



## MIRT 2015 ABSTRACTS

### **Childhood Physical and Sexual Abuse Experiences Associated with Post Traumatic Stress Disorder among Pregnant Women**

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**Statement of the Problem/Background:** There is some evidence of childhood abuse as a risk factor for posttraumatic stress disorder (PTSD) among men and non-pregnant women, but few studies have examined this relationship among pregnant women and none of the studies included Latin American women.

**Research Question/Hypothesis:**

We sought to evaluate the extent to which history of childhood physical and/or sexual abuse is associated with Post-Traumatic Stress Disorder (PTSD) symptoms during early pregnancy. We further sought to explore the extent to which association between childhood abuse and PTSD is mediated through adult experiences of intimate partner violence (IPV).

**Research Design/Methods Used in the Investigation:** In-person interviews were conducted to collect information regarding history of childhood abuse and IPV from 2,928 women during early pregnancy. Antepartum PTSD symptoms were assessed using the PTSD Checklist-civilian version (PCL-C). Multivariate logistic regression procedures were used to estimate adjusted odds ratios (aOR) and 95% confidence intervals (CI) of PTSD associated with history of childhood abuse.

**Results/Summary of the Investigation:** The prevalence of PTSD in in this cohort was 6.2%; and 71.7% of participants reported having experienced any physical or sexual abuse during childhood. History of any childhood physical or sexual abuse was associated with a 5.73-fold

increased odds of PTSD (95% CI 2.99-10.98) after adjusting for confounders including lifetime experiences of IPV. Compared with women who experienced no abuse during childhood, the odds of PTSD was increased 4.31-fold for those who reported experiencing physical abuse only (aOR=4.31; 95%CI: 2.18-8.49), 5.33-fold among those who reported sexual abuse only (aOR=5.33; 95% CI 2.38-11.98) and 8.03-fold among those who reported experiencing both physical and sexual abuse (aOR=8.03; 95% CI 4.10-15.74) during childhood. Mediation analysis showed that 13% of the child abuse-PTSD association was mediated by participants' lifetime experiences with IPV.

**Interpretation/Conclusion of the Investigation:** Childhood abuse is associated with increased odds of PTSD during early pregnancy independent of lifetime IPV experiences. Efforts should be made to prevent childhood abuse and mitigate its enduring effects on women's mental health.

## **Poor Sleep Quality, Antepartum Depression and Suicidal Ideation among Pregnant Women**

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### **Statement of the Problem/Background:**

Sleep disturbances increase during pregnancy, while sleep duration and overall sleep quality decrease especially during the third trimester. However, few studies have looked at both sleep disturbances and suicide ideation during pregnancy.

### **Research Question/Hypothesis:**

To evaluate the independent and combined associations of maternal self-reported poor sleep quality and antepartum depression with suicidal ideation.

### **Research Design/Methods Used in the Investigation:**

A cross-sectional study was conducted among 1,298 pregnant women attending prenatal clinics in Lima, Peru. Antepartum depression and suicidal ideation were assessed using the Patient Health Questionnaire-9 (PHQ-9). The Pittsburgh Sleep Quality Index (PSQI) questionnaire was used to assess sleep quality. Multivariate logistical regression procedures were used to estimate odds ratios (OR) and 95% confidence intervals (95% CI) after adjusting for putative confounders.

### **Results/Summary of the Investigation:**

The prevalence of antepartum depression and suicidal ideation were 10.3% and 8.5%, respectively in this cohort. Further, 16.9% of women were classified as having poor sleep quality (defined using the recommended criteria of PSQI global score of  $>5$  vs.  $\leq 5$ ). Women classified as having poor sleep quality were more likely to have antepartum depression (30.1% vs. 6.2%,  $p < 0.01$ ) and to report having suicidal thoughts (44.5% versus 14.3%,  $p < 0.001$ ) as compared with women classified as having good sleep. After adjusting for confounders including depression, poor sleep quality was associated with a 2.81 fold increased odds of suicidal ideation (OR=2.81; 95% CI 1.78-4.45). When assessed as a continuous variable, each 1-unit increase in the global PSQI score resulted in a 28% increase in odds for suicidal ideation, even after adjusting for depression (OR=1.28; 95% CI 1.15-1.41). The odds of suicidal ideation was particularly high among depressed women with poor sleep quality (OR=13.56 95% CI 7.53-24.41) as compared with without either risk factor.

### **Interpretation/Conclusion of the Investigation:**

Poor sleep quality is independently associated with antepartum suicidal ideation. Our findings support the need to explore sleep-focused interventions for pregnant women.

