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# Anti-depressant use during pregnancy in Australia: findings from the Longitudinal Study of Australian Children

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Increasing awareness among health professionals and detection of antenatal and postnatal depression has resulted in sharp increases in the prescription of anti-depressant medication in pregnancy. The literature on effects on the newborn of antenatal anti-depressant exposure raises a number of questions about the safety of such prescription practices[1,2] including findings of increased birth complications, lower gestational age and lowered birth weights resulting from prenatal exposure.[3] This letter aims to provide information on the prevalence of anti-depressant use in Australia and the characteristics of mothers who take anti-depressants during pregnancy.

## Method

Data were drawn from the first wave of The Longitudinal Study of Australian Children (LSAC) according to methods described in a technical paper.[4] Of those selected infants who were contacted, 5,107 took part in the first wave of LSAC in 2004 (64.2% response rate). The sample for this analysis was limited to infants for whom the primary caregiver was the child's biological mother. Mothers reported the child's gender and age, and their own age, marital status, employment, education and social disadvantage (SEIFA).Mothers were asked a single item on anti-depressants use. For depression during pregnancy, mothers were asked "Have you ever had two or more years in your life when you have felt depressed or sad most days, even if you felt OK sometimes?" Covariates included smoking, alcohol consumption and other medications taken during pregnancy.

## Results

Overall, 15.6% of the sample indicated that they had been depressed for two years or more. There was a significant difference in prescription of anti-depressants in pregnancy by State ($\chi^2 = 19.05$ (7), $p$=0.008). Western Australia has one of the lowest depression rates at 12.7%, compared to other States; however, it has one of the highest rates of anti-depressant medication prescription at 3.7%, while NSW has relatively low rates at 1.3%. The study groups were calculated as mothers who, during pregnancy, had (1) taken anti-depressants (108, 2.1%); (2) been depressed for at least two years but not taken anti-depressants (602, 11.8%); and (3) had been neither depressed nor taken anti-depressants (3,534, 69.2%). Missing data on the depression variable accounted for 861 cases (16.9%). As presented in Table 1, the mothers in the anti-depressant group tended to smoke and drink more during pregnancy. They had higher depression scores at wave one (K6) and the study child was more likely to have sleep problems at wave one than either of the other groups.

## Discussion

Our study found that 2.1% of Australian women reported anti-depressant use during pregnancy which is lower than current estimates

**Table 1: Group characteristics; chi-square tests and ANOVAs.**

| Chi-square tests | Anti-D group n (%) | depressed group n (%) | control group n (%) | $\chi^2$(df) | *p* |
|---|---|---|---|---|---|
| **Parity** | | | | | |
| First child | 27 (25.2) | 268 (44.5) | 1,391 (39.4) | 15.36 (2) | <0.001 |
| **Marital status** | | | | | |
| Married | 82 (66.7) | 346 (57.5) | 2,712 (76.7) | 101.49 (2) | <0.001 |
| **Work status** | | | | | |
| Full-time work | 14 (13.2) | 53 (8.8) | 359 (10.2) | 49.54 (8) | <0.001 |
| Part-time work | 29 (27.4) | 133 (22.1) | 1,067 (30.2) | | |
| Employed; maternity leave | 4 (3.8) | 40 (6.7) | 360 (10.2) | | |
| Unemployed and seeking work | 5 (4.7) | 33 (5.5) | 94 (2.7) | | |
| Not in labour force | 54 (50.9) | 342 (56.9) | 1,649 (46.7) | | |
| **School completion** | | | | | |
| Not completed school | 56 (51.9) | 322 (53.5) | 1,368 (38.7) | 51.34 (2) | <0.001 |
| **Cigarette smoking during pregnancy** | | | | | |
| 5 or more per day | 30 (36.1) | 134 (24.0) | 358 (10.8) | 112.59 (4) | <0.001 |
| **Alcohol during pregnancy** | | | | | |
| 1 glass/week or more | 14 (17.1) | 63 (11.3) | 386 (11.7) | 2.38 (4) | 0.304 |
| **Does the child have any sleep problems?** | | | | | |
| Has sleep problems | 69 (63.9) | 353 (58.7) | (58.7) (51.3) | 16.97 (2) | <0.001 |
| **ANOVAs** | **m (sd)** | **m (sd)** | **m (sd)** | **f (df)** | ***p*** |
| Age (years) | 31.52 (5.44) | 30.40 (6.24) | 31.34 (5.31) | 7.66 (2, 4239) | <0.001 |
| SEIFA –disadvantage | 1,010.3 (52.77) | 1,003.5 (61.79) | 1,012.1 (59.29) | 5.37 (2, 4238) | 0.005 |
| K6 | 6.55 (4.65) | 5.98 (4.60) | 3.06 (3.03) | 231.13 (2, 4165) | <0.001 |
| Combined medications* | 2.19 (1.18) | 1.61 (1.12) | 1.61 (.95) | 17.66 (2, 4226) | <0.001 |

* *Includes antibiotics, asthma medication, nausea medication, blood pressure tablets, iron tablets, heartburn medicines, thyroid medicines, other prescriptions medicines, over the counter medicines and painkillers taken during pregnancy*

of rates in the US and Canada. Rates of prescription were highest in South Australia and Western Australia despite low to moderate overall levels of depression. The current findings add to the growing evidence that antenatal depression is associated with a complex set of fetal exposures and suggest that clinicians need to be aware that women presenting with antenatal depression are also more likely to use a range of other medications as well as smoke and drink alcohol more frequently. This may imply the need for additional professional advice, intervention and public health campaigns to reduce the prevalence of these exposures over pregnancy.

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