THE ALSPAC STUDY

KZ FILE

SAMPLE DATA COLLECTED FROM A VARIETY OF SOURCES

Prepared by

The ALSPAC Study Team

Documentation giving frequencies, background and instructions for use.

Last updated for version 5c of the file

October 2019

Contents

Introduction

Background
The KZ file contains basic data on the children from each ALSPAC pregnancy, regardless of whether or not they survived the pregnancy. The variables include: pregnancy outcome (at the child level), congenital defects, causes of fetal death, sex, gestation at delivery, birth weight and other measures.

Note that the discussion of sample sizes that follows assumes the introduction to the documentation for the MZ file has been read.

Core ALSPAC sample
As described in the documentation for the MZ file, the core ALSPAC sample consists of 14,541 pregnancies, of which 69 had no known outcome. Of the remaining 14,472 pregnancies, 195 were twin, 3 were triplet and 1 was quadruplet, meaning that there are **14,676** children in the ALSPAC core sample. These children made up the sample of cases on version 4 of the KZ file.

Non-core cases
As described in the documentation for the MZ file, 5,247 non-core pregnancies were added to the MZ file at version 5. Of these pregnancies, 7 were twin and 1 was triplet. There are therefore 5,306 children resulting from these pregnancies.

Sample on current version of the KZ file
The sample on the current version of the KZ file consists of the 14,676 children in the core ALSPAC sample plus the 5,306 children from non-core pregnancies for which data appear on the current set of published data files.

The total number of cases on this file should not be thought of as a figure of any significance. In particular, care should be taken not to imply that it is the total number of eligible cases. As noted in the documentation for the MZ file the identification of the whole eligible cohort is currently under review, which is why non-core cases are only included if they appear on any current data files.

Version History

Note that the version history was only started with the update to version 4a.

Version 4a – March 2004
Sex (KZ021) was filled in for 3 stillbirths for which it was previously not known.

Version 5a – January 2009

- 5,306 eligible cases not in the core sample of 14,676 children were added. The total number of cases on the file is now therefore 19,982.
- For these extra cases, variables KZ010 to KZ018 were set appropriately, variable KZ021 was filled in and variables KZ028 to KZ051 were set to –10.
- A variable indicating membership of the core ALSPAC sample of 14,676 fetuses was introduced as KZ001.
- Indicator variables for 28-day and 1-year survivors were introduced as KZ011a & KZ011b.
- The file status variables KZ022a to KZ023 were removed as they are not guaranteed to be accurate and up to date.
- The death/survival variables have been simplified to only include deaths up to 1 year. KZ016 & KZ017 have been set to –2 for deaths after 1 year and in KZ010 values of 5 have been recoded to 7. This is because the grouping is out of date. It is really deaths after 1 year that ALSPAC was notified of before 19/07/1999. It is intended that a more useful categorisation of deaths after 1 year will be introduced in a future update.
- Category –2 in KZ017 has been split into –3 & -2 to differentiate between survivors and unclassified fetal deaths earlier than 20 weeks as in KZ016. In variable KZ018 the missing category 10 has been recoded to –2 so that missing values are all negative. For similar reasons values of 9 in KZ021 have been recoded to –1, values of 9999 in KZ030d to –9 and values of 0 in KZ032a to -2.

Version 5b – July 2009
5 cases (3 singletons and 1 pair of twins) who were invited to at least one of TF1, TF2 or TF3 but who did not appear on version 5a were added.

Version 5c – October 2019
Variables kz011b (alive at 1 year) and kz021 (sex) have been dropped from the KZ file as they are duplicated in the cohort profile dataset. Researchers wishing to use these variables should therefore use the cohort profile dataset. We have kept the frequencies for these variables here, as at present there is not a separate cohort profile documentation file (for a summary of the cohort profile dataset, see: https://wellcomeopenresearch.org/articles/4-51).

Variable Descriptions

Membership of core sample

Variable KZ001 identifies the 14,676 children in the core ALSPAC sample.

kz001 In core ALSPAC sample

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	14676	73.4	73.4	73.4
	2 No	5306	26.6	26.6	100.0
	Total	19982	100.0	100.0	

Outcome of the pregnancy

Variables KZ010 to KZ018 are concerned with outcomes relating to mortality.

Outcome A is concerned with the survival of the children up to 1 year. The categories distinguish between fetal loss at less than 20 weeks gestation (whether the fetus was lost as a miscarriage, induced abortion or termination, ectopic pregnancy or other outcome), fetal death before delivery at 20 weeks or more gestation, early neonatal death (less than seven days) of a live birth; late neonatal death (death at seven or more days but less than 28 days); post neonatal death (death from 28 days to less than one year).

kz010 Outcome A

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 fetal loss <20 w ks	546	2.7	2.7	2.7
	1 fetal death/sb 20+ w ks	68	.3	.3	3.1
	2 nn death <7 days	46	.2	.2	3.3
	3 nn death 7-27 days	9	.0	.0	3.3
	4 post nn death 28-1 yr	23	.1	.1	3.5
	7 survivor	19290	96.5	96.5	100.0
	Total	19982	100.0	100.0	

Indicator variables for live births, 28-day survivors and 1-year survivors have been derived from KZ010 as KZ011, KZ011a & KZ011b.

kz011 Outcome B - livebirth

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	19368	96.9	96.9	96.9
	2 No	614	3.1	3.1	100.0
	Total	19982	100.0	100.0	

kz011a Alive at 28 days

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	19313	96.7	96.7	96.7
	2 No	669	3.3	3.3	100.0
	Total	19982	100.0	100.0	

Note that variable kz011b no longer appears in the KZ file (see the 'cohort profile' dataset for this variable).

kz011b Alive at 1 year

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	19290	96.5	96.5	96.5
	2 No	692	3.5	3.5	100.0
	Total	19982	100.0	100.0	

Table 1 displays these survival figures separately for the core and non-core cases.

Table 1: Survival figures for core and non-core cases.

	Core	Non-core	Total
Live birth	14,062	5,306	19,368
Alive at 28 days	14,009	5,304	19,313
Alive at 1 year	13,988	5,302	19,290

Outcomes C and D distinguish between two definitions of perinatal deaths. Outcome C uses the definition of fetal death at gestation 28 weeks or more and early neonatal death; outcome D uses the definition of fetal death at twenty weeks or more together with the early neonatal death.

kz012 Outcome C-perinatal death(i) FD >27wks

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 yes	79	.4	.4	.4
	2 no	19322	96.7	99.6	100.0
	Total	19401	97.1	100.0	
Missing	-2 Miscarried	581	2.9		
Total		19982	100.0		

kz013 Outcome D-perinatal death(ii) FD >19wks

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 yes	114	.6	.6	.6
	2 no	19322	96.7	99.4	100.0
	Total	19436	97.3	100.0	
Missing	-2 Miscarried	546	2.7		
Total		19982	100.0		

Outcome E combines early and late neonatal death to give an outcome of neonatal death.

kz014 Outcome E - neonatal death.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 yes	55	.3	.3	.3
	2 no	19313	96.7	99.7	100.0
	Total	19368	96.9	100.0	
Missing	-2 Miscarried/FD	614	3.1		
Total		19982	100.0		

Outcome F relates to infant death - i.e. death within one year of a live birth. Consequently it combines early neonatal, late neonatal and post neonatal death.

kz015 Outcome F - infant death.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 yes	78	.4	.4	.4
	2 no	19290	96.5	99.6	100.0
	Total	19368	96.9	100.0	
Missing	-2 Miscarried/FD	614	3.1		
Total		19982	100.0		

Classification of all deaths of twenty weeks gestation or more uses the Wigglesworth classification [Wigglesworth, J.S. Monitoring perinatal mortality; a pathophysiological approach. The Lancet, 1980, 684-686]. This classifies children dying perinatally into six different groups which have been extended to cover all deaths in the first year of life as well as fetal deaths of gestation of 20 weeks or more. Clinical records and post mortem reports were used to classify each death (by JG), using the criterion that if the death included a major congenital malformation which was potentially lethal then that code was used. For all deaths that occurred in utero before the onset of labour, provided there was not a major malformation, the code antepartum fetal death was used. Death from immaturity was reserved for babies that had been live born but who died of diseases associated with immature delivery. Intrapartum birth asphyxia in general was used for fetal death occurring during labour and delivery or live births dying of asphyxia within a short period of delivery. The other two categories were normally coded as miscellaneous, but in this coding we have distinguished those who died of infection from other miscellaneous causes.

