

# **THE ALSPAC STUDY**

## **F11 FILE**

**Focus @ 11+**

**At around 11.5 years**

**Prepared by**

**The ALSPAC Study Team**

**Documentation giving frequencies, background and instructions for use.**

**Last updated for version 5d of the RELEASE file.**

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# 1 Organisation of Focus 11+

## 1.1 Space and Time for Observations

12380 eligible participants were available to be contacted during the course of Focus11+. Experience with F@9 and F@10 suggested that 56% - 60% of those might come.

Children were invited in groups of eight per half day 5 days a week including Saturdays

29.01.03 – 15.1.05. Between March 2003 and March 2004 we ran double clinics for most of the time in order to have sufficient capacity to see all the children we calculated that we would need to see before the end of F11 in December 04. We introduced weekly ‘twilight’ visits from 16.30-19.30 in October 2003 to give families a greater choice of non-school time appointments.

A variety of different observations with specialised equipment and trained assessors were undertaken with children moving from one observation to another. The most practical way to do this, given an estimated 3 hours of observations, was to divide the time available into units of 20 minutes and sub-units of 10 minutes (see diagram.) There were then 8 different orders in which the tests were carried out in each half-day. The order followed by each child was recorded to ensure that any order effect could be established and adjusted for if necessary.

In order to see the 8 children in a half day in each of the two clinics, as shown on the diagram, 7 rooms in each one were necessary plus an extra room for the body scanner. This room was used for half of the 20min Measuring session and was situated between the two other Measuring rooms. When two clinics were running concurrently, the second started 10mins later than the first so that the children entered the scanning room in turns. This was the solution to the problems of cost and space associated with having a scanner in both of the clinics. The child visited the phlebotomist twice, one hour apart, and each time for 10 minutes.

## 1.2 Other Space Requirements

The parents were invited to bring their children. They often also brought siblings. Both clinics therefore shared a reception room with activities for siblings as well as for the study children, and a kitchen area in which to prepare drinks and refreshments for the families. This room was less than an ideal size for the double clinic, but the crowding was minimized by the two clinics starting 10mins apart.

**Figure 1.1: Schematic representation of testing 8 children per half day at age 11+**

**Key**

M	Measuring	F & Y	Friends and You
V	Vision	B <sub>1</sub> & 2	Blood taking
H <sub>a</sub> & b	Hearing		

Identical grids were used for am and pm clinics and for the twilight clinics

Child	1	2	3	4	5	6	7	8
Appt. time	9.20	9.20	9.20	9.30	9.40	9.40	9.40	9.50
9.30	M	H <sub>1</sub> <sup>a</sup>	B <sub>1</sub>					
9.40		Move rooms		B <sub>1</sub>				
9.50	F+Y <sub>1</sub>	H <sub>1</sub> <sup>b</sup>	F+Y <sub>2</sub>	M	H <sub>2</sub> <sup>a</sup>	V	B <sub>1</sub>	
10.00		B <sub>1</sub>		H1a	H <sub>2</sub> <sup>b</sup>			B <sub>1</sub>
10.10							M	V
10.20						B1		
10.30	B <sub>1</sub>	F+Y <sub>2</sub>	V			M	F+Y <sub>1</sub>	H <sub>2</sub> <sup>a</sup>
10.40			B <sub>2</sub>		B <sub>1</sub>			
10.50	V				M	H <sub>1</sub> <sup>a</sup>		H <sub>2</sub> <sup>b</sup>
11.00			B <sub>2</sub>					
11.10	H <sub>2</sub> <sup>a</sup>	V	M	F+Y <sub>2</sub>	F+Y <sub>1</sub>	H <sub>1</sub> <sup>b</sup>	B <sub>2</sub>	
11.20								B <sub>2</sub>
11.30	H <sub>2</sub> <sup>b</sup>	B <sub>2</sub>	H <sub>1</sub> <sup>a</sup>				V	M
11.40						B <sub>2</sub>		
11.50	B <sub>2</sub>	M	H <sub>1</sub> <sup>b</sup>	V		F+Y <sub>2</sub>	H <sub>2</sub> <sup>a</sup>	F+Y <sub>1</sub>
12.00					B <sub>2</sub>			
12.10					V		H <sub>2</sub> <sup>b</sup>	
12.20								
12.30								
12.40								
Likely to leave	12.10	12.20	12.20	12.20	12.40	12.40	12.40	12.50

### **1.3 Creating the atmosphere for focus visits**

Mothers (fathers or other carers) bring their children to Focus visits to be tested voluntarily. The children are not ill, and they do not get treatment. The child is brought to help with research, which aims to make children healthier in the future. It is vital therefore that the families find the visits enjoyable and are prepared to return again and again, and that they encourage their friends to do so.

Staff have been selected who have a warm and understanding approach as well as the skills required for their role. Initial and on-going training and supervision ensure the standards are maintained.

All letters, forms and questionnaires, which are sent to children and parents, are written in a friendly and sympathetic way, and a similar approach is taken in telephone conversations. Every effort is made to accommodate the parents' wishes as to times and dates of appointments if those originally offered are inconvenient, and understanding is shown when parents have difficulties. Parents are sent a letter for the child's teacher asking for leave of absence for the visit, and also one for the employer asking for leave of absence for the parent to accompany the child.

If a child does not arrive for an appointment the family receives a friendly telephone call or letter expressing concern that there may have been a problem and offering another appointment.

Because of the way in which the sessions interlink with one another it has been shown to be important to have a number of rules that will ensure that no one child or session can upset the system. The following are therefore integral to the way in which the study proceeds:

A 3-minute turn-round time in each session so that a '20-minute' session actually means 17 minutes, a '40-minute' session means 37 minutes.

Anyone arriving late misses the first session they were scheduled for and goes on to the second, or misses part of the content of a longer first session.

If the clinic is running late, testers try to reduce what is attempted in the session.

If the morning sessions threaten to overrun with any child, the last session, or part of the session may be missed out.

It is also essential that the sessions include activities, which the children find interesting and enjoyable. In practice it is important that they include a physically active session and one that is technologically exciting and that one-to-one psychology interviewing takes no more than half the total time.

The Focus Visits Manager and team encourage scientists and senior managers to take these points into account at an early stage in clinic planning.

### **1.4 Definition of the Study Sample**

We regarded as eligible all children born to mothers resident in the former Avon area at the time they were born and with expected dates of delivery between 1.4.91 and 31.12.92. All children were invited regardless of where they lived. They were invited to attend at about age 11½. However since the clinic began at the end of January 03 the oldest children were already 11 years and 10months old. The fact that the second clinic began in March 03 meant that the age at which we saw the children tended towards 11½ from that point.

## **1.5 Twins, triplets and quadruplets**

Each member of a multiple pregnancy was given an appointment, and generally treated in the same way as singletons provided enough carers accompanied them. If less than one carer per child came, then a member of staff was provided to ensure that each child was accompanied to all sessions except Friends and You where the child went in alone.

## **1.6 Repeated sampling**

Random error in the measurement of exposures weakens associations between possible explanatory variables and disease (De Clerk et al, 1989, Phillips & Davey Smith, 1993). Such errors may arise as a result of observer, subject or instrument variability. Attempts were made to limit such variability as much as possible through staff training, strict protocols for recording measurements, and regular quality control assessments. In addition, to allow assessment of and adjustment for regression dilution bias in analysis, 3% of the study were invited back for a repeat visit between 2 –6 weeks of the initial examination.

Data from these repeat visits can be used to conduct sensitivity analyses using a variety of techniques for assessing and correcting measurement error (Bashir & Duffy, 1997).

Children in particular slot numbers were invited back, providing that they still lived within the old Avon area. The families were allocated to slot numbers randomly but the reinvites were put in the same slot number as they had on their first visit.

In the event, 3.4% (n=244) returned for a second visit (see section 2.3).

## **1.7 The child's booklet**

In advance of the 11½-year visit, each child was sent a booklet, with space for 'results', stickers or other input from each assessment. The child was asked to bring the booklet to the clinic.

## **1.8 Children with special needs**

It was envisaged that some children with special needs would find some of the tests difficult at this Focus visit. All parents were asked if they thought their child would have difficulties with any of the activities. If so, a member of staff with responsibility for families with special needs telephoned them to discuss whether a visit to the clinic was feasible; if not, then other possibilities for assessment were discussed. If they wanted to come, modifications to the visit or to particular measures were discussed. If necessary, extra staff or specialists such as signers for the deaf were brought in for the visit.

## **1.9 The clinic site**

Clinics have been held in the Focus Centre, the old Children's Hospital, since January '02. Focus11+ was held on the second floor, which has sound proofed rooms for hearing tests. Two of the rooms also had sound proof booths in them in which the otoacoustic emissions testing was carried out

## 1.10 Child behaviour

At the end of every test session each tester rated the child on a number of behaviour attributes during that session. These are as follows:

- Cooperative
- Shy
- Fidgety
- Active
- Attention problem
- Responsiveness
- Unusual child behaviour
- Avoidance of eye contact
- Tics
- Rocking
- Asked odd questions
- Made personal comments
- Making faces
- Made odd noises
- Talking to self
- Swearing
- Other unusual behaviour

## 1.11 Release file version history

### Release version 5a – March 2017

- Addition of section 'Release file version history' to this documentation
- Addition of 106 Vision session variables (fevs001-fevs919)
- Addition of 117 Hearing session variables (fehs001 – fehs918)
- Addition of 123 DXA scan variables (fedx001 – fedx430), including whole body and partial scans of the lumbar spine areas.
- Addition of 140 derivations to measure physical activity using accelerometer data, including 70 based on a cutpoint of 3600 counts per minute, where a valid day is equal to 600mins (feag001 to feag168) and 70 based on a cutpoint of 2296 counts per minute where a valid day is equal to 500 mins (feag200 to feag238).
- Removal of section 3.6 School Interview, which read 'data being cleaned'. This data is unclean. If you are interested in this data you are invited to contact ALSPAC.
- Removal of section Health Utilities Index, which read 'data being cleaned'. Only n<100 children completed this, for example if the child had additional needs or if a child attended at the start of Focus 11+ when Borderline Personality Data had not yet been approved by the Ethics committee
- The text 'Appendix 1: Copy of childs booklet' has been removed..
- Batch changes to metadata, where variable labels had truncated child to Ch etc. Variable labels have been expanded to include full names rather than acronyms

where practical and appropriate.

- Addition of triplet/quadruplet attendees to the release file, where all values are set to missing and coded either -11, -111 or -1111. There is no data attached (due to disclosure) which means there is no change in the summary statistics presented in this documentation. As such the tables in this documentation are not fully updated with the 6 missing values throughout.

#### *Release file version 5b – January 2019*

- In previous versions of this F@11 release file, left and right hand grip strengths were incorrectly labelled. That is, variables fegs100 to fegs105 were labelled as 'left hand' measures, while fegs110 to fegs115 were labelled as 'right hand' measures. This has now been amended, so that variables fegs100 to fegs105 refer to right hand measures, while fegs110 to fegs115 refer to left hand measures.

#### *Release file version 5c – May 2019*

- Date variables have been removed from this file and replaced with numeric variables. As all the previous date variables were time data, these have been split into separate 'hour' and 'minutes' variables. The affected variables are: febp002, fesa002, fesa053 and fesa066. These original variables have been dropped, and replaced with time in hours (previous variable name, but now ending in 'a' – e.g., fesa002a, for the starting hour of the samples session) and time in minutes (previous variable name, but now ending in 'b' – e.g., fesa002b, for the starting minute of the samples session).
- An error in the calculation of the mean systolic blood pressure (fesa021), diastolic blood pressure (fesa022) and pulse rate (fesa023) was noticed and has now been corrected. Previously, these derived mean variables were calculated as: (measure 1 + measure 2) / 2. However, as approximately 15 participants only had one blood pressure/pulse reading, their mean values were calculated as half of this single measure. This has now been corrected, and the mean values for these cases imputed as simply their only blood pressure/pulse reading.

#### *Release file version 5d – June 2019*

- Height, weight and BMI z-scores based on 1990 British Growth Reference charts have been derived (using the 'zanthro' function in Stata) and added to the release file. Variables are: fems090 (for height); fems091 (for weight); and fems092 (for BMI).

## 2 Invitation and Attendance

### 2.1 Eligibility

Families were eligible to be invited to Focus 11+ if, on the ALSPAC database, they were flagged as:

- Child alive,
- Address not recorded as unknown,
- Participating in the study (Not having refused the whole study; these families may have refused questionnaires).

In addition a number of 'new cases' were also invited to attend (see section 2.4).

### 2.2 Invitation and Attendance

The parents of the children who were eligible to be invited to Focus 11+ were sent an initial letter, explaining about Focus 11+. These were sent three months before the ideal date of attendance for the child (i.e. when they were 11 ½). Parents were asked to return a form giving their personal details (such as the child's name and which school they attended) and indicating whether they would like to come or not. If no response to the initial letter was received within 3 weeks a postal reminder was sent. If there was still no response after a further 2 weeks, the names were referred and some were contacted by phone or personal visit. After approximately three months, those still on the referral lists, who had not been contacted were sent a 'last-chance' letter.

A number of families did not receive an initial letter but did have appointments made for them. For example, friends and colleagues may have told them about Focus 11+ and as a result they contacted us expressing an interest in attending before we had the opportunity to contact them.

The families who were flagged on the ALSPAC database as not receiving any questionnaires were still invited to attend Focus 11+ but were sent a slightly different initial letter.

For the people who did not respond to the first invitation we frequently had no confirmation that they were still at the address we had used which may affect future follow-up.

A slightly different system was used for those families who were living a distance away from the clinic. If the time taken for a family to travel to Focus 11+ was deemed to be more than two hours (making it difficult for the family to do the visit in a day), that family was given a special invitation letter at an earlier stage (four months before the child's ideal attendance date) than the rest of the cohort. This gave them the opportunity to coordinate their Focus 11+ visit with one to Bristol for other reasons, such as visiting relatives.

Using the 13971 children alive at 1 year of age (i.e. excluding the 'new cases') as the baseline for attendance to Focus 11+, a total of 2461 (34.3%) were no longer eligible, using the definition in section 2.1 and were therefore not approached.

Of those eligible, 3151 (43.9%) did not respond to the initial letter, despite follow-up (it is likely that many of these had moved away and had not yet informed us of their new details). 1140 (15.9%) responded to the initial letter stating that they did not want to attend Focus 11+. 316 (4.4%) had appointments made for them but failed to attend on the day.

## Reason Child did not attend Focus 11+

	Frequency	Percent	Valid Percent	Cum. %
Valid 1 not eligible for invite	2461	34.3	34.3	34.3
2 Invited/no response	3151	43.9	43.9	78.2
3 Invited/refused	1140	15.9	15.9	94.1
4 Appt made, DNA	316	4.4	4.4	98.5
6 Appt made, clinic	104	1.5	1.5	100.0
Total	7172	100.0	100.0	

A total of 7159 children attended the Focus 11+ clinic, it is important to note that this includes 359 'new cases' (see section 2.4).

In addition, there were 104 families who were willing to come but were unable to do so before the clinic finished.

## 2.3 Re-invites

It was originally anticipated that approximately 3% of attendees would come back for a second visit to check reliability. A total of 244 (3.4%) children did so. In order to be eligible to be asked to return the families had to live locally, went through their first visit in a standard order (this order had to be repeated at the second visit) and most importantly they had to have enjoyed themselves!

The data collected during the child's second visit is not held on the release file, however, there is a flag which indicates those children who returned for such a visit (FE030).

### fe030 Child returned as a reinvite: F11

	Frequency	Percent	Valid Percent	Cum. %
Valid 1 Yes	244	3.4	3.4	3.4
2 No	6915	96.6	96.6	100.0
Total	7159	100.0	100.0	

Please note the difference between reinvites and revisits (see section 2.9).

## 2.4 New Cases

When preparing for the Focus @ 7 visit, it was decided that all those who were eligible for ALSPAC but who, for one reason or another had not been included to date should be invited to join. There were a number of reasons for this – 1) it was seen that this may give a handle on some of the children that had been missed from the original study, 2) word of mouth indicated that there were a number of children who felt that it was unfair that they could have been part of the study and were not, 3) it seemed beneficial in regard to relations with the general public.

The child health database was therefore searched for all children born to mothers resident in Avon who would have been eligible for the study. Thus, we did not rely on the dates of birth but rather on the expected dates of birth as near as we could get them. A letter then went out to the 3000 or so identified, inviting them to take part. It was recognised that the addresses we were using were old, and we only confined ourselves to children who we believed

according to records were still living in the Avon area.

It is important to note, regarding the enrolment of these new cases, that it is very likely that we have biological samples for them and we will be able to abstract obstetric information. Their inclusion will allow to a certain extent a comparison of the study children who have been part of ALSPAC from birth and earlier with those who have not – particularly looking at features of the child's outcomes. In the event 359 new cases attended Focus 11+.

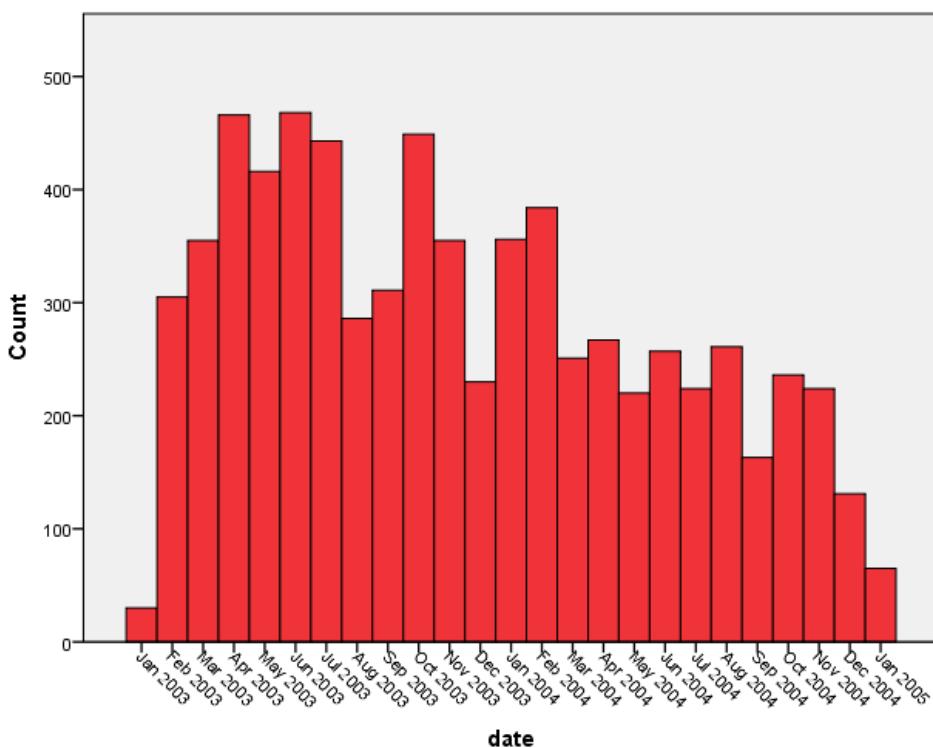
A variable is included on the release file flagging the new cases who attended Focus 11+ (FE010).

fe010 Child is new case: F11

	Frequency	Percent	Valid Percent	Cum. %
Valid 1 Yes	359	5.0	5.0	5.0
2 No	6800	95.0	95.0	100.0
Total	7159	100.0	100.0	

## 2.5 Month and year of attendance

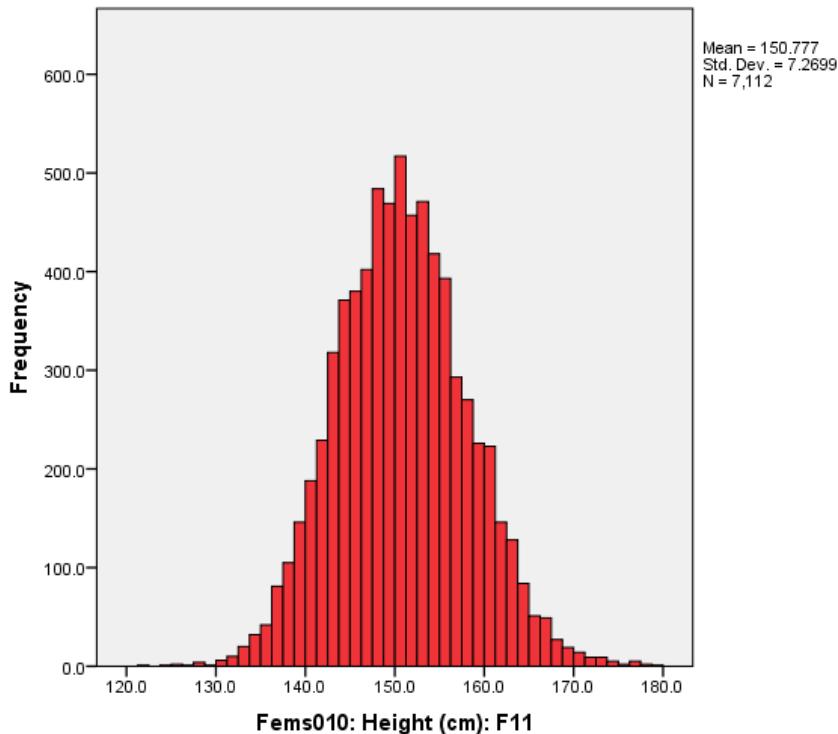
The Focus 11+ clinics ran from January 2003 through till January 2005. Month and year of visit are included on the release files (FE001 and FE002 respectively). The chart below shows the attendance throughout this period.



## 2.6 Age at attendance

The age of the child at attendance was calculated from the date of the visit and the child's date of birth. This is included on the release files in days (FE003a), weeks (FE003b) and months (FE003c), enabling the user to be as accurate as they choose. The chart below

shows the distribution of age in months.



It should be noted that a small number of children attended Focus 11+ before they attended Focus 10+ - children attended Focus 11+ having missed Focus 10+ but then decided they would attend Focus 10+ after all, assuming that it was still running. It is therefore important that age is taken into account when performing any longitudinal analyses.

## 2.7 Session Order

The receptionist recorded the order in which the child went through the sessions; this was based on the grid number that the child followed (see Figure 1.1). If the order had to be changed for any reason the new order was recorded. Variables have been calculated to indicate the first session that the child did, the second and so on (please see FE020 to FE025). This may help researchers to determine whether any previous sessions had an effect on the child's performance or behaviour in a later session.

## 2.8 Revisits

In the event that a child did not complete their visit they were offered the chance to return on another day to go through the sessions they may have missed. In the event only seven children did so and unlike previous clinics, these data have not been dealt with separately due to the small number.

Please note the difference between revisit and reinvite (section 2.4).

## 2.9 Biases in attendance

Table 2.9.1 gives an indication of the differences in the demographic characteristics of those children who attended Focus 11+ compared to the remaining ALSPAC sample who did not attend who were a) All those alive at 1 year and b) Still active in the study at the time of invitation

The 359 new cases have not been included here since the majority of information is not

available for these cases (leaving 6800 cases for comparison).

Table 2.9.1: Differences in characteristics of Focus 11+ attendees compared to non-attendees

	Attendees (n=6800)	Non-attendees alive at 1 year (n=7149)	Non-attendees, active at time of invite (n=4711)
Gender			
Boy	3358 (49.4%)	3856 (53.8%)	2531 (53.7%)
Girl	3442 (50.6%)	3313 (46.2%)	2180 (46.3%)
		$\chi^2=27.11$ (p<0.0001)	$\chi^2=21.01$ (p<0.0001)
Maternal education			
< O level	1434 (21.9%)	2290 (39.1%)	1515 (37.6%)
O level	2321 (35.4%)	1979 (33.7%)	1408 (34.9%)
A level or higher	2796 (42.7%)	1595 (27.2%)	1109 (27.5%)
		$\chi^2=516.02$ (p<0.0001)	$\chi^2=375.99$ (p<0.0001)
Maternal age			
< 20	228 (3.4%)	774 (10.8%)	428 (9.1%)
21-24	806 (11.9%)	1526 (21.3%)	922 (19.6%)
25-29	2719 (40.0%)	2680 (37.4%)	1825 (38.7%)
30-34	2222 (32.7%)	1634 (22.8%)	1143 (24.3%)
35+	825 (12.1%)	557 (7.8%)	393 (8.3%)
		$\chi^2=652.30$ (p<0.0001)	$\chi^2=377.40$ (p<0.0001)
Housing tenure			
Owner-occupier	5464 (83.0%)	4098 (63.6%)	2897 (67.3%)
Council/HA	606 (9.2%)	1471 (22.8%)	904 (21.0%)
Other	512 (7.8%)	870 (13.5%)	502 (11.6%)
		$\chi^2=646.61$ (p<0.0001)	$\chi^2=386.06$ (p<0.0001)
Ethnicity of child			
White	6205 (96.1%)	5267 (93.6%)	3666 (94.2%)
Non-white	251 (3.9%)	358 (6.4%)	226 (5.8%)
		$\chi^2=38.52$ (p<0.0001)	$\chi^2=20.30$ (p<0.0001)
Mean maternal age	29.05 (sd=4.6)	26.99 (sd=5.1) $t=78.65$ (p<0.0001)	27.35 (sd=5.0) $t=43.40$ (p<0.0001)
Mean birthweight	3410 (sd=549)	3373 (sd=571) $t=6.51$ (p=0.011)	3392 (sd=571) $t=4.79$ (p=0.029)
Mean gestation	39.45 (sd=1.9)	39.41 (sd=2.0) $t=6.75$ (p=0.009)	39.42 (sd=1.9) $t=3.79$ (p=0.051)

It can be seen that a significantly greater proportion of children with higher educated and older mothers attended Focus11+ as did those living in owner-occupied housing. A slightly smaller proportion of boys attended compared to non-attendees as did non-white children. Children who attended also had a slightly higher mean birthweight and mean gestation.

### 3 The Data and Observations

At Focus 11+ the 40 minute Friends and You session comprised a number of measures/tasks, in the order listed below:

- Attention
- Sensation Seeking
- Friendships
- Romantic Relations
- Borderline Personality (BPD)
- Health utilities index (note: this was only done if BPD could not be done, e.g. if the child had special needs or if a child attended at the start of Focus 11+ when BPD had not yet been approved by the Ethics committee). HUI data was only completed by <100 and is therefore not included in the release file.
- Bike drawing
- Behaviour rating

Five different data sheets were used within this session (Sensation Seeking and Romantic Relations data was collected via computer). Some of these sheets were used to record the results for several different measures. The data collected were keyed, stored and cleaned in separate files according to the data sheet rather than the session. Once all the data had been cleaned they were merged into a single file and made available for analysis.

The parents or guardians were asked not to accompany the children into the Friends and You Session. It was explained that some children might find it distracting if parents were there and that it was important to keep conditions as similar as possible for all children in order to obtain consistency in the data collection. It was also explained that the children would be told that any answers they gave would be confidential and that it may be breaking the agreement if a parent or guardian were present. They were also reassured that any activity was voluntary and the child was free to stop at any time. Parents were not prevented from accompanying their children if they felt strongly about it and were provided with the full list of BPD and RR questions if requested. However, certain parts of the sessions were not carried out in this case - only Attention and the Bike drawing task were administered, as we did not wish to put children in an uncomfortable position or to collect data we could not be confident about.

For each session a variable has been created which indicates whether or not the child began that session, with a further variable giving reasons why this may not have happened wherever possible. The remaining documentation details the data collected in each session indicating the methods used, recommendations for using the data and frequencies of the key variables.

Within each session, specifically designed data sheets are used to record the data. The datasheets are filed into folders and sent for double-keying on a weekly basis. The folders are returned with an electronic version of the data. A member of the research computing team performs a variety of error checks on the data and error reports are sent to the Focus teams responsible for that data. Corrections are made and an unclean file is made available to a member of the statistics team, who performs the final stage of the cleaning process. Comments recorded on the data sheet are keyed separately, anonymised by the research computing team and sent to the appropriate member of staff for coding. The codes only are

then matched to the main dataset and incorporated into the final data file.

There is a standard variable naming system throughout Focus 11+. Variables relevant to the whole session are named FE\*\*\*, where \*\*\* is a three digit number. The remaining data are named according to the datasheet they were collected on using the format FExx\*\*\*, where xx is a two letter abbreviation for that datasheet (e.g. ms for measures) and \*\*\* is again a 3 digit number. This system ensures that every variable is uniquely defined. For ease of use, wherever possible, consistency is maintained in naming variables, both between and within Focus visits. For example FExx004 represents the tester within each session.

Note that the variable labelling system changed from Focus 10+, due to there being an insufficient number of characters available in earlier versions of SPSS. In the future, where possible, previous clinic data will be renamed as follows:

F7\*\*\* will become FA\*\*\* F8\*\*\* will become FB\*\*\* F9\*\*\* will become FC\*\*\*

### 3.1 Measurements

#### 3.1.1 Anthropometric Measures

fems001 Child Started Measures session: F11

	Frequency	Percent	Valid Percent	Cum. %
Valid 1 Yes	6834	95.5	95.5	95.5
2 Yes, not completed	295	4.1	4.1	99.6
3 No	30	.4	.4	100.0
Total	7159	100.0	100.0	

fems001a Reason Child did not do Measuring session: F11

	Frequency	Percent	Valid Percent	Cum. %
Valid				
1 No staff	6	.1	.1	.1
2 Ch left early	14	.2	.2	.3
4 Ch refused	3	.0	.0	.3
6 Ch arrived late	4	.1	.1	.4
10 Did session	7129	99.6	99.6	100.0
Total	7156	100.0	100.0	
Missing				
-1 Missing	3	.0		
Total	7159	100.0		

Measurement session tester:

fems004 Measures tester: F11

	Frequency	Percent	Valid Percent	Cum. %
Valid				
1	39	.5	.5	.5
2	336	4.7	4.7	5.3
3	717	10.0	10.1	15.3
4	695	9.7	9.7	25.1
5	174	2.4	2.4	27.5
6	350	4.9	4.9	32.4
7	310	4.3	4.3	36.8
8	227	3.2	3.2	39.9
9	314	4.4	4.4	44.4
10	739	10.3	10.4	54.7
11	411	5.7	5.8	60.5
12	1368	19.1	19.2	79.7
13	637	8.9	8.9	88.6
14	541	7.6	7.6	96.2
15	271	3.8	3.8	100.0
Total	7129	99.6	100.0	
Missing				
-9 Did not do measures	30	.4		
Total	7159	100.0		

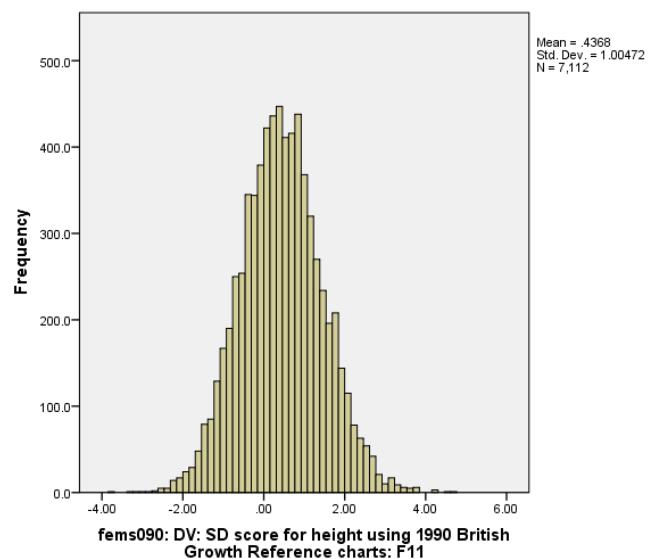
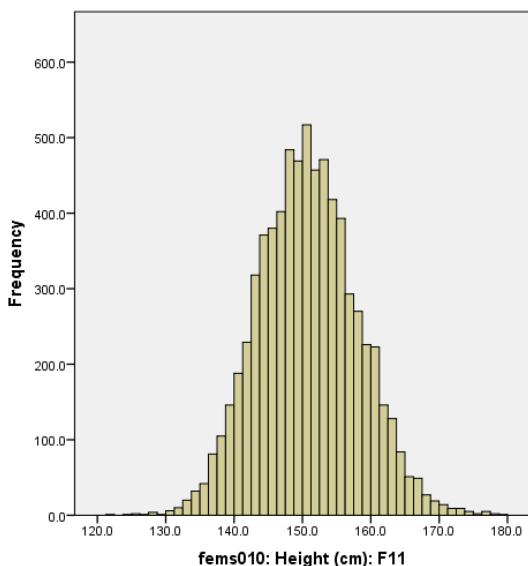
As far as possible all children were measured in their underclothes with their shoes removed.

For all measurements taken, the tester recorded any difficulties that may have affected accuracy such as: child had difficulty keeping still; whether the child had an intricate hairstyle or whether the child was partly clothed.

It is important to take into account age when looking at any longitudinal changes in measures due to the small number of children who attended Focus11+ before they attended Focus10+ (see section 2.6).

## Height

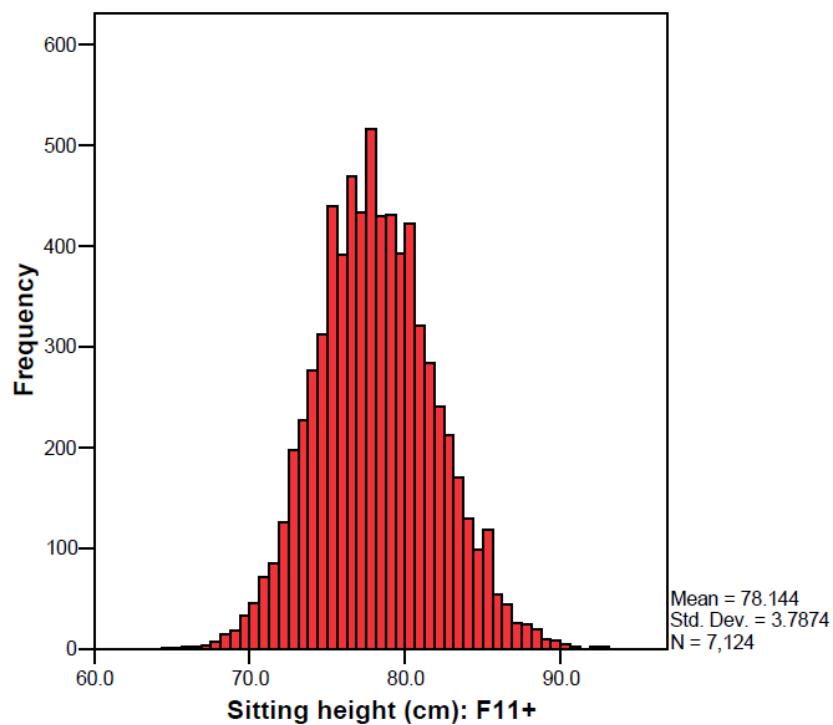
Height was measured to the last complete mm using the Harpenden Stadiometer. Children were positioned with their feet flat and heels together, standing straight so that their heels, calves, buttocks and shoulders came into contact with the vertical backboard of the stadiometer. The headboard was lowered down the backboard until it touched the child's head and a 1 Kg weight was placed on the headboard to ensure head contact and to minimise the effect of hair thickness. The child was asked to relax their shoulders and stretch up but keeping their heels in contact with the ground. Any problems with measuring were noted (FEMS011).



## Sitting Height

Sitting height was measured using the Harpenden sitting height table anthropometer to the last complete mm. The child was positioned on the table with back straight and thighs horizontal. Feet were supported on the footrest so that the knees were at right angles. The same process was used to take the measure, as described above. Any problems with measuring were noted (FEMS013)

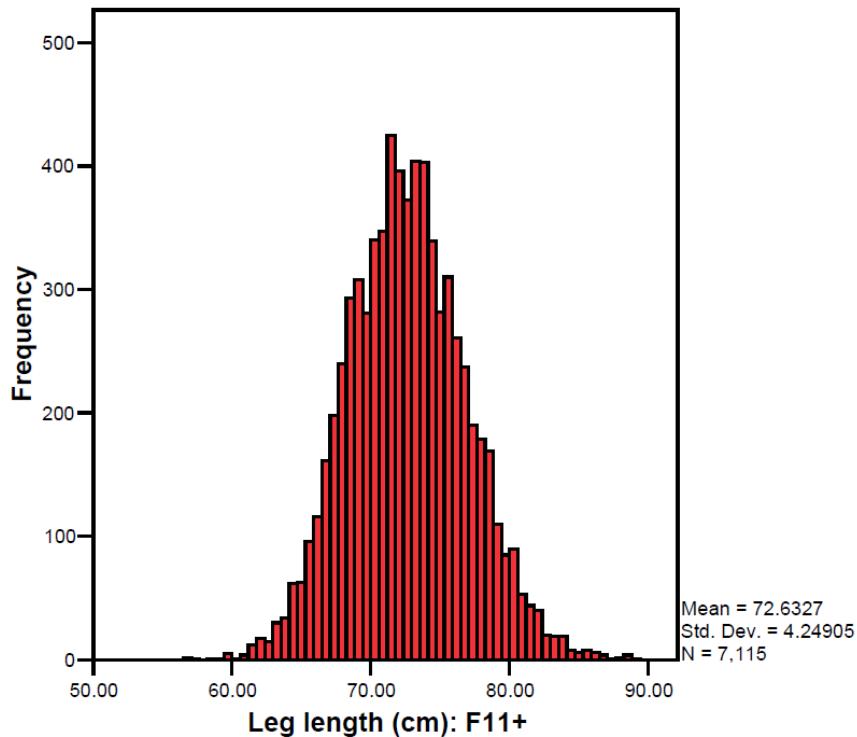
**FEMS012: Sitting height (cm): F11+**



## Leg length

Leg length (FEMS010-FEMS012) was calculated as the difference between height and sitting height:

**FEMS012a: Leg length (cm): F11+**

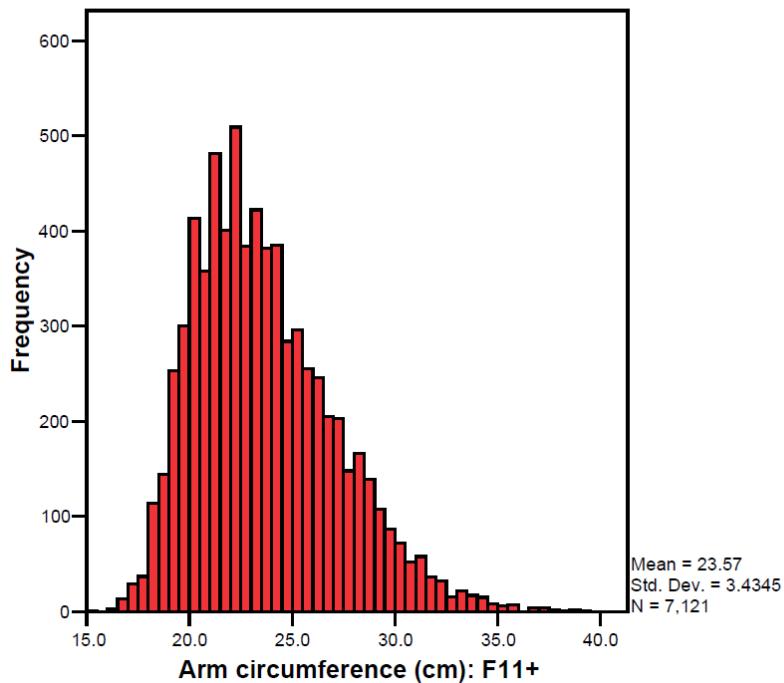


All circumferences were measured to the nearest mm using the Harpenden anthropometric tape.

