

10.0. Oral presentations: Parental addictive behaviour and interventions

The importance of smoking cessation during pregnancy and its association with perinatal outcomes

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In utero exposure to tobacco smoke is associated with an increased risk of multiple adverse perinatal outcomes. Smoking cessation during pregnancy has been related to the improvement of these outcomes, but often relies on self-reporting, impairing an accurate assessment of smoking cessation impact on newborns health. Building on data obtained in the frame of the NEOGENE project, this work aimed to estimate the association between smoking cessation among pregnant women, confirmed by maternal urinary cotinine concentrations, and perinatal outcomes. The study population included 595 pregnant women who sought prenatal care in a public hospital in Porto (Portugal), from April 2017 to July 2018. Data on tobacco consumption and cessation was obtained in a face-to-face interview, during the hospital stay. Perinatal outcomes, namely birth weight (BW), length (BL) and head circumference (HC) were retrieved from the hospital medical records. Maternal self-reported tobacco use was validated by urinary cotinine concentrations, using the solid-phase competitive ELISA technique. Maternal active smoking was associated with a significant decrease in BW, BL and HC of 157.66 g ($p < 0.001$), 0.78 cm ($p = 0.001$) and 0.39 cm ($p = 0.016$). Notably, maternal smoking cessation led to a significant increase in BW of approximately 172 g ($p = 0.006$), when compared to mothers who have not ceased. Increases in BL and HC did not reach significance. This study upholds that tobacco consumption is still an important public health threat in Portugal and that smoking cessation during pregnancy reverses smoking-associated deficits in perinatal outcomes, emphasizing the crucial need for

awareness campaigns to promote smoking cessation during pregnancy.

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Key messages:

- Maternal active smoking was significantly associated with lower birth weight, length and head circumference.
- Maternal smoking cessation reverses the smoking-associated deficits in birth weight.