kz016 Wigglesworth classification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Antepartum fetal dth	38	.2	22.0	22.0
	2 Major congen. malf	74	.4	42.8	64.7
	3 Dth from immaturity	29	.1	16.8	81.5
	4 Intrapartum asphyxia	11	.1	6.4	87.9
	5 Infection	10	.1	5.8	93.6
	6 Miscellaneous	11	.1	6.4	100.0
	Total	173	.9	100.0	
Missing	-11 Triplet / quadruplet	16	.1		
	-3 Fetal death <20wk, not classified	512	2.6		
	-2 Survivor	19277	96.5		
	-1 Not known	4	.0		
	Total	19809	99.1		
Total		19982	100.0		

Congenital defects

The information from all survivors concerning the presence or absence of a congenital defect is not yet available for the built files. However, KZ017 records whether or not congenital defects were present in all of the deaths up to 1 year, miscarriages or terminations for which there was adequate information. Miscarriages which hadn't been examined were omitted as were all surviving live births. It can be seen from KZ017, that 53 per cent of deaths had a congenital defect of some sort. A list of these is available from JG.

kz017 Death with congenital defect

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 yes	105	.5	54.7	54.7
	2 no	87	.4	45.3	100.0
	Total	192	1.0	100.0	
Missing	-11 Triplet / quadruplet	16	.1		
	-3 Fetal death <20wk, not classified	493	2.5		
	-2 Survivor	19277	96.5		
	-1 Not known	4	.0		
	Total	19790	99.0		
Total		19982	100.0		

Fetal deaths

Fetal outcome <28 weeks was coded to distinguish between miscarriages (spontaneous fetal death <20 weeks), ectopic pregnancy, hydatidiform mole, termination for social reasons, termination for other reasons, a miscellaneous group and fetal deaths in utero of gestation 20-27 completed weeks. There were 13 cases where the classification of the fetal death was unknown and these are coded -1.

kz018 Fetal outcome (deaths <28 wks)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Misc	491	2.5	81.7	81.7
	2 Ectopic	5	.0	.8	82.5
	3 Mole	2	.0	.3	82.9
	4 Term -CM	46	.2	7.7	90.5
	5 Term-soc	9	.0	1.5	92.0
	6 Term-other	10	.1	1.7	93.7
	7 other	5	.0	.8	94.5
	8 fetal death 20+ wks	33	.2	5.5	100.0
	Total	601	3.0	100.0	
Missing	-11 Triplet / quadruplet	16	.1		
	-2 Live birth	19352	96.8		
	-1 Unknown	13	.1		
	Total	19381	97.0		
Total		19982	100.0		

Sex

The sex of the child is denoted in KZ021. This variable was obtained both from the birth notification, and post mortem examinations. Nevertheless there were 517 individuals for whom there was no sex recorded. These were mainly miscarriages or induced abortions but include 2 live born children.

Note that variable kz021 no longer appears in the KZ file (see the 'cohort profile' dataset for this variable).

kz021 Sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Male	10077	50.4	51.8	51.8
	2 Female	9388	47.0	48.2	100.0
	Total	19465	97.4	100.0	
Missing	-1 Not known	517	2.6		
Total		19982	100.0		

Gestation at delivery or death of the fetus

The gestation of the fetus at death was estimated from clinical records. For all live births the gestation was recorded in a variety of ways on the "stork database", using both LMP, paediatric assessment, obstetric assessment and ultrasound assessment. In addition the mothers report of their expected date of delivery as recorded at enrolment was used to identify from any source children who had been classified as a preterm or post-term delivery. For all such case records, Professor Ian MacGillivray reviewed the obstetric notes and came to a conclusion as to the most appropriate gestation in completed weeks. In general, the LMP was used if the mother was certain of it and there were no other clinical suggestions that this was erroneous. If the LMP date was considered unreliable, then the earliest ultrasound measurement was most likely to be taken. MZ022c indicates whether or not the gestation was clarified from clinical records.

In general for livebirths the gestation represented by KZ029 is identical to that of the pregnancies as based on MZ023. However for miscarriages and fetal deaths the gestation at which the death occurred can be several weeks shorter than the gestation at which the pregnancy ended. In addition it is quite feasible for members of multiple pregnancies to have different gestations.

For all studies of fetal outcome where gestation is needed KZ029 should be the variable of choice.

kz029a Grouped gestation at delivery or death

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 4-11	258	1.3	1.8	1.8
	2 12-15	160	.8	1.1	2.9
	3 16-19	83	.4	.6	3.4
	4 20-23	34	.2	.2	3.7
	5 24-27	40	.2	.3	3.9
	6 28-31	97	.5	.7	4.6
	7 32-36	716	3.6	4.9	9.5
	8 37-41	12122	60.7	82.9	92.4
	9 42-45	1109	5.5	7.6	100.0
	Total	14619	73.2	100.0	
Missing	-11 Triplet / quadruplet	16	.1		
	-10 Not in core sample	5303	26.5		
	-1 LMP NK	44	.2		
	Total	5363	26.8		
Total		19982	100.0		

kz029 Gestation at delivery or death

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	1	.0	.0	.0
	5	9	.0	.1	.1
	6	14	.1	.1	.2
	7	15	.1	.1	.3
	8	37	.2	.3	.5
	9	40	.2	.3	.8
	10	79	.4	.5	1.3
	11	63	.3	.4	1.8
	12	72	.4	.5	2.3
	13	43	.2	.3	2.6
	14	28	.1	.2	2.7
	15	17	.1	.1	2.9
	16	23	.1	.2	3.0
	17	24	.1	.2	3.2
	18	17	.1	.1	3.3
	19	19	.1	.1	3.4
	20	10	.1	.1	3.5
	21	10	.1	.1	3.6
	22	4	.0	.0	3.6
	23	10	.1	.1	3.7
	24	8	.0	.1	3.7
	25	6	.0	.0	3.8
	26	15	.1	.1	3.9
	27	11	.1	.1	3.9
	28	21	.1	.1	4.1
	29	23	.1	.2	4.2
	30	26	.1	.2	4.4
	31	27	.1	.2	4.6
	32	52	.3	.4	5.0
	33	55	.3	.4	5.3
	34	107	.5	.7	6.1
	35	195	1.0	1.3	7.4
	36	307	1.5	2.1	9.5
	37	763	3.8	5.2	14.7
	38	1659	8.3	11.3	26.1
	39	2826	14.1	19.3	45.4
	40	4057	20.3	27.8	73.1
	41	2817	14.1	19.3	92.4
	42	1063	5.3	7.3	99.7
	43	38	.2	.3	99.9
	44	8	.0	.1	100.0
	Total	14619	73.2	100.0	
Missing	-11 Triplet / quadruplet	16	.1		
	-10 Not in core sample	5303	26.5		
	-1 LMP NK	44	.2		
	Total	5363	26.8		
Total		19982	100.0		

Birthweight

There were a variety of ways of identifying birthweight. As noted earlier, this included the birthweight from obstetric data (KZ030B), birthweight as recorded by the ALSPAC measurers (KZ030C), birthweight from birth notification (KZ030D).

The birthweight provenance is depicted in KZ030A. Here N = from notification, M = from measurer, DQ = from obstetric data file. N+M indicates that the notification and measurer's records agree. Codes 11-36 indicate disagreements, but for codes 34-36 the disagreements are <100g.