## Arm Circumference

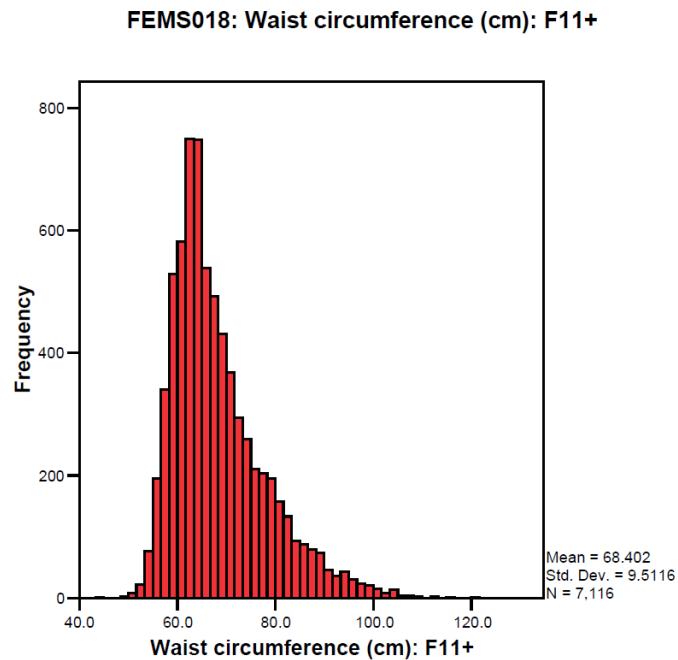
The left arm was flexed to a right angle and the circumference was measured to the nearest mm, midway between the process of the acromion of the scapula and the olecranon process of the elbow, keeping the tape taut but not tight. Any problems with measuring were noted (FEMS017).

**FEMS016: Arm circumference (cm): F11+**



## Waist Circumference

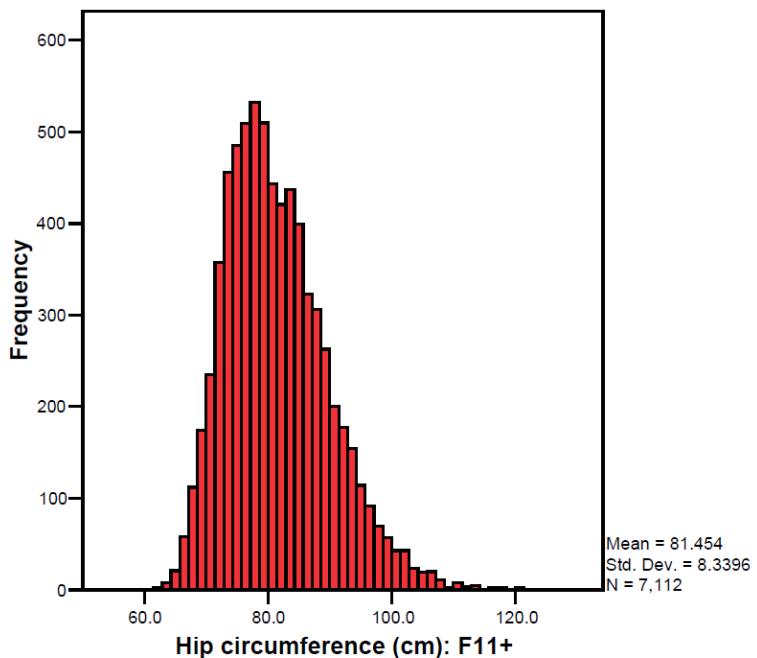
Waist circumference (overleaf) was measured to the nearest mm at the minimum circumference of the abdomen between the iliac crests and the lowest ribs, the tape was kept perpendicular to the long axis of the body, touching the skin but not compressing the tissue. Any problems with measuring were noted (FEMS019).



## Hip Circumference

Hip circumference was measured to the nearest mm at the point of maximum circumference around the child's hips/buttocks, again with the tape kept perpendicular to the long axis of the body segment. The measurement was done over the child's pants. Any problems with measuring were noted (FEMS021).

**FEMS020: Hip circumference (cm): F11+**

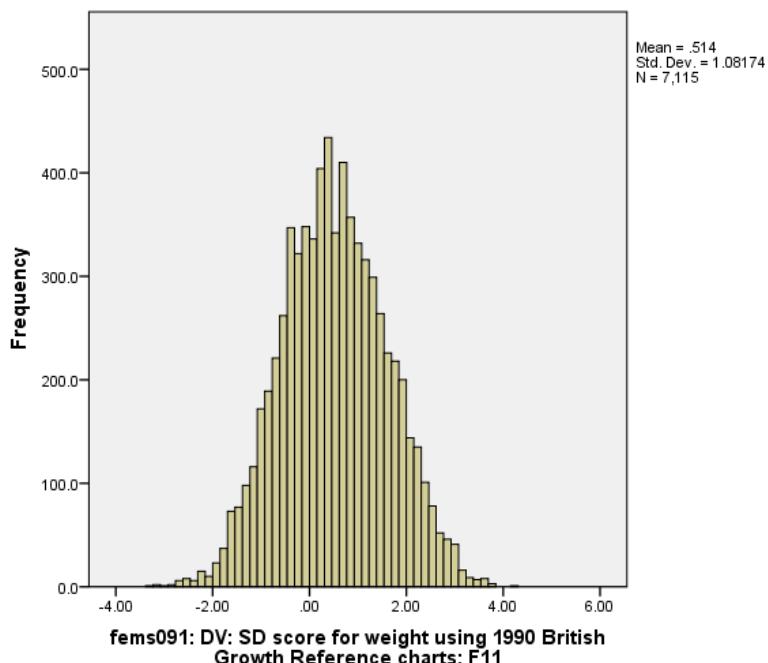
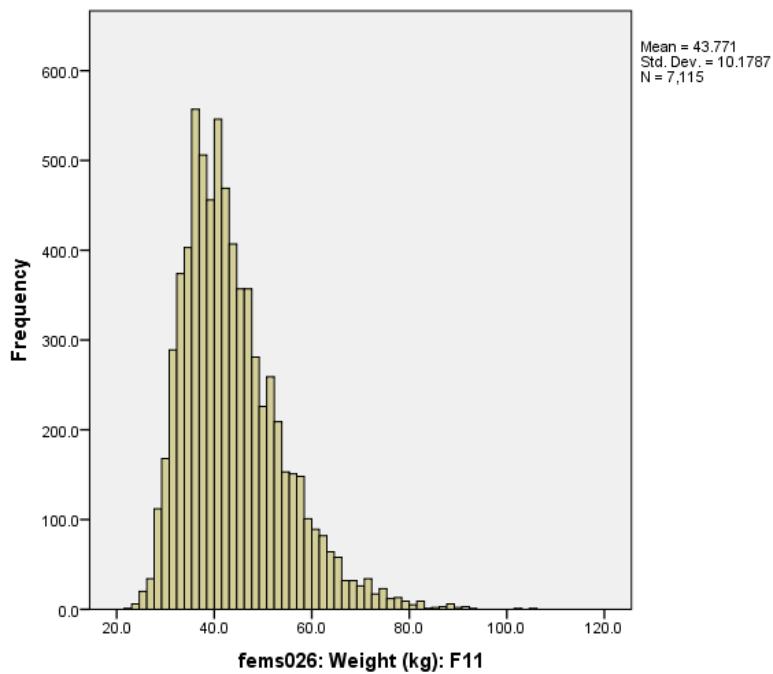


### 3.1.2 Weight and Bioelectrical Impedance

Both were measured using the Tanita Body Fat Analyser (Model TBF 305). The scales were donated by Professor Steven Humphries.

The child was encouraged to pass urine (see FEMS029) and undress to their underclothes. 'Female Standard' was entered into the machine for all children and their height was entered to the nearest cm. The child stepped onto the measuring platform which had been wiped with disinfecting alcohol and positioned so that both feet were located in parallel with the toe and heel in contact with their respective electrodes.

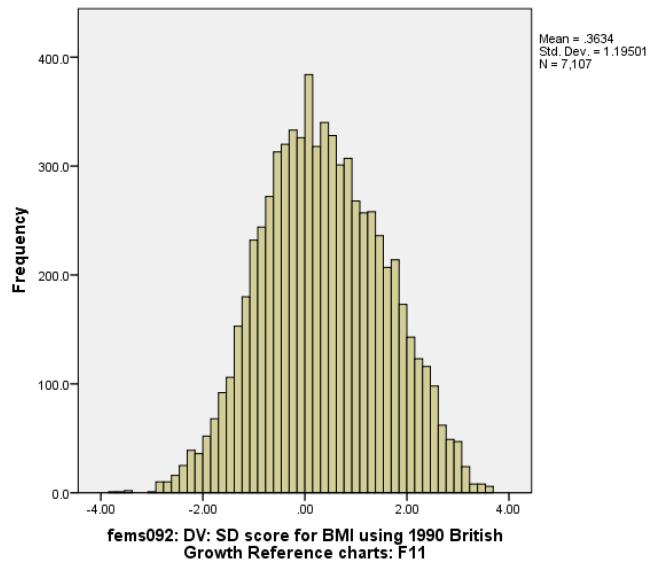
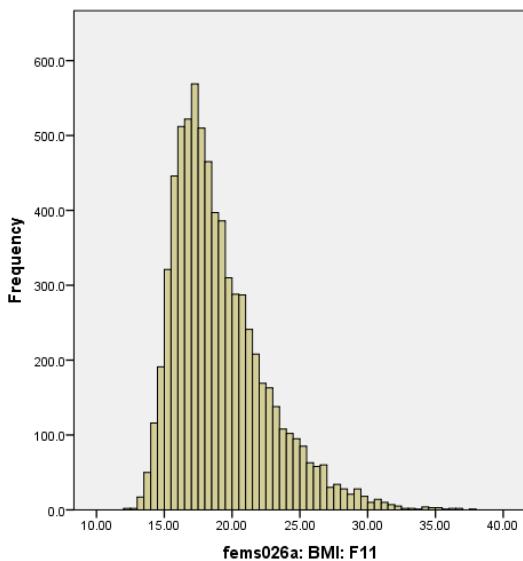
Measurement was completed when the weight and fat ratio readings were fixed and the buzzer beeped. Weight was measured to the nearest 50g. Any problems with measuring were noted (FEMS027).



## Body Mass Index

BMI (Kg/m<sup>2</sup>) was calculated as:

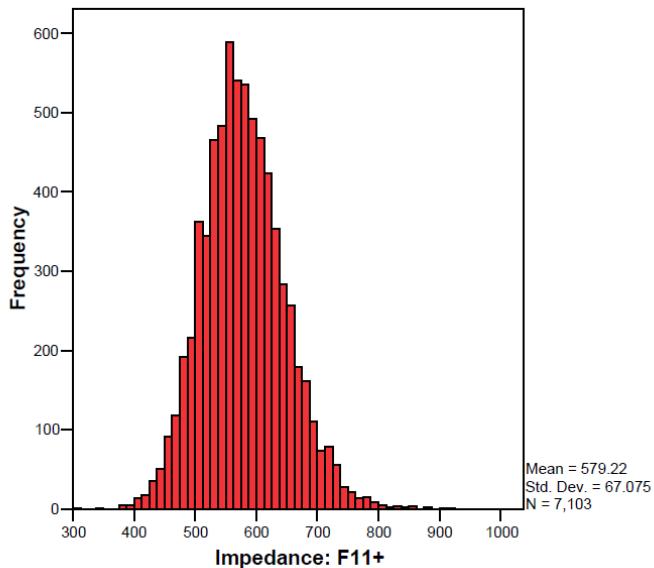
$$FEMS026 / (FEMS010/100)2$$



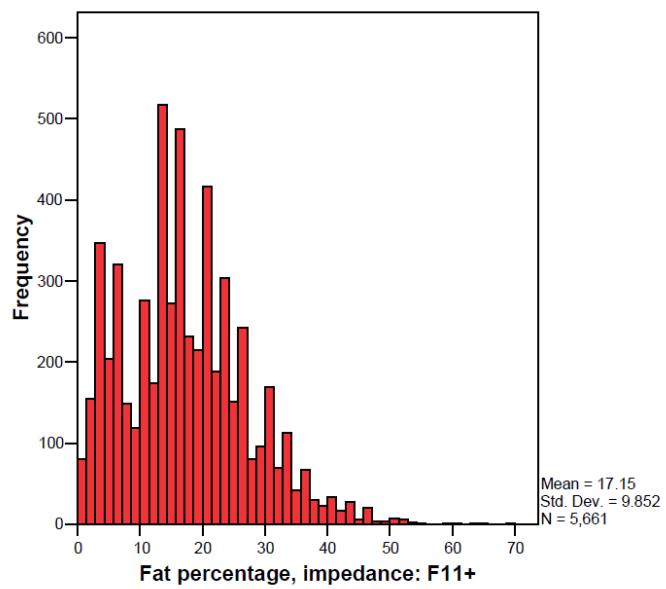
## Impedance

Note, that there were a handful of extremely low impedance values (< 300) (n=7). These have been checked and it was felt that they were obvious errors (not in keying), as such they have been set to missing.

FEMS028: Impedance: F11+



FEMS028a: Fat percentage, impedance: F11+



### 3.1.3 Scoliosis

As part of the measurements session, a scoliometer (Orthopaedic Systems Inc, Haywood, California) was used to measure the axial trunk inclination (ATI) in a forward bending position. The child was asked to bend forward slowly with their arms straight and palms together until the trunk was horizontal and the measurement was made. If a rotational deformity was noted at any level, the scoliometer was placed gently across the spine at different positions, perpendicular to the long axis, until the maximum ATI was read and recorded (Murrell, 1993).

fems030 Scoliometer measure: F11

		Frequency	Percent	Valid Percent	Cum. %
Valid	0	829	11.6	11.7	11.7
	1	2411	33.7	33.9	45.6
	2	2116	29.6	29.8	75.4
	3	940	13.1	13.2	88.6
	4	455	6.4	6.4	95.0
	5	235	3.3	3.3	98.3
	6	72	1.0	1.0	99.3
	7	18	.3	.3	99.6
	8	9	.1	.1	99.7
	9	8	.1	.1	99.8
	10	7	.1	.1	99.9
	12	2	.0	.0	100.0
	15	2	.0	.0	100.0
	18	1	.0	.0	100.0
	Total	7105	99.2	100.0	
Missing	-9 Did not do measures	30	.4		
	-1 Missing	24	.3		
	Total	54	.8		
	Total	7159	100.0		

If any child was found to have an ATI  $\geq 7$ o the parent was given a letter to pass to their GP which recommended surveillance (FEMS032).



### 3.1.4 Flexural Dermatitis

Flexural dermatitis is poorly demarcated erythema with surface changes which can be fine scaling, vesicles, oozing, crusting or lichenification. It was measured according to the ISAAC protocol (Strachan & Williams, 1995) as part of the measurements session.

Observers noted the presence of any flexural dermatitis > 1 cm in diameter in any of the following areas: around the eyes, the sides or front of the neck, in front of the elbows, behind the knees or in front of the ankles. The anthropometry team were trained to carry out these observations by Professor Hywell Williams, University of Nottingham.

Area	Variable label	Yes (%)	No (%)
Any	FEMS033	436 (6.1%)	6964 (92.4%)
Eyes	FEMS035	58 (0.8%)	7342 (99.2%)
Neck	FEMS036	43 (0.6%)	7357 (99.4%)
Elbows	FEMS037	324 (4.5%)	7076 (95.5%)
Knees	FEMS038	190 (2.7%)	7210 (97.3%)
Ankles	FEMS039	67 (0.9%)	7333 (99.1%)



### 3.1.5 DXA Scan

fems050 DXA Permission: F11

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	7060	98.7	99.1	99.1
	2 No	63	.9	.9	100.0
	Total	7123	99.6	100.0	
Missing	-9 Did not do measures	30	.4		
Total		7153	100.0		

fems051 DXA Done: F11

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	7051	98.6	99.0	99.0
	2 No	72	1.0	1.0	100.0
	Total	7123	99.6	100.0	
Missing	-9 Did not do measures	30	.4		
Total		7153	100.0		

fems052 DXA Spine Asked: F11

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	180	2.5	2.5	2.5
	2 No	6943	97.1	97.5	100.0
	Total	7123	99.6	100.0	
Missing	-9 Did not do measures	30	.4		
Total		7153	100.0		

fems053 DXA Spine done: F11

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	173	2.4	2.4	2.4
	2 No	6950	97.2	97.6	100.0
	Total	7123	99.6	100.0	
Missing	-9 Did not do measures	30	.4		
Total		7153	100.0		

A Lunar prodigy narrow fan beam densitometer was used to perform a whole body DXA scan where bone content, lean and fat masses are measured. A subset also had a part scan of the lumbar spine performed. The procedure was clearly explained to the child and parent and parental consent was obtained before proceeding. The child was asked to lie on the Prodigy couch (in light clothing without any metal fastenings), with the parent sitting at least a metre away to comply with the IRMER legislation. The child's height, weight, date of birth, gender and ethnicity were entered into the computer and the machine was started. The arm of the machine moved over the child and two sources of X-ray scan the child. The child was reassured throughout the scan and encouraged to keep as still as possible.

Once complete the tester examined the scan to ensure its quality and a picture of the skeleton part of the scan was printed out and given to the child to keep. For those having an additional scan of the spine, this scan was done directly after the total body scan.

If an unusual feature (such as an irregular bone mass) appeared on the DXA scan it was agreed that a second copy of the scan picture was printed and passed to the team leader to forward to Jon Tobias at the BRI, he would then contact the family if he felt it was necessary. The family would be reassured that the scanner can't be used to diagnose bone diseases. In the event, however, no families were contacted.

A daily QA was performed using the calibration block in accordance with the manufacturers recommendations. The radiation protection supervisor or deputy scanned a spine phantom weekly.

Descriptive Statistics n=7000

	Min	Max	M	SD
fedx101 Left Arm - bone mass (g): DXA: F11	30.09	187.59	81.5879	19.73710
fedx102 Left Arm - fat mass (g): DXA: F11	41.64	2663.55	522.6001	353.66944
fedx103 Left Arm - lean mass (g): DXA: F11	739.40	3064.16	1484.5875	287.30468
fedx104 Right Arm - bone mass (g): DXA: F11	32.42	181.48	82.9846	19.76303
fedx105 Right Arm - fat mass (g): DXA: F11	40.58	2298.79	524.1084	348.87219
fedx106 Right Arm - lean mass (g): DXA: F11	752.51	3015.44	1495.1899	284.69698
fedx107 Arms - bone mass (g): DXA: F11	62.51	355.65	164.5725	39.18643
fedx108 Arms - fat mass (g): DXA: F11	82.22	4962.35	1046.7084	701.76986
fedx109 Arms - lean mass (g): DXA: F11	1491.91	5945.42	2979.7774	567.32491
fedx110 Left Leg - bone mass (g): DXA: F11	128.81	674.63	307.3058	68.65799
fedx111 Left Leg - fat mass (g): DXA: F11	329.82	9792.71	2583.9270	1337.62460
fedx112 Left Leg - lean mass (g): DXA: F11	2821.22	10159.17	5216.4308	875.37837
fedx113 Right Leg - bone mass (g): DXA: F11	131.74	699.88	309.6277	68.71187
fedx114 Right Leg - fat mass (g): DXA: F11	343.34	9495.08	2583.3477	1336.17053
fedx115 Right Leg - lean mass (g): DXA: F11	2788.47	10185.95	5218.6124	881.19616
fedx116 Legs - bone mass (g): DXA: F11	260.55	1374.51	616.9335	136.98595
fedx117 Legs - fat mass (g): DXA: F11	673.16	19287.79	5167.2747	2672.47566
fedx118 Legs - lean mass (g): DXA: F11	5651.49	20345.12	10435.0432	1750.39072
fedx119 Left Trunk - bone mass (g): DXA: F11	89.10	578.42	216.5485	56.90049
fedx120 Left Trunk - fat mass (g): DXA: F11	293.96	11835.31	2524.9677	1720.60735
fedx121 Left Trunk - lean mass (g): DXA: F11	4034.54	12361.93	6772.1174	1053.94810
fedx122 Right Trunk - bone mass (g): DXA: F11	87.91	589.04	216.7735	57.31421
fedx123 Right Trunk - fat mass (g): DXA: F11	268.91	11673.36	2479.0376	1705.64718
fedx124 Right Trunk - lean mass (g): DXA: F11	3867.40	12382.29	6622.7538	1038.66303
fedx125 Trunk - bone mass (g): DXA: F11	177.01	1159.55	433.3220	113.08397
fedx126 Trunk - fat mass (g): DXA: F11	562.87	23508.66	5004.0053	3423.86321
fedx127 Trunk - lean mass (g): DXA: F11	7908.88	24744.21	13394.8712	2070.99834
fedx128 Total Left - bone mass (g): DXA: F11	389.49	1607.52	776.9953	152.79514
fedx129 Total Left - fat mass (g): DXA: F11	797.90	23797.70	5901.9103	3439.87538
fedx130 Total Left- lean mass (g): DXA: F11	8895.85	27208.52	14939.4340	2230.33688
fedx131 Total Right - bone mass (g): DXA: F11	342.51	1566.30	781.8051	153.19080
fedx132 Total Right - fat mass (g): DXA: F11	745.43	23520.98	5860.7553	3418.04740
fedx133 Total Right - lean mass (g): DXA: F11	8876.37	27918.00	14828.0391	2232.15497
fedx134 Total Body - bone mass (g): DXA: F11	732.00	3173.82	1558.8004	300.35583
fedx135 Total Body - fat mass (g): DXA: F11	1543.33	47318.68	11762.6657	6855.81639
fedx136 Total Body - lean mass (g): DXA: F11	18104.34	55126.52	29767.4731	4424.58069

### Descriptive Statistics n=7000

		Min	Max	M	SD
fedx201 Head - BMD (g/cm2): DXA: F11		1.114	2.632	1.63445	.160268
fedx202 Head - BMC (g): DXA: F11		202.63	578.18	343.9724	43.26397
fedx203 Head - area (cm2): DXA: F11		157.48	305.12	210.2633	13.97424
fedx204 Arms - BMD (g/cm2): DXA: F11		.519	.975	.69091	.047486
fedx205 Arms - BMC (g): DXA: F11		62.51	355.65	164.5725	39.18643
fedx206 Arms - area (cm2): DXA: F11		117.80	423.66	236.1841	43.31444
fedx207 Legs - BMD (g/cm2): DXA: F11		.699	1.461	1.01089	.097999
fedx208 Legs - BMC (g): DXA: F11		260.55	1374.51	616.9335	136.98595
fedx209 Legs - area (cm2): DXA: F11		364.58	1016.81	604.3694	84.95573
fedx210 Trunk - BMD (g/cm2): DXA: F11		.569	1.083	.74567	.061066
fedx211 Trunk - BMC (g): DXA: F11		177.01	1159.55	433.3220	113.08397
fedx212 Trunk - area (cm2): DXA: F11		305.51	1209.07	574.2323	105.05954
fedx213 Ribs - BMD (g/cm2): DXA: F11		.468	.806	.58457	.037701
fedx214 Ribs - BMC (g): DXA: F11		44.42	499.46	144.7926	43.93216
fedx215 Ribs - area (cm2): DXA: F11		94.95	670.77	245.3778	61.81538
fedx216 Pelvis - BMD (g/cm2): DXA: F11		.650	1.440	.91986	.098553
fedx217 Pelvis - BMC (g): DXA: F11		72.00	443.18	172.3062	44.56289
fedx218 Pelvis - area (cm2): DXA: F11		105.72	345.64	184.9131	29.92098
fedx219 Spine - BMD (g/cm2): DXA: F11		.552	1.551	.79809	.100486
fedx220 Spine - BMC (g): DXA: F11		39.60	310.94	116.2232	30.17034
fedx221 Spine - area (cm2): DXA: F11		71.79	261.25	143.9414	22.67290
fedx222 Total - BMD (g/cm2): DXA: F11		.721	1.323	.95312	.062776
fedx223 Total - BMC (g): DXA: F11		732.00	3173.82	1558.8004	300.35583
fedx224 Total - area (cm2): DXA: F11		996.24	2608.39	1625.0490	224.08808
fedx225 DV: Total body BMC adjusted for area (g): DXA: F11		1273.14	2165.31	1558.9423	75.36076
fedx226 DV: Total body less head - BMD (g/cm2): DXA: F11		.62	1.20	.8501	.06796
fedx227 DV: Total body less head - BMC (g): DXA: F11		500.07	2676.96	1214.8280	278.19376
fedx228 DV: Total body less head - area (cm2): DXA: F11		790.68	2364.03	1414.7857	220.74369
fedx229 DV: Total body less head - BMC adjusted for area (g): DXA: F11		982.23	1676.79	1214.9710	59.65141

### Descriptive Statistics n=6105

		Min	Max	M	SD
fedx241 DV: Change total body less head - BMD (g/cm2): DXA: F11/F@9		.88	1.32	1.0936	.03944
fedx242 DV: Change total body less head - BMC (g): DXA: F11/F@9		.84	2.06	1.3645	.13978
fedx243 DV: Change total body less head - area (cm2): DXA: F11/F@9		.95	1.70	1.2454	.09006

### fedx305 Reanalysed spine group F11

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1 A	3640	50.9	52.1	52.1
	2 B	2112	29.5	30.2	82.3
	3 C	1121	15.7	16.0	98.3
	4 D	118	1.6	1.7	100.0
	Total	6991	97.7	100.0	
Missing	-9 Did not do measures	28	.4		
	-3 Spine artefact	9	.1		
	-2 Scan not attempted	74	1.0		
	-1 No valid scan data	51	.7		
	Total	162	2.3		
Total		7153	100.0		

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	S.D.
fedx306 DV: Reanalysed spine - BMAD (g/cm3): DXA: F11	6991	0.06	0.14	0.08	0.01
fedx401 Spine L1 - BMD (g/cm2): DXA: F11	193	0.563	1.225	0.80	0.12
fedx402 Spine L1 - BMC (g): DXA: F11	193	0.96	14.55	6.57	1.93
fedx403 Spine L1 - area (cm2): DXA: F11	193	1.38	11.92	8.12	1.61
fedx404 Spine L2 - BMD (g/cm2): DXA: F11	201	0.530	1.278	0.84	0.12
fedx405 Spine L2 - BMC (g): DXA: F11	201	3.74	16.99	7.73	1.99
fedx406 Spine L2 - area (cm2): DXA: F11	201	6.33	13.72	9.15	1.31
fedx407 Spine L3 - BMD (g/cm2): DXA: F11	201	0.606	1.214	0.87	0.12
fedx408 Spine L3 - BMC (g): DXA: F11	201	4.86	17.87	8.85	2.13
fedx409 Spine L3 - area (cm2): DXA: F11	201	6.79	17.16	10.06	1.57
fedx410 Spine L4 - BMD (g/cm2): DXA: F11	201	0.577	1.151	0.85	0.12
fedx411 Spine L4 - BMC (g): DXA: F11	201	4.82	32.31	10.08	3.03
fedx412 Spine L4 - area (cm2): DXA: F11	201	7.19	31.07	11.82	2.60
fedx413 Spine L1:L2 - BMD (g/cm2): DXA: F11	193	0.578	1.253	0.82	0.11
fedx414 Spine L1:L2 - BMC (g): DXA: F11	193	6.02	31.54	14.36	3.78
fedx415 Spine L1:L2 - area (cm2): DXA: F11	193	8.64	25.17	17.30	2.70
fedx416 Spine L1:L3 - BMD (g/cm2): DXA: F11	193	0.588	1.228	0.84	0.11
fedx417 Spine L1:L3 - BMC (g): DXA: F11	193	11.67	49.40	23.27	5.82
fedx418 Spine L1:L3 - area (cm2): DXA: F11	193	16.58	41.75	27.39	4.08
fedx419 Spine L1:L4 - BMD (g/cm2): DXA: F11	193	0.593	1.191	0.84	0.11
fedx420 Spine L1:L4 - BMC (g): DXA: F11	193	17.57	72.02	33.36	8.53
fedx421 Spine L1:L4 - area (cm2): DXA: F11	193	24.92	65.85	39.21	6.14
fedx422 Spine L2:L3 - BMD (g/cm2): DXA: F11	201	0.574	1.229	0.86	0.11
fedx423 Spine L2:L3 - BMC (g): DXA: F11	201	8.61	34.85	16.58	4.08
fedx424 Spine L2:L3 - area (cm2): DXA: F11	201	13.11	30.88	19.21	2.81
fedx425 Spine L2:L4 - BMD (g/cm2): DXA: F11	201	0.596	1.183	0.85	0.11
fedx426 Spine L2:L4 - BMC (g): DXA: F11	201	13.95	58.93	26.66	6.77
fedx427 Spine L2:L4 - area (cm2): DXA: F11	201	20.48	54.65	31.02	4.87
fedx428 Spine L3:L4 - BMD (g/cm2): DXA: F11	201	0.605	1.178	0.86	0.11
fedx429 Spine L3:L4 - BMC (g): DXA: F11	201	9.76	45.88	18.93	4.90
fedx430 Spine L3:L4 - area (cm2): DXA: F11	201	14.15	42.83	21.87	3.74

**fems045 Measures - Comment: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0 Not commented	7085	99.0	99.5	99.5
	1 Difficulty standing	9	.1	.1	99.6
	2 Would not fully undress	7	.1	.1	99.7
	3 Uncooperative/upset	5	.1	.1	99.8
	4 Nervous/shy/anxious	6	.1	.1	99.8
	5 Doctors aware of scoliosis	11	.2	.2	100.0
Missing	Total	7123	99.6	100.0	
	-9 Did not do measures	30	.4		
Total		7153	100.0		

**fems060 DXA code: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Would not cooperate	1	.0	2.6	2.6
	12 Not done/unable to do	8	.1	21.1	23.7
	17 Child refused	28	.4	73.7	97.4
	20 Part scan and whole scan done	1	.0	2.6	100.0
	Total	38	.5	100.0	
	-9 Did not do measures	30	.4		
Missing	-1 Missing	7085	99.0		
	Total	7115	99.5		
Total		7153	100.0		

**fems061 DXA Spine code: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	2 Shy - would not be measured	1	.0	16.7	16.7
	4 Measured partly clothed	1	.0	16.7	33.3
	12 Not done/unable to do	2	.0	33.3	66.7
	16 Not done, no time	2	.0	33.3	100.0
	Total	6	.1	100.0	
	-9 Did not do measures	30	.4		
Missing	-1 Missing	7117	99.5		
	Total	7147	99.9		
Total		7153	100.0		

**fems065 DXA - Comment: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0 Not commented	7092	99.1	99.6	99.6
	1 Moved during scan	5	.1	.1	99.6
	2 Parent refused/unhappy about scan	6	.1	.1	99.7
	3 Jewellery/watch on during scan	12	.2	.2	99.9
	4 Problems with equipment	3	.0	.0	99.9
	5 Ch refused scan	5	.1	.1	100.0
Missing	Total	7123	99.6	100.0	
	-9 Did not do measures	30	.4		
Total		7153	100.0		

### 3.1.6 2D:4D Ratio

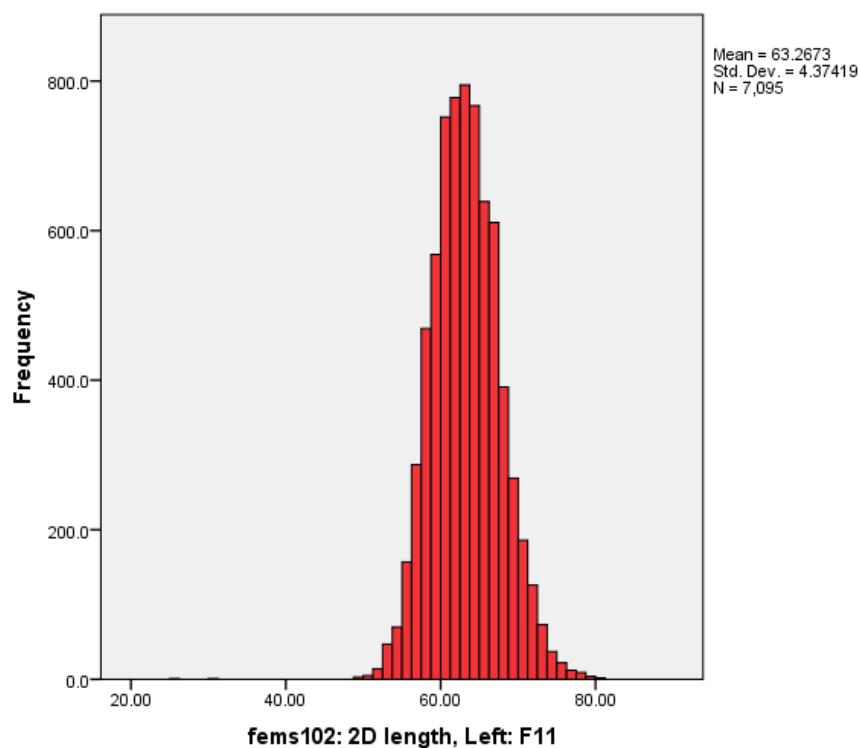
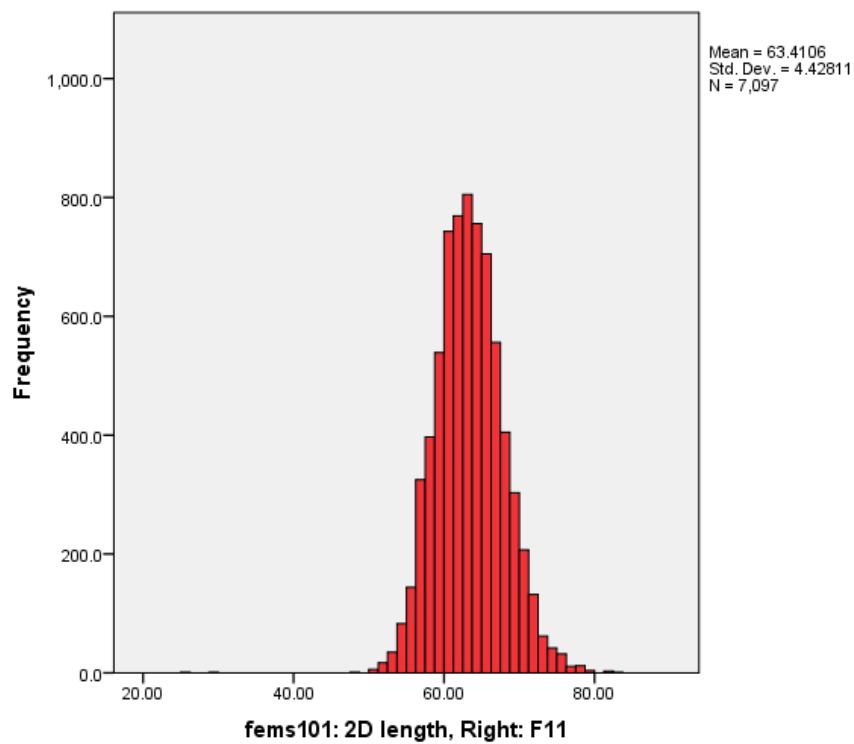
Photocopies of the child's hands were taken in order to measure the length of the second and fourth digits. The child was asked to remove any rings they may have been wearing.

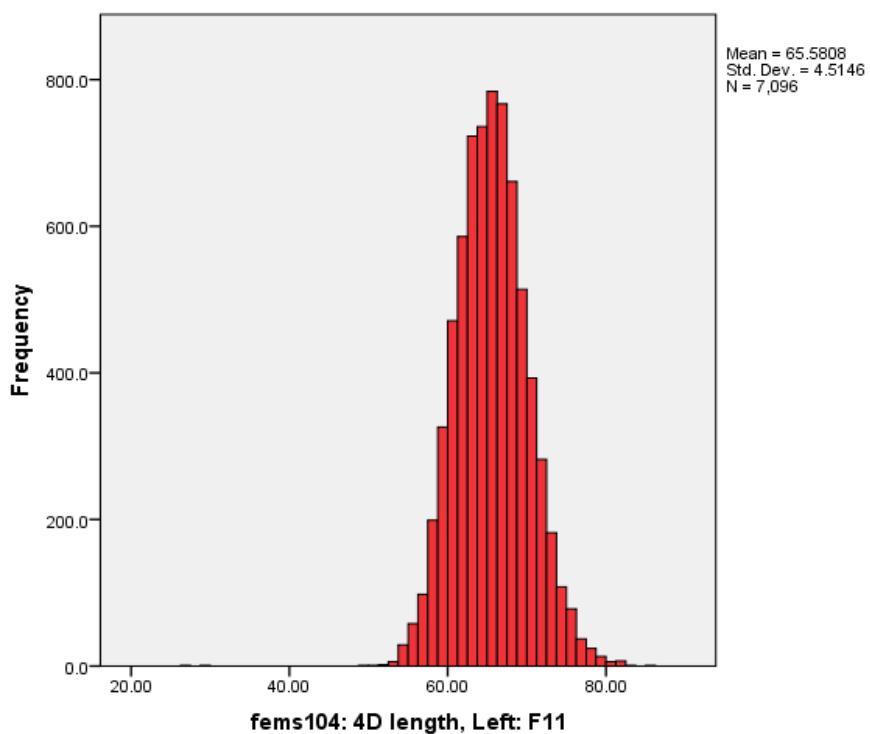
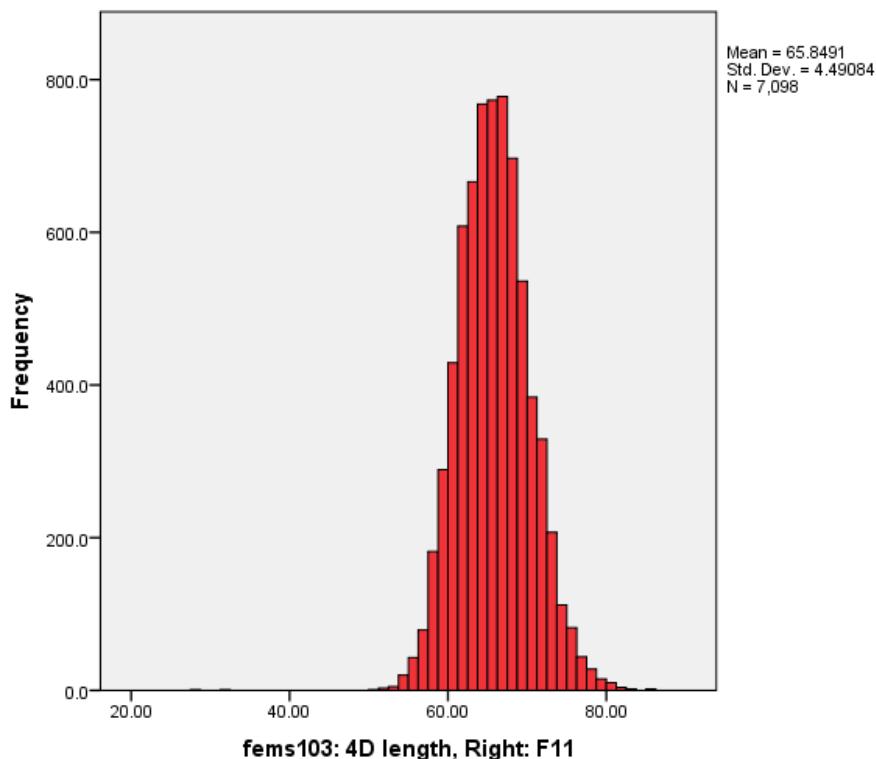
The tester placed the ventral surface of both hands flat onto the photocopier, ensuring that the fingers were apart and the palms were pressed down firmly onto the glass. Two photocopies were collected and one was given to the child to take home with them. The other copy was attached to the datasheet.

