Research Findings
No.68/2013

Growing Up in Scotland: Birth Cohort 2

Key Early Years indicators on pregnancy and birth

Pamela Warner

This document presents key findings on pregnancy and birth from the second birth cohort (BC2) of the Growing Up in Scotland (GUS) study, surveyed for the first time during 2010/11 when children were aged 10 months. It considers specific indicators related to pregnancy and birth which are relevant to the Early Years Framework and the Early Years Collaborative. These include: mother's supplement intake during pregnancy; alcohol, smoking and drug use during pregnancy; and birth weight. Where possible, comparisons were made with data on pregnancy and birth from families in the first birth cohort (BC1) collected during 2005/6 when the cohort child was also 10 months old.

Main Findings

- 90% of women took folic acid during pregnancy but only 38% took vitamin D.
- Taking vitamin D (at any stage and for any duration) was strongly associated with level of education (the more extended the education the higher the intake) and household income (higher intake amongst parents with higher incomes). Ethnicity and deprivation were not associated with vitamin D intake.
- Folic acid intake in the first 3 months of pregnancy was more likely amongst mothers with higher levels of education, those living in higher income households and those of white ethnicity. There were no significant differences by maternal age nor deprivation.
- 84% of BC2 mothers believed it is better avoid alcohol altogether during pregnancy, while 80% reported that they had drunk no alcohol during the pregnancy with the BC2 child. This latter percentage is higher than for BC1 (74%).
- 73% of BC2 women never smoked during pregnancy, a slight reduction from the 75% in BC1. However, a further 9% of mothers in BC2 stated that they gave up once they discovered they were pregnant (a response option not offered in BC1).
- Less than 1% of BC2 women had used drugs during some or all of their pregnancy.
- Of the 24% (n=1390) BC2 women who had ever used drugs, 32% had stopped well before becoming pregnant, 3% while trying to get pregnant or as soon as they found out, 62% did not use any drugs while pregnant, 2% reduced the amount used, while 1% continued (some of these having tried to stop and failed).
- Mean birth weight of children in BC2 was 3391g, very similar to BC1. The prevalence of low birth weight (<2500g) was 7% in both cohorts. As would be expected, low birth weight was associated with whether the baby arrived early, on time or late and with socio-demographic factors (lower education, low household income and older maternal age).

GUS

smarter scotland
SCOTTISH GOVERNMENT

Taking supplements

Parents in BC2 were asked whether they had taken vitamin D and folic acid during their pregnancy with the cohort child.

62% of women did not take any vitamin D. 15% took vitamin D prior to pregnancy, 32% during the first 3 months of pregnancy, 26% during the second 3 months and 1% during the last 3 months.

"Any" intake of vitamin D was strongly associated with education (the more extended the education the more prevalent was intake) and household income (the more affluent the more prevalent the intake). There was also a modest association with age (vitamin D use more likely if younger).

For example:

- 20% of mothers with lower level Standard Grades had taken any vitamin D compared with 51% of degree-educated mothers.
- 25% of mothers in the lowest income group had taken some compared with 53% in the highest income group.
- 22% of mothers aged under 20 at the child's birth had taken vitamin D compared with 44% of those who were in their thirties.
- 48% of mothers took folic acid prior to their pregnancy and 90% reported doing so during the first 3 months of pregnancy.
- Intake of folic acid also varied according to maternal education and household income. Additionally, there were differences by ethnicity. In the first 3 months of pregnancy.
- 81% of mothers with lower level Standard Grades had taken folic acid compared with 96% of degree-educated mothers.
- 81% in the lowest income group had taken folic acid compared with 97% in the highest income group.
- 79% of mothers from minority ethnic backgrounds had taken some compared with 90% of white mothers.

Alcohol consumption in pregnancy

Almost all respondents said they knew the alcohol guidelines for pregnancy (93%).

There was a slight reduction in frequency of alcohol consumption in pregnancy between the two cohorts. 80% of women in BC2 did not drink alcohol during pregnancy compared to 74% in BC1.

Amongst those who had drank some alcohol, the majority (78%) said they had done so less than once a month, 14% said 2-3 times a month and 7% 1-2 times a week.

Typically, on any occasion where they had some alcohol during their pregnancy, the vast majority of mothers said they consumed around 1-2 units (96%), 3% said 3-4 units with the remaining 1% saying 5 to 10 units.

Mothers who are degree-educated and those in higher income households were more likely than those with lower qualifications and in lower income households to have had some alcohol during their pregnancy. For example, 31% of mothers with a degree-level qualification reported having some alcohol compared with 12% of those with no qualifications.

