

2021 Best Research Poster Award



Investigating the role of inflammation in maternal mental health

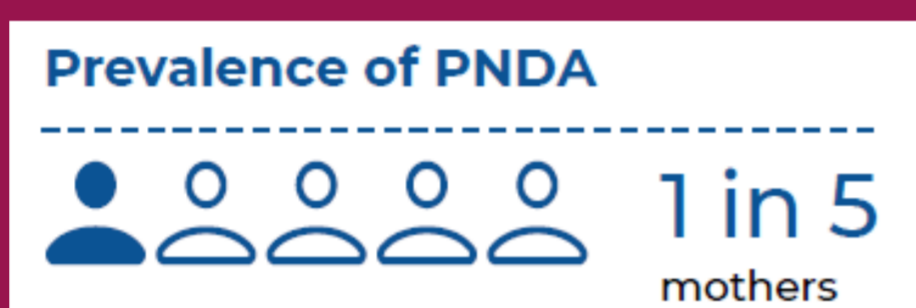
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INTRODUCTION

Maternal mood disorders are serious and specific complications of pregnancy experienced by as many as 1 in 5 women.

Outside of pregnancy, inflammation is an established risk factor for mood disorders. However, few studies have systematically examined the relationship between inflammation and perinatal depression and anxiety (PNDA).



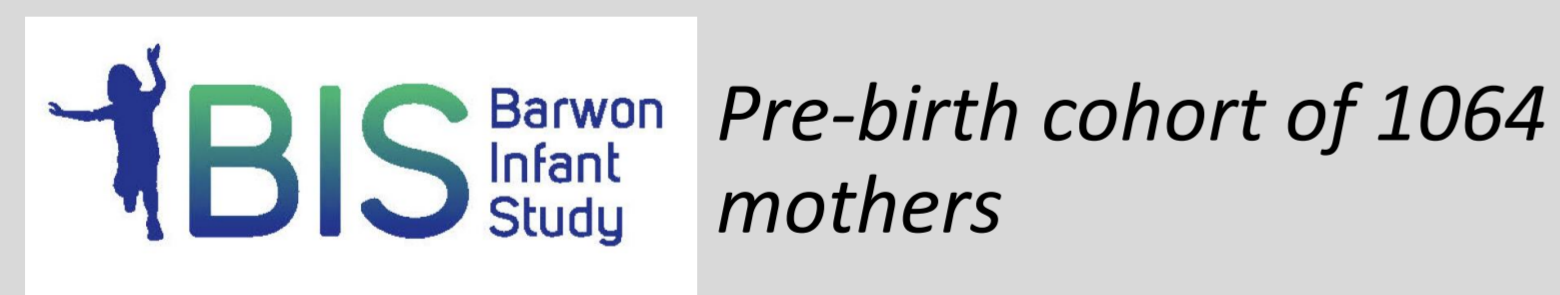
OBJECTIVES

To address the critical gap in current knowledge, we will focus on a significant risk factor for PNDA, obesity, as a well-established inflammatory condition.

We will utilise internationally unique biosamples, exposure data and detailed clinical phenotyping among mothers and infants participating in the Barwon Infant Study (BIS)

METHOD

Design: Population-based prospective birth cohort



		Antenatal		Postpartum		
		28 weeks	4 w	6 m	12 m	2 y
Biosamples Questionaries	Blood	X				
	EPDS	X	X			X
	PSS	X	X	X	X	X

EPDS- The Edinburgh Postnatal Depression Scale

PSS – Perceived Stress Scale

Clinical data: pre-pregnancy BMI, baseline mental health, pregnancy complications, and other relevant measures