## **Risk of Glucose Intolerance and Gestational Diabetes in Relation to Maternal Habitual Snoring During Early Pregnancy**

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**Statement of the Problem/Background:** Obstructive sleep apnea (OSA) or habitual snoring is known to be associated with impaired glucose intolerance and type 2 diabetes in diabetes among both men and non-pregnant women.

**Research Question/Hypothesis:** We examined the association of habitual snoring during early pregnancy with risk of impaired glucose intolerance (IGT) and gestational diabetes mellitus (GDM).

**Research Design/Methods Used in the Investigation:** A cohort of 1,579 women was interviewed during early pregnancy. We collected information about sociodemographic and lifestyle factors, and snoring frequency during early pregnancy. Results from screening and diagnostic testing for IGT and GDM were abstracted from medical records. Multivariate logistic regression models were fitted to estimate odds ratios (OR) and 95% confidence intervals (95% CIs) of IGT and GDM associated with snoring in early pregnancy.

**Results/Summary of the Investigation:** Women who snored “most or all of the time” had a 2.1-fold increased odds of IGT (OR 2.10; 95% CI 1.31-3.35) and a 2.5-fold increased odds of GDM (OR 2.50; 95% CI 1.34-4.67) as compared with women who did not snore. The odds of IGT and GDM were particularly elevated among overweight women (pre-pregnancy body mass index  $\geq 25\text{kg/m}^2$ ) who snored. Compared with lean ( $<25\text{kg/m}^2$ ) women who did not snore, those who were overweight and snored had 5-fold (OR=5.01; 95% CI 2.71-9.26) increased odds of GDM. The corresponding odd ratio for IGT was 3.41 (95%CI: 2.25-5.16).

**Interpretation/Conclusion of the Investigation:** Women who snore during pregnancy, particularly those who are overweight, are at an increased risk for developing IGT and GDM.

## **Association of Suicidal Ideation with Poor Sleep Quality among Ethiopian Adults**

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**Statement of the Problem/Background:** Sleep disorders, affecting more than 45% of the world's population, have emerged as an important global public health problem. No study, however, has evaluated the link between sleep quality and suicidal ideation among Ethiopians or other sub-Saharan African adults.

**Research Question/Hypothesis:** To examine the extent to which poor sleep quality is associated with suicidal ideation among Ethiopian adults.

**Research Design/Methods Used in the Investigation:** A cross-sectional study was conducted among 1,054 adults attending outpatient clinical facilities in Ethiopia. Standardized questionnaires were utilized to collect data on demographics, sleep quality, lifestyle, and depression status of all participants. Depression and suicidal ideation were assessed using the Patient Health Questionnaire-9 (PHQ-9), while the Pittsburgh Sleep Quality Index (PSQI) questionnaire was utilized to assess sleep quality. Multivariate logistic regression models were fit to estimate adjusted odds ratio (AOR) and 95% confidence intervals (95%CI).

**Results/Summary of the Investigation:** The prevalence of suicidal ideation was 24.3% while poor sleep quality (defined using the recommended criteria of PSQI global score of  $> 5$  vs.  $\leq 5$ ) was endorsed by 60.2% of participants. After adjustment for confounders including depression, poor sleep quality was associated with more than 3-fold increased odds of suicidal ideation (AOR=3.46; 95%CI 2.27-5.26). When assessed as a continuous variable, each 1-unit increase in the global PSQI score resulted in a 20% increase in odds for suicidal ideation, even after adjusting for depression (AOR=1.20; 95%CI 1.14-1.27). Participants with both poor sleep quality and depression had much higher odds (AOR=24.9, 95% CI 15.2-40.8) of suicidal ideation as compared with those who had good sleep quality and no depression although inferences from this analysis are limited due to the wide 95%CI.

**Interpretation/Conclusion of the Investigation:** Suicidal ideation and poor sleep quality are highly prevalent. Individuals with poor sleep quality have higher odds of suicidal ideations. If confirmed, mental health services need to address sleep disturbances seriously to prevent suicidal episodes.

## **Diagnostic Validity of the Patient Health Questionnaire-2 (PHQ-2) among Ethiopian Adults**

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**Statement of the Problem/Background:** The Patient Health Questionnaire-2 (PHQ-2) is an ultra-brief questionnaire widely used by researchers and clinicians to detect major depressive disorder (MDD). Despite its individual and societal impact, MDD is often undetected and untreated particularly among sub-Saharan Africans.

**Research Question/Hypothesis:** We conducted this study to evaluate the reliability and validity of using the PHQ-2 as a screen for MDD among Ethiopian adults.

**Research Design/Methods Used in the Investigation:** A total of 926 adults attending outpatient departments in a major referral hospital in Addis Ababa, Ethiopia participated in this study. Construct validity was assessed using factor analysis and by examining associations of PHQ-2 scores with World Health Organization Quality of Life (WHO-QOL) domains. We assessed criterion validity and performance characteristics against an independent, blinded, and psychiatrist administered semi-structured Schedules for Clinical Assessment in Neuropsychiatry (SCAN) interview using measures of sensitivity, specificity and receiver operating characteristics (ROC) curves.

