

## ASSESSMENT OF REPEATABILITY AND RECALL BIAS OF REPORTED PERI-CONCEPTION ENVIRONMENTAL EXPOSURE AMONG PREGNANT WOMEN IN SOUTHERN ISRAEL

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**Background.** A growing number of environmental exposures in the peri-conception period have shown to cause adverse pregnancy outcome (APO): low birthweight, small for gestational age, preterm birth and cardiac birth defects. Validity of exposure information collected retrospectively in case-control studies has been questioned. We aimed to assess repeatability and possible recall bias of self-reported environmental exposures collected after birth. .

**Methods.** Women registered for prenatal care in Maternal and Child Health clinics (MCHC) by week 25 of gestation comprised the study population (n=411). Information about place of residence and exposures to various risk factors during the 3 months prior to conception and first 3 months of pregnancy was obtained by personal interviews, using a structured questionnaire. Women with APO (gestational age at birth/miscarriage/induced abortion, low birth-weight, perinatal morbidity, fetal death, and in-hospital neonatal death), and a sample of control women without adverse outcome, matched by MCH clinic, were re-interviewed, after end of pregnancy (n=241). Kappa statistics was used to assess reliability of retrospectively reported exposures.

**Results.** Low agreement (kappa <0.4) between 1<sup>st</sup> and 2<sup>nd</sup> interview was observed regarding exposures to flu, fever, medications and vitamins consumption, cellphone use, home and work repairing, disinfestations, passive smoking. Better agreement (kappa >0.4) was observed regarding water filtering, maternal occupational exposures, living in proximity to antennas, contraceptive methods, urinary tract infections, smoking before/during pregnancy, fertility treatment, and physical exertion at work. There were no differences in agreement estimates for cases and controls.

**Conclusions.** While no recall bias was found, the validity of most retrospectively reported exposures was rather low, suggesting that OR estimated from case-control studies may be underestimated it is therefore advisable that, whenever possible, cohort studies should be performed to detect effects of perinatal exposures on pregnancy outcomes.

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