The tester placed the photocopy on a flat surface and measured the lengths of the 2nd and 4th digits for each hand accurate to 0.01mm using the "Mahr digital caliper16 EX". Each finger has a crease at its base. The index finger (2D) probably has one crease, the ring finger (4D) probably three or four. The tester chose crease proximal to the palm and by eye determined the mid-point of this crease and measured from that point to the distal tip of the finger and recorded the length for each digit on each hand.

fems100 Photocopy done for 2D:4D: F11

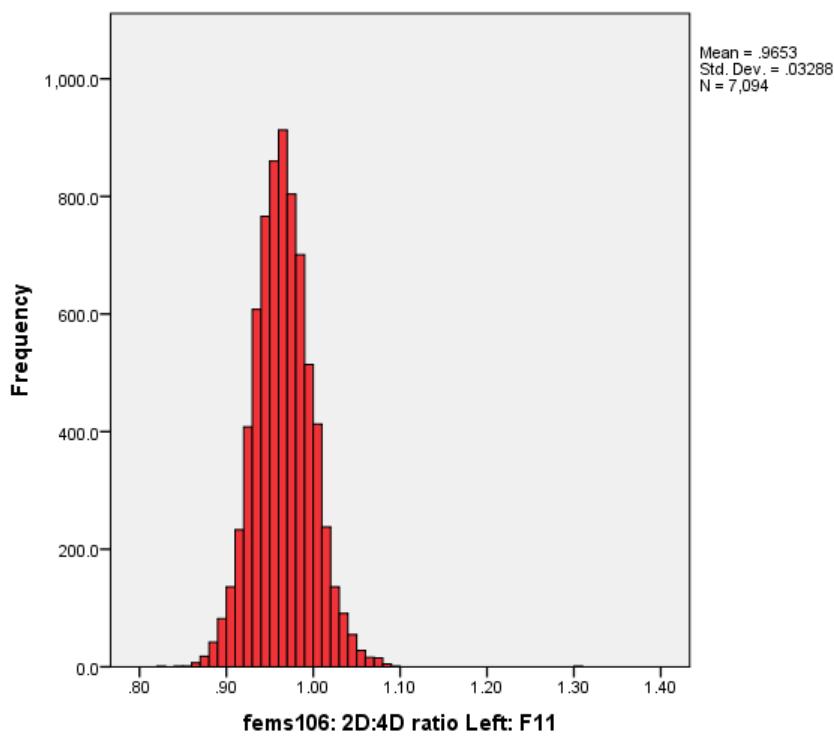
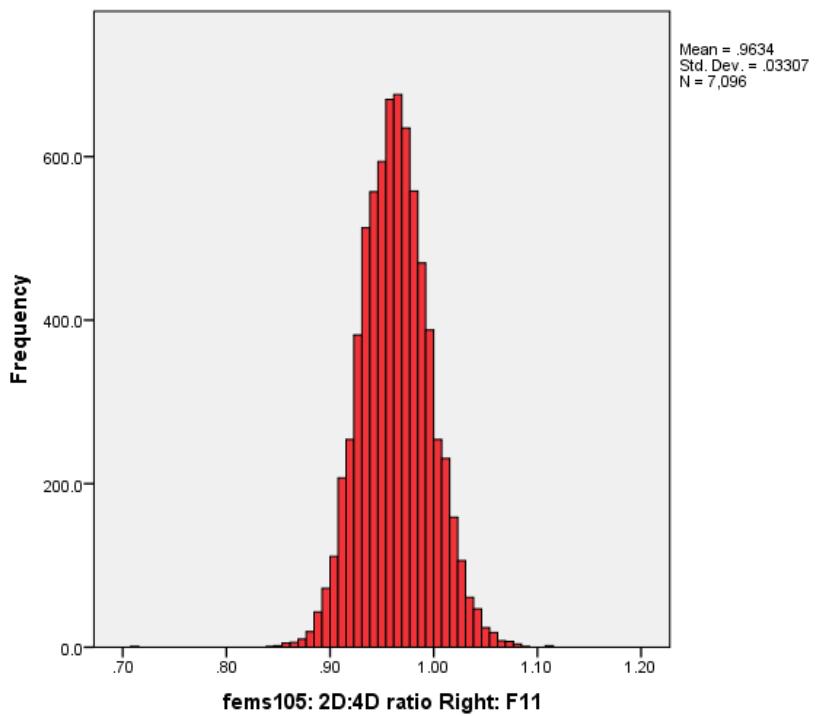
	Frequency	Percent	Valid Percent	Cum. %
Valid 1 Yes	7108	99.3	99.7	99.7
2 No	21	.3	.3	100.0
Total	7129	99.6	100.0	
Missing -9 Did not do	30	.4		
Total	7159	100.0		





The ratio of the length of the 2nd digit compared to the 4th was calculated for each hand as follows:

$$\text{fems105} = \text{fems101}/\text{fems103}, \text{fems106} = \text{fems102}/\text{fems104}$$



Any problems with this procedure were noted (*fems110*).

## Sebutape

Sebutape ® (CuDerm Corporation, Dallas, USA) is a combination of adhesive and micro-porous film. It acts as a passive collector of sebum and one is applied to the forehead of all compliant children for an hour during their visit. Ideally this was applied during the measures session or in reception but this was not always possible (see FEMS201).

**fems200 Sebutape done: F11**

	Frequency	Percent	Valid Percent	Cum. %
Valid 1 Yes	6988	97.6	97.6	97.6
2 No	171	2.4	2.4	100.0
Total	7159	100.0	100.0	

**fems201 Slot where Sebutape was applied**

	Frequency	Percent	Valid Percent	Cum. %
Valid 1	2448	34.2	35.0	35.0
2 Measures	4539	63.4	65.0	100.0
3 Samples	1	.0	.0	100.0
Total	6988	97.6	100.0	
Missing -2 Not	171	2.4		
Total	7159	100.0		

The measurer (or receptionist) explained to the child what was going to happen and obtained their consent. The central area of the forehead. (over and between the eyebrows) was wiped clean with a sterile swab and left to dry for a few minutes. The sebutape was then applied to the cleansed skin. It was smoothed so that the tape adhered closely to the skin surface by pressing very gently using as little pressure as possible.

The time of application was recorded on the visit record sheet and the child was given a stopwatch set for 60 minutes and asked to refrain from touching the patch and from having hot drinks or working up a sweat.

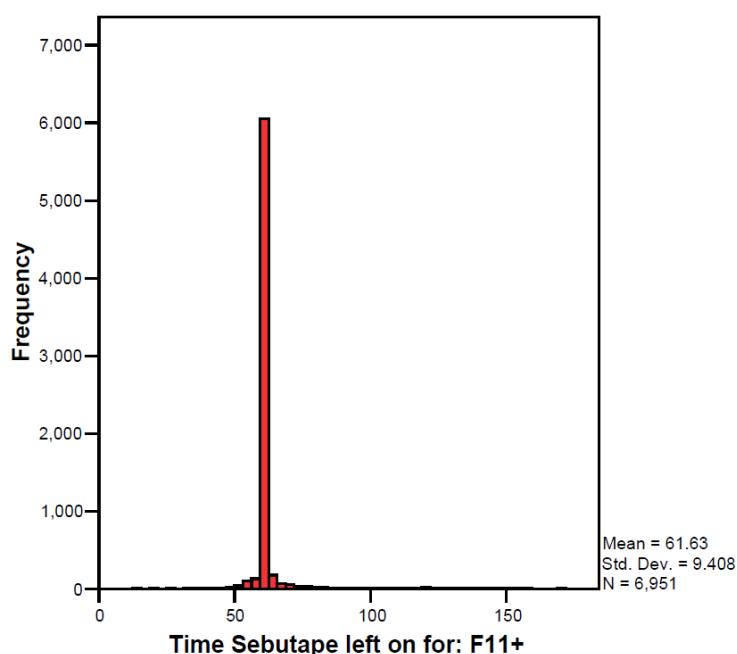
When the stopwatch went off, a member of staff removed the Sebutape by holding the black edges, it was then placed on the black part of the storage card with the side that was in contact with the skin facing down on to the black part of the card – this could occur in any session (FEMS202).

**fems202 Slot where Sebutape was removed**

		Frequency	Percent	Valid Percent	Cum Percent
Valid	1 Reception	3844	53.7	55.1	55.1
	2 Measures	78	1.1	1.1	56.2
	3 Samples	1195	16.7	17.1	73.4
	4 Friends & You	268	3.7	3.8	77.2
	5 Hearing	885	12.4	12.7	89.9
	7 Vision	705	9.8	10.1	100.0
	Total	6975	97.4	100.0	
	Missing -2 Not done	171	2.4		
Missing	-1 Missing	13	.2		
	Total	184	2.6		
	Total	7159	100.0		

Testers used their own judgement as to the most convenient time to remove the tape, to cause the least disruption to their session, though ideally the tape should have been in situ for a minimum of 55 minutes and a maximum of 65 minutes. When removed the tester recorded the time of removal on the visit record; a derived variable has been created, indicating the length of time that the tape was in place (FEMS205). All cards were returned to the measures room.

**FEMS205: Time Sebutape left on for: F11+**



### 3.2 Acne

Children were examined for acne as part of the measurements session and hence have the same tester (FEMS004) and were examined in the same room (FEMS006). Dr Giles Dunnill from the BRI, Bristol, advised and trained the staff.

Ideally, the children were examined dressed only in their underclothes after they had been weighed. If the child preferred some clothes could be put back on. The following sites on the body were examined:

- Face
- Chest
- Back and shoulders And in addition
- Other (e.g. upper arms, buttocks, thighs)
- The following elements of acne were recorded as being present (Few, Moderate, Many) or not on each of the 3 main sites:
- Seborrhea: Excessive secretion of sebum (oil)
- Open comedones: Blackheads
- Closed comedones: Whiteheads
- Red papules: Larger raised spots (no pus)
- Pustules: Spots filled with pus
- Nodules: Hardened lumps
- Fine superficial/atrophic macular scars
- Deep ice pick scars
- Hypertrophic scars
- Keloid (raised) scars
- Any pigmentary change in the skin (purple/brown) Summary variables have been created to indicate any presence.

**Table 3.2.1: Proportion of children with each acne variant present at each site**

	Face	Chest	Back/shoulders
Seborrhea	2314 (32.5%)	31 (0.4%)	57 (0.8%)
Open comedones	2076 (29.1%)	21 (0.3%)	49 (0.7%)
Closed comedones	2249 (31.5%)	31 (0.4%)	47 (0.7%)
Red papules	685 (9.6%)	29 (0.4%)	29 (0.4%)
Pustules	194 (2.7%)	3 (0.1%)	10 (0.1%)
Nodules	3 (0.1%)	-	1 (0.01%)
Fine/Superficial scars	1 (0.01%)	-	1 (0.01%)
Deep ice pick scars	1 (0.01%)	-	-
Keloid scars	-	-	-
Hypertrophic scars	-	-	-
Pigmentary change	3 (0.1%)	-	3 (0.1%)

\*Variables are named as follows

Face: FEAC021 to FEAC031; Chest: FEAC041 to FEAC051;

Back/shoulders: FEAC061 to FEAC071

If any acne variants were present on any of the three main sites the severity was recorded, according to the “Acne Grading Guide” (O’Brien et al, 1998) as trivial; mild; moderate or severe (FEAC032, FEAC052, FEAC072 for face, chest and back/shoulders respectively).

**feac032 Face acne - Severity Grade: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Trivial	2872	40.1	86.3	86.3
	2 Mild	403	5.6	12.1	98.4
	3 Moderate	51	.7	1.5	99.9
	4 Severe	2	.0	.1	100.0
	Total	3328	46.5	100.0	
Missing	-9 Did not do	29	.4		
	-2 Nothing	3801	53.1		
	-1 Missing	1	.0		
	Total	3831	53.5		
Total		7159	100.0		

**feac052 Chest acne - Severity Grade: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Trivial	33	.5	61.1	61.1
	2 Mild	20	.3	37.0	98.1
	3 Moderate	1	.0	1.9	100.0
	Total	54	.8	100.0	
Missing	-9 Did not do	29	.4		
	-2 Nothing	7071	98.8		
	-1 Missing	5	.1		
	Total	7105	99.2		
Total		7159	100.0		

**feac072 Back acne - Severity Grade: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Trivial	51	.7	56.7	56.7
	2 Mild	32	.4	35.6	92.2
	3 Moderate	7	.1	7.8	100.0
	Total	90	1.3	100.0	
Missing	-9 Did not do	29	.4		
	-2 Nothing	7036	98.3		
	-1 Missing	4	.1		
	Total	7069	98.7		
Total		7159	100.0		

Any acne was recorded if it was present on any of the other sites (FEAC080) and where:

**feac080 Acne on any other sites: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	69	1.0	1.0	1.0
	2 No	7061	98.6	99.0	100.0
	Total	7130	99.6	100.0	
Missing-9	Did not do	29	.4		
	Total	7159	100.0		

Upper arms (FEAC081); n=67

Buttocks (FEAC082); n=5

Thighs (FEAC083); n=6

Finally, the examiner recorded any presence of acne variants (FEAC090) in the form of:

- Excoriée: Picked and scratched lesions
- Fulminons: Ulceration/joint pains/fever
- Conglobata: Connecting nodules
- Sandpaper acne

**feac090 Any Acne Variants present: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	11	.2	.2	.2
	2 No	7119	99.4	99.8	100.0
	Total	7130	99.6	100.0	
Missing-9	Did not do	29	.4		
	Total	7159	100.0		

Excoriée (FEAC091); n=2

Fulminons (FEAC092); n=0

Conglobata (FEAC093); n=0

Sandpaper acne (FEAC094); n=9

### 3.3 Grip strength

Grip strength was assessed using the Jamar hand dynamometer, which measures isometric strength in kilograms. This task was initially performed in the vision session but was moved to the measures session on 03/03/03, consequently, tester (FEGS004) and room (FEGS006) are slightly different to that for the overall measures session and variables have been included specifically for this task.

**fegs001 Child started Grip Strength session: F11**

	Frequency	Percent	Valid Percent	Cum. %
Valid 1 Yes	6707	93.7	93.7	93.7
2 No	452	6.3	6.3	100.0
Total	7159	100.0	100.0	

**fegs001a Reason Child did not do Grip Strength: F11**

	Frequency	Percent	Valid Percent	Cum. %
Valid 0 No comment	32	.4	7.1	7.1
1 Hand/arm currently in plaster/broken	6	.1	1.3	8.4
2 Other current injury	4	.1	.9	9.3
3 Previous injury/problem	2	.0	.4	9.7
5 Missing digit/limb	2	.0	.4	10.2
6 Ran out of time	378	5.3	83.6	93.8
7 No equipment	13	.2	2.9	96.7
8 Problem with	8	.1	1.8	98.5
9 Child refused	2	.0	.4	98.9
11 Ch unable to do - other reason	5	.1	1.1	100.0
Total	452	6.3	100.0	
Missing -2 Grip strength	6707	93.7		
Total	7159	100.0		

**fegs004 Grip strength tester: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	2	235	3.3	3.5	3.5
	3	681	9.5	10.2	13.7
	4	679	9.5	10.1	23.8
	5	172	2.4	2.6	26.3
	6	299	4.2	4.5	30.8
	7	305	4.3	4.5	35.4
	8	198	2.8	3.0	38.3
	9	309	4.3	4.6	42.9
	10	672	9.4	10.0	52.9
	11	356	5.0	5.3	58.2
	12	1219	17.0	18.2	76.4
	13	562	7.9	8.4	84.8
	14	488	6.8	7.3	92.1
	15	188	2.6	2.8	94.9
	16	89	1.2	1.3	96.2
	17	80	1.1	1.2	97.4
	18	60	.8	.9	98.3
	19	114	1.6	1.7	100.0
	20	1	.0	.0	100.0
	Total	6707	93.7	100.0	
Missing	-9 Did not do Grip	452	6.3		
	Total	7159	100.0		

**fegs006 Room - Grip strength session: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Green	5145	71.9	76.7	76.7
	2 yellow	1562	21.8	23.3	100.0
	Total	6707	93.7	100.0	
Missing	-9 Did not do Grip	452	6.3		
	Total	7159	100.0		

The child sat in a chair with arms and back support and was asked to rest his/her forearms on the arms of the chair with their wrist just over the end of the arm of the chair. The wrist placed in a neutral position with the thumb facing upwards.

The tester demonstrated how to use the dynamometer to the child showing how gripping very tightly registered the best score. They explained to the child, that squeezing the dynamometer feels slightly strange as nothing actually moves. (The dynamometer registers the grip on the dial but the actual metal component of the machine doesn't move).

The child was given a practice squeeze of the dynamometer to ensure that it felt comfortable. Starting with the right hand, the hand was positioned so that the thumb was round one side of the handle and the four fingers were around the other side. It was important that the instrument felt comfortable for the child and the position of the handle was altered if necessary. The measurer rested the base of the dynamometer on the palm of the child's hand in order to support the weight of the dynamometer, whilst ensuring that the

movement of the machine was not restricted. The child was encouraged to squeeze as long and as tightly as possible or until the needle stopped rising. The higher the reading, the stronger the grip.

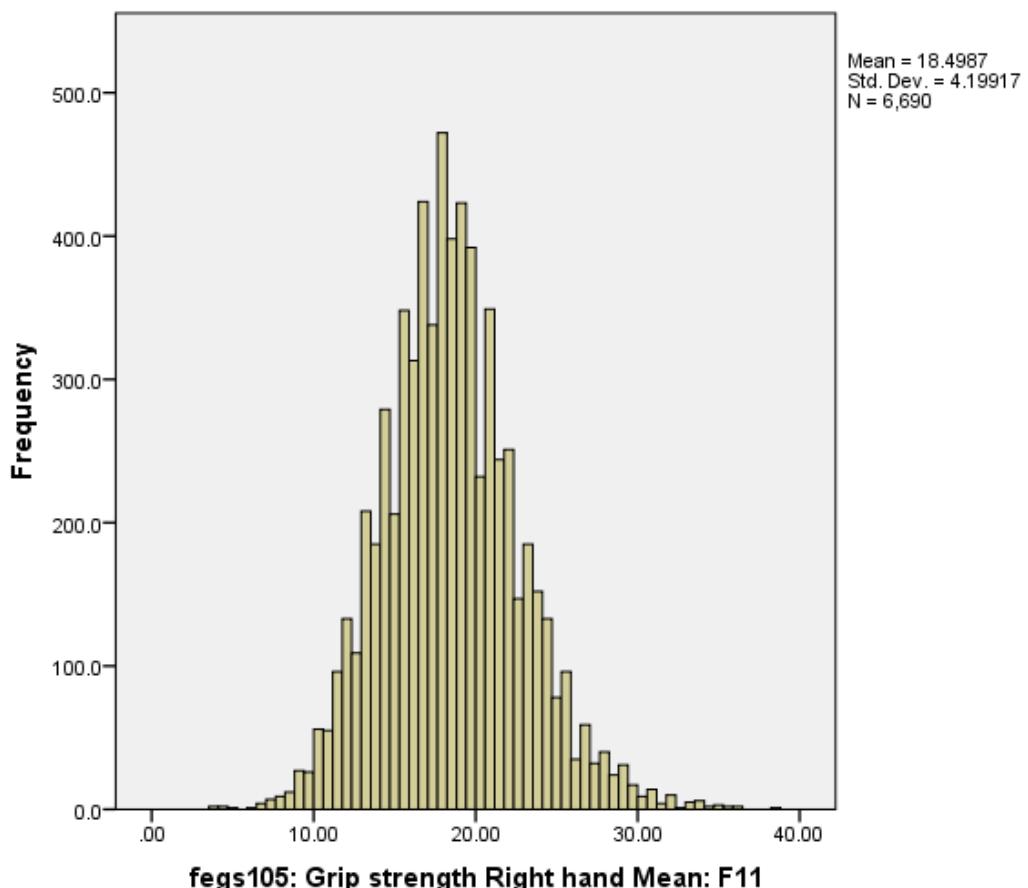
The child repeated the measurement with the left hand and two further measurements were taken with each hand, alternating sides to give three readings in total for each side. Derived variables have been computed indicating the mean value for each hand (FEGS105 and FEGS115 for left and right hands respectively).

The child was asked “*which hand do you mostly use to write with, right, left or both*”.

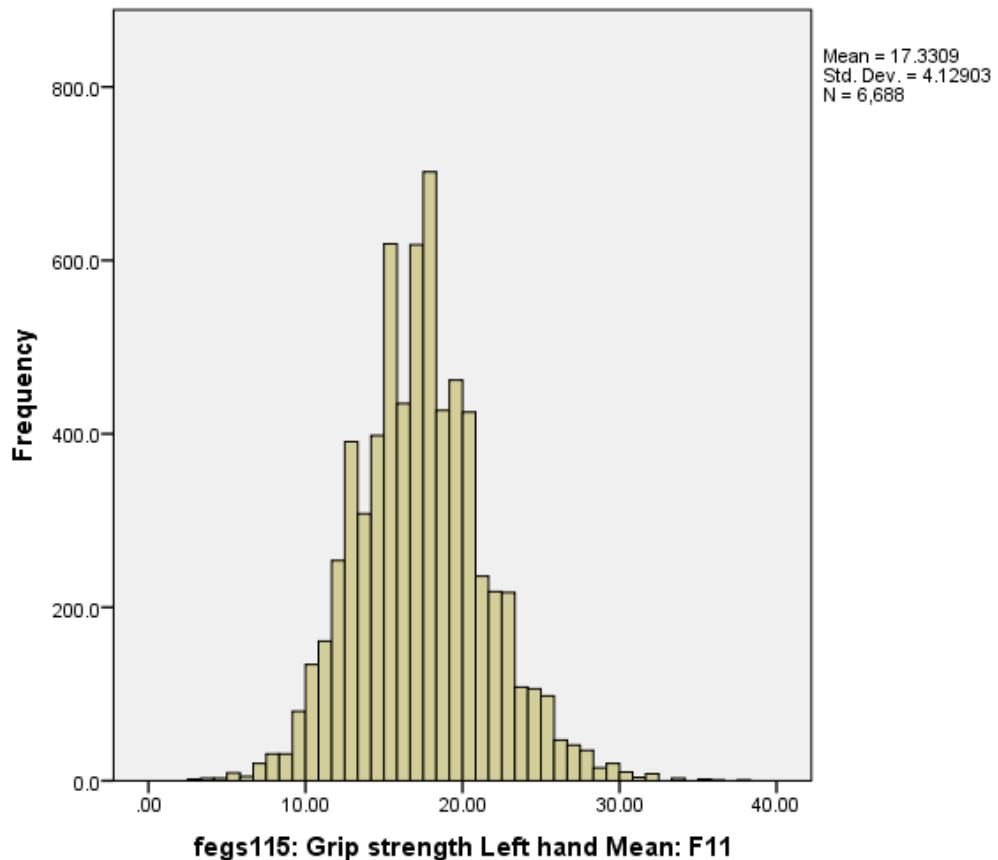
**fegs010 Hand Child normally writes with: Grip strength F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Right	5888	82.2	87.8	87.8
	2 left	806	11.3	12.0	99.8
	3 Both	12	.2	.2	100.0
	Total	6706	93.7	100.0	
Missing	-9 Did not do Grip	452	6.3		
	-1 Missing	1	.0		
	Total	453	6.3		
Total		7159	100.0		

Derived variable: The average right hand grip strength (fegs105) was calculated as the mean of the three right hand grip values (fegs100, fegs101 and fegs102):



Derived variable: The average left hand grip strength (fegs115) was calculated as the mean of the three left hand grip values (fegs110, fegs111 and fegs112):



### 3.4 Friends and You session

Please see Page 20 for more detailed information on this session.

**fefy001 Child Started Friends & You session: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	7121	99.5	99.5	99.5
	2 Yes, not	13	.2	.2	99.7
	3 No	25	.3	.3	100.0
	Total	7159	100.0	100.0	

**fefy001a Reason Child did not do Friends & You session: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 No staff	3	.0	.0	.0
	2 Ch left	15	.2	.2	.3
	4 Ch refused	5	.1	.1	.3
	8 Ch not	1	.0	.0	.3
	10 Did	7134	99.7	99.7	100.0
	Total	7158	100.0	100.0	
Missing	-1 Missing	1	.0		
	Total	7159	100.0		

#### 3.4.1 Attention

Research has strongly indicated that there are functionally and anatomically distinct attention systems, including a system for voluntarily maintaining attention in the absence of strong environmental facilitation and a system for selection. The importance of attentional control systems for the allocation of attention across different tasks simultaneously has also been recognised. A number of attention tasks, developed by Tom Manly and Ian Robertson at the MRC Applied Psychology Unit in Cambridge, UK and Vicki Anderson at the University of Melbourne in Australia, have been designed to show normal variation within a normal population and to distinguish children with attention problems from those without. The tasks of theirs used here, taken from the TEACH, the Tests of Everyday Attention for Children (adapted from the adult version by Robertson, 1996) reflect different aspects of attention and appear to measure selective attention, the ability to divide attention between two tasks and attentional control.

This test was a repeat of that performed at Focus@8. At the beginning of the session, the psychologist noted whether the child was accompanied by an adult and the handedness of the child.

**feat001 Attention session started: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	7130	99.6	99.9	99.9
	2 No	5	.1	.1	100.0
	Total	7135	99.7	100.0	
Missing	-9 Did not do F&Y	24	.3		
	Total	7159	100.0		

**feat001a Attention session - reason not started: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	3 No time	3	.0	60.0	60.0
	5 Other reason	2	.0	40.0	100.0
	Total	5	.1	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-1 Missing	7130	99.6		
	Total	7154	99.9		
Total		7159	100.0		

**feat010 Attention session - Adult accompanied Ch: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 No	7110	99.3	99.8	99.8
	2 Y, Child request	9	.1	.1	100.0
	3 Y, adult request	1	.0	.0	100.0
	5 Y, staff request	1	.0	.0	100.0
	Total	7121	99.5	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Task not started	5	.1		
	-1 Missing	9	.1		
	Total	38	.5		
Total		7159	100.0		

**feat013 Attention session - Handedness: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Left	826	11.5	11.6	11.6
	2 Right	6293	87.9	88.4	100.0
	Total	7119	99.4	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Task not started	5	.1		
	-1 Missing	11	.2		
	Total	40	.6		
Total		7159	100.0		

## Selective Attention and Motor Control: Sky Search

### *Description of tasks*

This task examines the child's efficiency in filtering information and rejecting irrelevant/distracting information. The child has to circle pairs of identical spaceships from an array of non-identical and identical spaceships as quickly as possible, whilst trying to avoid missing any sets of spaceships out, or making any errors.

### *Selective Attention*

The child was introduced to the task as "playing some outer space games". The tester explained that there were lots of spaceships which always travelled around in pairs, and that in some pairs the two spaceships are identical and in some pairs the two spaceships are

different. The tester illustrated the former by circling a pair where they were identical, roughly and quickly. The child was first asked to work through a practise sheet and circle the identical pairs as quickly as possible but not missing any out. The child was asked to tick a box on the sheet to indicate that he/she had circled all the identical pairs he/she could find. Errors during the practice were gone through with the child. After the practise, a larger sheet was presented to the child containing more pairs of spaceships (twenty of which were identical), and the child was asked to do the same. The time taken was recorded in seconds.

**feat020 Att Sky Search Started: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	7122	99.5	99.9	99.9
	2 No	1	.0	.0	99.9
	3 Partly	7	.1	.1	100.0
	Total	7130	99.6	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Task not started	5	.1		
	Total	29	.4		
Total		7159	100.0		

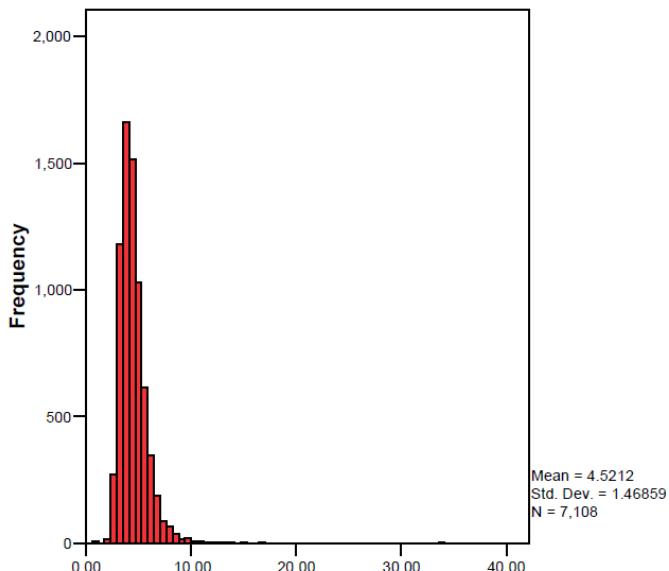
### *Motor Task*

The above task for selective attention was repeated but with the non-identical pairs of spaceships removed, such that only twenty identical pairs remained (but in a different array from the first sheet). The aim of this task was to identify how quickly the child was at this motor task so that motor performance could be controlled for.

Variables for selective attention and motor control

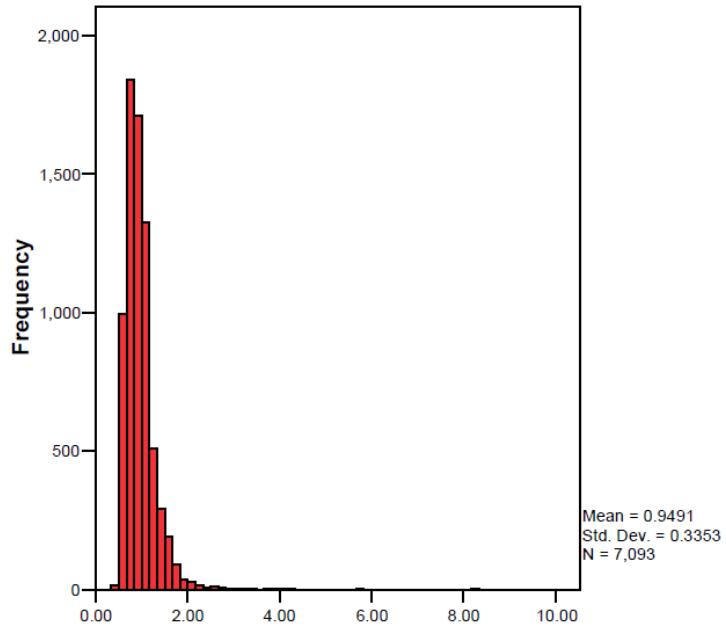
The selective attention task's main score FEAT060, before adjusting for motor speed, according to the TEACH was calculated as the time taken (in secs) for the Sky Search task (FEAT025) divided by the number of spaceship pairs correctly circled (20, minus the total number of pairs missed out, FEAT037), that is the average time taken to find each pair.

**FEAT060: Att Sky Search - Unadjusted Main Score: F11+**



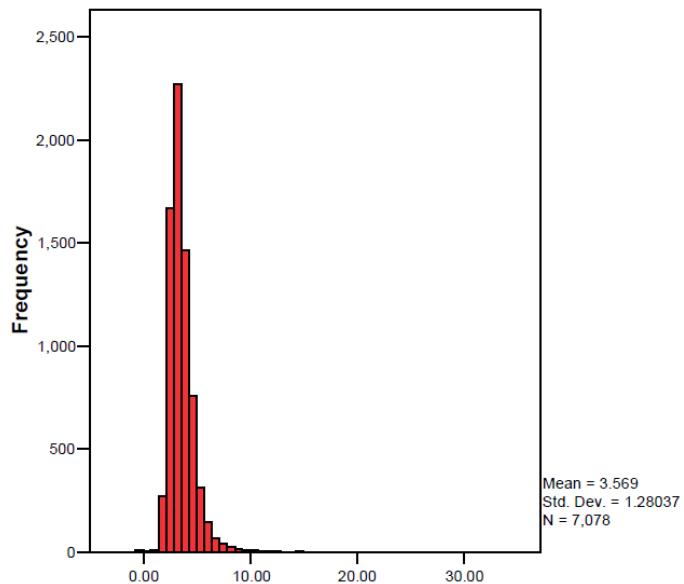
The motor score, FEAT061 is calculated as the time taken (in secs) for the motor task (FEAT041) divided by the number of pairs of spaceships correctly circled (20 minus FEAT045): average time to find each pair.

**FEAT061: Att Sky Search - Motor Score: F11+**



The final selective attention score is FEAT062, calculated as the first score, FEAT060, minus the motor score, FEAT061, thus adjusting for motor speed.

**FEAT062: Att Sky Search - Adjusted Main Score: F11+**



**For those researchers not familiar with attention tasks, it is recommended that you use this final score, FEAT062 as the only selective attention score.**

A normative score, FEAT065, has also been created, as per the manual instructions, however, this should be used with extreme caution as the original sample used by the authors to create the normative scores was small (~100 cases of relevant age). The children are divided into percentile bands based on the main score (represented in the labels of FEAT065) and the values represent age-scale scores.

feat065 Att Sky Search - Normative Score: F11

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 <0.2	45	.6	.6	.6
	2 0.2-0.6	41	.6	.6	1.2
	3 0.6-1.5	78	1.1	1.1	2.3
	4 1.5-3.3	74	1.0	1.0	3.3
	5 3.3-6.7	163	2.3	2.3	5.6
	6 6.7-12.2	709	9.9	9.9	15.6
	8 20.2-30.9	2010	28.1	28.2	43.8
	10 43.4-56.6	3070	42.9	43.1	86.8
	11 56.6-69.2	3	.0	.0	86.9
	12 69.2-79.8	1	.0	.0	86.9
	13 79.8-87.8	862	12.0	12.1	99.0
	16 96.7-98.5	1	.0	.0	99.0
	17 98.5-99.4	73	1.0	1.0	100.0
	Total	7130	99.6	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Task not started	5	.1		
	Total	29	.4		
	Total	7159	100.0		

Other variables which may be of interest include the number of non-identical spaceships that were incorrectly circled by the child (FEAT036), which would have added time to the child's task; whether the child kept going back to check whether they had failed to circle any of the identical pairs once they had reached the end of the sheet but before ticking the box to acknowledge that the task was over (some children spent almost as much time again checking the task as circling the spaceships in the first place): FEAT031; and the strategy that the child used to search for the identical spaceships - FEAT030 - the 'normal' strategy was to scan amongst the pairs methodically, either vertically or horizontally; 'random' meant that the child had not used such an apparent strategy and had appeared to search for identical pairs randomly (often resulting in many identical pairs being missed out); 'random/normal' meant that the child had started off with an apparently normal strategy and had then changed to a random strategy, or vice versa); 'other' meant that the child had used a different, but not as random as 'random', strategy, for example, scanning using a pattern. Some children were still confused by the main task (FEAT023) even after clear instruction, practice (problems with practice: FEAT022), and re-explanation.