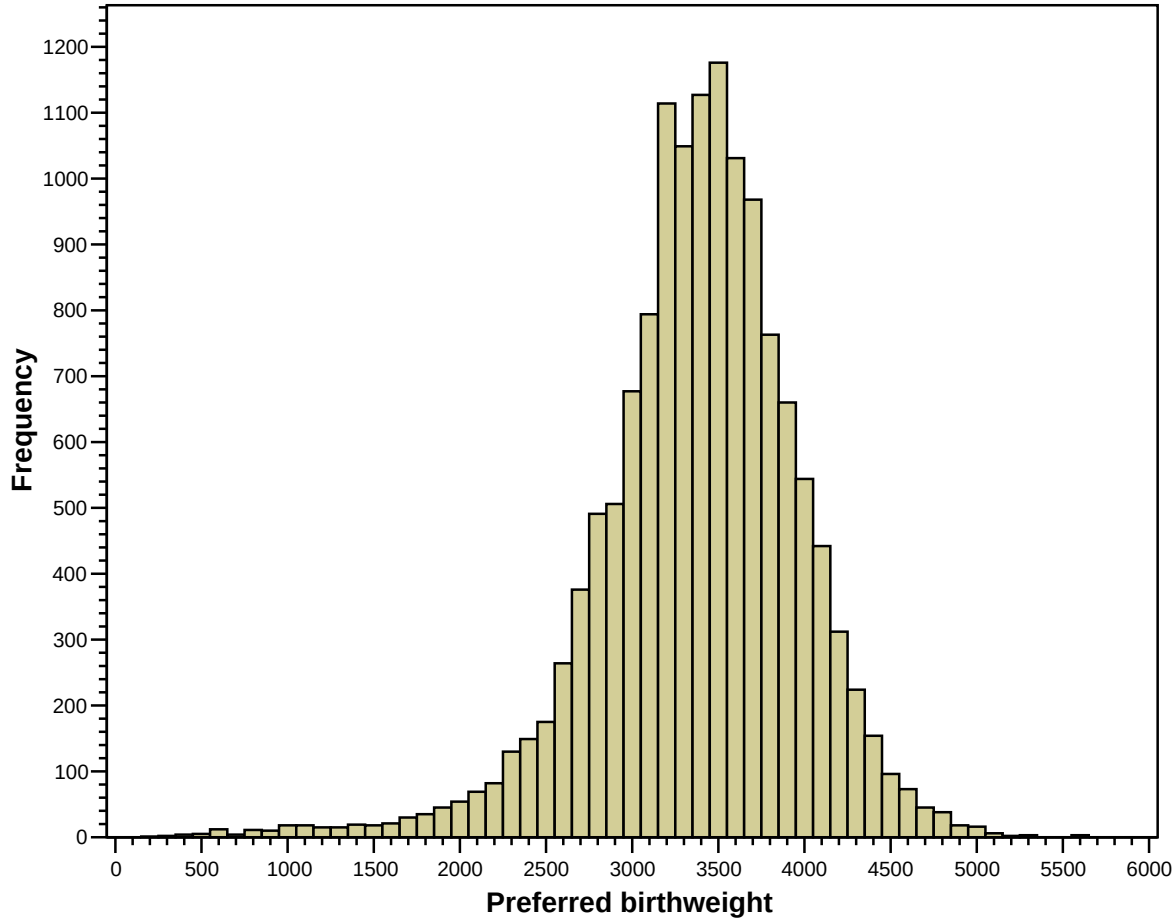
Currently omitted from KZ030 are those coded -2 (mainly miscarriages with no birthweight) and 11, 13, 15 where there are only 2 sources and they disagree by 100g +. For those where the disagreement is <100g, the lower figure has been taken.

kz030a Birthweight provenance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 N	3208	16.1	22.9	22.9
	3 N+M	5432	27.2	38.7	61.6
	4 DQ	87	.4	.6	62.2
	5 N+DQ	2011	10.1	14.3	76.6
	7 N+M+DQ	2798	14.0	19.9	96.5
	11 N+M not OK	78	.4	.6	97.1
	13 N+DQ not OK	22	.1	.2	97.2
	15 NMDQ not OK	26	.1	.2	97.4
	33 As 15, but DQ equal to one	141	.7	1.0	98.4
	34 As 11, but diff <100g	175	.9	1.2	99.7
	35 As 13, but diff <100g	31	.2	.2	99.9
	36 As 15, but diff <100g	18	.1	.1	100.0
	Total	14027	70.2	100.0	
Missing	-11 Triplet / quadruplet	16	.1		
	-10 Not in core sample	5303	26.5		
	-2 Birthweight NK	636	3.2		
	Total	5955	29.8		
Total		19982	100.0		

We have derived variable KZ030, the preferred birthweight by using the following criteria - if all birthweights from each data set were identical, that was taken. If there was a difference between the recorded birthweights on the different data sets, then the criteria as described above were used:

kz030 Preferred birthweight

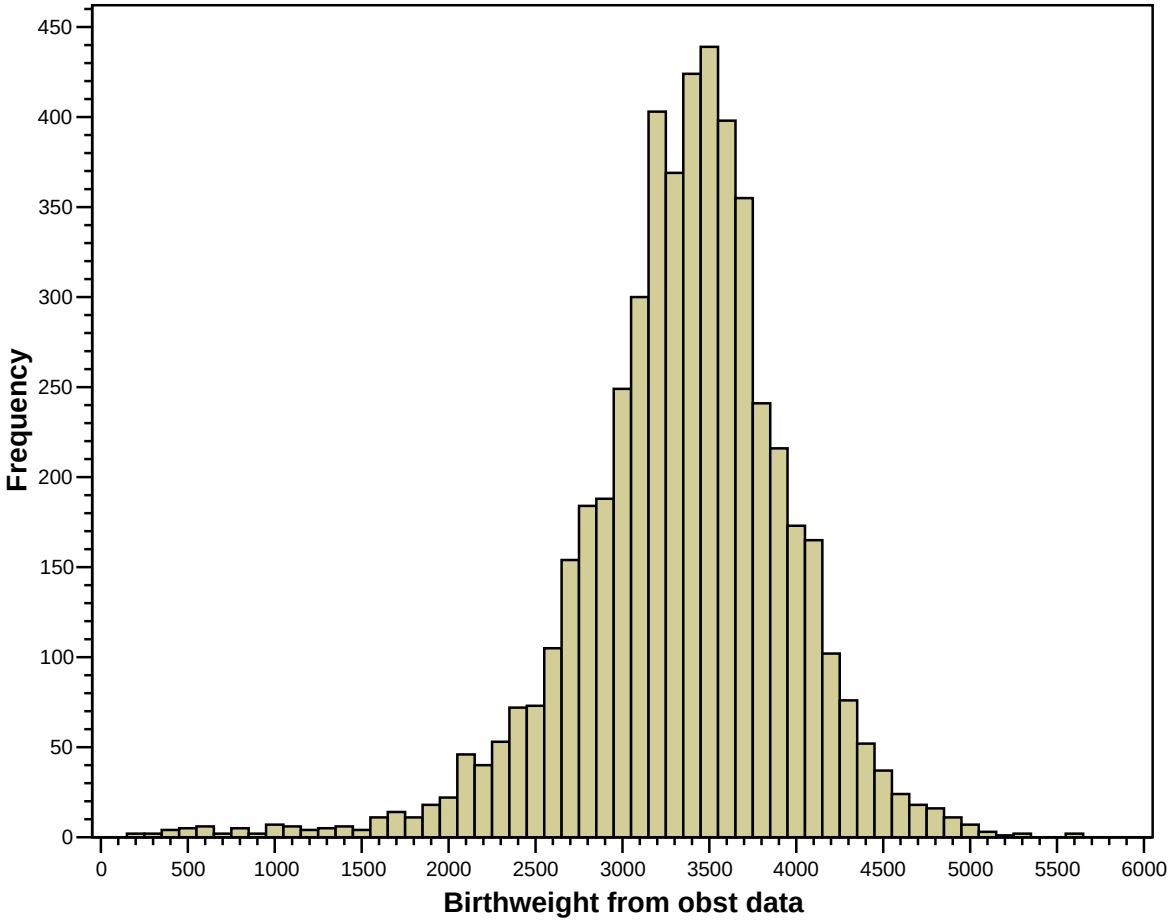


plus the following missing values:

kz030 Preferred birthweight

		Frequency	Percent
Missing	-11 Triplet / quadruplet	16	.3
	-10 Not in core sample	5303	87.2
	-1	762	12.5
	Total	6081	100.0