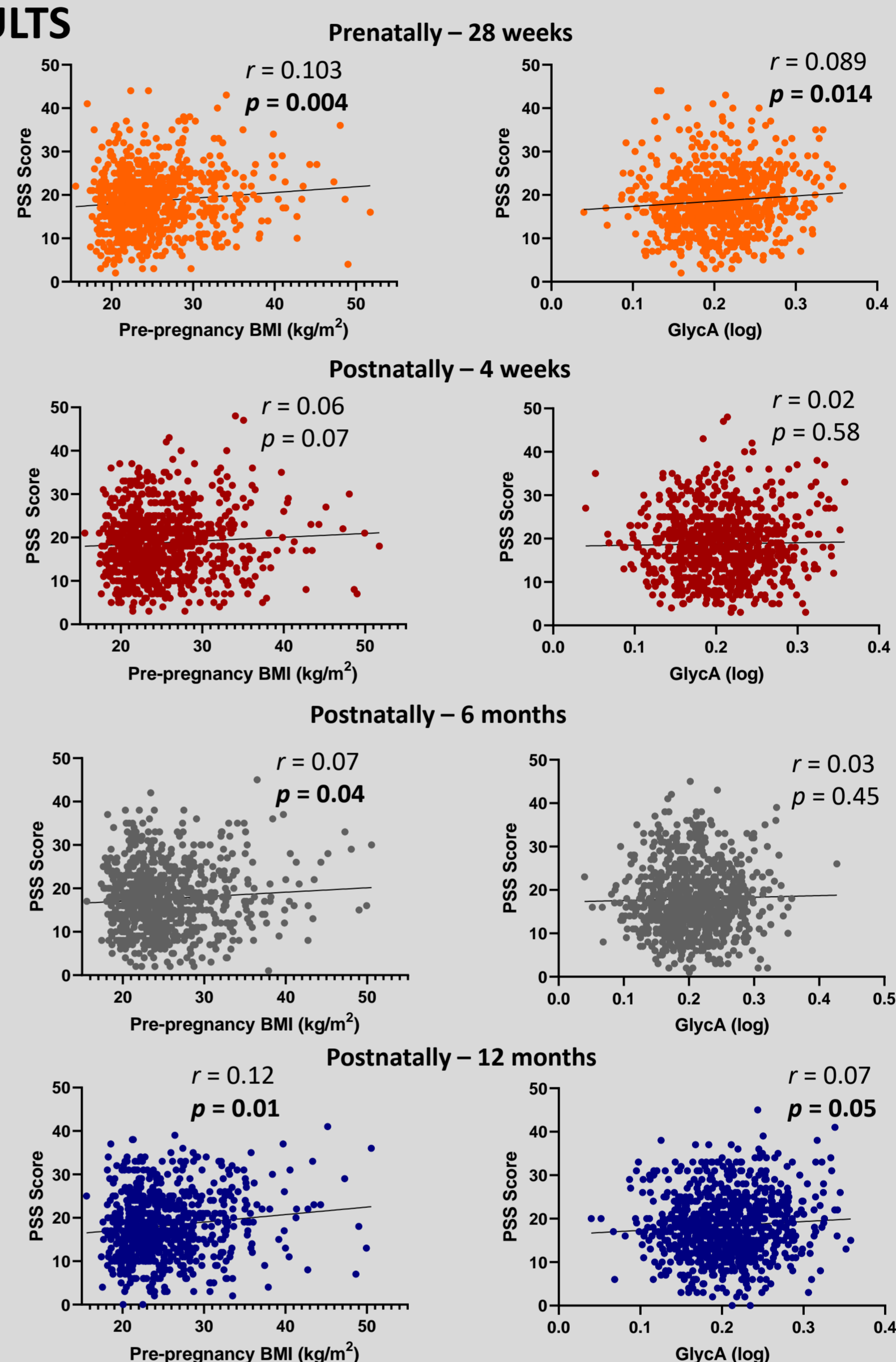


GlycA (glycoprotein acetyls); a new measure of chronic inflammation

hsCRP

Cytokines (27-plex)

RESULTS



DISCUSSION

Preliminary data show that pre-pregnancy BMI is associated with increased PSS and EDS scores pre- and postnatally, while the association of GlycA with maternal mental health issues was less consistent.

We will employ directed acyclic graphs and regression modelling to estimate the average causal effect of maternal pre-pregnancy BMI on PNDA incidence and whether this effect is mediated by maternal inflammation in pregnancy.

CONCLUSION

Understanding how inflammatory conditions before and during pregnancy contribute to the development of PNDA will help to predict women at risk and will also inform novel intervention strategies.