## Dividing Attention: Dual Task

### Description of task

The selective attention task was repeated, but this time, the child also had to count the number of spaceship noises played together in series of differing lengths throughout the task. This task was also preceded by a practice attempt, and difficulties with the procedure discussed with the child. As before, emphasis was put on the speed of circling all the identical pairs of spaceships, without missing any out, but this time also telling the tester how many spaceship sounds he or she had heard at the end of each sequence of noises. The time taken to complete the task was recorded, as was the number of identical pairs missed out (or incorrectly circled) and the response to each of the attempts at counting.

feat100 Att Dual Task Started: F11

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	7053	98.5	98.9	98.9
	2 No	69	1.0	1.0	99.9
	3 Partly	7	.1	.1	100.0
	Total	7129	99.6	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Task not started	5	.1		
	-1 Missing	1	.0		
	Total	30	.4		
Total		7159	100.0		

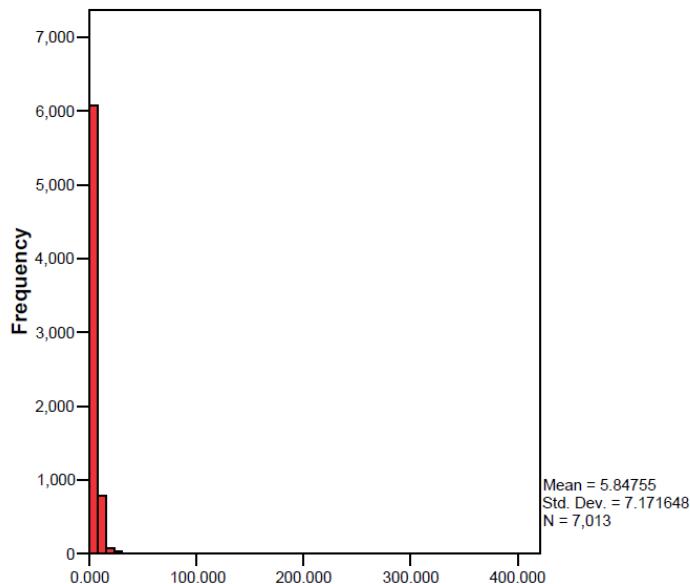
feat100a Att Dual Task - Reason not Started: F11

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Cognitive	21	.3	25.9	25.9
	2	8	.1	9.9	35.8
	3 Physical	6	.1	7.4	43.2
	5 Organisational	46	.6	56.8	100.0
Total		81	1.1	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Task not started	7053	98.5		
	-1 Missing	1	.0		
	Total	7078	98.9		
Total		7159	100.0		

### Variables for dual task

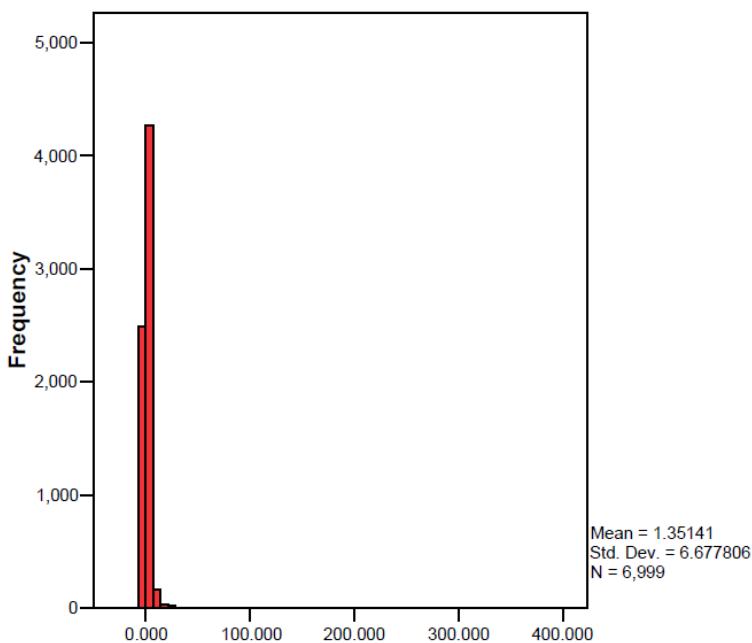
The dual task score, FEAT146 was calculated as the time taken for the task (FEAT145), divided by the number of correctly identified pairs of spaceships circled (20 minus FEAT155), and then weighting this score according to the child's performance with the counting part of the task, by dividing this score by FEAT133, which was calculated by working out the number of series of spaceship noises the child counted correctly (FEAT136, although if he or she did not score any correctly, a score of 1 was given) divided by the number of series he or she heard before completing the task (FEAT137).

#### FEAT146: Att Dual Task - Score: F11+



The dual task decrement score, FEAT147 was calculated by taking the selective attention task's score prior to adjusting for motor performance, FEAT060 from the score created from the dual task score itself, FEAT146, and so adjusting for the increased decrement in score to the selective attention task when a further task (counting the spaceship noises on the tape) was added.

#### FEAT147: Att Dual Task - Decrement Score: F11+



A normative score, FEAT148, has also been created, as per the manual instructions, however, this should be used with extreme caution as the original sample used by the authors to create the normative scores was small (~100 cases of relevant age). The children are divided into percentile bands based on the main score (represented in the labels of FEAT148) and the values represent age-scale scores.

feat148 Att Dual Task - Normative Score: F11

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 <0.2	252	3.5	3.6	3.6
	2 0.2-0.6	86	1.2	1.2	4.8
	3 0.6-1.5	104	1.5	1.5	6.3
	4 1.5-3.3	238	3.3	3.4	9.7
	5 3.3-6.7	201	2.8	2.9	12.6
	6 6.7-12.2	494	6.9	7.1	19.6
	7 12.2-20.2	1025	14.3	14.6	34.3
	8 20.2-30.9	1975	27.6	28.2	62.5
	9 30.9-43.4	1318	18.4	18.8	81.3
	10 43.4-56.6	934	13.0	13.3	94.7
	11 56.6-69.2	202	2.8	2.9	97.6
	12 69.2-79.8	116	1.6	1.7	99.2
	13 79.8-87.8	24	.3	.3	99.6
	14 87.8-93.3	6	.1	.1	99.7
	15 93.3-96.7	2	.0	.0	99.7
	16 96.7-98.5	5	.1	.1	99.8
	17 98.5-99.4	3	.0	.0	99.8
	18 99.99.8	4	.1	.1	99.9
	19 >99.8	10	.1	.1	100.0
	Total	6999	97.8	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Task not started	74	1.0		
	-1 Missing	62	.9		
	Total	160	2.2		
	Total	7159	100.0		

For researchers not familiar with attention tasks, it is recommended that only the main dual attention task score (FEAT147) be used.

Other variables which may be of interest include the number of non-identical spaceships that were incorrectly circled by the child (FEAT154), which would have added time to the child's task, whether the child kept going back to check whether he or she had failed to circle any of the identical pairs once he or she had reached the end of the sheet but before ticking the box to acknowledge that the task was over (some children spent almost as much time again checking the task as circling the spaceships in the first place): FEAT143, the strategy that the child used to search for the identical spaceships (FEAT142) and if the child was unable or unwilling to perform two tasks at once, and only circled the spaceships during the breaks between having to count the noises (FEAT144). Again, as with the selective attention task, some children were still confused by the main dual task (FEAT141) even after clear instruction, practice (problems with practice: FEAT140) and re-explanation.

## Attentional control: Opposite Worlds

### Description of task

The opposite worlds subtask from the TEACH, is a basic kind of Stroop task, where the child is required to give a verbal response that contradicts the visual information he or she is given. The child is shown a trail made up of the numbers 1 and 2 (with 24 numbers in total). In the 'same world' (control) condition, he or she must read the numbers out as they are, as quickly as possible (while the tester keeps his or her finger next to each in the trail until the child had read it correctly). In the 'opposite world' condition, the child has to inhibit a pre-potent (very familiar) response must call out 'two' when he or she reaches a 1 and 'one' when he or she reaches a 2 (and again, the tester keeps his or her finger by the number until the child has given the correct response). The child is given a demonstration of each condition and has a practice attempt at each before being reminded of the rules.

There are four test trials: a same world trial, followed by two opposite world trials and finishing with another same world trial.

feat200 Att Opp Worlds Task Started: F11

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	6819	95.3	95.6	95.6
	2 No	311	4.3	4.4	100.0
	Total	7130	99.6	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Task not started	5	.1		
	Total	29	.4		
Total		7159	100.0		

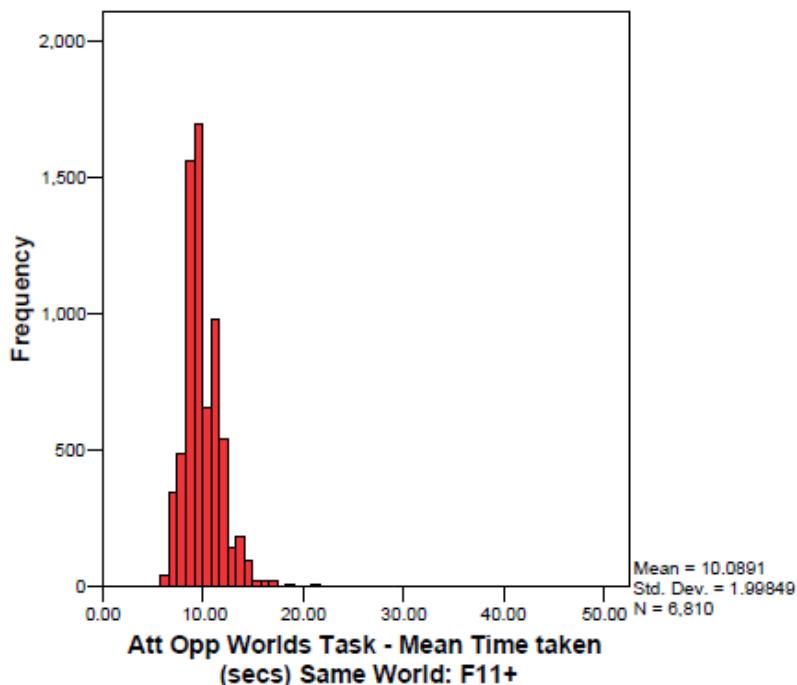
feat200a Att Opp Worlds - Reason not Started: F11

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Cognitive	11	.2	3.6	3.6
	2	15	.2	4.9	8.5
	3 Physical	5	.1	1.6	10.1
	4 Parental	1	.0	.3	10.4
	5 Organisational	275	3.8	89.6	100.0
	Total	307	4.3	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Task not started	6821	95.3		
	-1 Missing	7	.1		
	Total	6852	95.7		
Total		7159	100.0		

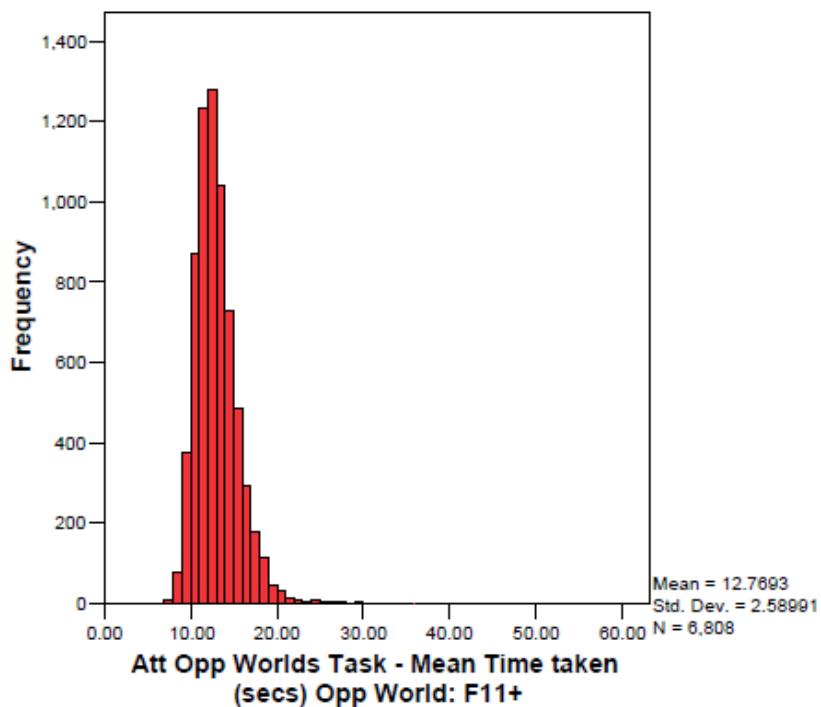
### Variables for attentional control

The mean time taken for the same world conditions is FEAT225, calculated from the same world trial times FEAT205 and FEAT220; the mean time taken for the opposite world condition is FEAT226, calculated from the opposite world trial times FEAT210 and FEAT215.

**FEAT225: Att Opp Worlds Task - Mean Time taken (secs) Same World: F11+**



**FEAT226: Att Opp Worlds Task - Mean Time taken (secs) Opp World: F11+**



Some researchers might also wish to use FEAT226, the mean time taken for opposite world trials, on its own.

Normative scores, FEAT228 and FEAT229, have also been created, as per the manual instructions, however, these should be used with extreme caution as the original sample used by the authors to create the normative scores was small (~100 cases of relevant age). The children are divided into percentile bands based on the main score (represented in the labels of FEAT228 and FEAT229) and the values represent age-scale scores.

**feat228 Att Opp Worlds Task - Normative score Same World: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 <0.2	3	.0	.0	.0
	2 0.2-0.6	3	.0	.0	.1
	7 12.2-20.2	1	.0	.0	.1
	8 20.2-30.9	2	.0	.0	.1
	9 30.9-43.4	3	.0	.0	.2
	10 43.4-56.6	5	.1	.1	.2
	11 56.6-69.2	4	.1	.1	.3
	12 69.2-79.8	9	.1	.1	.4
	13 79.8-87.8	22	.3	.3	.8
	14 87.8-93.3	16	.2	.2	1.0
	15 93.3-96.7	40	.6	.6	1.6
	16 96.7-98.5	50	.7	.7	2.3
	17 98.5-99.4	166	2.3	2.4	4.8
	18 99.99.8	126	1.8	1.9	6.6
	19 >99.8	6360	88.8	93.4	100.0
	Total	6810	95.1	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Task not started	316	4.4		
	-1 Missing	9	.1		
	Total	349	4.9		
	Total	7159	100.0		

**feat229 Att Opp Worlds Task - Normative score Opp World: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 <0.2	1	.0	.0	.0
	2 0.2-0.6	2	.0	.0	.0
	3 0.6-1.5	1	.0	.0	.1
	5 3.3-6.7	1	.0	.0	.1
	6 6.7-12.2	1	.0	.0	.1
	7 12.2-20.2	1	.0	.0	.1
	8 20.2-30.9	3	.0	.0	.1
	9 30.9-43.4	4	.1	.1	.2
	10 43.4-56.6	7	.1	.1	.3
	11 56.6-69.2	11	.2	.2	.5
	12 69.2-79.8	20	.3	.3	.8
	13 79.8-87.8	39	.5	.6	1.3
	14 87.8-93.3	70	1.0	1.0	2.4
	15 93.3-96.7	172	2.4	2.5	4.9
	16 96.7-98.5	228	3.2	3.3	8.2
	17 98.5-99.4	382	5.3	5.6	13.9
	18 99.99.8	599	8.4	8.8	22.6
	19 >99.8	5266	73.6	77.4	100.0
	Total	6808	95.1	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Task not started	316	4.4		
	-1 Missing	11	.2		
	Total	351	4.9		
	Total	7159	100.0		

Other variables for this subtask include whether the child had problems during the practice (FEAT201) and with the main (FEAT202) task, and whether child had difficulty following instructions (FEAT203).

### 3.4.2 Sensation Seeking

Sensation seeking has been defined as “the need for varied, novel and complex sensations and experienced and the willingness to take physical and social risks for the sake of such experiences” (Zuckerman, 1979) and has been applied in relation to potential risk behaviour. The Sensation Seeking questionnaire used at Focus 11+ was a modified version of Arnett’s Inventory of Sensation Seeking (AISS) (1994) used to assess risk taking behaviour in the children. This measure has been found to reliably measure both age and sex differences in sensation seeking. The original version of the AISS contains 20 questions, 11 of these were chosen for inclusion at Focus11+ and a further 9 questions designed by Dieter Wolke and Andrea Waylen were incorporated – these were more age appropriate than the original questions.

**fess001 Child Started Sensation Seeking interview: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	7028	98.2	98.5	98.5
	2 No	106	1.5	1.5	100.0
	Total	7134	99.7	100.0	
Missing	-9 Did not F&Y	25	.3		
	Total	7159	100.0		

**fess001a Reason Child did not do Sensation Seeking interview: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Cognitive	4	.1	5.4	5.4
	2	6	.1	8.1	13.5
	3 Physical	1	.0	1.4	14.9
	4 Parental	6	.1	8.1	23.0
	5 Organisational	57	.8	77.0	100.0
	Total	74	1.0	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview started	7028	98.2		
	-1 Missing	32	.4		
	Total	7085	99.0		
	Total	7159	100.0		

The interview was performed on a computer, the child was presented with a variety of behaviours – each appeared on the screen and was also spoken to the child via headphones. For each behaviour, the child was given four options to rate each statement, ‘Not like me at all’; ‘Not much like me’; ‘Quite like me’ and ‘Very like me’.

Table 3.4.2a overleaf shows the questions that were asked, provides the variable names and indicates which questions come from the original AISS (those marked \*).

**Table 3.4.2a**

Behaviour	Variable name
When the water is very cold, I prefer not to swim even if it is a hot day*	FESS020
When I listen to music I like it to be loud*	FESS021
I stay away from movies that are said to be frightening*	FESS022
I like to ride on the roller coaster and other fast rides*	FESS023
I would never gamble with money, even if I could afford it*	FESS024
I like a movie where there are lots of explosions and car chases *	FESS025
It would be interesting to see a car accident happen *	FESS026
I like the feeling of standing next to the edge on a high place and looking down *	FESS027
I think it would be exciting to be in a battle during a war *	FESS028
I think it's fun and exciting to perform or speak before a group *	FESS029
If it were possible to visit another planet or the moon for free, I'd be among the first to sign up *	FESS030
I enjoy playing exciting computer games	FESS031
I like using the diving boards when I go swimming	FESS032
I don't worry about coming home later than I'm supposed to	FESS033
I don't do my homework until the very last minute	FESS034
I am happy to go to new places or do new things on my own without friends or family	FESS035
My parents or carers would be worried if they knew about some of the things I do	FESS036
I always join in with what my friends are doing, even if I am not very sure about it	FESS037
When I ride a bike I go as fast as I can whenever possible	FESS038
I enjoy playing sports and activities which could be dangerous	FESS039

Table 3.4.2b overleaf provides the frequencies of responses for each question.

**Table 3.4.2b**

Variable name	Not like me at all	Not much like me	Quite like me	Very like me
FESS020*	2456 (35.0%)	2818 (40.1%)	1379 (19.6%)	371 (5.3%)
FESS021*	455 (6.5%)	1527 (21.7%)	2689 (38.3%)	2352 (33.5%)
FESS022*	2702 (38.5%)	2273 (32.4%)	1463 (20.8%)	583 (8.3%)
FESS023*	727 (10.4%)	935 (13.3%)	1566 (22.3%)	3783 (54.0%)
FESS024*	1090 (15.6%)	1554 (22.2%)	1724 (24.6%)	2640 (37.7%)
FESS025*	807 (11.5%)	1671 (23.9%)	1910 (27.3%)	2613 (37.3%)
FESS026*	2813 (40.2%)	2281 (32.6%)	1373 (19.6%)	534 (7.6%)
FESS027*	2312 (33.0%)	2185 (31.2%)	1679 (24.0%)	824 (11.8%)
FESS028*	4177 (59.7%)	1502 (21.5%)	847 (12.1%)	474 (6.8%)
FESS029*	762 (10.9%)	1762 (25.2%)	2415 (34.5%)	2061 (29.4%)
FESS030*	918 (13.1%)	1758 (25.1%)	2161 (30.9%)	2162 (30.9%)
FESS031	170 (2.4%)	743 (10.6%)	2082 (29.8%)	4003 (57.2%)
FESS032	735 (10.5%)	1326 (19.0%)	1838 (26.3%)	3098 (44.3%)
FESS033	2075 (29.7%)	3004 (42.9%)	1386 (19.8%)	530 (7.6%)
FESS034	1933 (27.6%)	2284 (32.7%)	1664 (23.8%)	1113 (15.9%)
FESS035	1170 (16.7%)	2962 (42.4%)	2092 (29.9%)	770 (11.0%)
FESS036	2786 (39.8%)	2678 (38.3%)	1056 (15.1%)	474 (6.8%)
FESS037	1355 (19.4%)	3399 (48.6%)	1852 (26.5%)	386 (5.5%)
FESS038	443 (6.3%)	1650 (23.6%)	2660 (38.0%)	2238 (32.0%)
FESS039	1141 (16.3%)	2214 (31.7%)	2096 (30.0%)	1538 (22.0%)

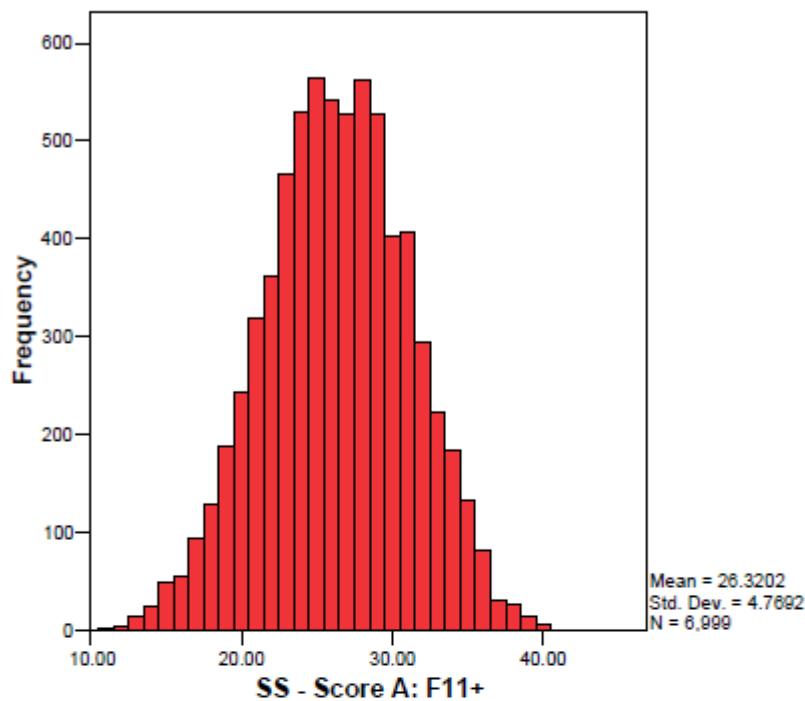
Two scores have been derived, the first (Score A) uses only those questions from the original AISS and the second (Score B) uses all responses.

Score A (FESS050) is a sum of those variables denoted by \* in the tables above. Before summing, variables fess021 fess023 fess025 fess026 fess027 fess028 fess029 fess030 were recoded as follows: (4=1)(3=2)(2=3)(1=4).

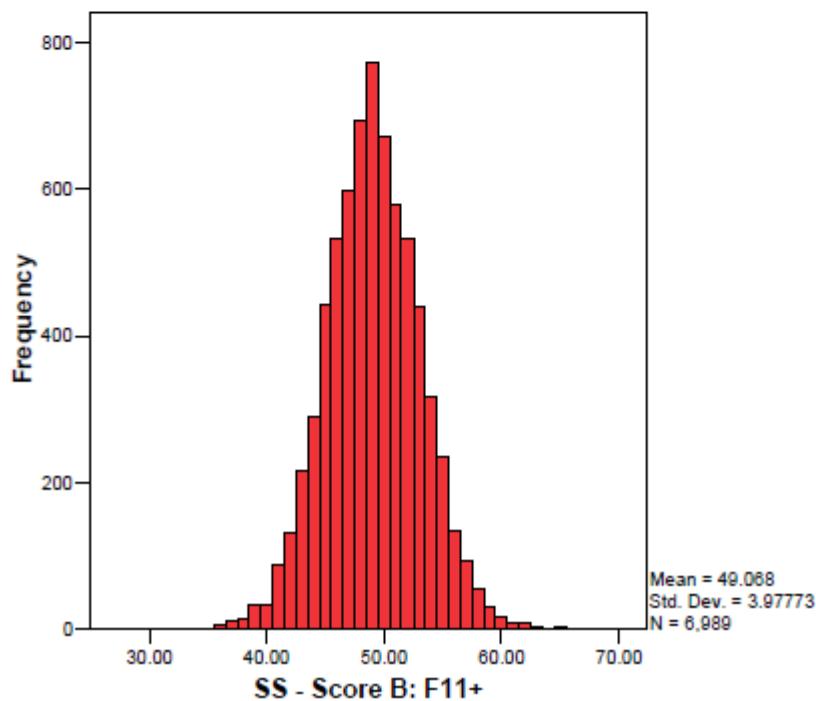
Similarly, Score B (FESS051) is a sum of all variables with the same recodes applied. For both scores if there were any missing values in the original variables then the score was set to missing.

For both scores, the higher the score, the higher the sensation seeking. For score A there is a minimum value of 11 and a maximum of 44, for Score B these values are 20 and 80 respectively.

**FESS050: SS - Score A: F11+**



**FESS051: SS - Score B: F11+**



The tester recorded whether the child wore glasses for this task (FESS100); Whether the child had difficulty understanding the instructions (FESS101); the Child's attempt at the task (FESS102); whether the child was distractible (FESS103); bored (FESS104) or impulsive (FESS107) and whether there were any problems with the computer during the task (FESS106).

**fess100 Sensation seeking - Child wore glasses: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	484	6.8	6.9	6.9
	2 No	6433	89.9	91.6	98.5
	3 Forgot	108	1.5	1.5	100.0
	Total	7025	98.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	106	1.5		
	-1 Missing	3	.0		
	Total	134	1.9		
Total		7159	100.0		

**fess101 Sensation seeking - Difficulty with instructions: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	40	.6	.6	.6
	2 No	6981	97.5	99.4	99.9
	9 Unknown	4	.1	.1	100.0
	Total	7025	98.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	106	1.5		
	-1 Missing	3	.0		
	Total	134	1.9		
Total		7159	100.0		

**fess102 Sensation seeking - Child's attempt: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Good	6997	97.7	99.6	99.6
	2 Medium	22	.3	.3	99.9
	3 Poor	1	.0	.0	99.9
	9 Unknown	5	.1	.1	100.0
Missing	Total	7025	98.1	100.0	
	-9 Did not do F&Y	25	.3		
	-2 Interview not	106	1.5		
	-1 Missing	3	.0		
Total		134	1.9		
Total		7159	100.0		

**fess103 Sensation seeking - Distractible: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	20	.3	.3	.3
	2 No	6987	97.6	99.5	99.7
	3 Half way	12	.2	.2	99.9
	9 Unknown	6	.1	.1	100.0
	Total	7025	98.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	106	1.5		
	-1 Missing	3	.0		
	Total	134	1.9		
Total		7159	100.0		

**fess107 Sensation seeking - Impulsive: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0 No	6912	96.5	98.4	98.4
	1 1 prompt	104	1.5	1.5	99.9
	2 >1 prompt	5	.1	.1	99.9
	9 Unknown	4	.1	.1	100.0
	Total	7025	98.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	106	1.5		
	-1 Missing	3	.0		
	Total	134	1.9		
Total		7159	100.0		

**fess104 Sensation seeking - Bored: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	109	1.5	1.6	1.6
	2 No	6883	96.1	98.0	99.5
	3 Half way	29	.4	.4	99.9
	9 Unknown	4	.1	.1	100.0
	Total	7025	98.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	106	1.5		
	-1 Missing	3	.0		
	Total	134	1.9		
Total		7159	100.0		

**fess106 Sensation seeking - Problems with computer: F11**

	Frequency	Percent	Valid Percent	Cum. %
Valid 1 Yes	15	.2	100.0	100.0
Missing-9 Did not do F&Y	25	.3		
-2 Interview not	106	1.5		
-1 Missing	7013	98.0		
Total	7144	99.8		
Total	7159	100.0		

### 3.4.3 Friendships

As the children are developing into adolescents and becoming more independent, it is of interest to find out how they are socialising. A short structured interview was therefore conducted looking into their social groups and what they do with their friends. Questions were also asked on how much their parents/guardians know about their friends and what they do with them to gain some information on parental monitoring. The children were also asked about their household composition, this had the dual task of obtaining some background information for the Borderline Personality Disorder Interview. The final part of the interview concerned the children's knowledge of sexual reproduction. This information is vital as this age as the children may be developing romantic relationships (note, these questions were not asked if a parent was in the room).

**fefs001 Child Started Friendships interview: F11**

	Frequency	Percent	Valid Percent	Cum. %
Valid 1 Yes	7094	99.1	99.1	99.1
2 No	65	.9	.9	100.0
Total	7159	100.0	100.0	

**fefs001a Reason Child did not do Friendships interview: F11**

	Frequency	Percent	Valid Percent	Cum. %
Valid 1 Parent present	3	.0	9.4	9.4
3 No time	18	.3	56.3	65.6
4 Inappropriate	2	.0	6.3	71.9
5 Other reason	9	.1	28.1	100.0
Total	32	.4	100.0	
Missing -2 Interview not	7094	99.1		
-1 Missing	33	.5		
Total	7127	99.6		
Total	7159	100.0		

### Friendships

The child was asked how many close friends that they had, these were 'children that they hang around with' (FEFS010). The child was then asked how many were boys and how many were girls (FEFS011 and FEFS012 respectively). Categorised variables have been derived as follows:

**fefs010a No. close friends Child has, categorised: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0 None	22	.3	.3	.3
	1 1-4	3217	44.9	45.3	45.7
	2 5-9	2869	40.1	40.4	86.1
	3 10-14	678	9.5	9.6	95.7
	4 15-19	138	1.9	1.9	97.6
	5 20+	170	2.4	2.4	100.0
	Total	7094	99.1	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	Total	65	.9		
Total		7159	100.0		

**fefs011a No. close friends that are boys, categorised: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0 None	2665	37.2	37.7	37.7
	1 1-4	2596	36.3	36.7	74.5
	2 5-9	1415	19.8	20.0	94.5
	3 10-14	253	3.5	3.6	98.1
	4 15-19	81	1.1	1.1	99.2
	5 20+	54	.8	.8	100.0
	Total	7064	98.7	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	-1 Missing	30	.4		
	Total	95	1.3		
Total		7159	100.0		

**fefs012a No. close friends that are girls, categorised: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0 None	2356	32.9	33.4	33.4
	1 1-4	3059	42.7	43.3	76.7
	2 5-9	1393	19.5	19.7	96.4
	3 10-14	196	2.7	2.8	99.2
	4 15-19	35	.5	.5	99.6
	5 20+	25	.3	.4	100.0
	Total	7064	98.7	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	-1 Missing	30	.4		
	Total	95	1.3		
Total		7159	100.0		

If the child did have close friends they were asked whether they went places with their friends and the places that they went were recorded. The frequencies of these are shown in Table 3.4.3a below.

**fefs020 Child goes places with friends: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	7045	98.4	99.6	99.6
	2 No	27	.4	.4	100.0
	Total	7072	98.8	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-3 No friends	22	.3		
	-2 Interview not	41	.6		
	Total	87	1.2		
Total		7159	100.0		

**Table 3.4.3a: Frequencies of Places Child goes to with friends**

Place	Variable name	n (%)
School	FEFS021	5186 (73.6%)
Child's own home	FEFS022	5562 (78.9%)
Other's homes	FEFS023	5705 (81.0%)
Park/playground/fields	FEFS024	4393 (62.4%)
Bus stop/neighbourhood	FEFS025	1065 (15.1%)
Organised clubs	FEFS026	2181 (31.0%)
In town/shopping centres	FEFS027	2770 (39.3%)
Cafes/burger bars	FEFS028	1084 (15.4%)
Sports centre	FEFS029	2261 (32.1%)

Further text was recorded by the tester if places that the child mentioned were not listed above, this has been coded as variable FEFS030.

The child was then asked what type of activities they mostly do with their friends. The frequencies of these are shown in Table 3.4.3b overleaf.

**fefs040 Child does things with friends: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	7015	98.0	99.3	99.3
	2 No	53	.7	.7	100.0
	Total	7068	98.7	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-3 No friends	22	.3		
	-2 Interview not	41	.6		
	-1 Missing	4	.1		
	Total	91	1.3		
Total		7159	100.0		

**Table 3.4.3b: Frequencies of Activities Child does with friends**

Activity	Variable name	n (%)
Go to child's house to hang out	FEFS041	4766 (67.9%)
Go to others house to hang out	FEFS042	4695 (66.9%)
Puts on make up/Dress up	FEFS043	968 (13.8%)
Reads magazines	FEFS044	1893 (27.0%)
Plays games inside	FEFS045	3239 (46.1%)
Plays on computer/games consoles	FEFS046	4388 (62.5%)
Plays sports outside	FEFS047	4347 (61.9%)
Make camps/play fantasy games	FEFS048	951 (13.5%)
Organised sports at sports centre	FEFS049	1880 (26.8%)
After school activities (not sport)	FEFS050	2121 (30.2%)
Goes into town and hang around	FEFS051	1333 (19.0%)
Goes shopping	FEFS052	2323 (33.1%)
Hangs around parks	FEFS053	2863 (40.8%)
Hangs around streets	FEFS054	1261 (18.0%)
Walks around	FEFS055	2358 (33.6%)
Goes to clubs (snooker hall/youth club etc)	FEFS056	1263 (18.0%)
Goes to the cinema	FEFS057	3667 (52.2%)

Further text was recorded by the tester if activities that the child mentioned were not listed above, this has been coded as variable FEFS058.

#### Household Composition

The child was asked about the people that they lived with at home. First they were asked to say which adults they lived with (variables FEFS070 to FEFS075).

		fefs070 First Adult living with Ch: F11			
		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Mother	6848	95.7	96.6	96.6
	2 Father	186	2.6	2.6	99.2
	3 Stepmother	4	.1	.1	99.3
	4 Stepfather	14	.2	.2	99.5
	5 Mother's partner	2	.0	.0	99.5
	7 Grandmother	24	.3	.3	99.9
	8 Grandfather	3	.0	.0	99.9
	10 Aunt	4	.1	.1	100.0
	21 Other Adult	3	.0	.0	100.0
	Total	7088	99.0	100.0	
Missing -9	Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	-1 Missing	6	.1		
	Total	71	1.0		
Total		7159	100.0		

**fefs071 Second Adult living with Ch: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Mother	130	1.8	2.1	2.1
	2 Father	5482	76.6	87.6	89.7
	3 Stepmother	15	.2	.2	89.9
	4 Stepfather	306	4.3	4.9	94.8
	5 Mother's partner	232	3.2	3.7	98.5
	6 Father's partner	11	.2	.2	98.7
	7 Grandmother	27	.4	.4	99.1
	8 Grandfather	18	.3	.3	99.4
	9 Uncle	5	.1	.1	99.5
	10 Aunt	3	.0	.0	99.5
	12 Male Cousin	2	.0	.0	99.6
	14 Older Brother	2	.0	.0	99.6
	15 Older Sister	5	.1	.1	99.7
	16 Nanny/Au Pair	3	.0	.0	99.7
	17 Godparent	1	.0	.0	99.7
	18 Parent's Friend	2	.0	.0	99.8
	19 Lodger	5	.1	.1	99.9
	21 Other Adult	9	.1	.1	100.0
	Total	6258	87.4	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	-1 Missing	836	11.7		
	Total	901	12.6		
Total		7159	100.0		

**fefs072 Third Adult living with Ch: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Mother	5	.1	3.1	3.1
	2 Father	5	.1	3.1	6.1
	4 Stepfather	1	.0	.6	6.7
	5 Mother's partner	2	.0	1.2	8.0
	7 Grandmother	73	1.0	44.8	52.8
	8 Grandfather	23	.3	14.1	66.9
	9 Uncle	9	.1	5.5	72.4
	10 Aunt	5	.1	3.1	75.5
	13 Female Cousin	2	.0	1.2	76.7
	15 Older Sister	1	.0	.6	77.3
	16 Nanny/Au Pair	9	.1	5.5	82.8
	18 Parent's Friend	1	.0	.6	83.4
	19 Lodger	15	.2	9.2	92.6
	20 Other Relative	1	.0	.6	93.3
	21 Other Adult	11	.2	6.7	100.0
	Total	163	2.3	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	-1 Missing	6931	96.8		
	Total	6996	97.7		
Total		7159	100.0		

**fefs073 Fourth Adult living with Ch: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	2 Father	1	.0	3.3	3.3
	7 Grandmother	1	.0	3.3	6.7
	8 Grandfather	17	.2	56.7	63.3
	9 Uncle	2	.0	6.7	70.0
	10 Aunt	1	.0	3.3	73.3
	19 Lodger	2	.0	6.7	80.0
	21 Other Adult	6	.1	20.0	100.0
	Total	30	.4	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	-1 Missing	7064	98.7		
	Total	7129	99.6		
Total		7159	100.0		

**fefs074 Fifth Adult living with Ch: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	7 Grandmother	1	.0	50.0	50.0
	10 Aunt	1	.0	50.0	100.0
	Total	2	.0	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	-1 Missing	7092	99.1		
Total		7157	100.0		
Total		7159	100.0		

**fefs075 Sixth Adult living with Ch: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	8 Grandfather	1	.0	100.0	100.0
	Missing	24	.3		
	-9 Did not do F&Y	41	.6		
-2 Interview not		7093	99.1		
	-1 Missing	7158	100.0		
	Total	7159	100.0		

A variable has been derived indicating how many adults live at home with the child (FEFS076).

**fefs076 No. adults Child lives with: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1	829	11.6	11.7	11.7
	2	6097	85.2	86.0	97.7
	3	132	1.8	1.9	99.6
	4	28	.4	.4	100.0
	5	1	.0	.0	100.0
	6	1	.0	.0	100.0
	Total	7088	99.0	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	-1 Missing	6	.1		
	Total	71	1.0		
Total		7159	100.0		

The child was then asked whether they ever lived with anyone else and if so whom (Variables FEFS091, FEFS092 and FEFS095). They were asked how often they stayed with these other people (variables FEFS093 and FEFS096), with the options weekly; fortnightly, monthly or occasionally and finally, whether this was on a predictably regular basis (variables FEFS094 and FEFS097), with the options predictable; semi-predictable and unpredictable.

**fefs090 Child ever lives with anyone else: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	1199	16.7	17.0	17.0
	2 No	5861	81.9	83.0	100.0
	Total	7060	98.6	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	-1 Missing	34	.5		
	Total	99	1.4		
Total		7159	100.0		

Children were next asked about their siblings (up to 6), whether they had any, who they were (FEFS101a to FEFS106a), how old they were (FEFS101b to FEFS106b) and whether they lived at home with the child (FEFS101c to FEFS106c).

**fefs100 Child has any siblings: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	6670	93.2	94.0	94.0
	2 No	424	5.9	6.0	100.0
	Total	7094	99.1	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	Total	65	.9		
Total		7159	100.0		

fef100a No. siblings Child has: F11

		Frequency	Percent	Valid Percent	Cum. %
Valid	0	424	5.9	6.0	6.0
	1	3401	47.5	48.0	53.9
	2	2074	29.0	29.3	83.2
	3	810	11.3	11.4	94.6
	4	237	3.3	3.3	98.0
	5	86	1.2	1.2	99.2
	6	58	.8	.8	100.0
	Total	7090	99.0	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	-1 Missing	4	.1		
	Total	69	1.0		
Total		7159	100.0		

Finally, in this part of the interview, the child was asked whether they were close to any one else (up to 4 were recorded) – variables FEFS110 to FEFS114.

### Parental Monitoring

The children were asked whether the grown-ups that they lived with knew all the children that the child hangs about with and whether they knew about what they did with other children. They were then asked whether the child would ask a grown up for help if they were having problems with their friends or other children.

fef120 Adults know all children Child hangs around with:F11

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes, all	4142	57.9	58.7	58.7
	2 Quite a lot	2226	31.1	31.6	90.3
	3 A few	614	8.6	8.7	99.0
	4 None	72	1.0	1.0	100.0
	Total	7054	98.5	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	-1 Missing	40	.6		
	Total	105	1.5		
Total		7159	100.0		

**fefs121 How much Adults know about what Child does with other children: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Everything	2748	38.4	39.0	39.0
	2 Most things	3521	49.2	50.0	89.0
	3 Few things	686	9.6	9.7	98.8
	4 Nothing	88	1.2	1.2	100.0
	Total	7043	98.4	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	-1 Missing	51	.7		
	Total	116	1.6		
Total		7159	100.0		

**fefs122 Child would ask grown ups for help if problems with other children: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	3544	49.5	50.4	50.4
	2 Most of time	1784	24.9	25.4	75.8
	3 Occasionally	1085	15.2	15.4	91.2
	4 Definitely not	619	8.6	8.8	100.0
	Total	7032	98.2	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	-1 Missing	62	.9		
	Total	127	1.8		
Total		7159	100.0		

## Sexual Reproduction

The tester told the child that they were going to ask them a couple of questions about things they may have talked about at home or in school. Firstly, had anyone talked to them about how babies are made, if so, how old were they when this was first talked about? The children were then asked to list the people who have talked to them about making babies (up to 6 – variables FEFS132 to FEFS137).