kz030b Birthweight from obst data

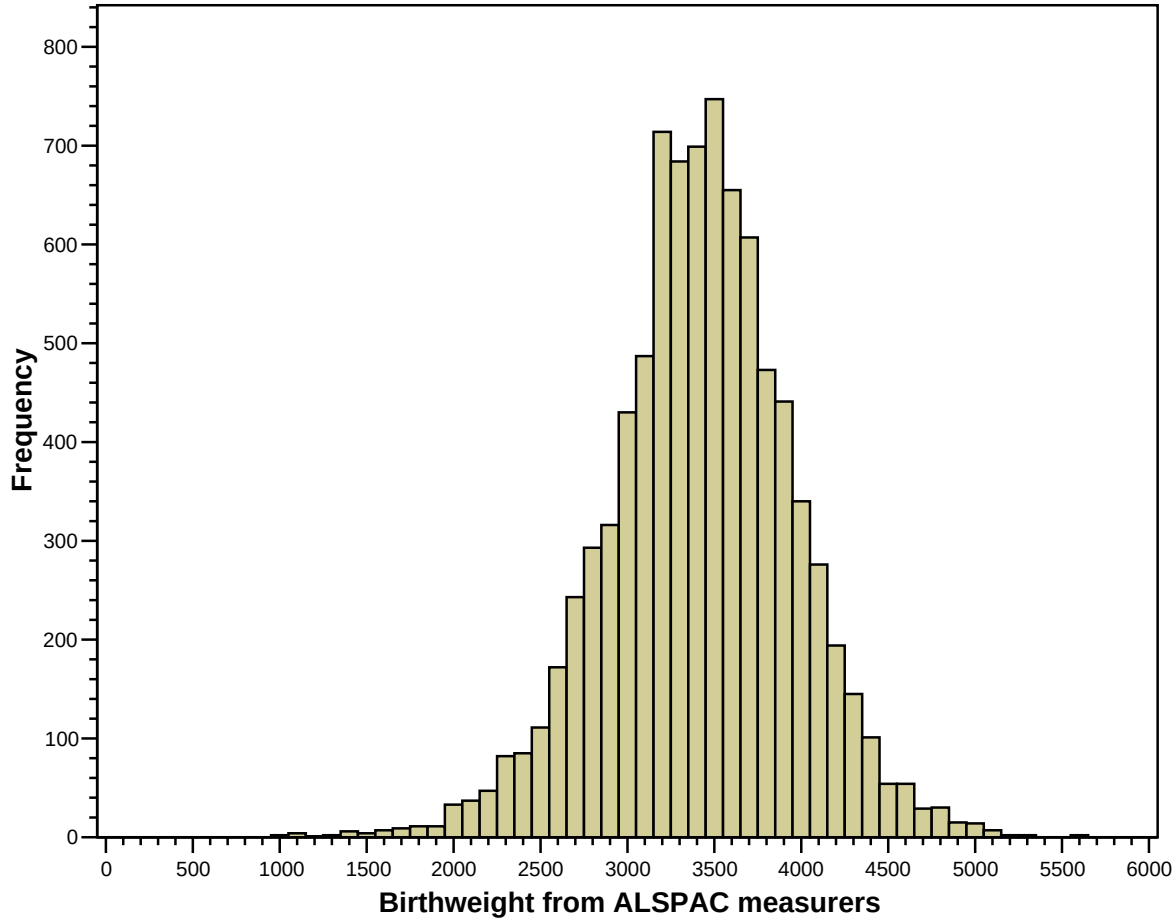


plus the following missing values:

kz030b Birthweight from obst data

		Frequency	Percent
Missing	-11 Triplet / quadruplet	16	.1
	-10 Not in core sample	5303	35.7
	-1	9529	64.2
	Total	14848	100.0

kz030c Birthweight from ALSPAC measurers

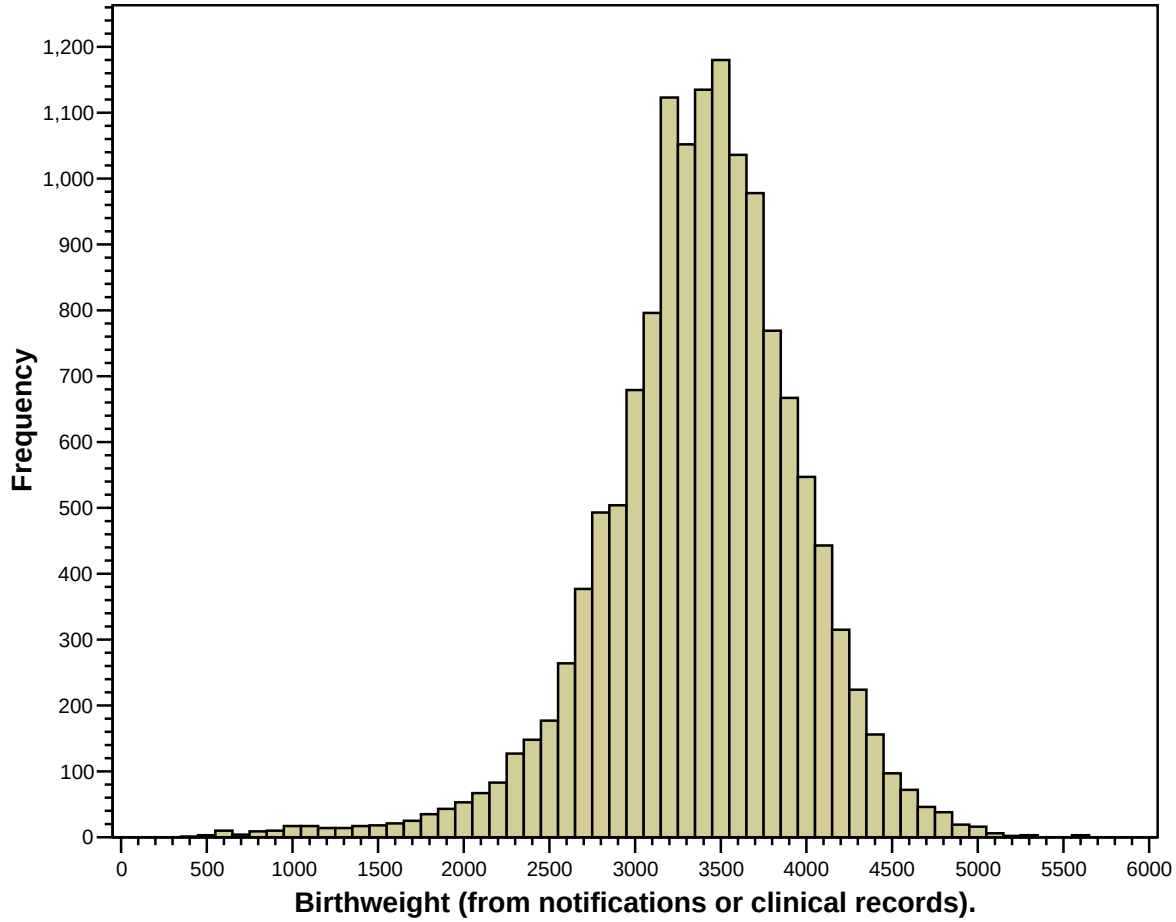


plus the following missing values:

kz030c Birthweight from ALSPAC measurers

		Frequency	Percent
Missing	-11 Triplet / quadruplet	16	.1
	-10 Not in core sample	5303	46.9
	-2	5995	53.0
	Total	11314	100.0

kz030d Birthweight (from notifications or clinical records).



plus the following missing values:

kz030d Birthweight (from notifications or clinical records).

		Frequency	Percent
Missing	-11 Triplet / quadruplet	16	.3
	-10 Not in core sample	5303	87.8
	-9	31	.5
	-1	692	11.5
	Total	6042	100.0

Measurement of the baby shortly after birth

A validation study of measurement of head circumference and birth length prior to the ALSPAC study had shown a high degree of inaccuracy in the measurements made in the maternity hospital. For the ALSPAC study we therefore employed ALSPAC staff who had been trained in crown-heel length and head circumference measurements by Maria Bredow. Dr Bredow had been trained by a team based at the Department of Professor Michael Preece of the Institute of Child Health, London. Equipment (the Harpenden Neonatometer (Holtain Ltd)) was provided for the crown-heel measurement by the Child Growth Foundation.

The team visited the two major maternity hospitals (Southmead and Bristol Maternity Hospital/ St. Michael's) each morning and measured all available children for whom the mother gave permission. At this point they often enrolled new mothers into the study.

The age of the baby in calendar days at measurement is shown in KZ028. The birth length and the head circumference measurements are given in KZ031 and KZ032. Missing measurements were biased in relation to place of delivery (those delivered at Weston General hospital and home deliveries did not get measured), and mothers who took early discharge were unlikely for their child to be measured.