Smoking in pregnancy

73% of women didn't smoke at all during their pregnancy. There has been a slight decline in the number of pregnant women who refrained from smoking, with the percentage falling by 2% between the two birth cohorts.

Among the women who continued to smoke during pregnancy, 4% kept on smoking the same amount, 5% of women tried to stop but didn't manage and 9% reduced the amount of cigarettes. 9% stopped smoking when they found out they were pregnant.

Smoking was more common amongst mothers in lower income households and those with lower educational qualifications. 92% of mothers in the highest income households did not smoke at all during pregnancy compared with 51% of those in the lowest income group.

Amongst those who continued to smoke, cessation was more likely amongst more educated and wealthy mothers. 56% of degree-educated mothers who continued to smoke stopped when they found out they were pregnant compared with 16% of mothers with no qualifications. In contrast, 25% of those with no qualifications who continued to smoke did not change their smoking behaviour during pregnancy compared with 8% of degree-educated mothers who continued smoking.

Drug use in pregnancy

24% of respondents said that they had taken drugs at some point in their lives. The majority of this was cannabis use (92% of those who had taken drugs, and 22% of the whole sample).

Of 1390 women who were past drug users, just 3% reported some drug use during their pregnancy (some of these having tried to stop and failed), representing far less than 1% of all mothers. 32% had stopped well before becoming pregnant and 3% while trying to get pregnant or as soon as they found out. 62% did not use any drugs while pregnant, 2% reduced the amount used, while 1% continued.

All women who had been using drugs received treatment, help or advice from a range of sources.

Birth weight

The average birth weight increased between the two cohorts, from 3376g for BC1 to 3391g for BC2, giving a mean increase of 14.5g.

Mothers were asked about the timing of the child's birth relative to due date – whether the baby was early, late (both by days or weeks) or on time. There was a strong association of birth weight with this timing variable such that the mean weight for babies born early, compared to those "on time", was 510g lower if "weeks" early, and 83g lighter if "days" early, while for babies born late the mean weight was 192g heavier.

The likelihood of having a "low birth weight" (<2500g) was almost identical across the two cohorts (7%), and as would be expected was strongly associated with timing of birth. 25% of children whose birth was reported as being "weeks early" had a low birth weight compared with 3% of those who were "days early" or "on time", and <1% of those who were "late".

Low birth weight was also strongly associated with older maternal age, no educational qualifications, lower household income, and minority ethnic background. For example, 11% of children whose mothers were aged 40 or older at the birth had a low birth weight compared around 5% of those aged under 30. 12% of mothers of minority ethnic background had a child of low birth weight compared with 7% of white mothers.

Type of delivery was also related with low birth weight being most common in elective caesarean deliveries. 15% of children born by elective caesarean were of low birth weight compared with 5% of those who had a normal birth.

Summary

In absolute terms there have been, generally, very small changes in outcomes for BC2 compared with BC1 in relation to the pregnancy and birth indicators considered here. Improvement was observed in that more BC2 mothers reported not drinking alcohol during pregnancy.

The first framework for maternity care in Scotland (Scottish Executive, 2001) noted that social factors have far-reaching impact on maternal health and the recently published "refreshed" framework (Scottish Government, 2011) commented on the many complex and interlinked determinants of health. Multivariate modelling with respect to use of supplements in pregnancy, attendance at antenatal classes, and use of the internet as a source of information, gave results that are in line with these statements – showing strong evidence of inequalities in health behaviours and access to information.

References

Scottish Executive (2001) *A Framework for maternity services in Scotland*, Edinburgh: Scottish Executive – Health Department

Scottish Government (2011) *A refreshed framework for maternity care in Scotland*, Edinburgh: Scottish Government.

Further information on the Growing Up in Scotland study can be found at: www.growingupinscotland.org.uk

If you require further copies of this research findings please contact:

Dissemination Officer
The Scottish Government
Education Analytical Services
Victoria Quay
Edinburgh EH6 6QQ

recs.admin@scotland.gsi.gov.uk

Online Copies

This document, along with full research report of the project, and further information about social and policy research commissioned and published on behalf of the Scottish Government, can be viewed on the Internet at: http://www.scotland.gov.uk/socialresearch.

If you have any further queries about social research, or would like further copies of this research findings summary document or the full research report, please contact us at socialresearch@scotland.gsi.gov.uk or on 0131-244 7560.

The Scottish Government
Riaghaltas na h-Alba

crfr
centre for research on families and relationships

ScotCen
Social Research that works for society

MRC Social and Public Health Sciences Unit

GSR
GOVERNMENT SOCIAL RESEARCH
Social Science in Government

ISBN: 978-1-78256-398-3

APS Group Scotland
DPPAS13859 (01/13)