**fefs130 Anyone talked to Child about how Babies are made: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	6066	84.7	86.1	86.1
	2 No	978	13.7	13.9	100.0
	Total	7044	98.4	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	-1 Missing	50	.7		
	Total	115	1.6		
Total		7159	100.0		

**fefs131 Age of Child when first talked about how Babies are made: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	3	3	.0	.0	.0
	4	19	.3	.3	.4
	5	57	.8	.9	1.3
	6	93	1.3	1.5	2.8
	7	254	3.5	4.2	7.0
	8	462	6.5	7.6	14.6
	9	1082	15.1	17.8	32.5
	10	2339	32.7	38.6	71.1
	11	1341	18.7	22.1	93.2
	12	21	.3	.3	93.5
	88 Dont know	393	5.5	6.5	100.0
	Total	6064	84.7	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-3 Not talked about	1028	14.4		
	-2 Interview not	41	.6		
	-1 Missing	2	.0		
	Total	1095	15.3		
	Total	7159	100.0		

Testers recorded aspects of the child's behaviour during the friendships interview:

**fefs150 Child had difficulty understanding questions: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	61	.9	.9	.9
	2 No	7023	98.1	99.1	100.0
	Total	7084	99.0	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	-1 Missing	10	.1		
	Total	75	1.0		
	Total	7159	100.0		

**fefs151 Child attempt at task: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Good	6984	97.6	98.6	98.6
	2 Medium	92	1.3	1.3	99.9
	3 Poor	5	.1	.1	100.0
	Total	7081	98.9	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	-1 Missing	13	.2		
	Total	78	1.1		
Total		7159	100.0		

**fefs152 Child answers appeared truthful: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	6942	97.0	98.5	98.5
	2 No	43	.6	.6	99.1
	3 Query	64	.9	.9	100.0
	Total	7049	98.5	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	-1 Missing	45	.6		
	Total	110	1.5		
Total		7159	100.0		

**fefs154 Child seemed uncomfortable with task: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	133	1.9	1.9	1.9
	2 No	6707	93.7	94.7	96.6
	3 Query	242	3.4	3.4	100.0
	Total	7082	98.9	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	-1 Missing	12	.2		
	Total	77	1.1		
Total		7159	100.0		

**fefs155 Child seemed upset with task: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	10	.1	.1	.1
	2 No	7053	98.5	99.6	99.8
	3 Query	15	.2	.2	100.0
	Total	7078	98.9	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	-1 Missing	16	.2		
	Total	81	1.1		
Total		7159	100.0		

**fefs156 Child seemed bored with task: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	144	2.0	2.0	2.0
	2 No	6827	95.4	96.5	98.5
	3 Query	107	1.5	1.5	100.0
	Total	7078	98.9	100.0	
Missing	-9 Did not do F&Y	24	.3		
	-2 Interview not	41	.6		
	-1 Missing	16	.2		
	Total	81	1.1		
Total		7159	100.0		

### 3.4.4 Romantic relations

The Romantic Relationships Questionnaire was adapted from Hansen et al's (1999) Adolescent Sexuality Activity Index (ASAI). This questionnaire has been incorporated into Focus 11+ because it is important, as the Children of the 90s enter the second decade in their lives, to gain an understanding of how they manage the transition from childhood to sexually active adolescents and eventually adults. The ASAI is a 13-item measure asking about progressive pre-coital sexual behaviours designed for use with adolescents. It was slightly modified for use with the Focus 11+ sample by Dieter Wolke and Andrea Waylen.

The interview was performed on a computer, the tester explained to the child the process of the interview and the confidentiality of their answers was assured. As an introduction to the interview and as part of the tester's explanation a simple question regarding watching TV was used. The children were then asked whether they had boys or girls who were friends and whether they spent any of their free time with the opposite sex. At this point, if the child said no, the interview stopped.

For each activity, the child was asked whether they had done it in the past year, and if so, whether they had enjoyed it.

**ferr001 Child Started Romantic Relations interview: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	6622	92.5	92.8	92.8
	2 No	512	7.2	7.2	100.0
	Total	7134	99.7	100.0	
Missing -9	Did not F&Y	25	.3		
Total		7159	100.0		

**ferr001a Reason Child did not do Romantic Relations interview: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Cognitive	10	.1	2.1	2.1
	2	15	.2	3.2	5.3
	3 Physical	2	.0	.4	5.7
	4 Parental	21	.3	4.4	10.1
	5 Organisational	425	5.9	89.9	100.0
	Total	473	6.6	100.0	
Missing -9	Did not do F&Y	25	.3		
-2 Interview started	-2 Interview started	6622	92.5		
	-1 Missing	39	.5		
	Total	6686	93.4		
Total		7159	100.0		

**ferr020 RR - Watched TV in last year: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	6609	92.3	99.8	99.8
	2 No	13	.2	.2	100.0
	Total	6622	92.5	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	512	7.2		
	Total	537	7.5		
Total		7159	100.0		

**ferr022 RR - Have friends who are girls: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	6598	92.2	99.8	99.8
	2 No	15	.2	.2	100.0
	Total	6613	92.4	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	512	7.2		
	-1 Missing	9	.1		
Total		546	7.6		
Total		7159	100.0		

**ferr023 RR - Have friends who are boys: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	5470	76.4	82.8	82.8
	2 No	1140	15.9	17.2	100.0
	Total	6610	92.3	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	512	7.2		
	-1 Missing	12	.2		
Total		549	7.7		
Total		7159	100.0		

**ferr024 RR - Spend free time with boys/girls: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	3004	42.0	45.5	45.5
	2 No	3603	50.3	54.5	100.0
	Total	6607	92.3	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	512	7.2		
	-1 Missing	15	.2		
	Total	552	7.7		
Total		7159	100.0		

Table 3.4.3a below shows the frequencies of children responding yes to each activity and provides the variable names. If a child answered No or did not respond to the question regarding spending time alone with the opposite sex, the interview ended and so the percentages presented below for the kissing activities are of the 1548 children who had spent free time alone with the opposite sex. For those who continued, the interview was stopped if the child answered No or did not respond to both kissing questions. Finally, the interview stopped if the child answered No or did not respond to the cuddling question.

**Table 3.4.4a**

Activity	Variable name	n (%), Yes	n, Missing
Hugged a boy/girl	FERR026	2181 (72.6%)	1
Held hands with a boy/girl	FERR028	1598 (53.2%)	3
Spent time alone with a boy/girl	FERR030	1548 (51.7%)	7
If no, Interview stopped			
Kissed a boy/girl on the mouth	FERR032	1068 (35.6%)	8
Been kissed on the mouth	FERR034	1125 (37.6%)	8
If no to both, Interview stopped	FERR036	768 (67.7%)	65
Cuddled a boy/girl			
If no, Interview stopped			
Laid down with a boy/girl	FERR038	1 (7.1%)	830
Let a boy/girl put hands under clothes	FERR040	1 (33.3%)	765
Put hands under boy's/girl's clothes	FERR042	1 (33.3%)	765
Been undressed with a boy/girl	FERR044	1 (33.3%)	767
Touched/fondled boy's/girl's private parts	FERR046	1 (33.3%)	767
Had sexual intercourse	FERR048	1 (33.3%)	767

Table 3.4.4b below shows, for those children responding yes to each activity, the frequencies of how much they enjoyed each and provides the variable names. Again, the percentages presented are of those who said Yes for each activity.

**Table 3.4.4b**

Enjoyed Activity	Variable name	Not at all	A bit	Quite a lot	Very much
Spend free time with opposite sex	FERR025	25 (0.8%)	1333 (44.4%)	1323 (44.1%)	322 (10.7%)
Hugged a boy/girl	FERR027	100 (4.6%)	976 (44.8%)	817 (37.5%)	288 (13.2%)
Held hands with a boy/girl	FERR029	69 (4.3%)	638 (39.9%)	625 (39.1%)	265 (16.6%)
Spent time alone with a boy/girl	FERR031	34 (2.2%)	510 (32.9%)	709 (45.8%)	295 (19.1%)
Kissed a boy/girl on the mouth	FERR033	30 (2.8%)	317 (29.7%)	419 (39.2%)	302 (28.3%)
Been kissed on the mouth	FERR035	52 (4.6%)	345 (30.7%)	448 (39.8%)	280 (24.9%)
Cuddled a boy/girl	FERR037	14 (1.8%)	205 (26.7%)	354 (46.1%)	195 (25.4%)
Laid down with a boy/girl	FERR039	1 (100%)	-	-	-
Let a boy/girl put hands under clothes	FERR041	1 (100%)	-	-	-
Put hands under boy's/girl's clothes	FERR043	1 (100%)	-	-	-
Been undressed with a boy/girl	FERR045	1 (100%)	-	-	-
Touched/fondled boy's/girl's private parts	FERR047	1 (100%)	-	-	-
Had sexual intercourse	FERR049	1 (100%)	-	-	-

A variable has been created denoting the number of activities that the child had been involved with over the past year (FERR060), the score has a minimum of 0 and a maximum of 12.

**ferr060 RR - No. of activities: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	.00	484	6.8	16.0	16.0
	1.00	611	8.5	20.2	36.3
	2.00	530	7.4	17.6	53.8
	3.00	347	4.8	11.5	65.3
	4.00	191	2.7	6.3	71.6
	5.00	324	4.5	10.7	82.4
	6.00	531	7.4	17.6	100.0
	12.00	1	.0	.0	100.0
	Total	3019	42.2	100.0	
Missing	-9.00 Did not do F&Y	25	.3		
	-3.00 No time spent with opp sex	3603	50.3		
	-2.00 Interview not	512	7.2		
	Total	4140	57.8		
	Total	7159	100.0		

The tester recorded information about the child's behaviour during this task: bored (FERR103); impulsive (FERR104) and embarrassed (FERR105) and finally whether there were any problems with the computer during the task (FERR106).

**ferr103 RR - Child bored: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	61	.9	.9	.9
	2 No	6518	91.0	98.8	99.7
	3 Halfway through	18	.3	.3	100.0
	Total	6597	92.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	512	7.2		
	-1 Missing	25	.3		
	Total	562	7.9		
Total		7159	100.0		

**ferr104 RR - Child impulsive: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0 No	6475	90.4	98.2	98.2
	1 Prompt once not	109	1.5	1.7	99.8
	2 Prompt >once not to	11	.2	.2	100.0
	Total	6595	92.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	512	7.2		
	-1 Missing	27	.4		
	Total	564	7.9		
Total		7159	100.0		

**ferr105 RR - Child Embarassed: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	136	1.9	2.1	2.1
	2 No	6456	90.2	97.9	100.0
	Total	6592	92.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	512	7.2		
	-1 Missing	30	.4		
	Total	567	7.9		
Total		7159	100.0		

**ferr106 RR - Problems with computer: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	2	.0	.0	.0
	2 No	6620	92.5	100.0	100.0
	Total	6622	92.5	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	512	7.2		
	Total	537	7.5		
Total		7159	100.0		

### 3.4.5 Borderline Personality Disorder

#### Introduction

Hundreds of research reports concerning some aspect of borderline personality disorder in adults have been published in the past fifteen years. People with BPD have instability in relationships, mood and self-image, with attitudes and feelings towards others changing dramatically and inexplicably over short periods of time. Emotions are also erratic and can shift abruptly, particularly to anger. BPD patients can be argumentative, irritable and sarcastic. Their unpredictable and impulsive behaviour, such as gambling, spending, sex and eating sprees, is potentially self-damaging. They have not developed a clear and coherent sense of self and remain uncertain about their values and loyalties. They cannot bear to be alone, so they tend to have a series of stormy one-to-one relationships. They are subject to chronic feelings of depression and emptiness; they may make manipulative attempts at suicide. They also may appear psychotic under emotional stress.

Something of its aetiology (both environmental and biological) is known, it “runs” in families, and has a complex but increasingly known course. However, despite the intense clinical and research interest in BPD, only two methodologically rigorous epidemiological studies of the prevalence of BPD have been conducted. One conducted in the US found a prevalence of 1.8% (Swartz et al, 1990) and the other, which was conducted in Norway, found a prevalence of 0.7% (Torgersen et al, 2001). It is now thought that there is common overlap with symptoms of other disorders such as depression, eating disorders (particularly bulimia and binge eating disorder), anxiety disorders (such as social phobia and panic disorder), and substance use disorders (particularly alcohol abuse). People with BPD are seen to have a hyperbolic temperament (over reaction) and to have experienced adverse childhood experiences, including experiences of neglect and abuse.

BPD is made up of four clusters of nine criteria symptoms:

##### *Affective mood symptoms*

Inappropriate anger, or difficulty controlling anger (e.g., frequent displays of temper, constant anger, recurrent physical fights).

Chronic feelings of emptiness. This can be more or less profound at times. It is not “numbness” or trying to block out feelings.

Affective instability due to marked reactivity of mood (e.g., intensive episodic dysphoria [e.g., depression and sorrow; anger and rage; anxiety and panic; and feelings of helplessness, hopelessness, worthlessness, emptiness, and loneliness], irritability, or anxiety usually lasting a few hours and only rarely more than a few days)

##### *Interpersonal relations symptoms*

A pattern of unstable or intense interpersonal relationships characterised by alternating between extremes of idealization and devaluation. They may use both idealization and devaluation to negotiate intimacy.

Frantic efforts to avoid real or imagined abandonment (not including suicidal or self-mutilation attempts)

##### *Cognitive symptoms*

Identity disturbance: marked and persistently unstable self-image or sense of self. They may change their goals or values depending on those with whom they are closest. Their sense of self may also shift from feeling basically OK and then quickly to feeling they are bad, worthless or evil.

Transient stress related paranoid ideation or severe dissociative symptoms, feeling of suspiciousness or experiences of depersonalisation (i.e. feelings that self is unreal) or derealization (i.e. feeling that the world is unreal). These feelings get worse under pressure or may only occur under pressure.

### *Impulsive symptoms*

Recurrent suicidal behaviour, gestures or threats or self-mutilation behaviour. Borderline patients may cut and burn themselves because they are dissociated and need to "feel real," or because they need to relieve a tremendous amount of anxiety; they also hurt themselves as a way of managing an extreme degree of frustration and rage.

A pattern of at least two impulsive behaviours that are potentially self-damaging.

A person has to meet five out of the nine criteria to be diagnosed as having BPD as defined by the DSM-IV.

The Childhood Interview for DSM-IV Borderline Personality Disorder (CI-BPD)—the first semi-structured interview designed specifically to assess DSM-IV BPD in latency-age children and adolescents was developed by Mary Zanarini. This was adapted by Jeremy Horwood and Dieter Wolke to be used at Focus 11+ and was administered as a face-to- face interview.

The purpose of the interview was to record the prevalence of the identified behaviours and emotions (not to try and diagnose a child as having a Borderline Personality). The interview was split into 9 sections identifying each of the symptom criteria.

Every question was asked, but further probing questions may then have needed to be asked to clarify whether a symptom was present or checking that the child had the right understanding of the asked behaviour and how often the behaviour may have been taking place.

The impulsive questions were scored according to the number of times the behaviour had been carried out in the past two years.

Once all the questions had been asked for that criteria, including further probing questions, a judgement needed to be made as to whether the symptom was present or not. [2] indicates that the symptom was definitely present and significant, [1] indicates that it was probably present and [0] indicates that the symptom was absent.

The following were guidelines used for scoring a 2 for the set criteria by the tester:

- *Inappropriate/intense anger* (variable FEBP100) – only had to display one of the behaviours, but they had to be happening on a very regular basis, everyday or at least 25% of the time.
- *Affective Instability* (variable FEBP110) – intense brief episodes of sadness, anxiety or irritability, occurring at least 25% of the time.
- *Emptiness* (variable FEBP120) – If the child recognised and admitted to the feelings, not be confused with numbness or boredom
- *Identity Disturbance* (variable FEBP130) – extreme shifting sense of self at least 25% of the time.
- *Paranoid ideation* (variable FEBP140) – cognitively unstable, imagined paranoia rather than child being picked on. Dissociative symptoms – not to be confused with daydreaming or tiredness, this should be out of the child's control. Both symptoms linked to stress, not present all the time.
- *Abandonment* (variable FEBP150) – Often making efforts to avoid being left on their

own, due to feelings of being abandoned, rather than just being scared to be left on their own. Do not include suicidal threats or self-mutilating behaviours.

- *Suicidal or self-mutilating behaviours* (variable FEBP160) - harming themselves to relieve pain or to express anger indirectly. Punching walls just to relieve anger was not counted. Must also have punched walls to hurt self or feel pain. Behaviours present two or more times.
- *Impulsivity* (variable FEBP190) – two behaviours must have been present five times or more over the past two years. Lashing out at someone, is the child attacking another, fistfights can be mutual. Damaging property is in private, against the law is public (this can include damaging public property).
- *Intense interpersonal relationships* (variable FEBP220) – very intense love/hate relationships, regularly changing feelings about a certain other, and/or having a series of short friendships/relationships. These turbulent relationships typically are focused on one person at a time but there may well be a history of such relationships.

**feb001 Child Started BPD interview: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	6423	89.7	90.0	90.0
	2 No	711	9.9	10.0	100.0
	Total	7134	99.7	100.0	
Missing	-9 Did not do F&Y	25	.3		
	Total	7159	100.0		

**feb001a Reason Child did not do BPD interview: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Parent present	35	.5	5.4	5.4
	3 No time	510	7.1	79.3	84.8
	4 Inappropriate	30	.4	4.7	89.4
	5 Other reason	68	.9	10.6	100.0
	Total	643	9.0	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview started	6423	89.7		
	-1 Missing	68	.9		
	Total	6516	91.0		
	Total	7159	100.0		

To introduce the interview the tester explained to the child that the questions in this interview were about the past two years of their life and that they were mainly interested in learning about feelings, thoughts, and behaviours that had been typical for them during the past two years. The child was also told that they would be asked a number of questions about specific things that the child may have done only when they were particularly upset.

The child was reminded of the confidentiality of their answers.



febp004 BPD Staff: F11

		Frequency	Percent	Valid Percent	Cum. %
Valid	1	143	2.0	2.2	2.2
	2	208	2.9	3.2	5.5
	3	569	7.9	8.9	14.3
	4	573	8.0	8.9	23.2
	5	279	3.9	4.3	27.6
	6	469	6.6	7.3	34.9
	7	607	8.5	9.5	44.3
	8	427	6.0	6.6	51.0
	9	199	2.8	3.1	54.1
	10	587	8.2	9.1	63.2
	11	124	1.7	1.9	65.2
	12	582	8.1	9.1	74.2
	13	49	.7	.8	75.0
	14	235	3.3	3.7	78.6
	15	280	3.9	4.4	83.0
	16	72	1.0	1.1	84.1
	17	550	7.7	8.6	92.7
	18	145	2.0	2.3	94.9
	19	109	1.5	1.7	96.6
	20	216	3.0	3.4	100.0
	Total	6423	89.7	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	711	9.9		
	Total	736	10.3		
	Total	7159	100.0		

Table 3.5.1 overleaf shows the frequencies for the presence of each symptom together with the appropriate variable name.

Derived variables have been created indicating the Number of criteria definitely present (FEBP251) and the number probably/definitely present (FEBP256). Finally, derived variables have been created to indicate whether the child is defined as a 'case' based on having five or more criteria definitely present (FEBP250) and for further information, a variable indicating whether five or more criteria were probably/definitely present (FEBP255).

The frequencies for each of the specific questions follow.

**Table 3.5.1: Frequencies for the presence of each symptom**

Symptom	Variable	Absent (0)	Probably (1)	Definitely (2)
Anger	FEBP100	4863 (75.7%)	1147 (17.9%)	412 (6.4%)
Affective instability	FEBP110	5113 (79.7%)	993 (15.5%)	310 (4.8%)
Emptiness	FEBP120	5882 (91.8%)	392 (6.1%)	136 (2.1%)
Identity disturbance	FEBP130	5821 (90.8%)	460 (7.2%)	129 (2.0%)
Paranoid ideation	FEBP140	5553 (86.8%)	677 (10.6%)	164 (2.6%)
Abandonment	FEBP150	5932 (92.8%)	378 (5.9%)	82 (1.3%)
Suicidal behaviours	FEBP160	6086 (95.5%)	180 (2.8%)	104 (1.6%)
Impulsivity	FEBP190	4931 (77.4%)	522 (8.2%)	918 (14.4%)
Intense Interpersonal relationships	FEBP220	5496 (86.4%)	686 (10.8%)	179 (2.8%)

**febp250 Case (>=5 criteria definitely present): BPD F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	42	.6	.7	.7
	2 No	6381	89.1	99.3	100.0
	Total	6423	89.7	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	711	9.9		
	Total	736	10.3		
Total		7159	100.0		

**febp251 Number of criteria definitely present: BPD F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0	5051	70.6	78.6	78.6
	1	881	12.3	13.7	92.4
	2	260	3.6	4.0	96.4
	3	121	1.7	1.9	98.3
	4	68	.9	1.1	99.3
	5	21	.3	.3	99.7
	6	13	.2	.2	99.9
	7	7	.1	.1	100.0
	8	1	.0	.0	100.0
	Total	6423	89.7	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	711	9.9		
	Total	736	10.3		
Total		7159	100.0		

**febp255 Case (>=5 criteria probably/definitely present): BPD F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	370	5.2	5.8	5.8
	2 No	6053	84.6	94.2	100.0
	Total	6423	89.7	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	711	9.9		
	Total	736	10.3		
Total		7159	100.0		

**febp256 Number of criteria probably/definitely present: BPD F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0	3474	48.5	54.1	54.1
	1	1223	17.1	19.0	73.1
	2	659	9.2	10.3	83.4
	3	422	5.9	6.6	90.0
	4	275	3.8	4.3	94.2
	5	179	2.5	2.8	97.0
	6	121	1.7	1.9	98.9
	7	51	.7	.8	99.7
	8	18	.3	.3	100.0
	9	1	.0	.0	100.0
Total		6423	89.7	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	711	9.9		
	Total	736	10.3		
Total		7159	100.0		

## Questions on Anger:

Have you felt angry a lot of the time?

**febp101 Felt angry a lot of the time: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	2480	34.6	38.6	38.6
	2 No	3940	55.0	61.4	100.0
	Total	6420	89.7	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Child said DK	3	.0		
	-2 Interview not	711	9.9		
	Total	739	10.3		
Total		7159	100.0		

If yes: How often has this happened?

**febp102 Felt angry - How often: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 <Once a month	327	4.6	13.3	13.3
	2 Once a month	464	6.5	18.9	32.2
	3 Several times a	451	6.3	18.3	50.5
	4 Once a week	591	8.3	24.0	74.5
	5 Several times a	410	5.7	16.7	91.2
	6 Daily	178	2.5	7.2	98.5
	7 Several times a day	38	.5	1.5	100.0
	Total	2459	34.3	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	17	.2		
	-3 Not felt angry	3940	55.0		
	-2 Interview not	711	9.9		
	-1 Missing	7	.1		
	Total	4700	65.7		
Total		7159	100.0		

Felt angry inside, but managed to hide it from other people?

**febp103 Felt angry - Managed to hide it: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	3870	54.1	60.4	60.4
	2 No	2534	35.4	39.6	100.0
	Total	6404	89.5	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	18	.3		
	-2 Interview not	711	9.9		
	-1 Missing	1	.0		
	Total	755	10.5		
Total		7159	100.0		

If yes: How often has this happened?

**febp104 Felt angry - How often managed to hide it: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 <Once a month	1389	19.4	36.3	36.3
	2 Once a month	1019	14.2	26.6	62.9
	3 Several times a	555	7.8	14.5	77.4
	4 Once a week	486	6.8	12.7	90.1
	5 Several times a	252	3.5	6.6	96.7
	6 Daily	96	1.3	2.5	99.2
	7 Several times a day	30	.4	.8	100.0
	8 Refused	1	.0	.0	100.0
	Total	3828	53.5	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	40	.6		
	-3 Not felt angry	2534	35.4		
	-2 Interview not	711	9.9		
	-1 Missing	21	.3		
Total		3331	46.5		
Total		7159	100.0		

Have you been angry and shown it? (said mean things, shouted, broken things)

**febp105 Felt angry - Shown it: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	3707	51.8	57.8	57.8
	2 No	2702	37.7	42.2	100.0
	Total	6409	89.5	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	9	.1		
	-2 Interview not	711	9.9		
	-1 Missing	5	.1		
	Total	750	10.5		
Total		7159	100.0		

If yes: How often has this happened?

**febp106 Felt angry - How often shown anger: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 <Once a month	1513	21.1	41.3	41.3
	2 Once a month	869	12.1	23.7	65.0
	3 Several times a	466	6.5	12.7	77.8
	4 Once a week	429	6.0	11.7	89.5
	5 Several times a	273	3.8	7.5	96.9
	6 Daily	90	1.3	2.5	99.4
	7 Several times a day	21	.3	.6	99.9
	8 Refused	2	.0	.1	100.0
	Total	3663	51.2	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	40	.6		
	-3 Not shown anger	2702	37.7		
	-2 Interview not	711	9.9		
	-1 Missing	18	.3		
	Total	3496	48.8		
Total		7159	100.0		

Have you got so angry that you got into a physical fight with someone you are close to?

**febp107 Felt angry - Involved in physical fight: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	1084	15.1	16.9	16.9
	2 No	5334	74.5	83.1	100.0
	Total	6418	89.6	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	1	.0		
	-2 Interview not	711	9.9		
	-1 Missing	4	.1		
	Total	741	10.4		
Total		7159	100.0		

If yes: How often has this happened?

**febp108 Felt angry - How often in physical fight: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 <Once a month	646	9.0	60.0	60.0
	2 Once a month	186	2.6	17.3	77.3
	3 Several times a	73	1.0	6.8	84.1
	4 Once a week	79	1.1	7.3	91.4
	5 Several times a	64	.9	5.9	97.4
	6 Daily	27	.4	2.5	99.9
	7 Several times a day	1	.0	.1	100.0
	Total	1076	15.0	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	7	.1		
	-3 Not had fight	5334	74.5		
	-2 Interview not	711	9.9		
	-1 Missing	6	.1		
	Total	6083	85.0		
Total		7159	100.0		

### Affective Instability questions:

During the past two years have you often found that your mood has changed suddenly (e.g., from feeling OK to feeling really sad or very cross or extremely nervous, or scared)?

**febp111 Mood changes - Sad/Cross/Nervous/Scared: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	3123	43.6	48.9	48.9
	2 No	3265	45.6	51.1	100.0
	Total	6388	89.2	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	28	.4		
	-2 Interview not	711	9.9		
	-1 Missing	7	.1		
	Total	771	10.8		
Total		7159	100.0		

How about changing from feeling OK to feeling angry, panicked, or totally hopeless?

**febp112 Mood changes - Angry/Panicked/Hopeless: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	2119	29.6	33.4	33.4
	2 No	4220	58.9	66.6	100.0
	Total	6339	88.5	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	76	1.1		
	-2 Interview not	711	9.9		
	-1 Missing	8	.1		
	Total	820	11.5		
Total		7159	100.0		

Have you been told that you're a moody person?

**feb113 Mood changes - Been told moody person: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	1754	24.5	27.4	27.4
	2 No	4640	64.8	72.6	100.0
	Total	6394	89.3	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	8	.1		
	-2 Interview not	711	9.9		
	-1 Missing	21	.3		
	Total	765	10.7		
Total		7159	100.0		

Derived variable: Yes to any of (1) to (3) above.

**feb114 DV: Any mood changes reported by child: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	3881	54.2	60.4	60.4
	2 No	2542	35.5	39.6	100.0
	Total	6423	89.7	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	711	9.9		
	Total	736	10.3		
Total		7159	100.0		

(IF YES TO any of 1-3) How long did these mood changes last?

**feb115 Mood changes - How long mood changes last: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 < An hour	1959	27.4	58.1	58.1
	2 Hours	941	13.1	27.9	86.1
	3 A day	276	3.9	8.2	94.3
	4 Days	115	1.6	3.4	97.7
	5 A week	32	.4	.9	98.6
	6 Weeks	19	.3	.6	99.2
	7 A month	20	.3	.6	99.8
	8 > A month	7	.1	.2	100.0
	Total	3369	47.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	91	1.3		
	-3 No mood changes	2542	35.5		
	-2 Interview not	711	9.9		
	-1 Missing	421	5.9		
	Total	3790	52.9		
Total		7159	100.0		

(IF YES TO any of 1-3) How often have these mood changes happened?

**febp116 Mood changes - how often : F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 <Once a month	1095	15.3	32.5	32.5
	2 Once a month	818	11.4	24.3	56.8
	3 Several times a	480	6.7	14.2	71.0
	4 Once a week	550	7.7	16.3	87.4
	5 Several times a	305	4.3	9.1	96.4
	6 Daily	103	1.4	3.1	99.5
	7 Several times a day	18	.3	.5	100.0
	Total	3369	47.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	101	1.4		
	-3 No mood changes	2542	35.5		
	-2 Interview not	711	9.9		
	-1 Missing	411	5.7		
	Total	3790	52.9		
	Total	7159	100.0		

### **Emptiness questions:**

During the past two years have you felt empty a lot of the time?

**febp121 Felt empty a lot of the time: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	865	12.1	13.5	13.5
	2 No	5538	77.4	86.5	100.0
	Total	6403	89.4	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	11	.2		
	-2 Interview not	711	9.9		
	-1 Missing	9	.1		
	Total	756	10.6		
	Total	7159	100.0		

How about that you had no feelings inside? (Nothing inside?)

**feb122 Felt empty - No feelings inside: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	774	10.8	12.1	12.1
	2 No	5610	78.4	87.9	100.0
	3 Refused	1	.0	.0	100.0
	Total	6385	89.2	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	28	.4		
	-2 Interview not	711	9.9		
	-1 Missing	10	.1		
	Total	774	10.8		
	Total	7159	100.0		

Derived variable: Yes to (1) or (2) above

**feb123 DV: Any empty feelings reported by child: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	1078	15.1	16.8	16.8
	2 No	5345	74.7	83.2	100.0
	Total	6423	89.7	100.0	
	Missing	25	.3		
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	711	9.9		
	Total	736	10.3		
Total		7159	100.0		

(IF YES TO (1) or (2) ABOVE) How often has this happened?

**feb124 Felt empty - How often: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 <Once a month	530	7.4	50.8	50.8
	2 Once a month	263	3.7	25.2	76.0
	3 Several times a	108	1.5	10.4	86.4
	4 Once a week	76	1.1	7.3	93.7
	5 Several times a	44	.6	4.2	97.9
	6 Daily	19	.3	1.8	99.7
	7 Several times a day	3	.0	.3	100.0
	Total	1043	14.6	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	22	.3		
	-3 Not felt empty	5345	74.7		
	-2 Interview not	711	9.9		
	-1 Missing	13	.2		
	Total	6116	85.4		
Total		7159	100.0		

### Identity Disturbance questions:

During the past two years have you often been unsure of what kind of person you are?

**febp131 Felt unsure about kind of person you are: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	1477	20.6	23.2	23.2
	2 No	4900	68.4	76.8	100.0
	Total	6377	89.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	32	.4		
	-2 Interview not	711	9.9		
	-1 Missing	14	.2		
	Total	782	10.9		
	Total	7159	100.0		

Frequently gone from feeling sort of OK about yourself to feeling that you're a bad person? (or even evil)

**febp132 Changed from feeling OK to feeling like bad person: F11 BP**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	1266	17.7	19.8	19.8
	2 No	5128	71.6	80.2	100.0
	Total	6394	89.3	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	15	.2		
	-2 Interview not	711	9.9		
	-1 Missing	14	.2		
	Total	765	10.7		
	Total	7159	100.0		

Often felt that you had no consistent or steady idea of who you are? (Like you had no identity?)

**febp133 Felt you have no identity: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	483	6.7	7.6	7.6
	2 No	5893	82.3	92.4	100.0
	Total	6376	89.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	34	.5		
	-2 Interview not	711	9.9		
	-1 Missing	13	.2		
	Total	783	10.9		
	Total	7159	100.0		

That you had no idea of who you are or what you believe in? (That you don't even exist?)

**febp134 Felt you don't even exist: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	513	7.2	8.0	8.0
	2 No	5867	82.0	92.0	100.0
	Total	6380	89.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	22	.3		
	-2 Interview not	711	9.9		
	-1 Missing	21	.3		
	Total	779	10.9		
	Total	7159	100.0		

Derived variable: Yes to any of (1) to (4) above

**febp135 DV: Any identity disturbance reported by child: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	2132	29.8	33.2	33.2
	2 No	4291	59.9	66.8	100.0
	Total	6423	89.7	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	711	9.9		
	Total	736	10.3		
	Total	7159	100.0		

(IF YES TO ANY OF (1) to (4) ABOVE) How often has this happened?

**febp136 Identity disturbance - How often: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 <Once a month	1072	15.0	53.2	53.2
	2 Once a month	491	6.9	24.4	77.6
	3 Several times a	191	2.7	9.5	87.1
	4 Once a week	151	2.1	7.5	94.6
	5 Several times a	74	1.0	3.7	98.3
	6 Daily	26	.4	1.3	99.6
	7 Several times a day	7	.1	.3	99.9
	8 Refused	2	.0	.1	100.0
	Total	2014	28.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	40	.6		
	-2 Interview not	711	9.9		
	-1 Missing	4369	61.0		
	Total	5145	71.9		
	Total	7159	100.0		

### Paranoid ideation questions:

During the past two years have you often felt very suspicious of other people?

**febp141 Felt suspicious of people: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	1628	22.7	25.5	25.5
	2 No	4753	66.4	74.5	100.0
	Total	6381	89.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	16	.2		
	-2 Interview not	711	9.9		
	-1 Missing	26	.4		
	Total	778	10.9		
	Total	7159	100.0		

How about believed that they were taking advantage of you or blaming you for things that weren't your fault?

**febp142 Felt others take advantage of you/blame you unnecessarily: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	1481	20.7	23.2	23.2
	2 No	4900	68.4	76.8	100.0
	Total	6381	89.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	13	.2		
	-2 Interview not	711	9.9		
	-1 Missing	29	.4		
	Total	778	10.9		
	Total	7159	100.0		

Felt others were staring at you, talking about you behind your back, or laughing at you?

**febp143 Felt others/staring at you/talking about you/laughing at you: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	1298	18.1	20.4	20.4
	2 No	5071	70.8	79.6	100.0
	Total	6369	89.0	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	26	.4		
	-2 Interview not	711	9.9		
	-1 Missing	28	.4		
	Total	790	11.0		
	Total	7159	100.0		

Frequently felt as if you were physically separated from your feelings or as though you were viewing yourself from a distance? (As if you were in a dream or as though something like a window was between you and the world?)

**febp144 Felt physically separated from your feelings: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	312	4.4	4.9	4.9
	2 No	6044	84.4	95.1	100.0
	Total	6356	88.8	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	38	.5		
	-2 Interview not	711	9.9		
	-1 Missing	29	.4		
	Total	803	11.2		
	Total	7159	100.0		

You felt like you had no emotions, you felt emotionally dead?

**febp145 Felt you had no emotions: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	419	5.9	6.6	6.6
	2 No	5939	83.0	93.4	100.0
	Total	6358	88.8	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	27	.4		
	-2 Interview not	711	9.9		
	-1 Missing	38	.5		
	Total	801	11.2		
Total		7159	100.0		

Derived variable: Yes to any of (1) to (5)

**febp146 DV: Any paranoia feelings reported by child: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	2541	35.5	39.6	39.6
	2 No	3882	54.2	60.4	100.0
	Total	6423	89.7	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	711	9.9		
	Total	736	10.3		
Total		7159	100.0		

(IF YES TO ANY OF (1) to (5) ABOVE) Did these feelings come and go or were they almost always there?

**febp147 Paranoia feelings come and go: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	2080	29.1	88.4	88.4
	2 No	272	3.8	11.6	100.0
	Total	2352	32.9	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	31	.4		
	-3 No paranoia	3882	54.2		
	-2 Interview not	711	9.9		
	-1 Missing	158	2.2		
	Total	4807	67.1		
Total		7159	100.0		

(IF YES TO ANY OF (1) to (5) ABOVE) Did they only occur when you were under stress or get worse when you were under a lot of stress?

**febp148 Paranoia feelings coincide with stress: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	1098	15.3	48.0	48.0
	2 No	1189	16.6	52.0	100.0
	Total	2287	31.9	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	87	1.2		
	-3 No paranoia	3882	54.2		
	-2 Interview not	711	9.9		
	-1 Missing	167	2.3		
	Total	4872	68.1		
		7159	100.0		

(IF YES TO ANY OF (1) to (5) ABOVE) How often has this happened?

**febp149 Paranoia feelings - how often: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 <Once a month	1142	16.0	48.6	48.6
	2 Once a month	538	7.5	22.9	71.4
	3 Several times a	255	3.6	10.8	82.3
	4 Once a week	210	2.9	8.9	91.2
	5 Several times a	128	1.8	5.4	96.6
	6 Daily	71	1.0	3.0	99.7
	7 Several times a day	8	.1	.3	100.0
	Total	2352	32.9	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	82	1.1		
	-3 No paranoia	3882	54.2		
	-2 Interview not	711	9.9		
	-1 Missing	107	1.5		
	Total	4807	67.1		
		7159	100.0		

### Abandonment questions:

During the past two years have you frequently tried to avoid feeling completely alone e.g., phoned someone you're close to because you were feeling totally alone or scared?

**febp151 Tried to avoid feeling alone: F11'**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	1187	16.6	18.6	18.6
	2 No	5190	72.5	81.4	100.0
	Total	6377	89.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	15	.2		
	-2 Interview not	711	9.9		
	-1 Missing	31	.4		
	Total	782	10.9		
	Total	7159	100.0		

(IF YES To (1) ) How often has this happened?

