

# **Association between Maternal Age and the Likelihood of a Cesarean Section: A Population-based Multivariate Logistic Regression Analysis**

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## **Abstract**

**BACKGROUND:** A majority of studies examining the relationship between advancing maternal age and the likelihood of cesarean section (CS) use data from regional samples or from a limited number of medical institutions. This study uses population-based data from Taiwan to explore the relationship between maternal age and the likelihood of a CS. **METHODS:** The National Health Insurance Research Database (NHIRD) on registries of medical facilities and board-certified physicians and monthly claim summaries for inpatients were used. In total, 502 524 singleton deliveries were included in the study. Multivariate logistic regressions were performed with the presence of CS as the dependent variable and maternal age (<20, 20-29, 30-34 and >34 years) as the independent variable. The study controlled for maternal indications, institution characteristics, maternal requests and attending physician characteristics. **RESULTS:** CS rates for the age groups <20, 20-29, 30-34 and >34 years were 17.7, 27.4, 37.4 and 47.5%, respectively. The regression analyses consistently showed that the likelihood of a CS significantly increased with advancing maternal age within each category of complication after adjusting for medical institution characteristics and characteristics of the attending physician. **CONCLUSIONS:** This study found that, after adjusting for maternal indications, and healthcare institution and physician characteristics, there was a significant relationship between advancing maternal age and an increased likelihood of a CS. This finding, together with the high CS rate of 32.1% in Taiwan, one of the highest reported in the world today, highlights an imperative need to devise interventions to reduce the frequency of CSs.