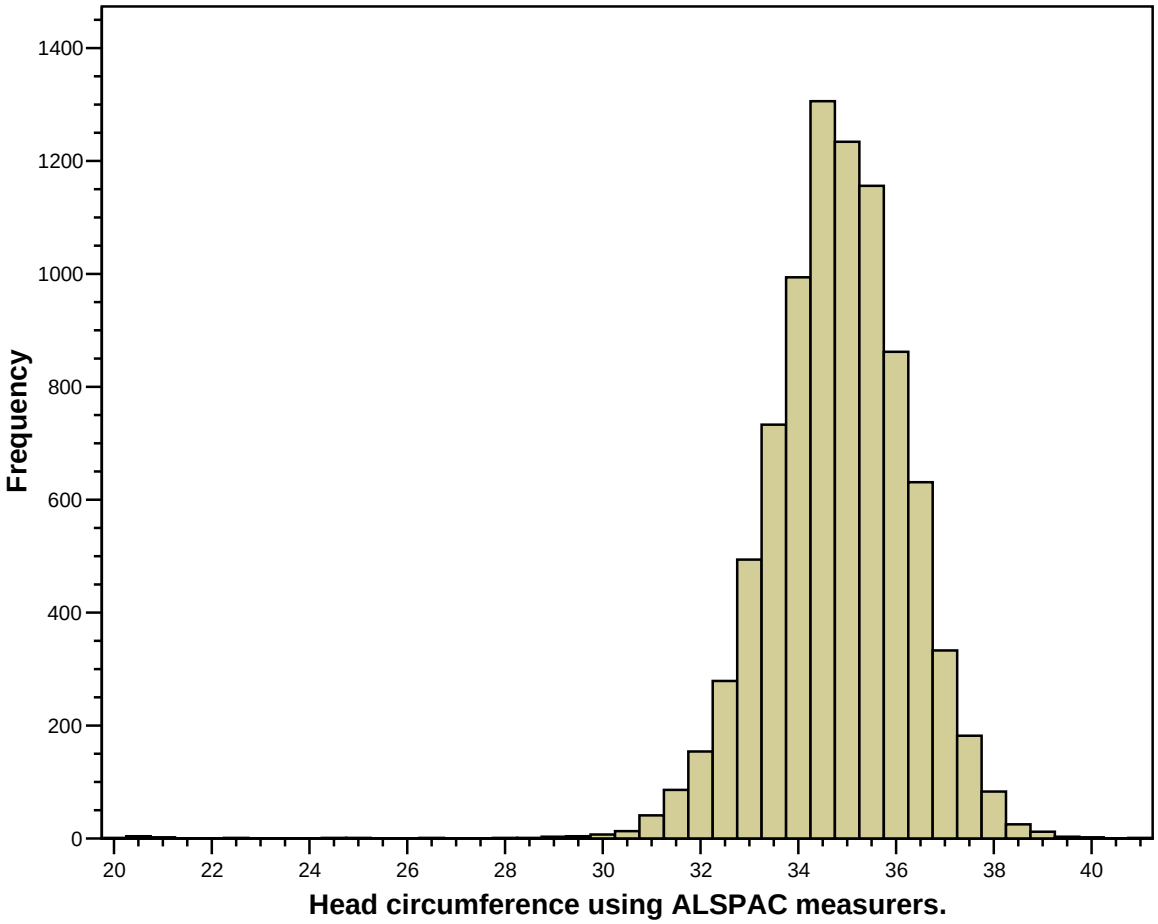
kz028 Age in days at measurement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	878	4.4	10.1	10.1
	1	3457	17.3	39.9	50.0
	2	1996	10.0	23.0	73.0
	3	1055	5.3	12.2	85.2
	4	614	3.1	7.1	92.3
	5	302	1.5	3.5	95.8
	6	135	.7	1.6	97.3
	7	76	.4	.9	98.2
	8	43	.2	.5	98.7
	9	23	.1	.3	99.0
	10	16	.1	.2	99.2
	11	14	.1	.2	99.3
	12	10	.1	.1	99.4
	13	3	.0	.0	99.5
	14	12	.1	.1	99.6
	15	3	.0	.0	99.6
	16	3	.0	.0	99.7
	17	4	.0	.0	99.7
	18	3	.0	.0	99.8
	19	3	.0	.0	99.8
	20	2	.0	.0	99.8
	21	1	.0	.0	99.8
	22	2	.0	.0	99.9
	28	3	.0	.0	99.9
	29	3	.0	.0	99.9
	34	1	.0	.0	99.9
	38	1	.0	.0	99.9
	46	1	.0	.0	100.0
	47	1	.0	.0	100.0
	52	1	.0	.0	100.0
	56	1	.0	.0	100.0
	58	1	.0	.0	100.0
	Total	8668	43.4	100.0	
Missing	-11 Triplet / quadruplet	16	.1		
	-10 Not in core sample	5303	26.5		
	-2 fetal loss	581	2.9		
	-1 not measured	5414	27.1		
	Total	11314	56.6		
Total		19982	100.0		

Head circumference

The child's head circumference was measured by ALSPAC staff for 8677 children at the age given by KZ028. The distribution is shown in KZ031C. This is the most accurate data.

kz031c Head circumference using ALSPAC measurers.



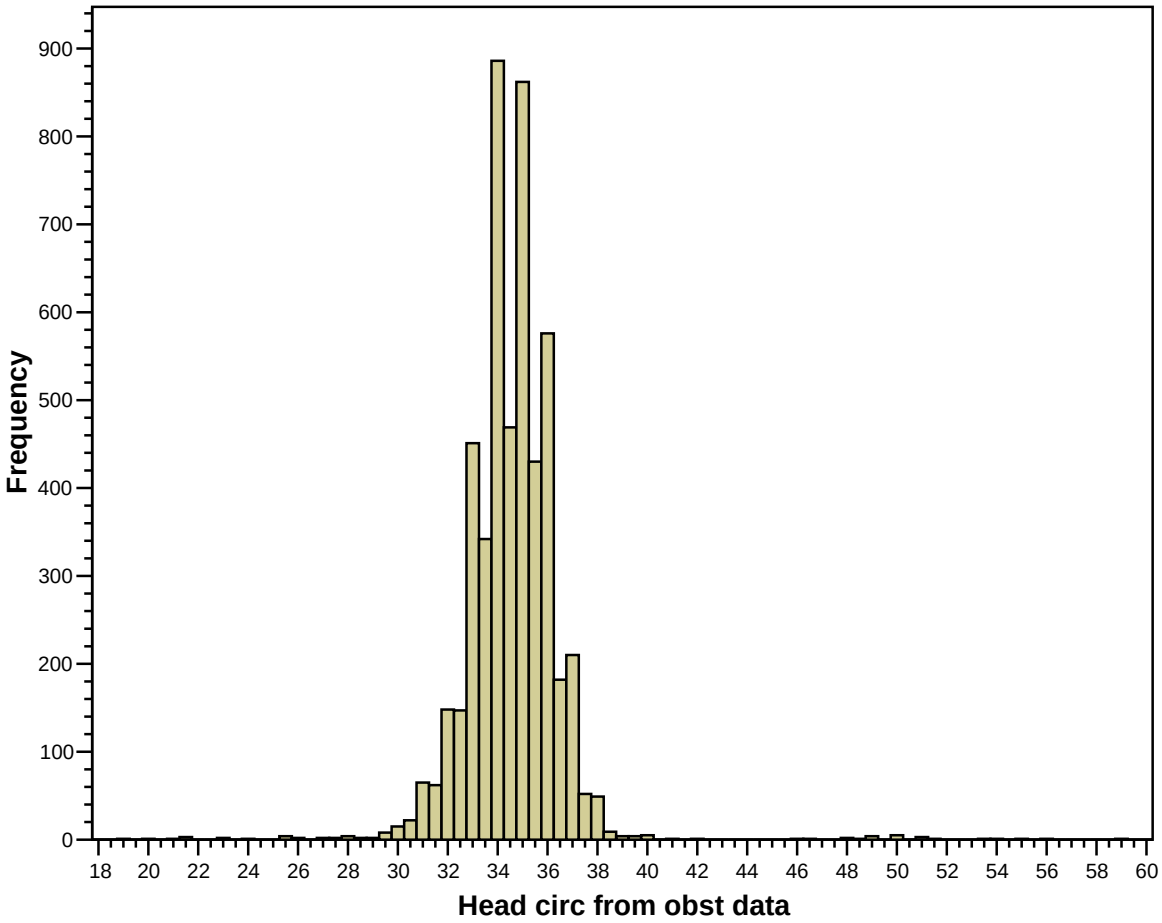
plus the following missing values:

kz031c Head circumference using ALSPAC measurers.