**febp152 Tried to avoid feeling alone - how often: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 <Once a month	600	8.4	51.3	51.3
	2 Once a month	275	3.8	23.5	74.9
	3 Several times a	111	1.6	9.5	84.3
	4 Once a week	102	1.4	8.7	93.1
	5 Several times a	58	.8	5.0	98.0
	6 Daily	20	.3	1.7	99.7
	7 Several times a day	3	.0	.3	100.0
	Total	1169	16.3	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	17	.2		
	-3 Not avoided feeling	5190	72.5		
	-2 Interview not started	711	9.9		
	-1 Missing	47	.7		
	Total	5990	83.7		
Total		7159	100.0		

How about tried to avoid being left alone or abandoned e.g., pleaded with people not to leave you, clung to them physically, refused to leave their home or office?

**febp153 Tried to avoid being left alone: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	532	7.4	8.4	8.4
	2 No	5836	81.5	91.6	100.0
	Total	6368	89.0	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	23	.3		
	-2 Interview not	711	9.9		
	-1 Missing	32	.4		
	Total	791	11.0		
		7159	100.0		

(IF YES To (2) ) How often has this happened?

**febp154 Tried to avoid being left alone - how often: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 <Once a month	289	4.0	55.5	55.5
	2 Once a month	112	1.6	21.5	77.0
	3 Several times a	53	.7	10.2	87.1
	4 Once a week	40	.6	7.7	94.8
	5 Several times a	17	.2	3.3	98.1
	6 Daily	10	.1	1.9	100.0
	Total	521	7.3	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	10	.1		
	-3 Not avoided being				
	left alone	5836	81.5		
	-2 Interview not	711	9.9		
	-1 Missing	56	.8		
	Total	6638	92.7		
Total		7159	100.0		

## Suicidal behaviour questions:

Have you ever hurt yourself on purpose?

**febp161 Hurt yourself on purpose: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	293	4.1	4.6	4.6
	2 No	6069	84.8	95.4	100.0
	Total	6362	88.9	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	9	.1		
	-2 Interview not	711	9.9		
	-1 Missing	52	.7		
	Total	797	11.1		
	Total	7159	100.0		

(IF YES TO (1)) How many times?

**febp163 Hurt yourself on purpose - how often: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1	134	1.9	51.5	51.5
	2	41	.6	15.8	67.3
	3	20	.3	7.7	75.0
	4	6	.1	2.3	77.3
	5	12	.2	4.6	81.9
	8	4	.1	1.5	83.5
	10	7	.1	2.7	86.2
	12	6	.1	2.3	88.5
	15	1	.0	.4	88.8
	20	8	.1	3.1	91.9
	24	4	.1	1.5	93.5
	25	1	.0	.4	93.8
	35	1	.0	.4	94.2
	48	1	.0	.4	94.6
	50	5	.1	1.9	96.5
	90 Occassionally	2	.0	.8	97.3
	98 Weekly	7	.1	2.7	100.0
	Total	260	3.6	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3 Never hurt self on purpose	6069	84.8		
	-2 Interview not	711	9.9		
	-1 Missing	94	1.3		
	Total	6899	96.4		
	Total	7159	100.0		

(IF YES TO (1)) Have you told an adult about this?

**febp164 Hurt yourself on purpose - told adult: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	114	1.6	42.4	42.4
	2 No	155	2.2	57.6	100.0
	Total	269	3.8	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	5	.1		
	-3 Never hurt self on purpose	6069	84.8		
	-2 Interview not	711	9.9		
	-1 Missing	80	1.1		
	Total	6890	96.2		
Total		7159	100.0		

(IF YES TO (1) ) Received help?

**febp165 Hurt yourself on purpose - Received help: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	83	1.2	35.2	35.2
	2 No	153	2.1	64.8	100.0
	Total	236	3.3	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	3	.0		
	-3 Never hurt self on purpose	6069	84.8		
	-2 Interview not	711	9.9		
	-1 Missing	115	1.6		
	Total	6923	96.7		
Total		7159	100.0		

Have you ever told someone that you're going to kill yourself to let them know you're in pain?  
To see if they care?

**febp166 Told someone you will kill yourself: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	281	3.9	4.4	4.4
	2 No	6081	84.9	95.5	99.9
	4 Parent refused	7	.1	.1	100.0
	Total	6369	89.0	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	3	.0		
	-2 Interview not	711	9.9		
	-1 Missing	51	.7		
	Total	790	11.0		
Total		7159	100.0		

(IF YES TO (5)) How many times?

**febp167 Told someone you will kill yourself - How often: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1	105	1.5	37.6	37.6
	2	79	1.1	28.3	65.9
	3	17	.2	6.1	72.0
	4	9	.1	3.2	75.3
	5	14	.2	5.0	80.3
	6	5	.1	1.8	82.1
	7	1	.0	.4	82.4
	10	16	.2	5.7	88.2
	12	5	.1	1.8	90.0
	18	1	.0	.4	90.3
	20	5	.1	1.8	92.1
	24	2	.0	.7	92.8
	25	2	.0	.7	93.5
	48	1	.0	.4	93.9
	50	4	.1	1.4	95.3
	52	1	.0	.4	95.7
	90 Occassionally	1	.0	.4	96.1
	98 Weekly	2	.0	.7	96.8
	99 Unknown	9	.1	3.2	100.0
	Total	279	3.9	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3 Never told will kill	6081	84.9		
	-2 Interview not	711	9.9		
	-1 Missing	63	.9		
	Total	6880	96.1		
Total		7159	100.0		

(IF YES) Have you told an adult about this?

**feb168 Told adult you will kill yourself: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	202	2.8	73.5	73.5
	2 No	73	1.0	26.5	100.0
	Total	275	3.8	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	2	.0		
	-3 Never told will kill	6081	84.9		
	-2 Interview not	711	9.9		
	-1 Missing	65	.9		
	Total	6884	96.2		
Total		7159	100.0		

(IF YES TO (5)) Received help?

**feb169 Told someone you will kill yourself - Received help: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	135	1.9	54.4	54.4
	2 No	113	1.6	45.6	100.0
	Total	248	3.5	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	6	.1		
	-3 Never told will kill	6081	84.9		
	-2 Interview not	711	9.9		
	-1 Missing	88	1.2		
	Total	6911	96.5		
Total		7159	100.0		

Have you thought about killing yourself?

**feb170 Thought about killing yourself: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	313	4.4	4.9	4.9
	2 No	6050	84.5	95.1	100.0
	Total	6363	88.9	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	3	.0		
	-2 Interview not	711	9.9		
	-1 Missing	57	.8		
	Total	796	11.1		
Total		7159	100.0		

(IF YES TO (9)) How many times?

**feb171 Thought about killing yourself - How many times: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1	117	1.6	37.5	37.5
	2	76	1.1	24.4	61.9
	3	21	.3	6.7	68.6
	4	14	.2	4.5	73.1
	5	11	.2	3.5	76.6
	6	1	.0	.3	76.9
	8	4	.1	1.3	78.2
	10	4	.1	1.3	79.5
	12	6	.1	1.9	81.4
	15	2	.0	.6	82.1
	18	1	.0	.3	82.4
	20	9	.1	2.9	85.3
	24	15	.2	4.8	90.1
	25	2	.0	.6	90.7
	50	2	.0	.6	91.3
	90 Occassionally	2	.0	.6	92.0
	98 Weekly	3	.0	1.0	92.9
	99 Unknown	22	.3	7.1	100.0
	Total	312	4.4	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3 Never thought about killing self	6050	84.5		
	-2 Interview not	711	9.9		
	-1 Missing	61	.9		
	Total	6847	95.6		
Total		7159	100.0		

(IF YES TO (9)) Have you told an adult about this?

**feb172 Thought about killing yourself - Told adult: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	88	1.2	28.8	28.8
	2 No	218	3.0	71.2	100.0
	Total	306	4.3	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	4	.1		
	-3 Never thought about killing self	6050	84.5		
	-2 Interview not	711	9.9		
	-1 Missing	63	.9		
	Total	6853	95.7		
Total		7159	100.0		

(IF YES TO (9)) Received help?

**feb173 Thought about killing yourself - Received help: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	74	1.0	31.9	31.9
	2 No	158	2.2	68.1	100.0
	Total	232	3.2	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	3	.0		
	-3 Never thought about killing self	6050	84.5		
	-2 Interview not	711	9.9		
	-1 Missing	138	1.9		
	Total	6927	96.8		
	Total	7159	100.0		

(IF YES TO (9)) Have you ever made plans to kill yourself?

**feb174 Made plans to kill yourself: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	23	.3	7.5	7.5
	2 No	284	4.0	92.5	100.0
	Total	307	4.3	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	1	.0		
	-3 Never thought about killing self	6050	84.5		
	-2 Interview not	711	9.9		
	-1 Missing	65	.9		
	Total	6852	95.7		
	Total	7159	100.0		

(IF YES TO (13)) How many times?

**feb175 Made plans to kill yourself - How many times: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1	15	.2	62.5	62.5
	2	2	.0	8.3	70.8
	4	1	.0	4.2	75.0
	7	1	.0	4.2	79.2
	10	1	.0	4.2	83.3
	25	1	.0	4.2	87.5
	99 Unknown	3	.0	12.5	100.0
	Total	24	.3	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3 Never thought about killing self	6050	84.5		
	-2 Interview not	711	9.9		
	-1 Missing	349	4.9		
	Total	7135	99.7		
Total		7159	100.0		

(IF YES TO (13)) Have you told an adult about this?

**feb176 Made plans to kill yourself - Told an adult: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	7	.1	31.8	31.8
	2 No	15	.2	68.2	100.0
	Total	22	.3	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3 Never thought about killing self	6050	84.5		
	-2 Interview not	711	9.9		
	-1 Missing	351	4.9		
	Total	7137	99.7		
Total		7159	100.0		

(IF YES TO (13)) Received help

**feb177 Made plans to kill yourself - Received help: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	6	.1	31.6	31.6
	2 No	13	.2	68.4	100.0
	Total	19	.3	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3 Never thought about killing self	6050	84.5		
	-2 Interview not	711	9.9		
	-1 Missing	354	4.9		
	Total	7140	99.7		
Total		7159	100.0		

(IF YES TO (9)) Have you actually tried to kill yourself?

**feb178 Actually tried to kill yourself: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	10	.1	14.7	14.7
	2 No	58	.8	85.3	100.0
	Total	68	.9	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	1	.0		
	-3 Never thought about killing self	6050	84.5		
	-2 Interview not	711	9.9		
	-1 Missing	304	4.2		
	Total	7091	99.1		
Total		7159	100.0		

(IF YES TO (17)) How many times?

**feb179 Actually tried to kill yourself - How many times: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1	6	.1	60.0	60.0
	2	2	.0	20.0	80.0
	3	2	.0	20.0	100.0
	Total	10	.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3 Never thought about killing self	6050	84.5		
	-2 Interview not	711	9.9		
	-1 Missing	363	5.1		
	Total	7149	99.9		
Total		7159	100.0		

(IF YES TO (17)) Have you told an adult about this?

**feb180 Actually tried to kill yourself - Told an adult: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	7	.1	70.0	70.0
	2 No	3	.0	30.0	100.0
	Total	10	.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3 Never thought about killing self	6050	84.5		
	-2 Interview not	711	9.9		
	-1 Missing	363	5.1		
	Total	7149	99.9		
Total		7159	100.0		

(IF YES TO (17)) Received help?

**feb181 Actually tried to kill yourself - Received help: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	6	.1	60.0	60.0
	2 No	4	.1	40.0	100.0
	Total	10	.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3 Never thought about killing self	6050	84.5		
	-2 Interview not	711	9.9		
	-1 Missing	363	5.1		
	Total	7149	99.9		
Total		7159	100.0		

### **Impulsivity questions:**

During the past two years have you got really drunk on alcohol?

**feb191 Got really drunk on alcohol: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	153	2.1	2.4	2.4
	2 No	6219	86.9	97.6	100.0
	Total	6372	89.0	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	2	.0		
	-2 Interview not	711	9.9		
	-1 Missing	49	.7		
	Total	787	11.0		
Total		7159	100.0		

(IF YES TO (1)) How many times?

**feb192 Got really drunk on alcohol - How many times: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0 0-2 times	123	1.7	82.0	82.0
	1 3-4 times	18	.3	12.0	94.0
	2 >=5 times	9	.1	6.0	100.0
	Total	150	2.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3 Never got really	6219	86.9		
	-2 Interview not	711	9.9		
	-1 Missing	54	.8		
	Total	7009	97.9		
Total		7159	100.0		

Have you used prescription or illegal drugs to get high?

**feb193 Used drugs to get high: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	8	.1	.1	.1
	2 No	6362	88.9	99.9	100.0
	Total	6370	89.0	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	1	.0		
	-2 Interview not	711	9.9		
	-1 Missing	52	.7		
	Total	789	11.0		
Total		7159	100.0		

(IF YES TO (3)) How many times?

**feb194 Used drugs to get high - How many times: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0 0-2 times	4	.1	66.7	66.7
	1 3-4 times	1	.0	16.7	83.3
	2 >=5 times	1	.0	16.7	100.0
	Total	6	.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3 Never got high	6362	88.9		
	-2 Interview not	711	9.9		
	-1 Missing	55	.8		
	Total	7153	99.9		
Total		7159	100.0		

Had times where you ate so much food that you were in a lot of pain or had to force yourself to throw up?

**feb195 Eaten so much had to throw up: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	394	5.5	6.2	6.2
	2 No	5977	83.5	93.8	100.0
	Total	6371	89.0	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	1	.0		
	-2 Interview not	711	9.9		
	-1 Missing	51	.7		
	Total	788	11.0		
	Total	7159	100.0		

(IF YES TO (5)) How many times?

**feb196 Eaten so much had to throw up - How many times: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0 0-2 times	258	3.6	66.0	66.0
	1 3-4 times	66	.9	16.9	82.9
	2 >=5 times	67	.9	17.1	100.0
	Total	391	5.5	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3 Never eaten so	5977	83.5		
	-2 Interview not	711	9.9		
	-1 Missing	55	.8		
	Total	6768	94.5		
	Total	7159	100.0		

Spent all of your money as soon as you got it?

**feb197 Spent all your money as soon as you have it: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	2023	28.3	31.8	31.8
	2 No	4344	60.7	68.2	100.0
	Total	6367	88.9	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	5	.1		
	-2 Interview not	711	9.9		
	-1 Missing	51	.7		
	Total	792	11.1		
	Total	7159	100.0		

(IF YES TO (7)) How many times?

**feb198 Spent all your money - How many times: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0 0-2 times	488	6.8	24.3	24.3
	1 3-4 times	365	5.1	18.2	42.5
	2 >=5 times	1154	16.1	57.5	100.0
	Total	2007	28.0	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3 Never spent all	4344	60.7		
	-2 Interview not	711	9.9		
	-1 Missing	72	1.0		
	Total	5152	72.0		
Total		7159	100.0		

Lost your temper and really shouted, yelled, or screamed at anyone?

**feb199 Lost temper and really shouted: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	2651	37.0	41.7	41.7
	2 No	3709	51.8	58.3	100.0
	Total	6360	88.8	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	8	.1		
	-2 Interview not	711	9.9		
	-1 Missing	55	.8		
	Total	799	11.2		
Total		7159	100.0		

(IF YES TO (9)) How many times?

**feb200 Lost temper and really shouted - How many times: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0 0-2 times	655	9.1	33.7	33.7
	1 3-4 times	424	5.9	21.8	55.5
	2 >=5 times	865	12.1	44.5	100.0
	Total	1944	27.2	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3 Never lost temper	1154	16.1		
	-2 Interview not	711	9.9		
	-1 Missing	3325	46.4		
	Total	5215	72.8		
Total		7159	100.0		

Threatened to physically harm anyone (e.g., told someone that you would punch him, stab him, or kill him)?

**feb201 Threatened to physically harm someone: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	773	10.8	12.1	12.1
	2 No	5596	78.2	87.9	100.0
	Total	6369	89.0	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	3	.0		
	-2 Interview not	711	9.9		
	-1 Missing	51	.7		
	Total	790	11.0		
		7159	100.0		

(IF YES TO (11)) How many times?

**feb202 Threatened to physically harm someone - How many times: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0 0-2 times	307	4.3	39.9	39.9
	1 3-4 times	139	1.9	18.1	58.0
	2 >=5 times	323	4.5	42.0	100.0
	Total	769	10.7	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3 Never threatened	5596	78.2		
	-2 Interview not	711	9.9		
	-1 Missing	58	.8		
	Total	6390	89.3		
		7159	100.0		

Shoved, slapped, punched, or kicked someone?

**feb203 Shoved/slapped/punched/kicked someone: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	1963		27.4	30.9
	2 No	4397		61.4	69.1
	Total	6360		88.8	100.0
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	8	.1		
	-2 Interview not	711	9.9		
	-1 Missing	55	.8		
	Total	799	11.2		
		7159	100.0		

(IF YES TO (13)) How many times?

**feb204 Shoved/slapped/punched/kicked someone - How many times: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0 0-2 times	905	12.6	46.5	46.5
	1 3-4 times	350	4.9	18.0	64.4
	2 >=5 times	693	9.7	35.6	100.0
	Total	1948	27.2	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3 Never shoved etc	4397	61.4		
	-2 Interview not	711	9.9		
	-1 Missing	78	1.1		
	Total	5211	72.8		
Total		7159	100.0		

Been in any fistfights?

**feb205 Been in a fistfight: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	1051	14.7	16.5	16.5
	2 No	5315	74.2	83.5	100.0
	Total	6366	88.9	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	1	.0		
	-2 Interview not	711	9.9		
	-1 Missing	56	.8		
	Total	793	11.1		
Total		7159	100.0		

(IF YES TO (15)) How many times?

**feb206 Been in a fistfight - How many: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0 0-2 times	612	8.5	58.7	58.7
	1 3-4 times	186	2.6	17.8	76.5
	2 >=5 times	245	3.4	23.5	100.0
	Total	1043	14.6	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3 Never been in	5315	74.2		
	-2 Interview not	711	9.9		
	-1 Missing	65	.9		
	Total	6116	85.4		
Total		7159	100.0		

Deliberately damaged property (e.g., smashed dishes, broken furniture, destroyed some of your own things)?

**feb207 Deliberately damaged property: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	227	3.2	3.6	3.6
	2 No	6139	85.8	96.4	100.0
	Total	6366	88.9	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	3	.0		
	-2 Interview not	711	9.9		
	-1 Missing	54	.8		
	Total	793	11.1		
	Total	7159	100.0		

(IF YES TO (17) How many times?

**feb208 Deliberately damaged property - How many times: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0 0-2 times	158	2.2	69.9	69.9
	1 3-4 times	31	.4	13.7	83.6
	2 >=5 times	37	.5	16.4	100.0
	Total	226	3.2	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3 Never damaged	6139	85.8		
	-2 Interview not	711	9.9		
	-1 Missing	58	.8		
	Total	6933	96.8		
	Total	7159	100.0		

Done anything that's against the law (e.g., shoplifted, sold drugs, destroyed public property)?

**feb209 Done anything illegal: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	106	1.5	1.7	1.7
	2 No	6255	87.4	98.3	100.0
	Total	6361	88.9	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	7	.1		
	-2 Interview not	711	9.9		
	-1 Missing	55	.8		
	Total	798	11.1		
	Total	7159	100.0		

(IF YES TO (19) How many times?

**feb210 Done anything illegal - How many times: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0 0-2 times	66	.9	72.5	72.5
	1 3-4 times	9	.1	9.9	82.4
	2 >=5 times	16	.2	17.6	100.0
	Total	91	1.3	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3 Never broken law	37	.5		
	-2 Interview not	711	9.9		
	-1 Missing	6295	87.9		
	Total	7068	98.7		
Total		7159	100.0		

### **Intense Interpersonal relationship questions:**

During the past two years have you often gone from loving and admiring someone to feeling that you can't stand him or her?

**feb221 Changed your mind about someone from love to hate: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	1977	27.6	31.1	31.1
	2 No	4373	61.1	68.9	100.0
	Total	6350	88.7	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	15	.2		
	-2 Interview not	711	9.9		
	-1 Missing	58	.8		
	Total	809	11.3		
Total		7159	100.0		

Had any stormy relationships or friendships with a lot of ups and downs?

**feb222 Had stormy relationships: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	2296	32.1	36.2	36.2
	2 No	4054	56.6	63.8	100.0
	Total	6350	88.7	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	16	.2		
	-2 Interview not	711	9.9		
	-1 Missing	57	.8		
	Total	809	11.3		
Total		7159	100.0		

Any relationships or friendships with a lot of very intense arguments?

**febp223 Had relationships with a lot of arguments: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	943	13.2	14.9	14.9
	2 No	5405	75.5	85.1	100.0
	Total	6348	88.7	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	15	.2		
	-2 Interview not	711	9.9		
	-1 Missing	60	.8		
	Total	811	11.3		
	Total	7159	100.0		

Who was this with?

**febp224 Who did you have stormy relationships with: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Other	16	.2	1.7	1.7
	2 Sibling	43	.6	4.5	6.2
	3 Sibling & Other	2	.0	.2	6.4
	4 Friend	736	10.3	77.2	83.6
	5 Friend & Other	13	.2	1.4	85.0
	6 Friend & Sibling	78	1.1	8.2	93.2
	7 Partner	18	.3	1.9	95.1
	8 Partner & Other	1	.0	.1	95.2
	9 Partner & Sibling	4	.1	.4	95.6
	10 Partner & Friend	18	.3	1.9	97.5
	11 Partner & Friend &	1	.0	.1	97.6
	12 Partner & Friend &	21	.3	2.2	99.8
	13 Partner & Friend & Sibling & Other	2	.0	.2	100.0
	Total	953	13.3	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3	5405	75.5		
	-2 Interview not started	711	9.9		
	-1 Missing	3	.0		
	System	62	.9		
	Total	6206	86.7		
Total		7159	100.0		

How about times when you stopped talking to someone or stopped seeing them?

**feb225 Stopped talking/seeing people: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	2166	30.3	34.3	34.3
	2 No	4151	58.0	65.7	100.0
	Total	6317	88.2	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	23	.3		
	-2 Interview not	711	9.9		
	-1 Missing	83	1.2		
	Total	842	11.8		
Total		7159	100.0		

(IF YES TO (5)) And then got back together again?

**feb226 Got back with people afterwards: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	1829	25.5	85.0	85.0
	2 No	322	4.5	15.0	100.0
	Total	2151	30.0	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	4	.1		
	-3 Not stopped talking to someone	4151	58.0		
	-2 Interview not	711	9.9		
	-1 Missing	117	1.6		
	Total	5008	70.0		
Total		7159	100.0		

Derived variable: Yes to any of (1) to (5)

**feb227 DV: Any stormy relationships reported by child: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	3730	52.1	58.1	58.1
	2 No	2693	37.6	41.9	100.0
	Total	6423	89.7	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Interview not	711	9.9		
	Total	736	10.3		
Total		7159	100.0		

(IF YES TO ANY OF (1) to (6) ABOVE) How often has this happened?

**febp228 Stormy relationships - How many times: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 <Once a month	2446	34.2	69.8	69.8
	2 Once a month	468	6.5	13.3	83.1
	3 Several times a	235	3.3	6.7	89.8
	4 Once a week	174	2.4	5.0	94.8
	5 Several times a	111	1.6	3.2	97.9
	6 Daily	67	.9	1.9	99.9
	7 Several times a day	3	.0	.1	99.9
	8 Refused	2	.0	.1	100.0
	Total	3506	49.0	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-4 Ch said DK	36	.5		
	-3 No stormy	2693	37.6		
	-2 Interview not	711	9.9		
	-1 Missing	188	2.6		
	Total	3653	51.0		
	Total	7159	100.0		

### 3.4.6 Bike Drawing

The bike drawing task was first developed as a measure of children's higher conceptual reasoning (Piaget, 1993; Taylor, 1959) and more recently as a tool to measure mechanical reasoning and visuographing functioning (Lezak, 1995). A simplified version of the task was devised by Professor Dieter Wolke and given to the children at Focus11+.

The tester explained to the child that they wanted them to draw a bicycle within a box printed on a piece of A4 paper. The child was given a maximum of 3 minutes to complete the task (they were prompted with 30 seconds to go). The tester noted whether any of 12 basic items necessary for a bike to function were present in the drawing; a further 10 more detailed items were also scored, as were 3 possible background aspects of the picture (see Table 3.4.8b below for items).

**febd001 Child Started Bike Drawing task: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	6287	87.8	88.1	88.1
	2 No	847	11.8	11.9	100.0
	Total	7134	99.7	100.0	
Missing-9 Did not F&Y		25	.3		
Total		7159	100.0		

**febd001a Reason Child did not do Bike Drawing task: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Parent present	179	2.5	22.5	22.5
	2 Child upset	4	.1	.5	23.0
	3 No time	567	7.9	71.2	94.2
	4 Inappropriate	2	.0	.3	94.5
	5 Other reason	44	.6	5.5	100.0
	Total	796	11.1	100.0	
Missing-9 Did not do F&Y					
	-2 Task started	6287	87.8		
	-1 Missing	51	.7		
	Total	6363	88.9		
Total		7159	100.0		

feb004 Bike Drawing Staff: F11

		Frequency	Percent	Valid Percent	Cum. %
Valid	1	148	2.1	2.4	2.4
	2	244	3.4	3.9	6.2
	3	512	7.2	8.1	14.4
	4	624	8.7	9.9	24.3
	5	288	4.0	4.6	28.9
	6	410	5.7	6.5	35.4
	7	634	8.9	10.1	45.5
	8	371	5.2	5.9	51.4
	9	194	2.7	3.1	54.5
	10	405	5.7	6.4	60.9
	11	122	1.7	1.9	62.9
	12	589	8.2	9.4	72.2
	13	46	.6	.7	73.0
	14	244	3.4	3.9	76.8
	15	280	3.9	4.5	81.3
	16	84	1.2	1.3	82.6
	17	580	8.1	9.2	91.9
	18	147	2.1	2.3	94.2
	19	120	1.7	1.9	96.1
	20	245	3.4	3.9	100.0
	Total	6287	87.8	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Task not started	847	11.8		
	Total	872	12.2		
	Total	7159	100.0		

In the early stages of Focus11+ (up to 16/06/03), testers only noted whether an item was present or absent. It became clear that this was rather crude and that additional coding was required to indicate whether an item was functional (e.g. pedals drawn attached to the handlebars were present but not functional, while pedals attached to the Frame were functional). Therefore, variables indicating the presence of items contain three different versions of 'Yes', as such, derived variables (suffix -a) have been created, combining these 3 versions to indicate any presence or absence of each item. Note, that an indicator variable has also been created to show when the task was performed for each child (FEBD015).

It should be noted that the early data is currently being recoded from Yes/No to Yes, functional; Yes, not functional and No. Once available this dataset will be updated accordingly.

Table 3.4.7 overleaf shows the frequencies for the initial variables.

feb015 Bike Drawing - Date done: F11

		Frequency	Percent	Valid Percent	Cum. %
Valid	1.00 Before 16\06\03	1984	27.7	31.6	31.6
	2.00 On or after	4303	60.1	68.4	100.0
	Total	6287	87.8	100.0	
Missing	-9.00 Did not do F&Y	25	.3		
	-2.00 Task not started	847	11.8		
	Total	872	12.2		
Total		7159	100.0		

Table 3.4.7: Frequencies for presence of details and parts of bike

Variable	Yes	Yes-name	Functional	Yes – Not Functional	No
<b>Main Bike Part</b>					
Two wheels	FEBD020	1628 (25.9%)	356 (5.7%)	4227 (67.2%)	76 (1.2%)
Spokes	FEBD021	1444 (23.0%)	485 (7.7%)	3512 (55.9%)	846 (13.5%)
V-Frame	FEBD022	352 (5.6%)	616 (9.8%)	479 (7.6%)	4840 (77.0%)
Front wheel forks	FEBD023	608 (9.7%)	411 (6.5%)	1242 (19.8%)	4026 (64.0%)
Rear wheel forks	FEBD024	299 (4.8%)	346 (5.5%)	507 (8.1%)	5135 (81.7%)
Upright to saddle	FEBD025	1366 (21.7%)	612 (9.7%)	2855 (45.4%)	1454 (23.1%)
Saddle	FEBD026	1594 (25.4%)	731 (11.6%)	3742 (59.5%)	220 (3.5%)
Chain coq	FEBD027	575 (9.1%)	642 (10.2%)	859 (13.7%)	4211 (67.0%)
Chain	FEBD028	531 (8.4%)	729 (11.6%)	672 (10.7%)	4355 (69.3%)
Chain – coq to back wheel	FEBD029	316 (5.0%)	314 (5.0%)	588 (9.4%)	5069 (80.6%)
Pedals	FEBD030	774 (12.3%)	1141 (18.1%)	944 (15.0%)	3428 (54.5%)
Handlebars	FEBD031	1597 (25.4%)	1194 (19.0%)	3328 (52.9%)	168 (2.7%)
<b>Bike Details</b>					
Cross-bar	FEBD040	788 (12.5%)	70 (1.1%)	738 (11.7%)	4691 (74.6%)
Lights	FEBD041	81 (1.3%)	38 (0.6%)	183 (2.9%)	5985 (95.2%)
Basket	FEBD042	9 (0.1%)	5 (0.1%)	14 (0.2%)	9259 (99.6%)
Bell	FEBD043	77 (1.2%)	21 (0.3%)	172 (2.7%)	6017 (95.7%)
Rider	FEBD044	13 (0.2%)	28 (0.4%)	35 (0.6%)	6211 (98.8%)
Mudguards	FEBD045	171 (2.7%)	125 (2.0%)	231 (3.7%)	5760 (91.6%)
Carrier	FEBD046	9 (0.1%)	3 (0.05%)	6 (0.1%)	6269 (99.7%)
Brake levers	FEBD047	324 (5.2%)	134 (2.1%)	612 (9.7%)	5217 (85.0%)
Gear levers	FEBD048	48 (0.8%)	22 (0.3%)	89 (1.4%)	6128 (97.5%)
Tyres	FEBD049	581 (9.2%)	159 (2.5%)	1383 (22.0%)	4164 (66.2%)
<b>Background</b>					
Road	FEBD060	27 (0.4%)	7 (0.1%)	35 (0.6%)	6218 (98.9%)
Landscape	FEBD061	5 (0.1%)	2 (0.05%)	2 (0.05%)	6278 (99.9%)
Sky	FEBD062	6 (0.1%)	3 (0.05%)	6 (0.1%)	6272 (99.8%)

Scores have been created to indicate firstly, the number of parts (FEBD035), details (FEBD055) or background aspects (FEBD065) that were present in the picture, together with the total number of all items that were scored (FEBD070) and secondly, the total number of functional parts (FEBD036) or details (FEBD056) that were present, together

with the total number of all items that were scored and were functional (FEBD071), this does not include background items.

**febd035 DV: Bike Drawing - No. bike parts present: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0	40	.6	.6	.6
	1	21	.3	.3	1.0
	2	43	.6	.7	1.7
	3	121	1.7	1.9	3.6
	4	576	8.0	9.2	12.7
	5	1439	20.1	22.9	35.6
	6	1207	16.9	19.2	54.8
	7	889	12.4	14.1	69.0
	8	671	9.4	10.7	79.6
	9	514	7.2	8.2	87.8
	10	374	5.2	5.9	93.8
	11	256	3.6	4.1	97.8
	12	136	1.9	2.2	100.0
	Total	6287	87.8	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Task not started	847	11.8		
	Total	872	12.2		
	Total	7159	100.0		

**feb036 DV: Bike Drawing - No. functional bike parts present: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0	63	.9	1.5	1.5
	1	65	.9	1.5	3.0
	2	306	4.3	7.1	10.1
	3	493	6.9	11.5	21.5
	4	790	11.0	18.4	39.9
	5	1085	15.2	25.2	65.1
	6	477	6.7	11.1	76.2
	7	351	4.9	8.2	84.4
	8	220	3.1	5.1	89.5
	9	192	2.7	4.5	93.9
	10	141	2.0	3.3	97.2
	11	64	.9	1.5	98.7
	12	56	.8	1.3	100.0
Total		4303	60.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3 Functional info not available	1984	27.7		
	-2 Task not started	847	11.8		
	Total	2856	39.9		
Total		7159	100.0		

**feb055 DV: Bike Drawing - No. bike details present: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0	2313	32.3	36.8	36.8
	1	2328	32.5	37.0	73.8
	2	1200	16.8	19.1	92.9
	3	353	4.9	5.6	98.5
	4	84	1.2	1.3	99.9
	5	8	.1	.1	100.0
	6	1	.0	.0	100.0
	Total	6287	87.8	100.0	
	Missing				
	-9 Did not do F&Y	25	.3		
	-2 Task not started	847	11.8		
	Total	872	12.2		
Total		7159	100.0		

**febd056 DV: Bike Drawing - No. functional bike details present: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0	1728	24.1	40.2	40.2
	1	1588	22.2	36.9	77.1
	2	740	10.3	17.2	94.3
	3	201	2.8	4.7	98.9
	4	41	.6	1.0	99.9
	5	5	.1	.1	100.0
	Total	4303	60.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-3 Functional info not available	1984	27.7		
	-2 Task not started	847	11.8		
	Total	2856	39.9		
Total		7159	100.0		

**febd065 DV: Bike Drawing - No. background items present: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0	6205	86.7	98.7	98.7
	1	73	1.0	1.2	99.9
	2	7	.1	.1	100.0
	3	2	.0	.0	100.0
	Total	6287	87.8	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Task not started	847	11.8		
	Total	872	12.2		
Total		7159	100.0		

**febd070 DV: Bike Drawing - Total no. parts/details present: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0	40	.6	.6	.6
	1	15	.2	.2	.9
	2	33	.5	.5	1.4
	3	77	1.1	1.2	2.6
	4	331	4.6	5.3	7.9
	5	812	11.3	12.9	20.8
	6	1038	14.5	16.5	37.3
	7	1017	14.2	16.2	53.5
	8	811	11.3	12.9	66.4
	9	657	9.2	10.5	76.8
	10	544	7.6	8.7	85.5
	11	380	5.3	6.0	91.5
	12	251	3.5	4.0	95.5
	13	175	2.4	2.8	98.3
	14	75	1.0	1.2	99.5
	15	21	.3	.3	99.8
	16	8	.1	.1	100.0
	17	2	.0	.0	100.0
	Total	6287	87.8	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Task not started	847	11.8		
	Total	872	12.2		
	Total	7159	100.0		

**febd071 DV: Bike Drawing - Total no. functional parts/details present: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0	50	.7	1.2	1.2
	1	46	.6	1.1	2.2
	2	210	2.9	4.9	7.1
	3	332	4.6	7.7	14.8
	4	578	8.1	13.4	28.3
	5	772	10.8	17.9	46.2
	6	694	9.7	16.1	62.3
	7	483	6.7	11.2	73.6
	8	386	5.4	9.0	82.5
	9	235	3.3	5.5	88.0
	10	192	2.7	4.5	92.4
	11	146	2.0	3.4	95.8
	12	91	1.3	2.1	98.0
	13	54	.8	1.3	99.2
	14	21	.3	.5	99.7
	15	10	.1	.2	99.9
	16	3	.0	.1	100.0
	Total	4303	60.1	100.0	

Missing -9 Did not do F&Y	25	.3		
-3 Functional info not available	1984	27.7		
-2 Task not started	847	11.8		
Total	2856	39.9		
Total	7159	100.0		

The children were also asked a series of questions about bikes as part of this task.

**feb080 Bike Drawing - Child owns a bike: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	5922	82.7	94.5	94.5
	2 No	347	4.8	5.5	100.0
	Total	6269	87.6	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Task not started	847	11.8		
	-1 Missing	18	.3		
	Total	890	12.4		
	Total	7159	100.0		

**feb081 Bike Drawing - Child can ride a bike: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	6129	85.6	98.1	98.1
	2 No	119	1.7	1.9	100.0
	Total	6248	87.3	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Task not started	847	11.8		
	-1 Missing	39	.5		
	Total	911	12.7		
	Total	7159	100.0		

**febd082 Bike Drawing - Age child learnt to ride bike: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1	4	.1	.1	.1
	2	43	.6	.8	.8
	3	377	5.3	6.8	7.6
	4	1299	18.1	23.3	30.9
	5	1553	21.7	27.9	58.8
	6	1111	15.5	19.9	78.8
	7	696	9.7	12.5	91.3
	8	243	3.4	4.4	95.6
	9	151	2.1	2.7	98.3
	10	67	.9	1.2	99.5
	11	24	.3	.4	100.0
	12	2	.0	.0	100.0
	Total	5570	77.8	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Task not started	847	11.8		
	-1 Missing	717	10.0		
	Total	1589	22.2		
	Total	7159	100.0		

**febd083 Bike Drawing - Child passed cycling proficiency test: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	2267	31.7	38.3	38.3
	2 No	3573	49.9	60.4	98.7
	3 Failed	21	.3	.4	99.0
	4 Training	57	.8	1.0	100.0
	Total	5918	82.7	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Task not started	847	11.8		
	-1 Missing	369	5.2		
	Total	1241	17.3		
	Total	7159	100.0		

**febd084 Bike Drawing - How often child rides bike: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Daily	990	13.8	16.6	16.6
	2 Weekly	1911	26.7	32.0	48.6
	3 Fortnightly	703	9.8	11.8	60.4
	4 Monthly	901	12.6	15.1	75.4
	5 Seasonal	774	10.8	13.0	88.4
	6 Few times/year	542	7.6	9.1	97.5
	7 Never	150	2.1	2.5	100.0
	Total	5971	83.4	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Task not started	847	11.8		
	-1 Missing	316	4.4		
	Total	1188	16.6		
Total		7159	100.0		

**febd085 Bike Drawing - Child fixes/helps to fix bike: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	3779	52.8	63.6	63.6
	2 No	2165	30.2	36.4	100.0
	Total	5944	83.0	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Task not started	847	11.8		
	-1 Missing	343	4.8		
	Total	1215	17.0		
Total		7159	100.0		

**febd086 Bike Drawing - Child cleans bike: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	3311	46.2	55.7	55.7
	2 No	2636	36.8	44.3	100.0
	Total	5947	83.1	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Task not started	847	11.8		
	-1 Missing	340	4.7		
	Total	1212	16.9		
Total		7159	100.0		

**febd087 Bike Drawing - What child uses bike for: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Function only	1187	16.6	20.3	20.3
	2 Mainly leisure	1960	27.4	33.5	53.7
	3 Only leisure (e.g.	2712	37.9	46.3	100.0
	Total	5859	81.8	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Task not started	847	11.8		
	-1 Missing	428	6.0		
	Total	1300	18.2		
Total		7159	100.0		

Finally, the tester recorded the child's attempt at the bike drawing task.

