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Gestational smoking lowers child's memory and quality of life - study

A new study by the University of Cape Town's (UCT) Centre for Environment and Occupational Health Research published in peer-reviewed journal, *NeuroToxicology*, found that gestational smoking lowers child's memory and quality of life.

Led by Professor Aqiel Dalvie, the study also found that maternal gestational smoking and drinking increase the odds of child repeating a grade.

"Maternal substance use and its long-term effect on the neurocognitive functions of children is a global public health issue," said Dalvie.

The study explored the effect of maternal alcohol use and smoking on child cognition, using self-reported data on four exposure proxies, six cognitive outcomes, and one health symptom, in a sample of 482 rural school-going children and their parent or guardian.

Of the 482 parents/guardians who completed the survey, 29% reported current drinking, 27% reported past drinking and 10% reported maternal gestational drinking, while 31% reported gestational smoking. Participating children were between 9-16 years old and 48% were female.

Dalvie said a few statistically significant associations were found with maternal gestational, past and current drinking, and smoking. Maternal past and current drinking significantly reduced child rapid visual processing accuracy in attention and maternal drinking significantly reduced spatial working memory.

"Heavy maternal gestational smoking significantly lowered child performance on the paired associated learning in-memory task and health-related quality of life. A child was 70% more likely to repeat a grade if exposed to maternal gestational smoking than those who were not exposed," he said.

According to Dalvie, the high proportion of alcohol use among mothers in the rural areas of the Western Cape are likely to be related to the wide range of adverse socio-demographic factors that mothers experience in this area, which arguably exist as legacies of both apartheid and the 'dop system,' – the practice of remunerating farmworkers with alcohol.

Dalvie and his colleagues found smoking during pregnancy to be as an overall significant predictor of lowered cognitive performance, with an observed significantly lowered performance in the domain of memory.

Dalvie said education, awareness, and intervention in these communities to avoid the use of substances during pregnancy and support mothers to limit their use before pregnancy should be increased while screening measures by the World Health Organization should be enforced in all clinics during pre-natal regular check-ups.

“Additionally, physical exercise and play regimes are suggested as supportive tools for coping for children in these chronic environments,” he said.

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