

Conclusions: The differences in SGA prevalence by mining activity were fully explained by the differences in prevalence of maternal tobacco use. Maternal tobacco use continues to be a major determinant of SGA.

P80. Physical Activity for the Prevention of Gestational Diabetes: A Meta-Analysis of Randomized Controlled Trials

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Purpose: Gestational diabetes (GDM) affects up to 10% of pregnancies and is associated with increased incidence of pregnancy complications, adverse pregnancy outcomes, and maternal and fetal risks of chronic health conditions later in life. Physical activity (PA) has been proposed as a low-cost prevention for GDM, and is supported by observational studies, but experimental research assessing its effectiveness is limited and conflicting. The goal of this project is to perform a meta-analysis of published randomized controlled studies of PA and GDM.

Methods: We searched MEDLINE and Cochrane library for all randomized controlled studies that met our search criteria. To meet eligibility, studies had to randomize participants to an exercise-only based intervention (i.e., separate from dietary interventions) and present data regarding GDM risk. Two authors were involved in the database search, assessment of eligibility for inclusion, and abstraction of data from included studies. Cochrane Review Manager Software was used to derive a summary relative risk (RR) and 95% confidence interval (CI) utilizing a fixed-effects model with the Mantel-Haenszel method and I^2 as a test of heterogeneity.

Results: Six studies were identified. Meta-analysis yielded a relative risk of GDM of 0.78 (95% CI 0.59–1.02, $p=.07$) comparing the exercise intervention group to the control group. I^2 was equal to 25%. 4.

Conclusions: The results from our meta-analysis, though not statistically significant, are consistent with the possibility that PA may provide a slight protective effect against the development of GDM. Additional studies are warranted to help inform evidence-based obstetrical guidelines.

P81. Clustering of Retrospectively Reported and Prospectively Observed Time-To-Pregnancy Among Women in a Preconception Cohort

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Purpose: Two previous studies reported high clustering of retrospectively reported time-to-pregnancy (TTP). Given the limited validity of retrospectively reported TTP despite its frequent use in epidemiologic research, we assessed TTP clustering in a unique cohort of women with both retrospectively reported TTPs and ≥ 1 prospectively observed TTP.

Methods: 501 couples discontinuing contraception for purposes of becoming pregnant were followed until hCG pregnancy or 12 months of unsuccessful trying; women experiencing losses could re-enroll. At enrollment, women retrospectively reported TTP for all prior planned pregnancies. Prospectively observed menstrual cycles defined prospective TTP. Frailty models with lognormal distribution were used to estimate clustering as measured by frailty variance, with separate models comparing 1) all retrospective TTPs and 2) all retrospective and prospective TTPs. Logistic regression models were used to assess clustering of conception delay (TTP >6) in retrospective and prospective pregnancies. Models were adjusted for maternal age, BMI, and smoking for each pregnancy attempt.

Results: 75 women contributed 180 retrospective and 91 prospective TTPs. Median age at enrollment was 33 (IQR: 29, 36); median BMI was 27 (IQR: 23, 32); 11% of women smoked. Overall, TTP clustering was high (frailty variance=0.89) among retrospectively reported pregnancies, but significantly lower when modeling retrospective and prospective TTP (frailty variance=0.32; p -value for difference=0.05). Prospectively observed conception delay was significantly more common in women reporting past conception delay ($OR=2.87$, 95% CI=1.05–7.91).

Conclusions: TTP clustering is high for retrospectively reported TTP but low when including prospectively observed TTP. Conception delay may be a better assessment of prior fecundity.

P82. The Association Between Maternal Depression During Pregnancy and Adverse Birth Outcomes: A Retrospective Cohort Study of Prams Participants

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Purpose: Women of reproductive age are at higher risk for depression; thus it is vital to examine the relationship between depression and negative birth outcomes. The purpose of this study was to investigate whether maternal depression during pregnancy affected adverse pregnancy outcomes, specifically preterm birth and small for gestational age (SGA).

Methods: This study included 4,123 women who participated in the 2009–2011 Utah Pregnancy Risk Assessment Monitoring System, an ongoing surveillance project that investigates maternal behaviors in women who have recently had a live birth. Women self-reported information on depression and outcome data were obtained from birth certificates. Logistic regression was used to obtain odds ratios (ORs) and 95% confidence intervals (CIs).

Results: Women who self-reported a diagnosis of depression during pregnancy had statistically significant increased odds of preterm birth as compared to women who had not been diagnosed with depression (OR=1.51; 95% CI: 1.07, 2.12); there was no association between depression and SGA (OR=0.92; 95% CI: 0.63, 1.34). After adjustment for prenatal care visits, the depression-preterm birth association was attenuated and no longer significant (OR=1.29; 95% CI: 0.90, 1.85). After adjustment for smoking, there continued to be no association between depression and SGA (OR=0.80; 95% CI: 0.54, 1.20).

Conclusion: The findings of this study do not support a maternal depression–adverse birth outcomes relationship among a predominantly healthy population of non-Hispanic White, well educated women. Future studies should focus on other populations of women (i.e. minorities) to determine if there is an association for these subgroups.

Social/Behavior

P83. Stressful Life Events and Posttraumatic Growth Among Police Officers

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Purpose: Our purpose was to examine the association between stressful life events and posttraumatic growth, and whether this relationship is modified by satisfaction with life, gratitude, or interpersonal support.

Methods: Posttraumatic growth was assessed using the posttraumatic growth inventory which measures positive growth following traumatic events. Stressful life events were measured using the Recent Life Changes Questionnaire which includes five subfactors of stress: health, work, home and family, personal and social, and financial stressors. Analysis of variance and covariance were utilized to compare mean levels of posttraumatic growth across quartiles of stressful life event scores and to assess associations stratified by potential modifying factors.

Results: Our study consists of 111 officers (27 women and 84 men) from a police agency in the New Orleans geographical area. The association between stressful life events and posttraumatic growth was statistically significant. Adjusted mean posttraumatic growth total score increased across increasing quartiles of stress scores (37.4, 33.2, 43.3, and 51.7, respectively). Among the five subfactors, only personal and social support was positively associated with posttraumatic growth. The association between stressful life events and posttraumatic growth was modified by satisfaction with life, gratitude, and interpersonal support. After stratification, stressful life events were significantly and positively associated with posttraumatic growth among officers with high scores in satisfaction with life, gratitude, and interpersonal support.

Conclusion: These results indicate that an increasing number of stressful life events are associated with greater posttraumatic growth, particularly among individuals with high levels of satisfaction with life, gratitude, and interpersonal support.