**febd100 Bike Drawing - Child's attempt at task: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Good	5730	80.0	92.6	92.6
	2 Medium	379	5.3	6.1	98.7
	3 Poor	80	1.1	1.3	100.0
	Total	6189	86.5	100.0	
Missing	-9 Did not do F&Y	25	.3		
	-2 Task not started	847	11.8		
	-1 Missing	98	1.4		
	Total	970	13.5		
Total		7159	100.0		

### 3.5 Samples

**fesa001 Child Started Samples session: F11**

	Frequency	Percent	Valid Percent	Cum. %
Valid 1 Yes	4891	68.3	68.3	68.3
2 Yes, not	2238	31.3	31.3	99.6
3 No	30	.4	.4	100.0
Total	7159	100.0	100.0	

**fesa001a Reason Child did not do Samples session: F11**

	Frequency	Percent	Valid Percent	Cum. %
Valid 1 No staff	19	.3	.3	.3
2 Child left	11	.2	.2	.4
10 Did	7129	99.6	99.6	100.0
Total	7159	100.0	100.0	

**fesa004 Samples tester F11**

	Frequency	Percent	Valid Percent	Cum. %
Valid 1	191	2.7	2.7	2.7
2	2393	33.4	33.8	36.5
3	1883	26.3	26.6	63.1
4	5	.1	.1	63.2
5	64	.9	.9	64.1
6	37	.5	.5	64.6
7	464	6.5	6.6	71.2
8	241	3.4	3.4	74.6
9	917	12.8	13.0	87.6
10	879	12.3	12.4	100.0
Total	7074	98.8	100.0	
Missing -9 Did not do	80	1.1		
-1 Missing	5	.1		
Total	85	1.2		
Total	7159	100.0		

**fesa006 Room - Samples session: F11**

	Frequency	Percent	Valid Percent	Cum. %
Valid 1 Y	1738	24.3	24.6	24.6
2 G	5341	74.6	75.4	100.0
Total	7079	98.9	100.0	
Missing -9 Did not do	80	1.1		
Total	7159	100.0		

At the start of this session the tester determined whether the child had recently or currently had an infection and if so, how long ago (FESA011 – frequency table overleaf), details were recorded as text and coded as FESA012 and FESA013. Also whether they were currently on any medication, details of these were also recorded as text and have been coded into variables FESA016 and FESA017 (data not shown).

**fesa010 Infection present/recent:samples F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	1154	16.1	16.3	16.3
	2 No	5925	82.8	83.7	100.0
	Total	7079	98.9	100.0	
Missing	-9 Did not do	80	1.1		
	Total	7159	100.0		

**fesa015 Currently taking medication: samples F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	1666	23.3	23.6	23.6
	2 No	5407	75.5	76.4	100.0
	Total	7073	98.8	100.0	
Missing	-9 Did not do	80	1.1		
	-1 Missing	6	.1		
	Total	86	1.2		
	Total	7159	100.0		

fesa011 Infection - no. of days before visit: samples F11

		Frequency	Percent	Valid %	Cum. %
Valid	.00	594	8.3	51.9	51.9
	1.00	100	1.4	8.7	60.7
	2.00	145	2.0	12.7	73.3
	3.00	77	1.1	6.7	80.1
	4.00	58	.8	5.1	85.1
	5.00	50	.7	4.4	89.5
	6.00	36	.5	3.1	92.7
	7.00	59	.8	5.2	97.8
	8.00	6	.1	.5	98.3
	10.00	1	.0	.1	98.4
	11.00	2	.0	.2	98.6
	12.00	1	.0	.1	98.7
	13.00	1	.0	.1	98.8
	14.00	5	.1	.4	99.2
	17.00	1	.0	.1	99.3
	20.00	1	.0	.1	99.4
	30.00 30 or more	7	.1	.6	100.0
	Total	1144	16.0	100.0	
Missing	-9.00 Did not do	80	1.1		
	-2.00 No infection	5932	82.9		
	-1.00 Missing	3	.0		
	Total	6015	84.0		
	Total	7159	100.0		

### 3.5.1 Blood pressure

Both blood pressure and pulse rates were measured using a Dinamap 9301 Vital Signs Monitor. The child was first given a simple explanation of what would happen in the session using the analogy of an inflating balloon to explain the action of the cuff. Two cuffs were used depending on the size of the child's upper arm circumference (ideally the right arm was used): If  $< 23\text{cm}$  a small adult size cuff (blue in colour) was used and if  $\geq 23\text{cm}$  an adult cuff (dark blue in colour) was used. A piece of cotton tubing was slid onto the child's arm to cushion it before the cuff was attached. The initial inflation was set to 130 mmHg.

The child was asked to press 'start' on the machine. While it took the measurements, the tester asked the parent whether the child had recently or presently had an infection. If so, details were taken (see above). The parents were also asked about any medications the child was currently on and when they had last been taken. Two readings of systolic and diastolic blood pressure and pulse rates were recorded and the mean of each has been calculated. Also noted were the child's demeanour during the session, the time of the reading and the room temperature (data not shown for the two latter).

If the child's blood pressure was 140/90 or more the parents were given a letter to take to their GP.

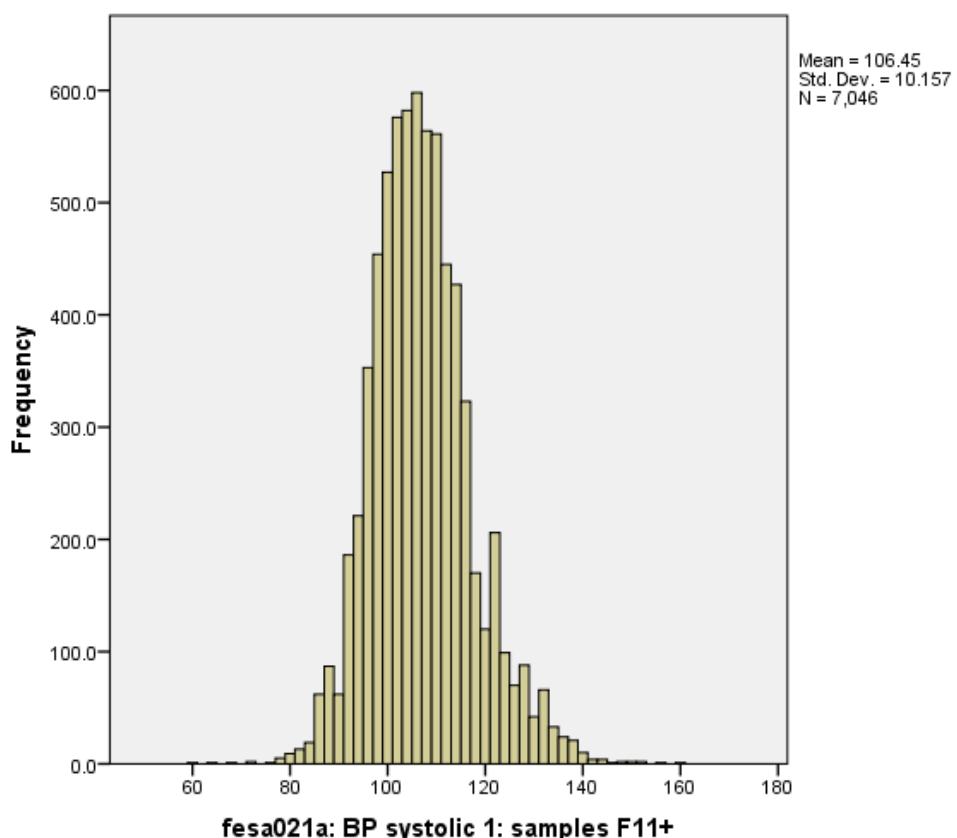
*When using this data in conjunction with other measures across this and our other clinics and sessions, it is important to remember that blood pressure readings are taken in different ways across each clinic as well as across and within the session. Please ensure your measures are harmonious before any analyses.*

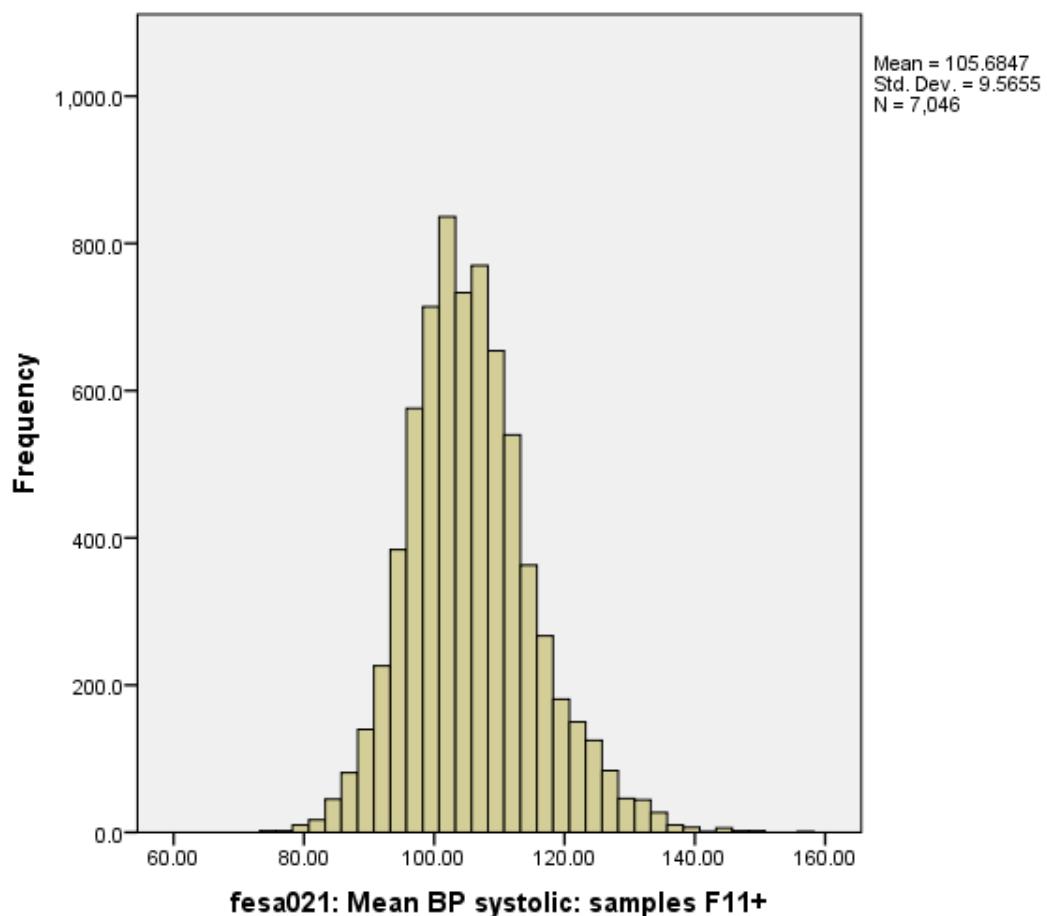
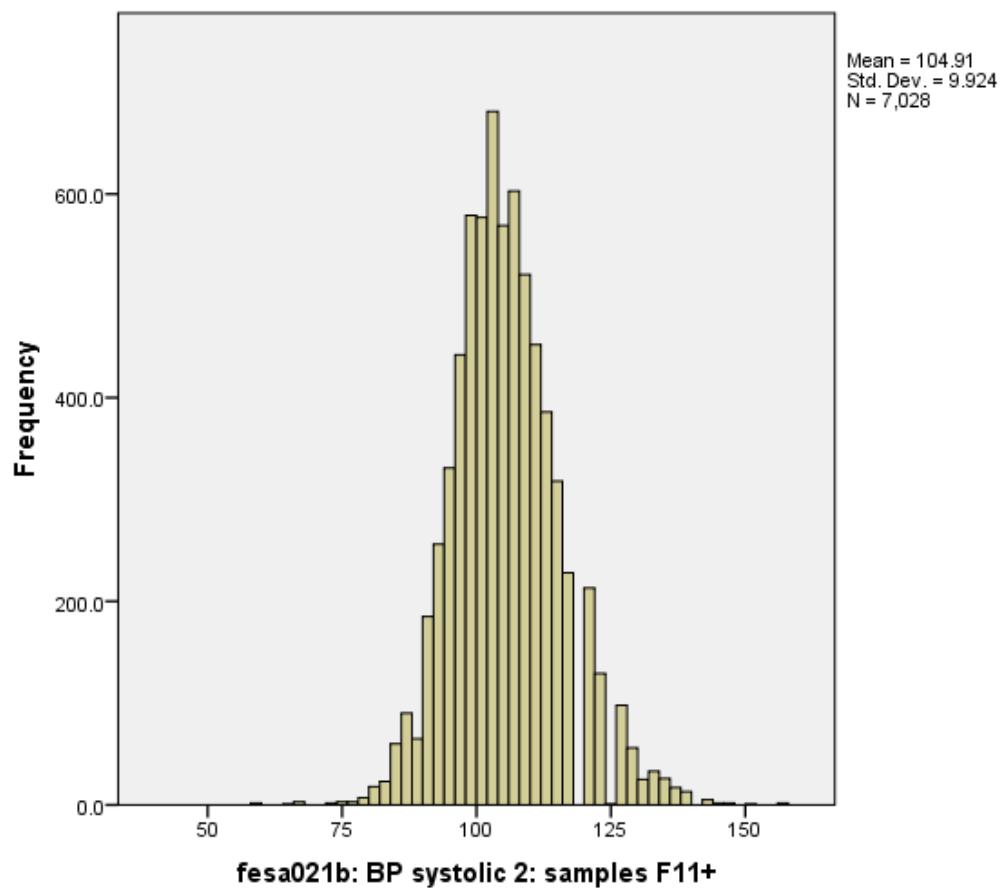
**fesa020 BP/pulse result obtained: samples F11**

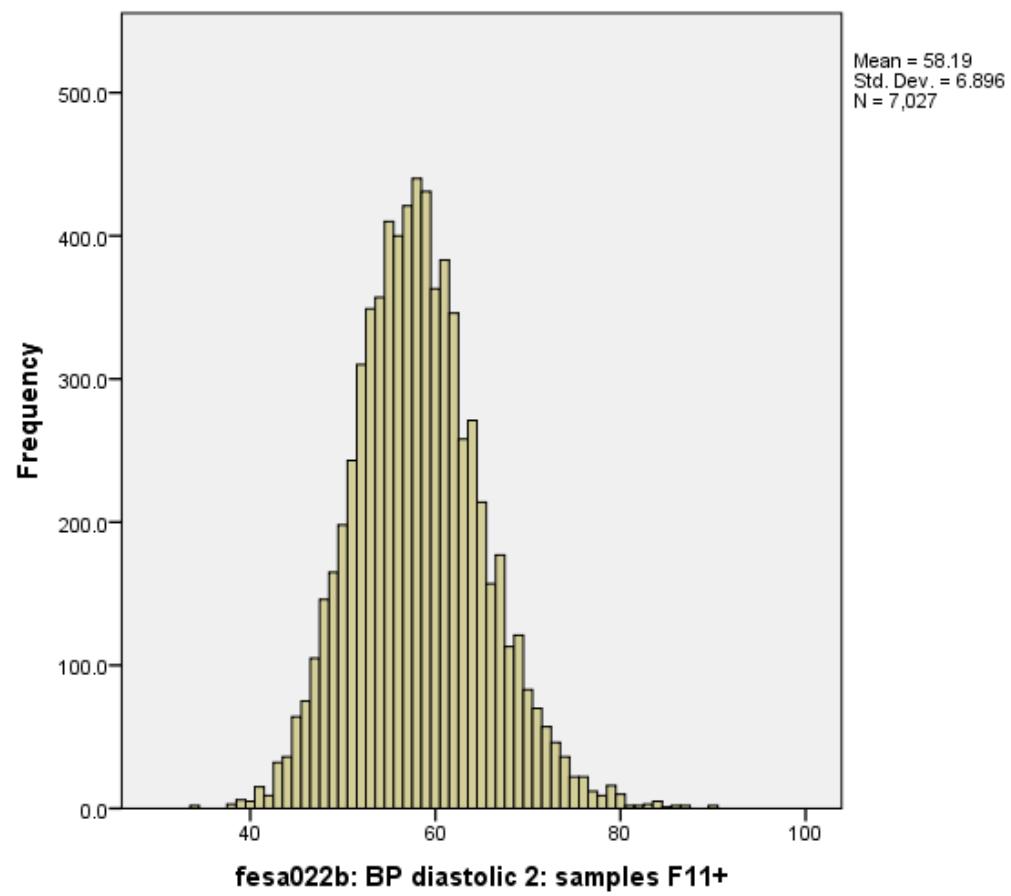
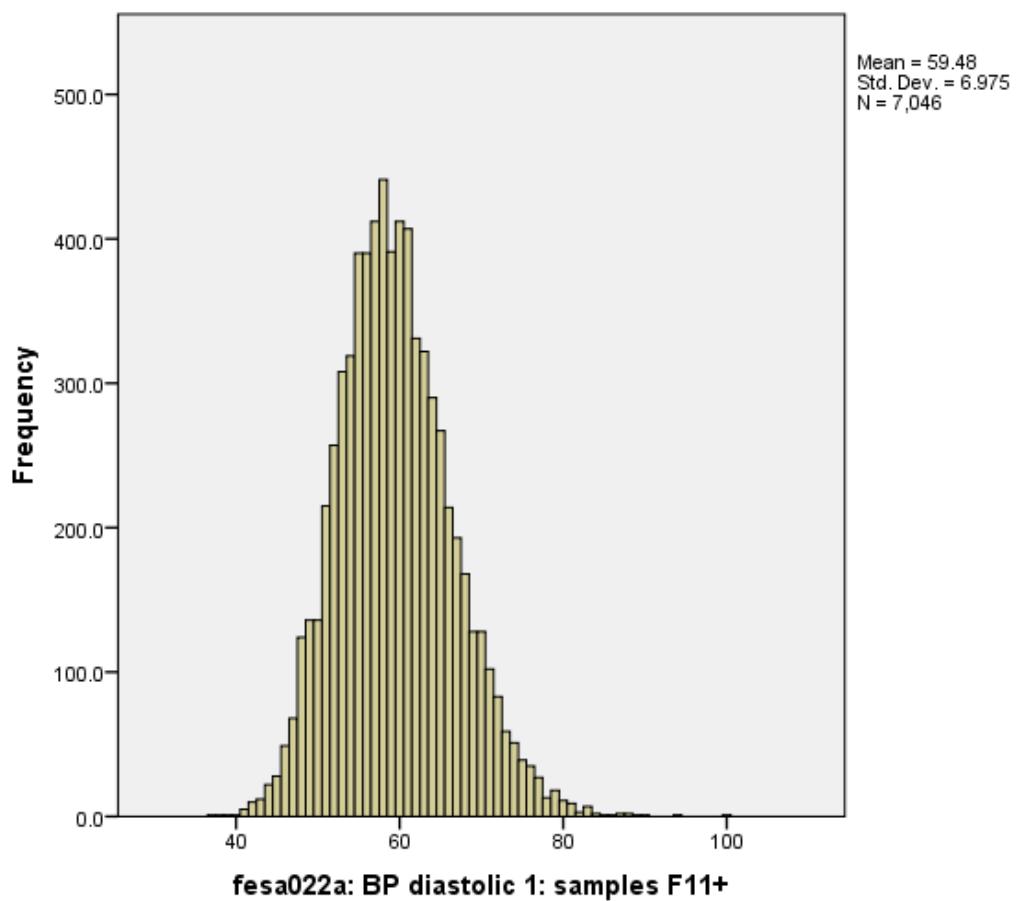
		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	7052	98.5	99.6	99.6
	2 No	27	.4	.4	100.0
	Total	7079	98.9	100.0	
Missing	-9 Did not do	80	1.1		
	Total	7159	100.0		

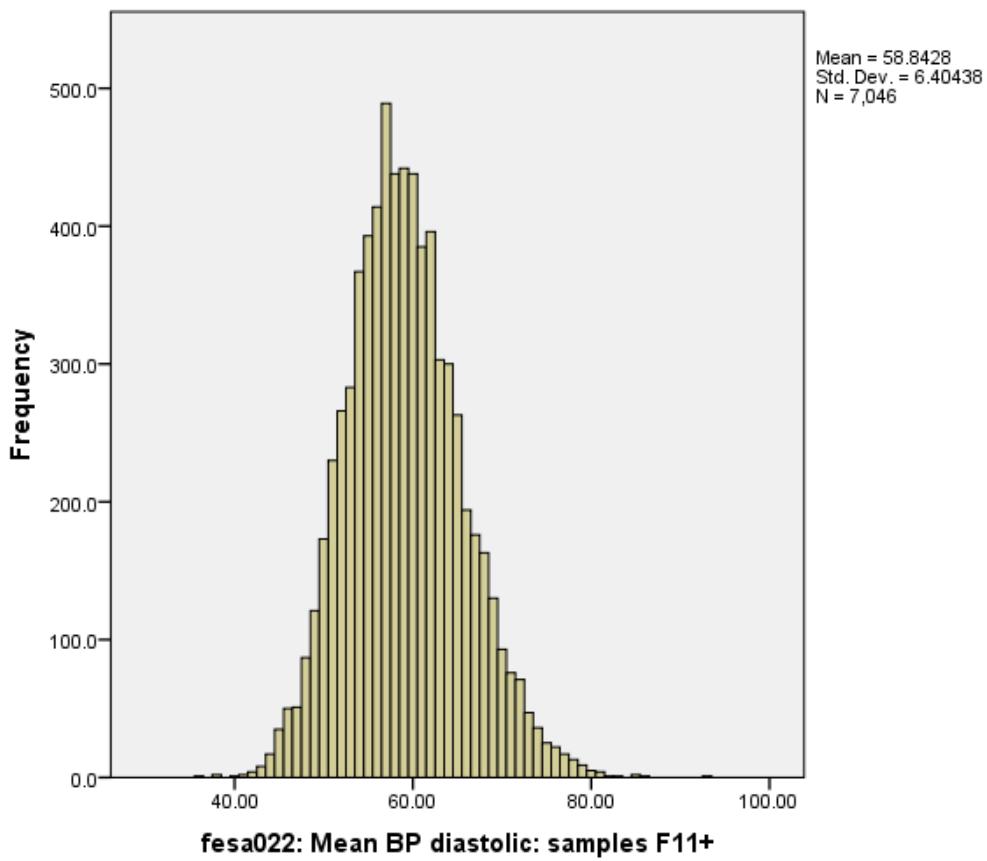
**fesa020a Reason for BP/pulse not done: samples F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Child refused	25	.3	92.6	92.6
	3 Child touched swab with hand	2	.0	7.4	100.0
	Total	27	.4	100.0	
Missing	-9 Did not do	80	1.1		
	-2 Done	7052	98.5		
	Total	7132	99.6		
	Total	7159	100.0		

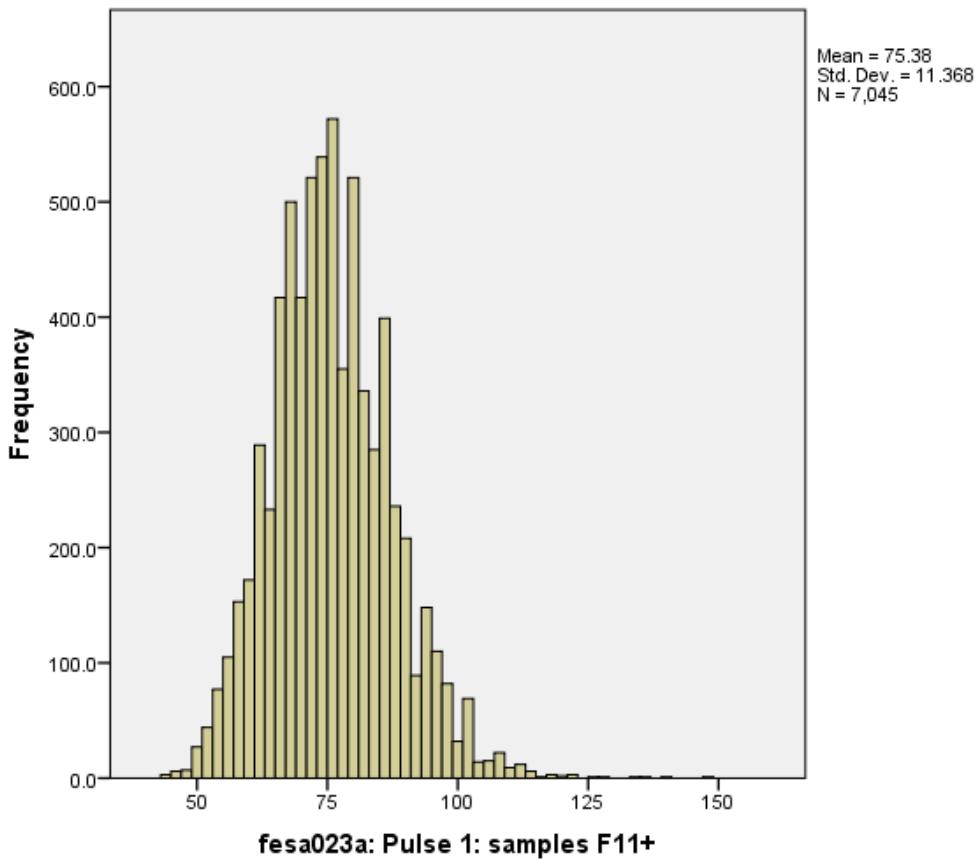


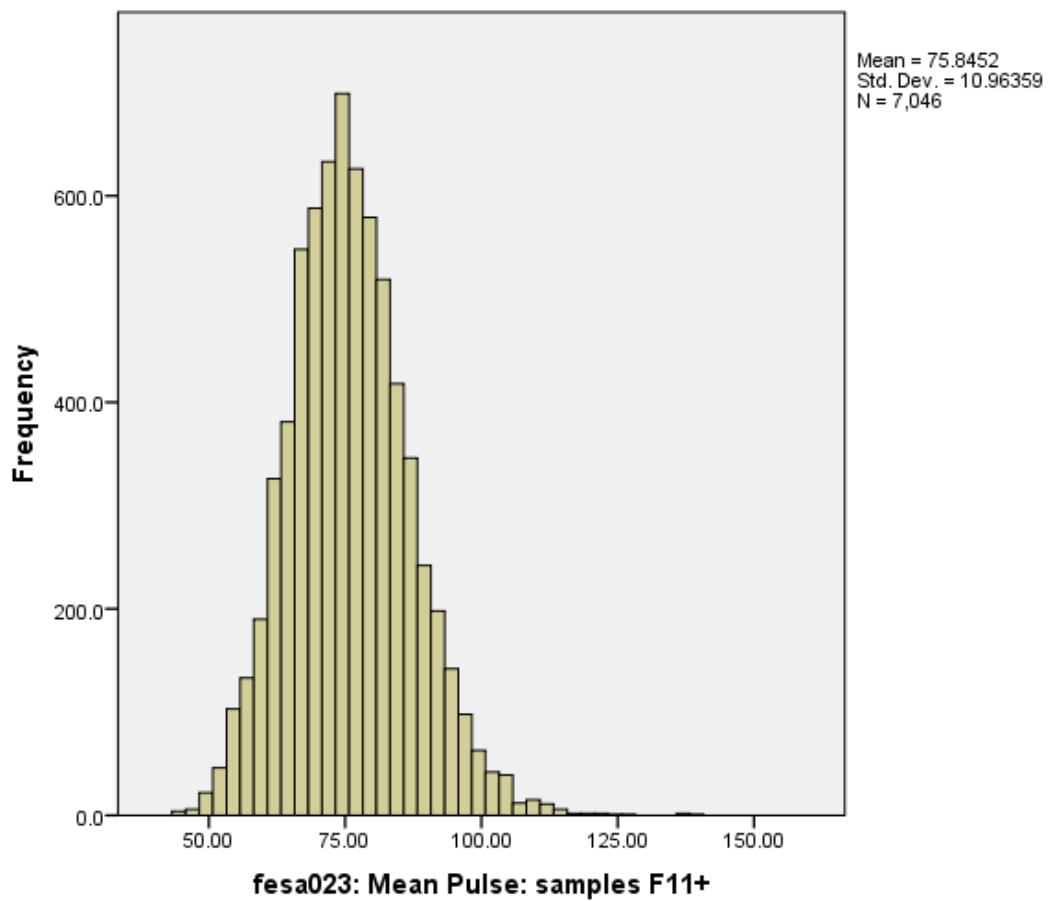
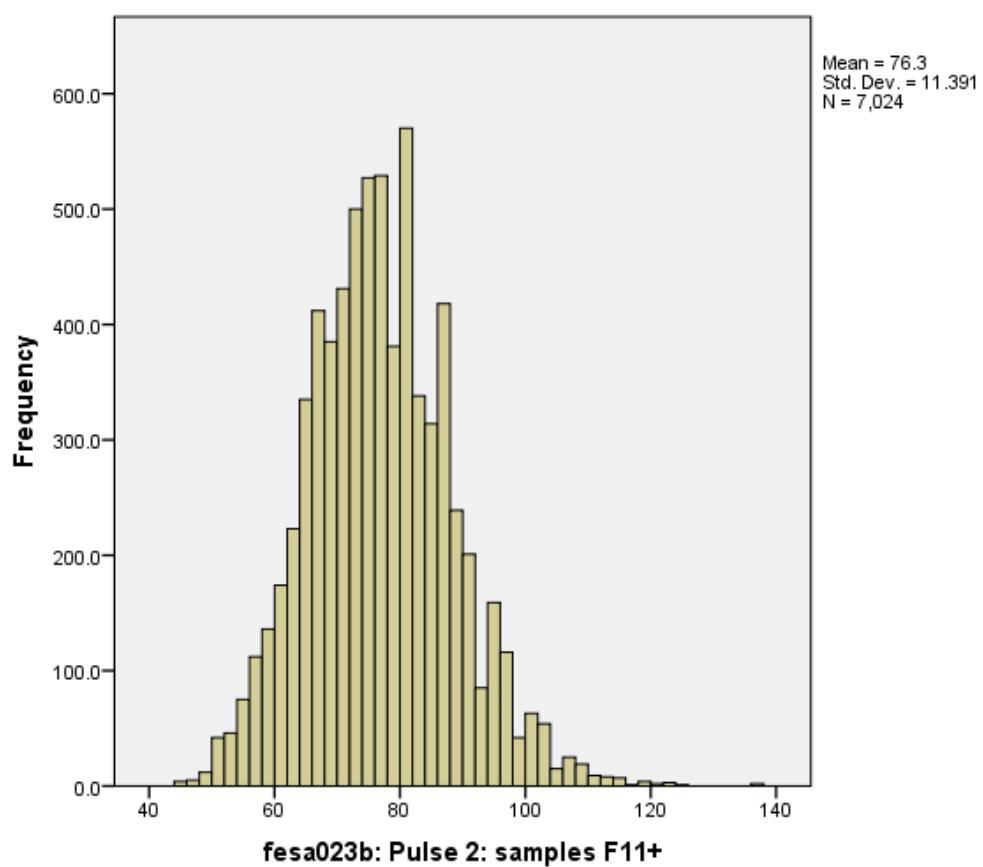






### 3.5.2 Pulse rate





The tester recorded the following information :

- FESA027: Child's demeanour during BP/pulse FESA028: Room temp
- FESA029: Which arm used BP/pulse FESA030: Which cuff used BP/pulse

### 3.5.3 Blood taking

Note was made of any infections or treatments current in the child (acute infection is known to affect ferritin levels), and of medications being used to treat them.

It is recognised that taking blood from children for research purposes is very different from taking it from sick children where the sample is essential to their care. For this study it was mandatory to:

Obtain the mother's or father's informed consent in writing before the sample was taken

Have the child's willingness to undergo the procedure

Ask the parent(s) to say if they wanted the blood-taker to stop taking the blood at any time (this removed some of the anxiety from both parents and staff)

Stop if the child asks the blood-taker to do so, or if the child became distressed

Staff were trained by the existing team of highly experienced blood-takers before working under their supervision. Permission was obtained from the parent for venepuncture while the child's blood pressure was being taken. After blood pressure had been recorded and providing consent was obtained, the tester gently explained the procedure and the use of EMLA (local anaesthetic) cream to the child. If any child (or parent) refused or objected at any stage, no further attempt was made to obtain a sample. Two samples were taken, one for general biochemical tests (taken in an orange tube) and one to be used for immortalized cell lines (yellow tube). Separate consent was obtained for each.

fesa050 Parents gave consent for EMLA cream: samples F11'

	Frequency	Percent	Valid Percent	Cum. %
Valid 1 Yes	5310	74.2	75.0	75.0
2 No	1769	24.7	25.0	100.0
Total	7079	98.9	100.0	
Missing -9 Did not do	80	1.1		
Total	7159	100.0		

Parents were asked several questions to determine whether it was appropriate to take blood, if the parent answered yes to any of the following questions blood was not taken (unfortunately the numbers for these were not recorded):

- Is your child allergic to local anaesthetic?
- Has your child recently used or been given a local anaesthetic or related medicines?
- Is your child taking any medication containing sulphonamides?
- Is your child anaemic?
- Does your child suffer from any clotting or bleeding disorders?
- Does your child suffer from epilepsy?

The taking of blood was performed in two ten minute slots. In the first slot a vein was located using a tourniquet and 2.5g of EMLA was applied by the blood-taker at least 60 minutes before the blood was taken. The time of application was recorded. The child also selected a video to watch in the second session. Watching the video distracted the child as the sample was taken.

If EMLA cream was not applied, the tester recorded why (FESA055).

In the second samples slot, if the child was happy to continue and 60 minutes had elapsed

since the EMLA cream was applied, the cream was removed and the area was tested to reassure the child that their skin was numb. A tourniquet was applied and vein located. A butterfly needle was inserted once the child was settled watching their chosen video. Two vacutainers of blood were taken: as explained above. Once obtained the orange tube for biochemical tests was labeled, placed in a poly bag and stored in a fridge; the yellow tube for cell lines was stored at room temperature.

Blood Attempted	Variable label	Yes	No
Orange tube	FESA060	4700 (89.1%)	575 (10.9%)
Yellow tube	FESA061	945 (18.2%)	227(4.4%)

Note, that fewer children had blood taken in the yellow tube. If they had done this previously at Focus@9 (over 4000 had), the procedure was not repeated.

The tester recorded any reasons why blood was not taken or difficulties in obtaining blood (FESA064).

Technicians from the laboratory nearby, in the Institute of Child Health visited the clinics twice daily to collect the blood samples.

### 3.5.4 Saliva samples

Children were asked to provide a saliva sample. The procedure was carefully explained to the child: they were asked to pop a sponge in their mouths and soak it with as much saliva as possible. The sponge was placed into a tube and collected by the laboratories for storage.

fesa100 Consent for saliva sample: samples F11

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	7031	98.2	99.3	99.3
	2 No	48	.7	.7	100.0
	Total	7079	98.9	100.0	
Missing -9	Did not do	80	1.1		
	Total	7159	100.0		

**fesa101 Saliva sample given: samples F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	6966	97.3	99.1	99.1
	2 No	27	.4	.4	99.5
	3 Incomplete	38	.5	.5	100.0
	Total	7031	98.2	100.0	
Missing	-9 Did not do	80	1.1		
	-2 No consent	48	.7		
	Total	128	1.8		
Total		7159	100.0		

**fesa102 Reasons saliva sample not given: samples F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Swab not	29	.4	46.0	46.0
	2 Child not like taste/feeling swab	4	.1	6.3	52.4
	3 Child touched	6	.1	9.5	61.9
	4 Child refused	18	.3	28.6	90.5
	5 Unable produce	6	.1	9.5	100.0
	Total	63	.9	100.0	
Missing	-9 Did not do	80	1.1		
	-3 Sample given	6966	97.3		
	-2 No consent	48	.7		
	-1 Missing	2	.0		
	Total	7096	99.1		
Total		7159	100.0		

### 3.5.5 Menstruation questionnaire

During the consent process for the samples session, the phlebotomist confirmed whether the woman accompanying any girls was her mother or principal carer (i.e. the girl lived with her and not her mother).

If she was the mother/principal carer the phlebotomist asked whether they would fill in a short questionnaire regarding their daughter's periods. It was explained to them that we might want to take into account the stage of the girl's menstrual cycle (if they had one) when we analyse hormones measured from the blood sample.

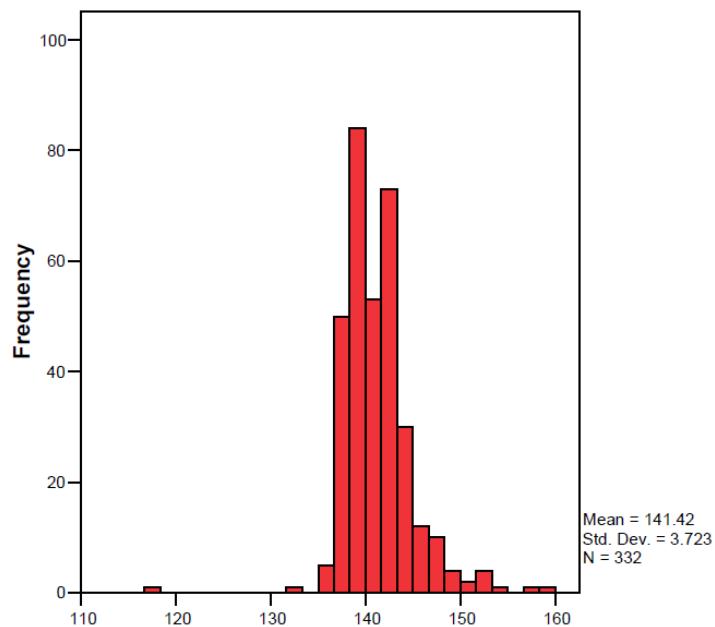
**femn010 Started periods: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	530	7.4	14.6	14.6
	2 No	3107	43.4	85.3	99.9
	3 DK	4	.1	.1	100.0
	Total	3641	50.9	100.0	
Missing	-2 Boy	3518	49.1		
Total		7159	100.0		

**femn011 When last period started: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Currently having period	83	1.2	15.7	15.7
	2 1 week ago	88	1.2	16.7	32.4
	3 2 weeks ago	107	1.5	20.3	52.7
	4 3 weeks ago	133	1.9	25.2	77.8
	5 >= 4 weeks ago	105	1.5	19.9	97.7
	6 Dont know	12	.2	2.3	100.0
	Total	528	7.4	100.0	
Missing-3	Not started periods/NK	3111	43.5		
	-2 Boy	3518	49.1		
	-1 Missing	2	.0		
	Total	6631	92.6		
	Total	7159	100.0		

**FEMN012: Age at start of last period (months): F11+**



**femn013 Periods are regular: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	275	3.8	52.0	52.0
	2 No	156	2.2	29.5	81.5
	3 Dont know	98	1.4	18.5	100.0
	Total	529	7.4	100.0	
Missing	-3 Not started	3111	43.5		
	-2 Boy	3518	49.1		
	-1 Missing	1	.0		
	Total	6630	92.6		
Total		7159	100.0		

**femn014 Length of cycle (days): F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0	1	.0	.4	.4
	3	1	.0	.4	.7
	4	6	.1	2.2	2.9
	5	10	.1	3.6	6.5
	6	8	.1	2.9	9.4
	7	3	.0	1.1	10.4
	20	1	.0	.4	10.8
	21	10	.1	3.6	14.4
	22	1	.0	.4	14.7
	23	4	.1	1.4	16.2
	24	4	.1	1.4	17.6
	25	9	.1	3.2	20.9
	26	11	.2	4.0	24.8
	27	7	.1	2.5	27.3
	28	131	1.8	47.1	74.5
	29	6	.1	2.2	76.6
	30	51	.7	18.3	95.0
	31	3	.0	1.1	96.0
	32	2	.0	.7	96.8
	34	2	.0	.7	97.5
	35	6	.1	2.2	99.6
	40	1	.0	.4	100.0
Missing	Total	278	3.9	100.0	
	-3 Not started	3111	43.5		
	-2 Boy	3518	49.1		
	-1 Missing	252	3.5		
Total	Total	6881	96.1		
		7159	100.0		

### 3.6 Hearing

All testing took place within a 40-minute test session which followed the same order for each child. The equipment used for each session was routinely checked daily and was within its specified calibration period.