			Frequency	Percent
Missing	-11.0	Triplet / quadruplet	16	.1
	-10.0	Not in core sample	5303	46.8
	-2.0		6022	53.1
	Total		11341	100.0

There are a further 2095 measurements so far abstracted from the clinical records.

kz031b Head circ from obst data



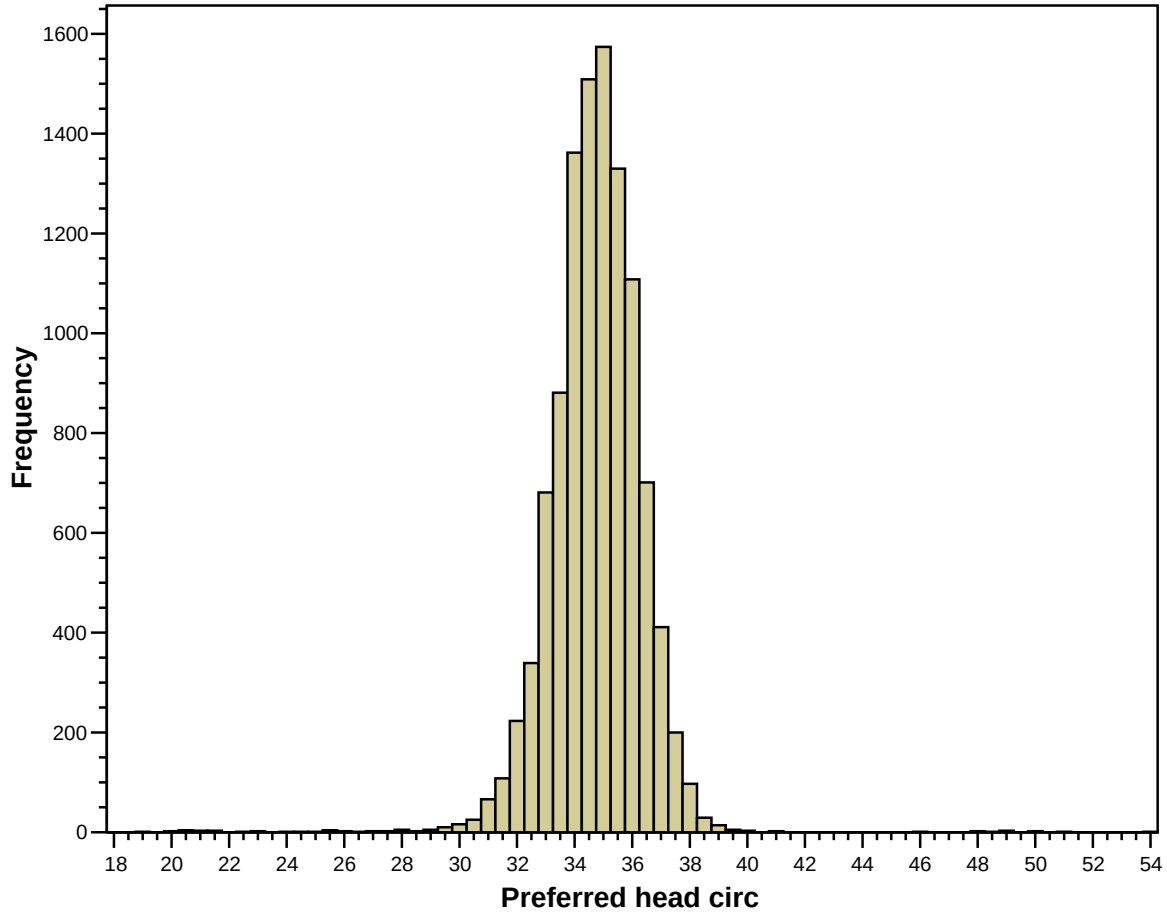
plus the following missing values:

kz031b Head circ from obst data

			Frequency	Percent
Missing	-11.0	Triplet / quadruplet	16	.1
	-10.0	Not in core sample	5303	35.5
	-1.0		9613	64.4
	Total		14932	100.0

The “preferred” head circumference therefore combines the two data sets. Although labelled “preferred”, this variable should not be used if accuracy is of prime importance.

kz031 Preferred head circ



plus the following missing values:

kz031 Preferred head circ

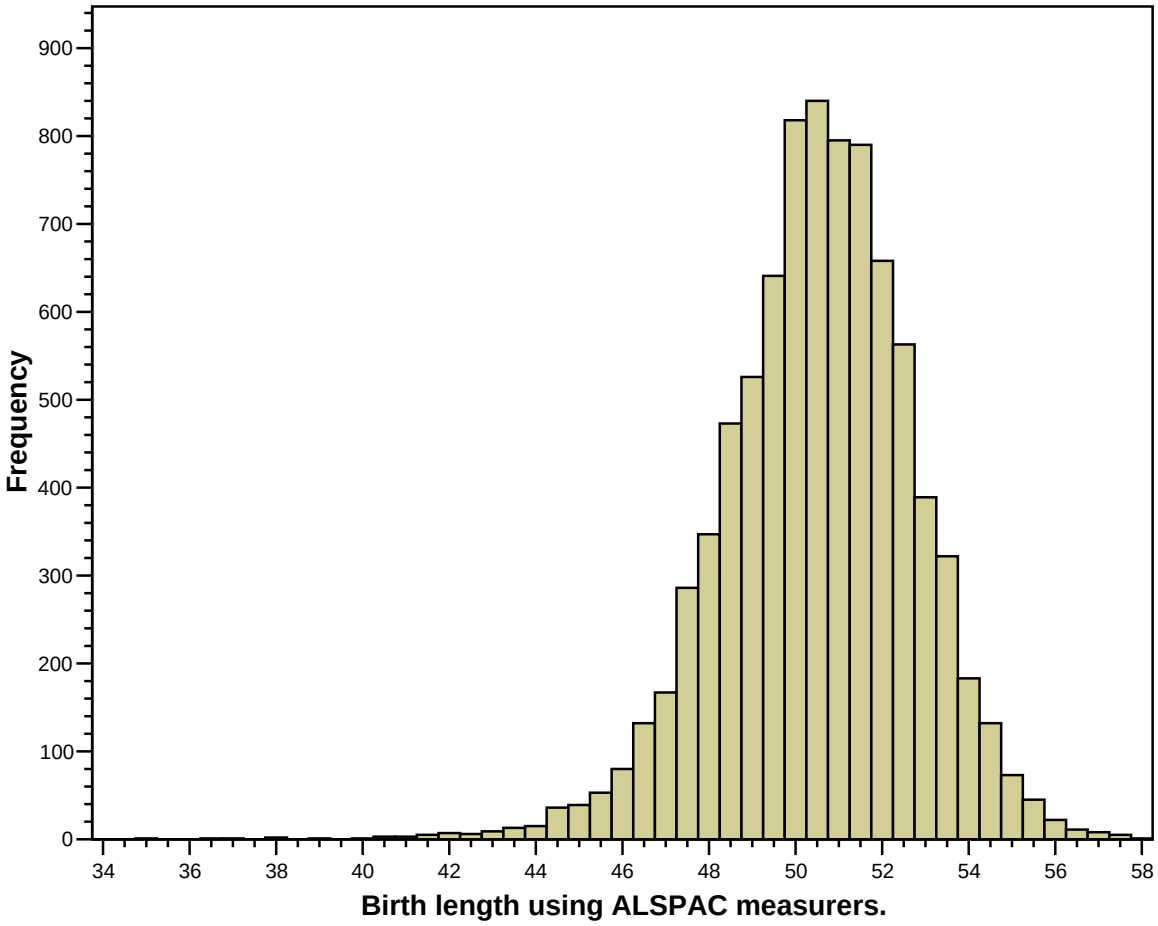
		Frequency	Percent
Missing	-11.0 Triplet / quadruplet	16	.2
	-10.0 Not in core sample	5303	57.4
	-1.0	3926	42.5
	Total	9245	100.0

kz031a Headcirc provenance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 M	8641	43.2	80.5	80.5
	2 DQ	2096	10.5	19.5	100.0
	Total	10737	53.7	100.0	
Missing	-11 Triplet / quadruplet	16	.1		
	-10 Not in core sample	5303	26.5		
	-2 Head circumference NK	3926	19.6		
	Total	9245	46.3		
Total		19982	100.0		

Crown-heel length
The crown-heel length was measured by ALSPAC staff for 8502 children at the age given by KZ028. This is the most accurate variable.

kz032c Birth length using ALSPAC measurers.