**Results/Summary of the Investigation:** The PHQ-2 items showed good reliability (intraclass correlation coefficient=0.92). Quality of life, as reflected by subscale scores for four WHO-QOL domains, was significantly lower among patients with increasing PHQ-2 scores demonstrating good construct validity. ROC analysis and Youden Index showed that a PHQ-2 threshold score of 3 offered optimal discriminatory power with respect to the diagnosis of MDD via the clinical interview (sensitivity=74% and specificity=60%).

**Interpretation/Conclusion of the Investigation:** The Amharic language version of the PHQ-2 had good sensitivity and fair specificity for detecting MDD compared against a psychiatrist administered SCAN diagnosis. This study provides evidence for the PHQ-2 as a reliable and valid ultra-brief screening tool for initial identification of MDD.

## **Childhood Abuse and Subsequent Risk of Migraine Among Pregnant Women: An Epidemiologic Study**

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**Statement of the Problem/Background:** Childhood abuse has been associated with migraine headaches in previous studies, but this association has not been explored in pregnant women.

**Research Question/Hypothesis:** To examine the association between history of childhood abuse and migraine among pregnant women.

**Research Design/Methods Used in the Investigation:** A cross-sectional study was conducted among a cohort of 2,970 pregnant women attending prenatal clinics in Lima, Peru. History of childhood abuse was assessed using the Childhood Physical and Sexual Abuse Questionnaire. Migraine classification (including migraine and probable migraine) was based on International Classification of Headache Disorders (ICHD)-III beta criteria. Multivariate logistic regression analyses were performed to estimate odd ratios (OR) and 95% confidence intervals (95% CI).

**Results/Summary of the Investigation:** The prevalence of migraine was 12.5% while approximately 70% of the participants reported a history of physical or sexual abuse in childhood. After adjusting for confounders, including lifetime intimate partner violence, those with history of any childhood had a 1.6-fold (OR=1.63; 95% CI 1.25-2.14) increased odds of migraine and 1.2-fold (OR=1.20; 95% CI 0.98-1.48) increased odds of probable migraine compared to women with no history of childhood abuse. The odds of migraine increased with increased number of childhood abuse events experienced (p-value for trend <0.001).

**Interpretation/Conclusion of the Investigation:** Childhood abuse is associated with migraine in pregnant women. Our findings highlight the importance of screening childhood abuse in pregnant migraineurs to help guide treatment strategies.



## **Childhood Abuse and Suicidal Ideation in a Cohort of Pregnant Peruvian Women**

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**Statement of the Problem/Background:** Childhood abuse has been associated with suicidal ideation in previous studies. However, this association has not been explored in pregnant women.

**Research Question/Hypothesis:** To examine the association between exposure to childhood abuse and suicide ideation among pregnant women.

**Research Design/Methods Used in the Investigation:** A cross-sectional study was conducted among 2,964 pregnant women attending prenatal clinics, in Lima, Peru. Childhood abuse was assessed using the Childhood Physical and Sexual Abuse Questionnaire. Depression and suicide ideation were assessed using the Patient Health Questionnaire-9 scale. Logistic regression procedures were performed to estimate odds ratios (aOR) and 95% confidence intervals (95% CI) adjusted for potential confounders.

**Results/Summary of the Investigation:** Overall, the prevalence of childhood abuse in this cohort was 71.8% and antepartum suicidal ideation was 15.8%. The prevalence of antepartum suicide ideation was higher among women who reported experiencing any childhood abuse compared to those who did not (89.3% vs. 10.7%,  $P < 0.0001$ ). After adjusting for potential confounders, including antepartum depression and lifetime intimate partner violence, those with history of any childhood abuse had a 2.9-fold (aOR; 95% CI: 2.12-3.97) increased odds of suicidal ideation. Women who experienced both physical and sexual childhood abuse had much higher odds of suicidal ideation (aOR=4.04; 95% CI: 2.88-5.68). Women who experienced any childhood abuse and had depression had 3.44-fold (aOR; 95% CI: 1.84-6.43) increased odds of suicide ideation compared with non-depressed women with no history of childhood abuse. Finally the odds of suicidal ideation increased with increased number of childhood abuse events experienced (P-value for trend < 0.001).

**Interpretation/Conclusion of the Investigation:** Maternal history of childhood abuse was associated with increased odds of antepartum suicidal ideation. It is important for clinicians to be aware of the potential increased risk of suicidal behaviors among pregnant women with a history of childhood physical and sexual abuse.