Letter to the Editor

Response to commentary: maternal smoking during pregnancy—hazard for what?
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While appreciating Dr Breslau’s comments1 on our manuscript,2 we have some considerations.

Neurodevelopment measured early in life might be used as an early marker for neurotoxicity. Grandjean et al. have recently defended its value as an early detector of long-term effects of industrial chemicals.3 The examples of lead,4 methyl-mercury5 and PCBs6 for which the early life findings were extended till late in youth also support this concept. In addition, there is some evidence of an association of smoking during pregnancy and late externalizing behavioural problems during adolescence even after adjustment for parental psychosocial factors.7

Conventional cognitive assessments in preschoolers or older children are based on verbal, perceptive-performance, memory, quantitative and motor scales. Similar constructs compose the intelligence quotient (IQ) later in life. We agree that there is a need for epidemiological studies to add other psychometric constructs in the assessments of the outcomes (i.e. neuro-psychological or neurocognitive functions). It is necessary to describe more precisely the specificity of the effects, which in turn may help to better understand the underlying pathways. There is broad agreement that assessing IQ scores alone is not the gold standard.8

Although it is true that parental psychosocial factors may be in the causative pathway between maternal smoking and mental development,9 we want to emphasize that the causative plausibility of smoking being a neuron-toxicant2,3,8 is reinforced by the facts that (1) the specific time window of exposure during pregnancy was formulated a priori based on biological coherence, and (2) we found no effects for exposure after pregnancy and with paternal smoking.

Finally, even if effects of maternal smoking during pregnancy may be small at an individual level, this could represent an important social cost impact for future generations similarly as it has been shown for lead exposure during pregnancy.3,4

References
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