

ABSTRACT

**EARLY DETECTION MODEL OF PREGNANT WOMEN AT RISK FOR
SPONTANEOUS PRETERM BIRTH (28-<37 WEEKS) USING SPONTANEOUS
PRETERM BIRTH PREDICTION CARDS (SPBPC)**

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Introduction: Preterm birth (PTB) is a major cause of infant death before 32 weeks' gestation and is still a global problem with regard to prevalence, morbidity and perinatal mortality.

Aims and method: The first phase of the study was conducted on post PTB mothers totaling 443 people, the aim of which was to determine the risk factors for PTB and to develop alternative models for early detection of PTB risk using a case control study at nine hospitals in East Java. Phase II of the study, tested the SPBPC card using a prospective cohort study of 260 pregnant women from five Puskesmas in Kota Surabaya and six Puskesmas in Probolinggo City.

Results and analysis of the study: The first phase of the research contained 18 PTB risk factor variables that met the modeling candidate requirements and only seven variables were included in the index formula (Index = $-1,488 + 1,056$ (<regional minimum salary) $+1,058$ (first child) $+1,431$ (children > 2) $+1,541$ (Workload) $+0,858$ (moderate-weight EPDS) $+1,746$ (premature history) $+1,252$ (less BMI) $+3,094$ (positive fluor albus) The results of the second phase of the study, the predictive value of the SPBPC model did not differ significantly in trimester I and II, but it is better to do the screening in the first trimester so that prevention can be done earlier, SPBPC are new and first findings in Indonesia that are able to predict the occurrence of PB with a PPV value of 12.2% in the first trimester and 12.3% in the second trimester, this is because this research uses only a very simple, easy, cheaper and non-invasive examination.

Conclusion: SPBPC models have sensitivity in trimester I and II (86.7% and 90.0%), PPV (12.2% and 12.4%), specificity (18.7% and 16.2%), and NPV (91.5% and 92.5%). Further socialization on the use of SPBPC to the government involved in effective and efficient policy making is needed as an effort to reduce perinatal morbidity and mortality due to preterm birth.

Keywords: Spontaneous preterm birth, Early detection, SPBPC