**Abstract Submission**

**Title** Investigating The Link Between Depression and Gestational Diabetes In Rural Australia

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**Background** The risk factors forGestational Diabetes Mellitus (GDM) such as high Body Mass Index (BMI) and increasing age are well recognized. There is however a paucity of research investigating the link between pre and perinatal depression, and development of GDM. Furthermore, there is also limited research on the association between GDM, and developing post-natal depression. These areas of knowledge are poorly understood particularly in rural Australia.

**Aims** The current study investigated whether GDM had any significant links with lifetime history of development of depression in rural Australia. Confirmation of the well known trends in terms of risk factors for acquiring GDM, such as high BMI and increasing age; were also assessed.

**Method** Clinical audits of pregnant patients above the age of 18 in a rural Grafton General Practice were undertaken and a retrospective analysis was completed on depression and GDM diagnosis. Data was assessed using unpaired T tests, Chi squared testing and Pearson’s correlation.

**Results** High BMI significantly increased an individual’s risk of developing GDM, with the average BMI of those with GDM at 40.3 ± 8.77 compared to those undiagnosed with GDM at 26.3 ± 6.72 (p=0.001). There was a statistically significant increase in those with depression developing GDM as 54.4% of women that were diagnosed with GDM had coexisting perinatal depression or previous depression compared to only 17.8% of those who suffered from perinatal depression or previous depression that did not have GDM (p <0.0001). There was a statistically significant increase in those with depression who also developed GDM in Grafton. BMI was significantly correlated with plasma glucose at 1 hour and 2 hours post- prandial (p<0.0001), but not with baseline fasting glucose levels and BMI was positively correlated with age.

**Conclusion** This preliminary study suggests that the diagnosis of depression before and during pregnancy significantly increases the risk of developing GDM in rural Australia. However, GDM diagnosis does not seem to increase the risk of development of post-natal depression (PND). From the results of this study, one can propose the potential benefit of a risk rubric in terms of GDM and depression assessments and quantitative antenatal depression screening in the future.

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