

Study associates poor academic achievement and maternal drinking

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Credit: AI-generated image ([disclaimer](#))

Researchers from WA and the UK have linked heavy drinking and binge drinking, even occasionally during pregnancy, to children's academic achievement in reading, writing and spelling; and this impact is related to the trimester in which the exposure occurred.

These results lend further support to other international studies which have found prenatal alcohol exposure increases the risk of a range of [neurodevelopmental disorders](#), including Fetal Alcohol Spectrum Disorder (FASD).

Lead author Colleen O'Leary, from Curtin's Centre for Population Health Research, says this study is a first.

"This is the first population-based study that utilises linked cohort and state-wide education test data to examine the effect of prenatal alcohol exposure on [educational achievement](#)," Dr O'Leary says.

The cohort of 4056 children aged 8-9 years-old were from the Randomly Ascertained Sample of Children born in Australia's Largest State study; a 10 per cent random sample of infants born in WA between 1995 and 1997.

Information about maternal [alcohol consumption](#) was catergorised into dosage and pattern; low (1-2 standard drinks on occasion, less than 7 per week), moderate (3-4 standard drinks on occasion, 7 per week), binge drinking (more than 50g per occasion), and heavy drinking (more than 7 standard drinks per week).

They then matched this data with education records from the WA Literacy and Numeracy Assessment statewide testing program, and also examined absenteeism at these tests.

Resulting learning problems varied depending on the dose, timing, and drinking pattern of the prenatal alcohol exposure.

"Children exposed to heavy prenatal alcohol exposure during the first trimester were over twice as likely as comparison children to not achieve the reading benchmark," Dr O'Leary says.

"Prenatal exposure to occasional binge drinking in [late pregnancy](#) [second and/or third trimester] increased the risk of not achieving the benchmark for writing.

"Children of mothers [binge drinking](#) occasionally or drinking heavily at any stage during pregnancy were more likely to have been absent for the spelling test."

Dr O'Leary says results are particularly pertinent given the high rate of pregnancies reported to be unplanned – around 50 per cent – and thus associated risk of unintentional prenatal alcohol exposure.

While low or moderate levels of [prenatal alcohol exposure](#) was not associated with academic underachievement, Dr O'Leary stresses that other studies have demonstrated adverse offspring effects, even at very low doses.

As such, "we cannot conclusively state that any amount of alcohol is 'safe'."

She recommends exploring the impact of whether supportive family and school systems can improve academic achievement of children exposed prenatally to alcohol.

More information: www.ncbi.nlm.nih.gov/pubmed/23837182

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