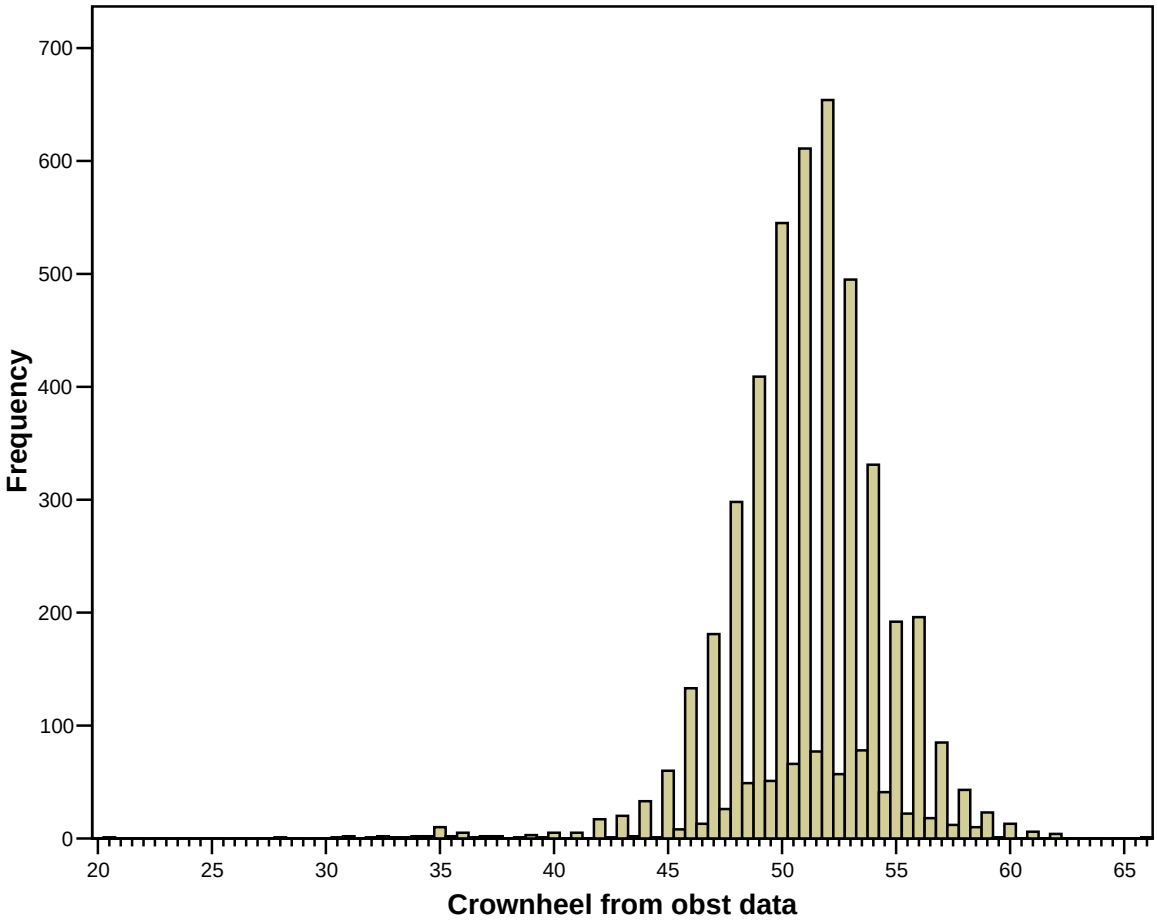
plus the following missing values:

kz032c Birth length using ALSPAC measurers.

			Frequency	Percent
Missing	-11.00	Triplet / quadruplet	16	.1
	-10.00	Not in core sample	5303	46.2
	-2.00		6170	53.7
	Total		11489	100.0

It was also available from clinical records for 4933 children. As can be seen from this histogram it would appear that there is a tendency for the measure from this source to be rounded to the nearest integer, even though some records do still have a decimal part.

kz032b Crownheel from obst data



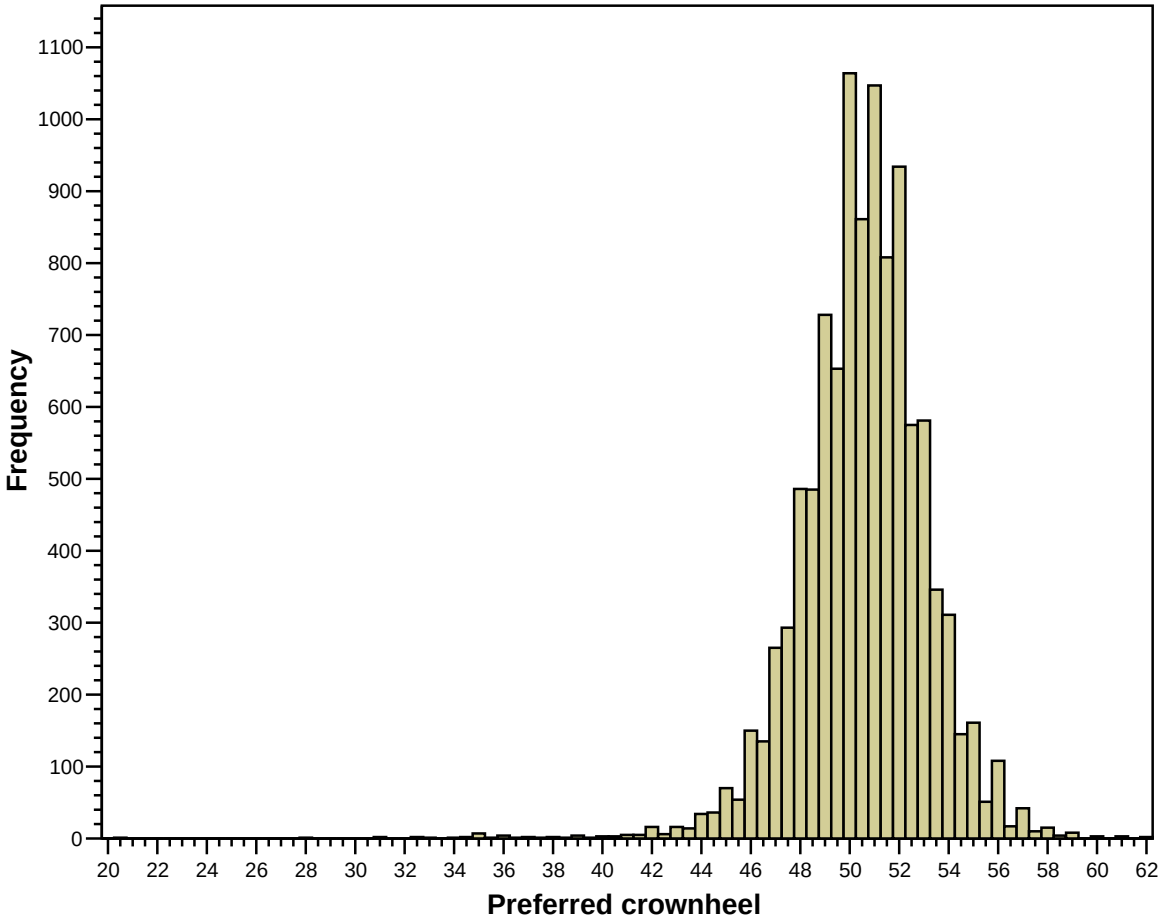
plus the following missing values:

kz032b Crownheel from obst data

			Frequency	Percent
Missing	-11.00	Triplet / quadruplet	16	.1
	-10.00	Not in core sample	5303	35.2
	-1.00		9729	64.7
	Total		15048	100.0

The variable (KZ032) uses the ALSPAC data where available and that from clinical records where that was the only source. It should be used with caution.

kz032 Preferred crownheel



plus the following missing values:

kz032 Preferred crownheel

		Frequency	Percent
Missing	-11.00 Triplet / quadruplet	16	.2
	-10.00 Not in core sample	5303	56.4
	-1.00	4086	43.4
	Total	9405	100.0

