

Maternal education level affects preterm preeclampsia in Indonesia, while insurance status does not.

Other significant first trimester risk factors: advanced age, family history of PE, chronic hypertension, previous PE, and mean arterial pressure ≥ 90 mmHg.



Exploring First Trimester Maternal Risk Factors of Preterm Preeclampsia in Indonesia: Examining the Role of Education Level and Insurance Status

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Intro

- **Preterm preeclampsia (PE)** (delivery at <37 weeks) has **higher rates of adverse outcomes**¹
- **Socioeconomic factors** (education level and insurance status) may affect PE
- **Limited research in Indonesia (low-middle income country)**

Methods

Retrospective cohort on singleton pregnancies

Taken at 11-13 weeks or 45-84 mm CRL measurement

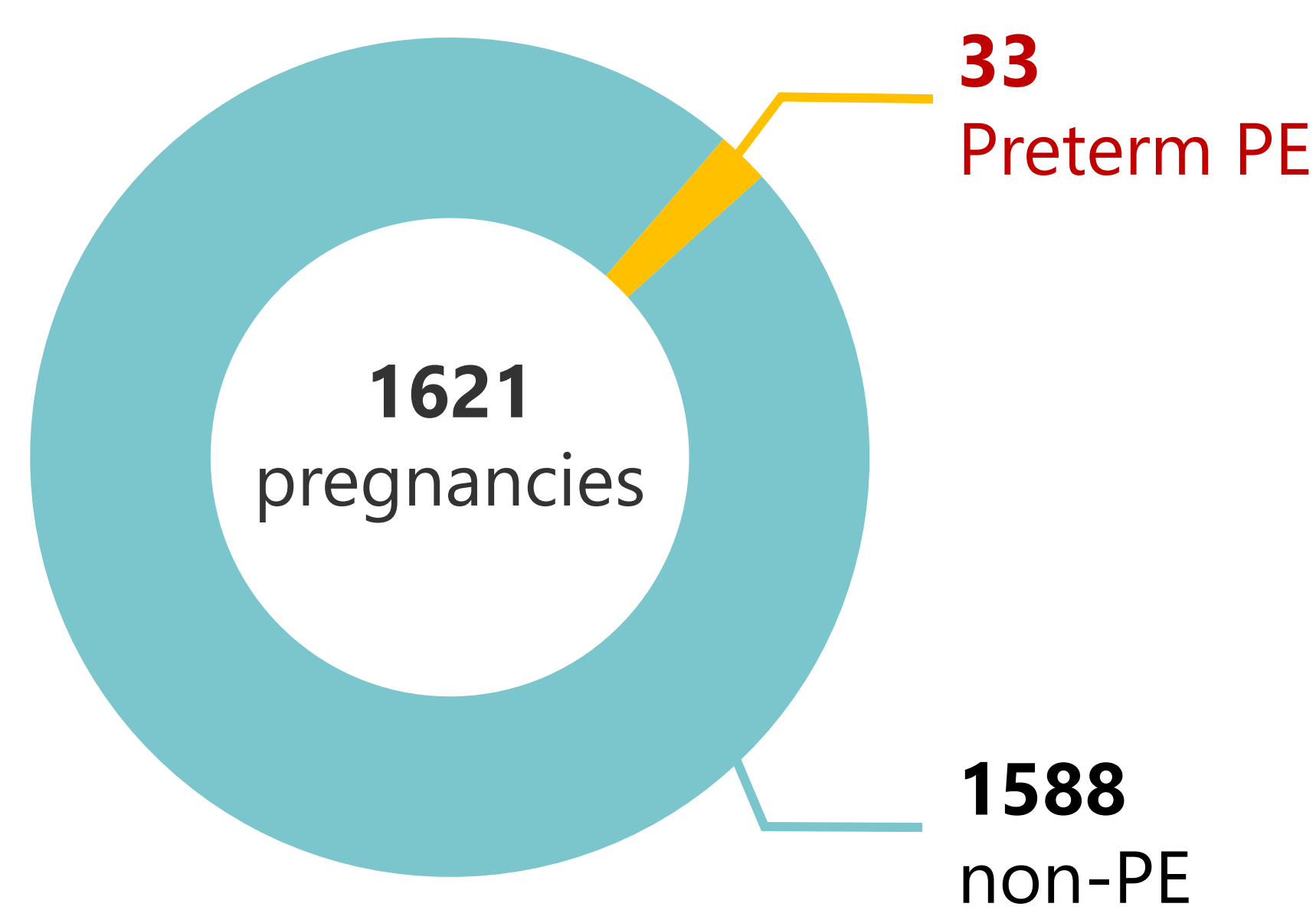
Three maternal and child's health centres, 2019-2020

Logistic regression

Discussions

This study identified well-established maternal risk factors, but also found conflicting results²⁻⁴. Regarding the relationship between high education level and the risk of preterm PE, two previous studies reported similar results⁵⁻⁶. This may be influenced by the diverse perceptions of maternal attitudes towards pregnancy in Indonesia shaped by local sociocultural factors and unhealthy lifestyle. However, exploring these influences was beyond the scope of our study. **Limitation:** small number of identified preterm PE cases, which should be considered when interpreting the results. The impact of socioeconomic factors to preterm preeclampsia needs further research due to inconsistent findings⁵⁻⁷.

Results



Variables	<i>p</i>
Education level	
Low* (17.4%)	0.039
High (82.6%)	
Insurance status	
Private (66.7%)	>0.05
Public (33.3%)	

*low: high school or less

Table 1. Crude and adjusted OR (aOR) for age and obesity of maternal risk factors for preterm PE.

Variable	OR (95% CI)	aOR (95% CI)
Age of ≥ 35 years	3.233 (1.547-6.759)	-
Nulliparity	0.754 (0.378-1.502)	1.093 (0.537-2.224)
Pregnancy interval <1 year	0.755 (0.383-1.489)	0.924 (0.452-1.889)
Family history of PE	8.51 (3.53-20.514)	7.298 (2.962-17.982)
Assisted Conception	0.997 (0.235-4.225)	0.607 (0.137-2.691)
Chronic HT	17.995 (8.627-37.538)	22.985 (8.453-62.499)
Previous PE	17.671 (8.389-37.225)	16.095 (7.506-34.511)
Obesity (BMI ≥ 30 kg/m ²)	1.479 (0.604-3.623)	-
MAP ≥ 90 mmHg	13.381 (5.486-32.635)	11.917 (4.74-29.964)
Higher education level	2.925 (1.001-8.541)	3.163 (1.062-9.419)
Private insurance	1.142 (0.206-6.319)	0.829 (0.148-4.639)