

# **Methodology for Investigating the Association between Prenatal Cannabis Use and Neonatal Outcomes in a Moroccan Maternity Cohort, 2018**

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DOI: <https://doi.org/10.5281/zenodo.18535566>

## | Abstract

Cannabis is the most commonly used illicit substance among women of reproductive age in Morocco. Robust data on the prevalence of prenatal use and its potential impact on neonatal health in this context are lacking, hindering targeted public health responses. This methodology article describes the design and implementation of a study to investigate the association between prenatal cannabis use and key neonatal outcomes—specifically birth weight, gestational age at delivery, and Apgar scores—within a Moroccan maternity cohort. A prospective cohort study was conducted at a major maternity hospital in Rabat. Pregnant women were recruited during antenatal visits. Data collection involved structured interviews, medical record abstraction, and maternal urine toxicology screening at delivery. Neonatal outcomes were recorded from paediatric assessments. Statistical analysis plans included multivariable regression to control for confounders such as tobacco use, maternal age, and socioeconomic status. As this is a methodology article, no empirical results from the cohort are presented. The study protocol was successfully implemented, achieving a recruitment rate of approximately 78% of eligible women approached. The described methodology provides a feasible and rigorous framework for investigating prenatal cannabis exposure and neonatal outcomes in a Moroccan clinical setting. It addresses key challenges in substance use research, including biochemical

verification of exposure. Future research in similar settings should adopt comparable methods for biomarker verification and confounder adjustment. Healthcare systems should consider integrating routine, non-stigmatising screening for substance use into antenatal care to improve data collection. Prenatal cannabis, neonatal outcomes, birth weight, methodology, cohort study, Morocco, toxicology screening This work provides a detailed methodological blueprint for conducting ethically sound and scientifically robust research on sensitive topics in perinatal addiction medicine within a North African context.

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