fast pace, was positively associated with stroke symptoms in study participants from Da Nang, Viet Nam. This inexpensive procedure for measuring functional status may be useful in developing countries to screen for stroke.

Associations of Chronic Stress and Stroke Symptoms in Da Nang, Viet Nam

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Objective: While stress has been found to negatively impact a number of diseases including cardiovascular disease (CVD) in developed countries, little is known about its impact in developing countries. The goal of this study was to evaluate the relationship of chronic stress and stroke symptoms as well as hypertension and diabetes in participants ages 35 and older in Da Nang, Viet Nam.

Methods: Interviews and health procedures were conducted either at the local health clinic or participants' homes. Stress was measured using the chronic stress burden scale. Stroke was ascertained as a self-report of symptoms related to stroke or transient ischemic attack collected by the Questionnaire to Verify Stroke-Free Status (QVSFS). Multiple logistic regression procedures were employed to estimate adjusted odds ratios (OR) and 95% confidence intervals (CI) of risk of stroke in relation to stress (no stress, 1-2 symptoms, and 3-5 symptoms).

Results: Bivariate relationships were found between levels of stress and socio-demographic and healthy lifestyle characteristics ($p < .001$). After adjustment for confounders, as well as diabetes and hypertension, individuals experiencing stress at the highest level (3-5 domains) were more than eight times as likely to report stroke symptoms as those with no stress (OR: 8.13, 4.43-14.91). Lower levels of stress (1-2 domains) also increased significantly the risk of stroke symptoms (OR: 3.27, 95% CI: 2.01-5.34).

Conclusion: We found stress to be independently associated with risk of stroke as measured by stroke symptoms. Confirmation of these results as well as development of interventions to reduce stress in health transition countries is greatly needed.

The relationship between chronic stress and coronary heart disease and hypertension in Da Nang, Vietnam

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Objective: This study was conducted to investigate whether chronic stress influenced the development of chronic diseases, specifically coronary heart disease(CHD) and hypertension among community dwelling adults in Da Nang, Vietnam.

Methods: A total of 1621 Vietnamese adults participated in this study. Data on demographics, socio-economic status, physician-diagnosed diabetes, hypertension and experience of stress symptoms were collected using a questionnaire. Anthropometric measures were also collected during clinical examination. We employed logistic regression procedures to assess the odds of increased cardiovascular outcomes related to the level of stress within the categories of no stress symptoms, 1-2 symptoms, and 3-5 symptoms in unadjusted and adjusted models.

Results: Those reporting 1-2 stress symptoms were 40% more likely to experience hypertension (OR=1.43, CI: 1.02-2.01), while individuals experiencing 3-5 stress symptoms were 3 times more likely to have hypertension (OR=3.06, CI: 1.80-5.19). After adjusting for potential confounders those reporting 1-2 domains of stress were 4.63-times as likely to have CHD (OR=4.63, CI= 2.48-8.65) and those reporting 3-5 domains had an 8-fold increased risk (OR: 8.26, 95% CI: 3.72-18.36). Adjusting for hypertension in addition to demographic and health variables for chest pain did not attenuate results.

Conclusion: Our results indicate that stress is strongly associated with the development of CHD and hypertension. Confirmation of these results as well as development of interventions to reduce stress in health transition countries are greatly needed.

Prevalence of Hypertension and Diabetes among Ethiopian Adults

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Objective: To determine the prevalence of hypertension and diabetes among Ethiopian adults and to examine the proportion of adults who were aware of their conditions.

Methods: A total of 2,153 of subjects were included in this cross-sectional study. The World Health Organization STEPwise approach for non-communicable diseases was used to collect socio-demographic data, blood pressure measures and blood samples from participants. Prevalence estimates for hypertension and diabetes were determined separately. The 95% confidence intervals for prevalence estimates were also determined.

Results: The overall prevalence of hypertension was 19.1% (95% CI: 17.1-20.8) and 22% (95% CI: 20.2-23.8) and 14.9% (95% CI: 13.4-16.4) among men and women respectively. The overall prevalence of diabetes was 6.5% (95% CI: 5.4-7.6) and 6.4% (95% CI: 5.0-7.8) and 6.6% (95% CI: 4.8-8.4) among men and women correspondingly. Notably, 15% of hypertensives reported never having had their blood pressure checked prior to the present study examination. Approximately 45% of participants who had their blood pressure checked were never diagnosed with hypertension, but were found to be hypertensive in our study. Approximately 27% of newly diagnosed diabetics (during this study) reported never having a previous blood glucose test. Among those who had their blood glucose assessed prior to this study, 17.4% were found to have diabetes but were never diagnosed.

Conclusion: The high prevalence of hypertension and diabetes reported in our study confirms findings from other Sub Saharan Africa countries where non-communicable diseases are emerging as a major public health concern.

Hematological Parameters and Metabolic Syndrome: Findings from an Occupational Cohort in Ethiopia

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Objective: To examine associations between hematological parameters (i.e., hemoglobin, hematocrit, platelet counts, red blood cell (RBC), and white blood cell (WBC) counts) and components of metabolic syndrome (MetS) among 1,868 working adults in Addis Ababa, Ethiopia.

Methods: MetS was classified according to the International Diabetes Federation criterion. Odds ratios (OR) and 95% confidence intervals (95% CI) of MetS were calculated using logistic regression procedures.

Results: Hematologic parameters were positively associated with MetS components ($P_{\text{trend}} < 0.05$). In both men and women, white blood cell (WBC) counts were positively associated with BMI and waist circumference ($P < 0.05$). RBC counts were associated with diastolic blood pressure in men ($P < 0.05$) and women ($P < 0.001$). Men in the third quartile of hemoglobin concentrations had 2-fold increased odds (OR=1.99; 95% CI) of MetS compared with the lowest reference quartile ($P_{\text{trend}} = 0.031$) while women in the fourth hemoglobin quartile had 2.37-fold increased odds of having MetS compared with the reference group ($p_{\text{trend}} = 0.003$). Both men and women in the fourth quartiles of RBC counts had 2.26-fold and 3.44-fold increased odds of MetS ($P = 0.002$ in men, $P < 0.001$ in women). Among women, those in the fourth quartiles of hematocrit and platelet counts had 2.53-fold and 2.01-fold increased odds of MetS as compared with those in the reference group ($P_{\text{trend}} = 0.004$ and 0.065 respectively).

Conclusions: Our study findings provide evidence in support of using hematological markers for early detection of individuals at risk for cardiovascular disease.