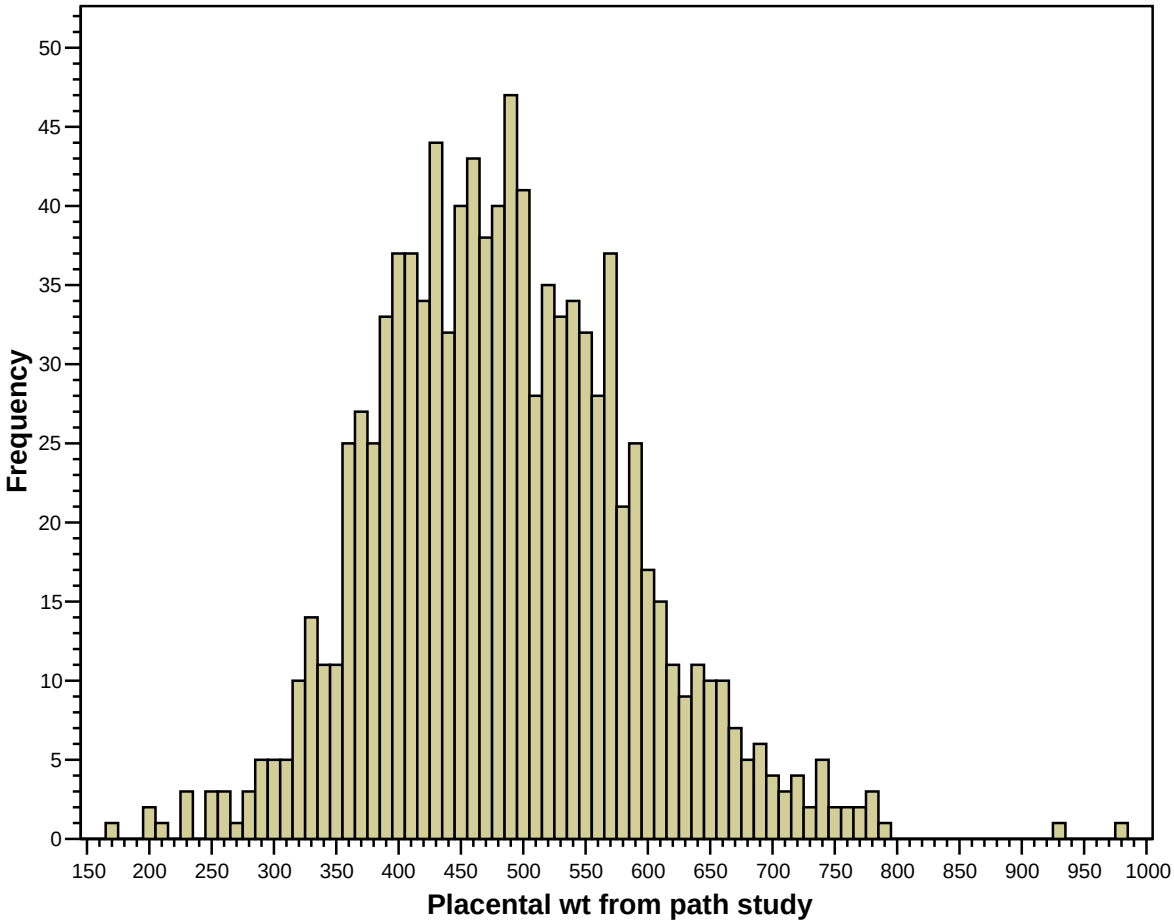
kz032a Crownheel provenance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 M	8493	42.5	80.3	80.3
	2 DQ	2084	10.4	19.7	100.0
	Total	10577	52.9	100.0	
Missing	-11 Triplet / quadruplet	16	.1		
	-10 Not in core sample	5303	26.5		
	-2 Crownheel NK	4086	20.4		
	Total	9405	47.1		
Total		19982	100.0		

Placental weight

The placentas of births at Southmead and St Michael's Hospitals were fixed in formalin and kept. The study undertaken by Fiona Payne with Professor J Berry and Dr Helen Porter weighed a sample of 1025 of these placentae using a standardised proforma. The sample includes Children in Focus, augmented by a sample of deaths.

kz033 Placental wt from path study



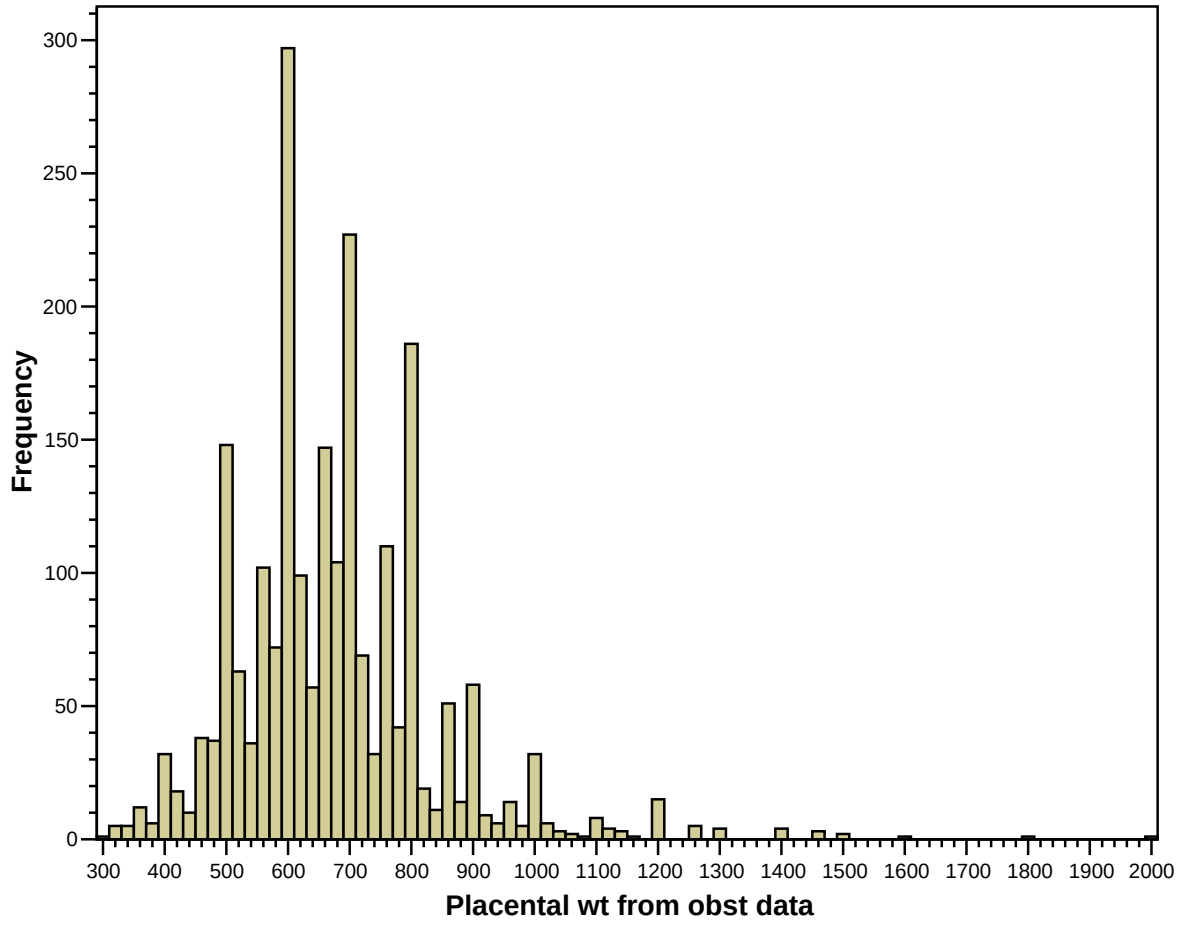
plus the following missing values:

kz033 Placental wt from path study

		Frequency	Percent
Missing	-11 Triplet / quadruplet	16	.1
	-10 Not in core sample	5303	28.0
	-1	13638	71.9
	Total	18957	100.0

Obstetric records often record the weight of the placenta - but they are not weighed under standard conditions. They will contain variable amounts of blood and variable length of umbilical cord. **This variable is not recommended.**

kz033a Placental wt from obst data



plus the following missing values:

kz033a Placental wt from obst data

		Frequency	Percent
Missing	-11 Triplet / quadruplet	16	.1
	-10 Not in core sample	5303	29.9
	-1	12425	70.0
	Total	17744	100.0

Membership of substudies

Failure to thrive

This study (funded by the Wellcome Trust) was undertaken by Dr Alan Emond and Dr Jon Pollock. They used the information on the child's weight at 6 weeks, 9 months and 18-24 months as recorded by the health visitors on the child health data base. They defined Failure to Thrive as the slowest 5% in growth measured by a change in SD scores.

Only children born between 1st September 1991 and 31st December 1992 were eligible.

kz050 In Failure to thrive study

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	339	1.7	2.3	2.3
	2 No	14337	71.7	97.7	100.0
	Total	14676	73.4	100.0	
Missing	-10 Not in core sample	5306	26.6		
Total		19982	100.0		

Being Three

This study (funded by NIAAA) assessed the development of children at age 3 according to the alcohol consumption of the mother and breast feeding duration.

The groups 1-4 were all breast fed for at least 3 months and 5-8 were never breast fed. Based on the mother's response to the alcohol consumption questions at 8 weeks, groups 1 and 5 had no alcohol, groups 2 and 6 had less than 1 drink per week, groups 3 and 7 had at least 1 drink per week and groups 4 and 8 had at least 1 drink per day. The group coded '-1' were a random set of women unrestricted by response to questionnaires who were included to satisfy the ethical criteria of the study.

kz051 Group no. in Being 3 study

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	110	.6	12.6	12.6
	2	114	.6	13.1	25.7
	3	118	.6	13.5	39.2
	4	168	.8	19.2	58.4
	5	101	.5	11.6	70.0
	6	102	.5	11.7	81.7
	7	111	.6	12.7	94.4
	8	49	.2	5.6	100.0
	Total	873	4.4	100.0	
Missing	-10 Not in core sample	5306	26.6		
	-2	13798	69.1		
	-1	5	.0		
	Total	19109	95.6		
Total		19982	100.0		