The first test was for pure tone audiology in order to obtain bilateral air conduction hearing threshold levels and bone conduction hearing threshold levels. The second was to obtain transient evoked (TE) otoacoustic emissions (OAE) from both ears in the linear mode at a level of 70 dBPeSPL. The third obtained tympanograms from both ears and recorded middle-ear pressure (MEP), middle-ear compliance (MEC), tympanogram shape, ear canal volume and tympanogram gradient and measured the presence or absence of the ipsilateral screening acoustic reflex at 1 kHz at levels of 85, 95 or 105 dB. Finally, the personal test measured the preferred listening level of music through headphones. The noise questionnaire, which was completed at any stage of the test session, enabled the collection of a detailed history of the child's noise exposure over the past year. Study children with severe/profound hearing loss, did not do the noise questionnaire or the personal stereo test.

**fehs001 Form version: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	696	9.7	9.8	9.8
	2	6395	89.3	90.2	
	Total	7091	99.1	100.0	
Missing	-11 Trips/quads	6	.1		
	-1	62	.9		
	Total	68	.9		
Total		7159	100.0		

**fehs002 H4: Room : hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Green	3688	51.5	52.0	52.0
	2 Yellow	3403	47.5	48.0	
	Total	7091	99.1	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	62	.9		
	Total	68	.9		
Total		7159	100.0		

#### 3.6.1 Previous referrals

**fehs100 H5: Parent concerned about study child hearing: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	455	6.4	6.4	6.4
	2 No	6634	92.7	93.6	
	Total	7089	99.0	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	64	.9		
	Total	70	1.0		
Total		7159	100.0		

**fehs101 H7: Your study child previously referred for hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	1399	19.5	19.7	19.7
	2 No	5690	79.5	80.3	100.0
	Total	7089	99.0	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	64	.9		
	Total	70	1.0		
Total		7159	100.0		

**fehs102 H8: If yes, your study child has been referred since last Focus visit: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	132	1.8	9.6	9.6
	2 No	1244	17.4	90.4	100.0
	Total	1376	19.2	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	5777	80.7		
	Total	5783	80.8		
Total		7159	100.0		

**fehs103 H9: If yes, age in years your study child referred: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	10	.1	6.4	6.4
	2	6	.1	3.8	10.2
	3	18	.3	11.5	21.7
	4	5	.1	3.2	24.8
	5	16	.2	10.2	35.0
	6	6	.1	3.8	38.9
	7	5	.1	3.2	42.0
	8	2	.0	1.3	43.3
	9	41	.6	26.1	69.4
	10	35	.5	22.3	91.7
	11	13	.2	8.3	100.0
	Total	157	2.2	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	6996	97.7		
	Total	7002	97.8		
Total		7159	100.0		

**fehs104 H10: Your study child; history of referrals: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Seen once then discharged	47	.7	25.8	25.8
	2 Kept under review discharged later	80	1.1	44.0	69.8
	3 Still under review	55	.8	30.2	100.0
	Total	182	2.5	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	6971	97.4		
	Total	6977	97.5		
Total		7159	100.0		

**fehs105 H11: Your study child has had surgery: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	71	1.0	39.2	39.2
	2 No	110	1.5	60.8	100.0
	Total	181	2.5	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	6972	97.4		
	Total	6978	97.5		
Total		7159	100.0		

**fehs106 H12: Your study child has had surgery for grommets: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	56	.8	100.0	100.0
	-11 Trips/quads	6	.1		
	-1 Missing	7097	99.1		
Total		7103	99.2		
Total		7159	100.0		

**fehs107 H13: Grommets, age in years at most recent surgery: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	.1	7.3	7.3
	2	3	.0	5.5	12.7
	3	4	.1	7.3	20.0
	4	8	.1	14.5	34.5
	5	6	.1	10.9	45.5
	6	5	.1	9.1	54.5
	7	8	.1	14.5	69.1
	8	3	.0	5.5	74.5
	9	6	.1	10.9	85.5
	10	4	.1	7.3	92.7
	11	4	.1	7.3	100.0
	Total	55	.8	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	7098	99.1		
	Total	7104	99.2		
Total		7159	100.0		

**fehs108 H14: Your study child has had surgery for tonsils: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	8	.1	100.0	100.0
	-11 Trips/quads	6	.1		
	-1 Missing	7145	99.8		
Total		7151	99.9		
Total		7159	100.0		

**fehs109 H15: Tonsils, age at most recent surgery: hearing: F11 – withheld – single case values****fehs110 H16: Your study child has had surgery for adenoids: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	17	.2	100.0	100.0
	-11 Trips/quads	6	.1		
	-1 Missing	7136	99.7		
Total		7142	99.8		
Total		7159	100.0		

**fehs111 H17: Adenoids, age at most recent surgery: hearing: F11 – withheld – single case values**

**fehs112 H18: Your study child has had surgery for other reasons: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	12	.2	100.0	100.0
Missing	-11 Trips/quads	6	.1		
	-1 Missing	7141	99.7		
	Total	7147	99.8		
Total		7159	100.0		

**fehs113 H19: Other reasons, age at most recent surgery: hearing: F11 – withheld – single case values**

### 3.6.2 Tinnitus

Each child was asked if they ever hears noises in their ears (tinnitus). Tinnitus includes noises such as whistles, buzzes etc, but does not include spoken voices or similar. If the child reported tinnitus, the following information was recorded:

**fehs200 H21: Tinnitus: Child hears noises in ears: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	1993	27.8	28.1	28.1
	2 No	5093	71.1	71.9	100.0
	Total	7086	99.0	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	67	.9		
	Total	73	1.0		
Total		7159	100.0		

**fehs201 H22: Tinnitus: Description of noises - buzzing/whistling: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Buzzing	599	8.4	30.1	30.1
	2 Whistling	116	1.6	5.8	35.9
	3 Other	1274	17.8	64.1	100.0
	Total	1989	27.8	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	5164	72.1		
	Total	5170	72.2		
Total		7159	100.0		

**fehs202 H23: Tinnitus: Description of noises - low/high: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Low	483	6.7	24.8	24.8
	2 High	1304	18.2	66.8	91.6
	3 Dont know	164	2.3	8.4	100.0
	Total	1951	27.3	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	5202	72.7		
	Total	5208	72.7		
Total		7159	100.0		

**fehs203 H24: Tinnitus: Description of noises - left/right/both ears: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Left	211	2.9	10.7	10.7
	2 Right	353	4.9	17.8	28.5
	3 Both	1158	16.2	58.5	87.0
	4 Dont know	258	3.6	13.0	100.0
	Total	1980	27.7	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	5173	72.3		
	Total	5179	72.3		
Total		7159	100.0		

**fehs204 H25: Tinnitus: Description of noises - loud/soft: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Loud	590	8.2	30.5	30.5
	2 Soft	1132	15.8	58.4	88.9
	3 Dont know	215	3.0	11.1	100.0
	Total	1937	27.1	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	5216	72.9		
	Total	5222	72.9		
Total		7159	100.0		

**fehs205 H26: Tinnitus: Description of noises - intermittent/continuous: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Intermittently	919	12.8	47.9	47.9
	2 Continuously	990	13.8	51.6	99.4
	3 Dont know	11	.2	.6	100.0
	Total	1920	26.8	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	5233	73.1		
	Total	5239	73.2		
Total		7159	100.0		

**fehs206 H27: Tinnitus: Length of time noises last: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Seconds	678	9.5	34.5	34.5
	2 Minutes	1055	14.7	53.7	88.2
	3 Hours	72	1.0	3.7	91.9
	4 Dont know	160	2.2	8.1	100.0
	Total	1965	27.4	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	5188	72.5		
	Total	5194	72.6		
Total		7159	100.0		

**fehs207 H28: Tinnitus: Frequency noises heard: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Each day	117	1.6	6.0	6.0
	2 Every few days	191	2.7	9.7	15.7
	3 Each week	386	5.4	19.6	35.3
	4 Each month	543	7.6	27.6	62.9
	5 Every few months	316	4.4	16.1	79.0
	6 Each year	69	1.0	3.5	82.5
	7 Dont know	344	4.8	17.5	100.0
	Total	1966	27.5	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	5187	72.5		
	Total	5193	72.5		
Total		7159	100.0		

**fehs208 H29: Tinnitus: Length of time noises have been heard: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 <= one week	14	.2	.7	.7
	2 One month	31	.4	1.6	2.3
	3 Several months	220	3.1	11.1	13.4
	4 One year	212	3.0	10.7	24.1
	5 Several years	778	10.9	39.2	63.3
	6 Dont know	728	10.2	36.7	100.0
	Total	1983	27.7	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	5170	72.2		
	Total	5176	72.3		
Total		7159	100.0		

**fehs209 H30: Tinnitus: Degree to which noises bother child: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Not bothered	1651	23.1	84.1	84.1
	2 Slightly bothered	274	3.8	14.0	98.1
	3 Severely bothered	38	.5	1.9	100.0
	Total	1963	27.4	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	5190	72.5		
	Total	5196	72.6		
Total		7159	100.0		

### 3.6.3 Hyperacusis

In the second section of the noise questionnaire, the study child was asked if they ever experience over-sensitivity or distress to particular sounds. If they answered yes, answers to the following questions were recorded.

fehs300 H32/H98: Hyperacusis: Child over-sensitive to some sounds: hearing: F11

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	261	3.6	3.7	3.7
	2 No	6826	95.3	96.3	100.0
	Total	7087	99.0	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	66	.9		
	Total	72	1.0		
Total		7159	100.0		

fehs301 H35/H101: Hyperacusis: Child uses ear protection against some sounds: hearing: F11

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	21	.3	8.4	8.4
	2 No	230	3.2	91.6	100.0
	Total	251	3.5	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	6902	96.4		
	Total	6908	96.5		
Total		7159	100.0		

fehs302 H36/H102: Hyperacusis: Child avoids places/activities because of sensitivity to sounds: hearing: F11

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	112	1.6	44.8	44.8
	2 No	138	1.9	55.2	100.0
	Total	250	3.5	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	6903	96.4		
	Total	6909	96.5		
Total		7159	100.0		

fehs303 H37/H103: Hyperacusis: Length of time child has been over-sensitive to sounds: hearing: F11

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4 Between 1 and several months	9	.1	4.2	4.2
	5 One year	11	.2	5.1	9.3
	6 Several years	157	2.2	72.7	81.9
	7 Dont know	39	.5	18.1	100.0
	Total	216	3.0	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	6937	96.9		
	Total	6943	97.0		
Total		7159	100.0		

**fehs304 H38/H104: Hyperacusis: Over-sensitivity to sounds triggered by some factor: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	29	.4	14.4	14.4
	2 No	173	2.4	85.6	100.0
	Total	202	2.8	100.0	
Missing	-1 Missing	6951	97.1		
	-11 Trips/quads	6	.1		
	Total	6957	97.2		
Total		7159	100.0		

**fehs305 H40/H106: Hyperacusis: Child is over-sensitive to light/colours: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	23	.3	100.0	100.0
	-1 Missing	7130	99.6		
	-11 Trips/quads	6	.1		
Total		7136	99.7		
Total		7159	100.0		

**fehs306 H40/H106: Hyperacusis: Child is over-sensitive to touch: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	17	.2	100.0	100.0
	-1 Missing	7136	99.7		
	-11 Trips/quads	6	.1		
Total		7142	99.8		
Total		7159	100.0		

**fehs307 H40/H106: Hyperacusis: Child is over-sensitive to pain: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	9	.1	100.0	100.0
	-1 Missing	7144	99.8		
	-11 Trips/quads	6	.1		
Total		7150	99.9		
Total		7159	100.0		

**fehs308 H40/H106: Hyperacusis: Child is over-sensitive to smell: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	14	.2	100.0	100.0
	-1 Missing	7139	99.7		
	-11 Trips/quads	6	.1		
Total		7145	99.8		
Total		7159	100.0		

**fehs309 H40/H106: Hyperacusis: Child is over-sensitive to taste: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	10	.1	100.0	100.0
	-1 Missing	7143	99.8		
	-11 Trips/quads	6	.1		
Total		7149	99.9		
Total		7159	100.0		

### 3.6.4 Audiometry

The audiometry test was performed in a sound-attenuating room using a GSI 61 audiometer, standard headphones (TDH 50P) and a bone vibrator (B71). Non-standard testing conditions were recorded. Parents were told that there would not be any details about the results of the hearing session, but were told that we would let them know if their child's hearing is okay or if there is a query. The child was given verbal instructions for audiometry and the standard headphones were placed on the child's head and the response button was given to the child. If the child was unable to perform audiometry by pressing the button, the child was asked to lift a finger when they heard a sound or use the peg-board and pegs. The initial test ear was randomised between subjects and Audiometry was performed according to British Society of Audiology (BSA) recommended procedure, using the shortened ascending technique for determining threshold in 5 dB steps. The test commenced at 1000 Hz, then 2000, 3000, 4000, 6000, 8000, 500 Hz. Then the same procedure was repeated on the other ear. The threshold was then rechecked in the initial ear at 1000 Hz.

After removing the headphones, the bone-vibrator was placed on the worse hearing ear. Where there was no difference between ears, it was placed on the mastoid of the initial test ear. The thresholds were measured at 1000, 2000 then 500 Hz.

**fehs400 H43/H32: Audiometry: Audio done: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	7085	99.0	99.9	99.9
	2 No	6	.1	.1	100.0
	Total	7091	99.1	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	62	.9		
	Total	68	.9		
Total		7159	100.0		

**fehs401 H44/H33H: Audiometry: First test ear: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Left	3780	52.8	53.4	53.4
	2 Right	3305	46.2	46.6	100.0
	Total	7085	99.0	100.0	
Missing	-1 Missing	68	.9		
	-11 Trips/quads	6	.1		
	Total	74	1.0		
Total		7159	100.0		

**fehs402 H45/H34: Audiometry: Equipment number: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3671	51.3	51.8	51.8
	2	3387	47.3	47.8	99.6
	3 Other	27	.4	.4	100.0
Missing	-11 Trips/quads	6	.1		
	-1 Missing	68	.9		
	Total	74	1.0		
Total		7159	100.0		

**fehs403 H46/H35: Audiometry: Calibration number: hearing: F11**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	1	.0	.0	.0
1	6	.1	.1	.1
2	24	.3	.3	.4
3	4	.1	.1	.5
4	2	.0	.0	.5
5	212	3.0	3.0	3.5
6	940	13.1	13.3	16.8
7	802	11.2	11.3	28.1
8	841	11.7	11.9	40.0
9	1621	22.6	22.9	62.9
10	1016	14.2	14.3	77.2
11	647	9.0	9.1	86.3
12	689	9.6	9.7	96.0
13	279	3.9	3.9	100.0
40	1	.0	.0	100.0
Total	7085	99.0	100.0	
Missing -1 Missing	68	.9		
-11 Trips/quads	6	.1		
Total	74	1.0		
Total	7159	100.0		

**Descriptive Statistics**

	N	Min	Max	M	SD
fehs404 H47/H36: Audiometry: Right 500: hearing: F11	7016	-10	100	4.84	7.125
fehs405 H48/H37: Audiometry: Right 1000: hearing: F11	7083	-10	110	3.97	7.346
fehs406 H49/H38: Audiometry: Right 2000: hearing: F11	7077	-10	110	3.72	7.122
fehs407 H50/H39: Audiometry: Right 3000: hearing: F11	7023	-10	110	3.53	7.421
fehs408 H51/H40: Audiometry: Right 4000: hearing: F11	7072	-10	105	3.38	7.919
fehs409 H52/H41: Audiometry: Right 6000: hearing: F11	7004	-10	110	6.41	9.260
fehs410 H53/H42: Audiometry: Right repeat test at: hearing: F11	3223	-10	70	3.10	7.228
fehs411 H54/H43: Audiometry: Right 8000: hearing: F11	7032	-10	75	7.98	9.772

**Descriptive Statistics**

	N	Min	Max	M	SD
fehs412 H55/H44: Audiometry: Left 500: hearing: F11	7018	-10	100	5.21	7.453
fehs413 H56/H45: Audiometry: Left 1000: hearing: F11	7080	-10	110	3.34	7.414
fehs414 H57/H46: Audiometry: Left 2000: hearing: F11	7079	-10	120	3.67	7.658
fehs415 H58/H47: Audiometry: Left 3000: hearing: F11	7023	-10	110	3.66	7.805
fehs416 H59/H48: Audiometry: Left 4000: hearing: F11	7068	-10	105	4.08	8.392
fehs417 H60/H49: Audiometry: Left 6000: hearing: F11	7009	-10	115	7.43	9.847
fehs418 H61/H50: Audiometry: Left repeat test at 1000: hearing: F11	3640	-10	90	2.37	7.117
fehs419 H62/H51: Audiometry: Left 8000: hearing: F11	7037	-10	100	7.63	10.200

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
fehs420 H63/H52: Audiometry: Bone 500: hearing: F11	7041	-10	55	-.13	6.509
fehs421 H64/H53: Audiometry: Bone 1000: hearing: F11	7049	-10	70	-1.18	6.290
fehs422 H65/H54: Audiometry: Bone 2000: hearing: F11	7042	-10	70	1.91	7.312

**fehs423 H66/H55: Audiometry: Bone vibrator placed on left/right mastoid: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Left	3711	51.8	52.7	52.7
	2 Right	3326	46.5	47.3	100.0
	Total	7037	98.3	100.0	
Missing	-1 Missing	116	1.6		
	-11 Trips/quads	6	.1		
	Total	122	1.7		
Total		7159	100.0		

**fehs424 H68/H57: Hearing letter given: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Left	153	2.1	2.2	2.2
	2 Right	6937	96.9	97.8	100.0
	Total	7090	99.0	100.0	
Missing	-1 Missing	63	.9		
	-11 Trips/quads	6	.1		
	Total	69	1.0		
Total		7159	100.0		

### 3.6.5 Otoacoustic emissions

First, the child was given an examination (otoscopy) to give information about the ear canal. The test was performed when there was no sign of infection, wax blocking or where the ear canal was larger than the Standard ILO B-type adult probe (8 pin). The child was then sat in a Bilsom sound-attenuating booth and was given scripted verbal instructions to remain still. Non-standard testing conditions were recorded. The left ear was tested first using an Otodynamics Echoport PC and ILO288 Software, where the click intensity level was initially set to 70 dB (-10.5 dB gain). The test was then repeated for the right ear.

**fehs500 H77/H66: OtoAcoustic: Equipment number: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Other	26	.4	.4	.4
	28	1135	15.9	18.2	18.7
	29	595	8.3	9.6	28.2
	30	1111	15.5	17.9	46.1
	31	1029	14.4	16.5	62.6
	32	392	5.5	6.3	68.9
	33	1007	14.1	16.2	85.1
	34	564	7.9	9.1	94.2
	35	361	5.0	5.8	
	Total	6220	86.9	100.0	100.0
Missing	-11 Trips/quads	6	.1		
	-1 Missing	933	13.0		
	Total	939	13.1		
Total		7159	100.0		

**fehs501 H78/H67: OtoAcoustic: Calibration number: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3122	43.6	50.2	50.2
	2	3063	42.8	49.2	99.4
	3 Other	35	.5	.6	100.0
	Total	6220	86.9	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	933	13.0		
	Total	939	13.1		
Total		7159	100.0		

**fehs502 H70/H59: OtoAcoustic: Room colour: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Green	3647	50.9	51.4	51.4
	2 Yellow	3442	48.1	48.6	100.0
	Total	7089	99.0	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	64	.9		
	Total	70	1.0		
Total		7159	100.0		

**fehs503 H71/H60: OtoAcoustic: OAE attempted left ear: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	5751	80.3	81.1	81.1
	2 No	1340	18.7	18.9	100.0
	Total	7091	99.1	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	62	.9		
	Total	68	.9		
Total		7159	100.0		

**fehs504 H72/H61: OtoAcoustic: OAE not attempted due to wax left ear: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	789	11.0	58.9	58.9
	2 No	551	7.7	41.1	100.0
	Total	1340	18.7	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	5813	81.2		
	Total	5819	81.3		
Total		7159	100.0		

**fehs505 H73/H62: OtoAcoustic: OAE successful left ear: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	5737	80.1	99.7	99.7
	2 No	15	.2	.3	100.0
	Total	5752	80.3	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	1401	19.6		
	Total	1407	19.7		
Total		7159	100.0		

**fehs506 H74/H63: OtoAcoustic: OAE attempted right ear: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	5658	79.0	79.8	79.8
	2 No	1433	20.0	20.2	100.0
	Total	7091	99.1	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	62	.9		
	Total	68	.9		
Total		7159	100.0		

**fehs507 H75/H64: OtoAcoustic: OAE not attempted due to wax right ear: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	858	12.0	59.8	59.8
	2 No	577	8.1	40.2	100.0
	Total	1435	20.0	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	5718	79.9		
	Total	5724	80.0		
Total		7159	100.0		

**fehs508 H76/H65: OtoAcoustic: OAE successful right ear: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	5642	78.8	99.8	99.8
	2 No	13	.2	.2	100.0
	Total	5655	79.0	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	1498	20.9		
	Total	1504	21.0		
Total		7159	100.0		

### 3.6.6 Otoacoustic derivatives

Funding for analysis of the OAE waveforms was obtained from Deafness Research UK (B754). See Hall *et al* (2012) for further information on the original project.

Analysis was performed by Professor Mark Lutman, Institute of Sound & Vibration Research, University of Southampton:

Analysis of the OAE waveforms concentrated on the measure that is conventionally named as response, which is the sound pressure level (SPL) of the recorded components that are common to the two interleaved averages obtained during recording, conventionally denoted by A and B. Analogous to the way that the power of a signal is obtained mathematically by

summarising across frequency the product of the Fourier transform of the signal and its complex conjugate, the response measure is derived by summarising across frequency the real part of the cross-product of the Fourier transform of A and the complex conjugate of the Fourier transform of B. The real part contains only those components that are in phase in A and B. This measure can simply be considered as an estimate of the OAE signal after removal of the noise. The response measure was obtained from the raw (unfiltered) recordings and also after filtering into frequency bands centred on 1, 2, 3 and 4 kHz. Each filter had a bandwidth of 1 kHz.

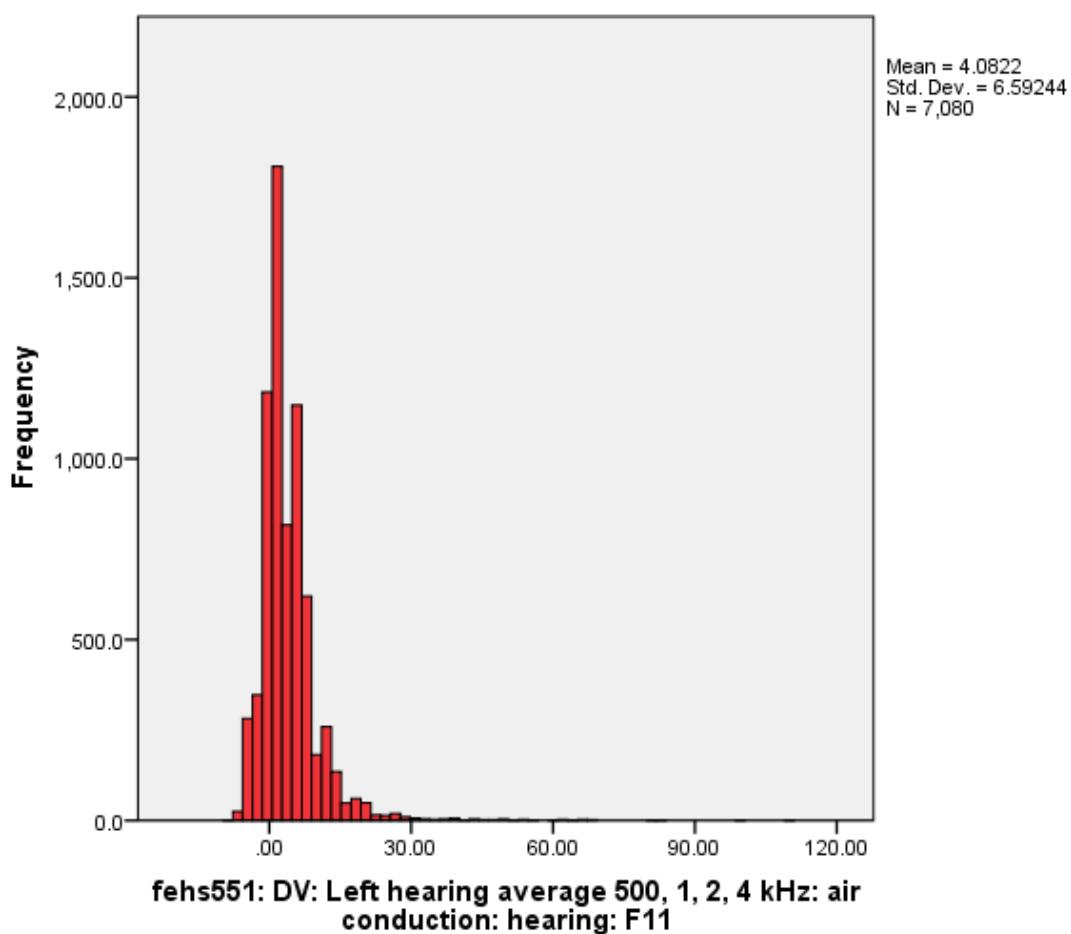
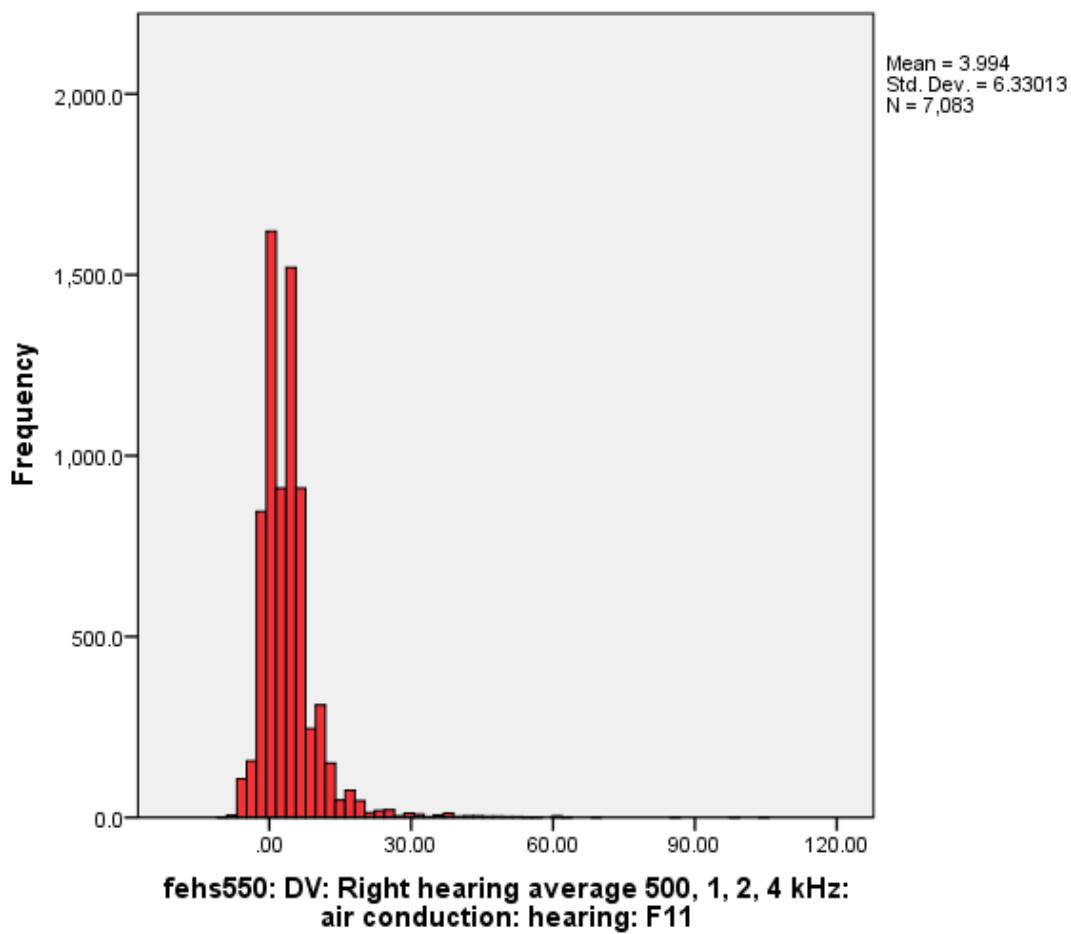
Hall A, Pembrey M, Lutman M, Steer C, Bitner-Glindzicz M. (2012) 'Prevalence and audiological features in carriers of GJB2 mutations, c.35delG and c.101T>C (p.M34T), in a UK population study'. *BMJ Open*: 2:e001238 [doi:10.1136/bmjopen-2012-001238]

Left ear summary (n=4933)

	Minimum	Maximum	Mean	Std. Deviation
fehs510 DV: Broadband, AB average: L ear: hearing: F11	-9.67	30.96	14.6044	5.40316
fehs511 DV: Broadband, noise: L ear: hearing: F11	-6.02	16.12	2.8762	2.29280
fehs512 DV: Broadband, correlation: L ear: hearing: F11	-.14	1.00	.9265	.12894
fehs513 DV: Broadband, response level: L ear: hearing: F11	-9.01	30.96	14.5113	5.48921
fehs514 DV: 1 kHz, AB average: L ear: hearing: F11	-14.62	29.05	9.8568	6.63271
fehs515 DV: 1 kHz, noise: L ear: hearing: F11	-11.37	15.03	-.4842	3.09719
fehs516 DV: 1 kHz, correlation: L ear: hearing: F11	-.43	1.00	.8705	.22500
fehs517 DV: 1 kHz, response level: L ear: hearing: F11	-14.02	29.05	9.7192	6.75422
fehs518 DV: 2 kHz, AB average: L ear: hearing: F11	-17.15	27.40	8.0587	6.55702
fehs519 DV: 2 kHz, noise: L ear: hearing: F11	-15.03	8.18	-5.3272	2.92923
fehs520 DV: 2 kHz, correlation: L ear: hearing: F11	-.44	1.00	.9342	.14127
fehs521 DV: 2 kHz, response level: L ear: hearing: F11	-17.13	27.40	7.9555	6.65942
fehs522 DV: 3 kHz, AB average: L ear: hearing: F11	-18.93	27.84	5.5188	7.16944
fehs523 DV: 3 kHz, noise: L ear: hearing: F11	-16.81	5.67	-7.1845	2.12582
fehs524 DV: 3 kHz, correlation: L ear: hearing: F11	-.38	1.00	.9213	.15679
fehs525 DV: 3 kHz, response level: L ear: hearing: F11	-16.91	27.84	5.3918	7.30578
fehs526 DV: 4 kHz, AB average: L ear: hearing: F11	-19.73	25.87	2.0821	7.23810
fehs527 DV: 4 kHz, noise: L ear: hearing: F11	-17.41	2.55	-9.5438	2.15498
fehs528 DV: 4 kHz, correlation: L ear: hearing: F11	-.44	1.00	.9067	.16805
fehs529 DV: 4 kHz, response level: L ear: hearing: F11	-21.45	25.87	1.9267	7.40051

Right ear summary (n=4645)

	Minimum	Maximum	Mean	Std. Deviation
fehs530 DV: Broadband, AB average: R ear: hearing: F11	-7.28	31.44	15.4389	5.37308
fehs531 DV: Broadband, noise: R ear: hearing: F11	-5.13	21.61	3.0514	2.38739
fehs532 DV: Broadband, correlation: R ear: hearing: F11	-.09	1.00	.9340	.12048
fehs533 DV: Broadband, response level: R ear: hearing: F11	-7.69	31.44	15.3513	5.46200
fehs534 DV: 1 kHz, AB average: R ear: hearing: F11	-12.82	28.44	10.7988	6.59475
fehs535 DV: 1 kHz, noise: R ear: hearing: F11	-10.93	18.55	-.2453	3.18655
fehs536 DV: 1 kHz, correlation: R ear: hearing: F11	-.38	1.00	.8834	.21450
fehs537 DV: 1 kHz, response level: R ear: hearing: F11	-12.96	28.44	10.6692	6.71982
fehs538 DV: 2 kHz, AB average: R ear: hearing: F11	-15.32	28.38	9.0755	6.46909
fehs539 DV: 2 kHz, noise: R ear: hearing: F11	-15.23	14.99	-5.2051	2.96236
fehs540 DV: 2 kHz, correlation: R ear: hearing: F11	-.31	1.00	.9428	.13223
fehs541 DV: 2 kHz, response level: R ear: hearing: F11	-15.96	28.38	8.9806	6.58104
fehs542 DV: 3 kHz, AB average: R ear: hearing: F11	-18.59	27.95	6.2446	7.20775
fehs543 DV: 3 kHz, noise: R ear: hearing: F11	-16.44	8.97	-7.0938	2.17913
fehs544 DV: 3 kHz, correlation: R ear: hearing: F11	-.48	1.00	.9285	.14736
fehs545 DV: 3 kHz, response level: R ear: hearing: F11	-18.51	27.95	6.1245	7.34641
fehs546 DV: 4 kHz, AB average: R ear: hearing: F11	-19.67	28.75	2.3952	7.34886
fehs547 DV: 4 kHz, noise: R ear: hearing: F11	-18.08	7.42	-9.4321	2.21393
fehs548 DV: 4 kHz, correlation: R ear: hearing: F11	-.27	1.00	.9074	.16710
fehs549 DV: 4 kHz, response level: R ear: hearing: F11	-20.08	28.75	2.2406	7.51201



### 3.6.7 Tympanometry

Tympanometry and acoustic reflexes were preceded by the otoscopy described above and performed after audiometry and the otoacoustic emissions testing.

The child was sat by the tympanometer and given verbal scripted instructions. The left ear was tested first using a GSI 38 Auto Tympanometer. Once the tympanogram was measured, the acoustic reflex was measured. The tympanogram and acoustic reflex was then repeated for the right ear.

This session's data is summarised below. Acoustic reflexes are recorded in variables *fehs700 - fehs704* in section 3.6.8.

**fehs600 H85/H72: Tym Equipment number: hearing: F11**

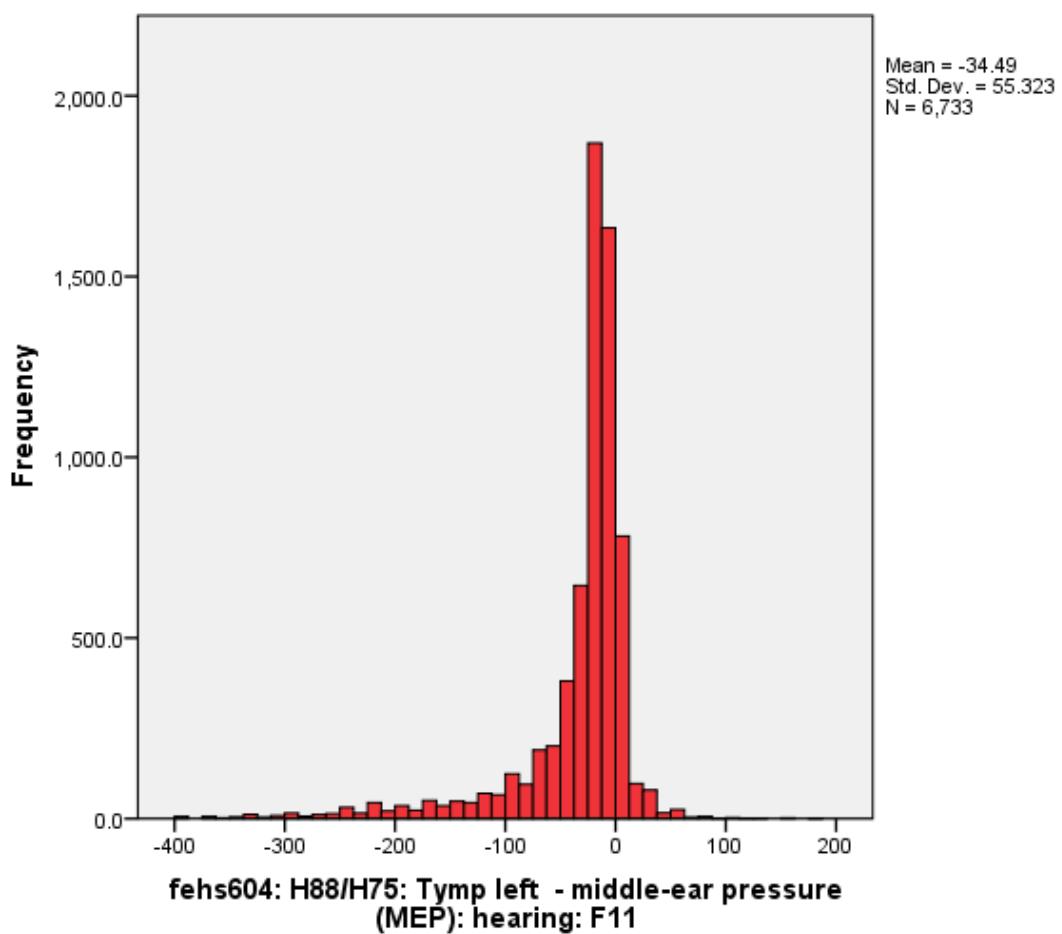
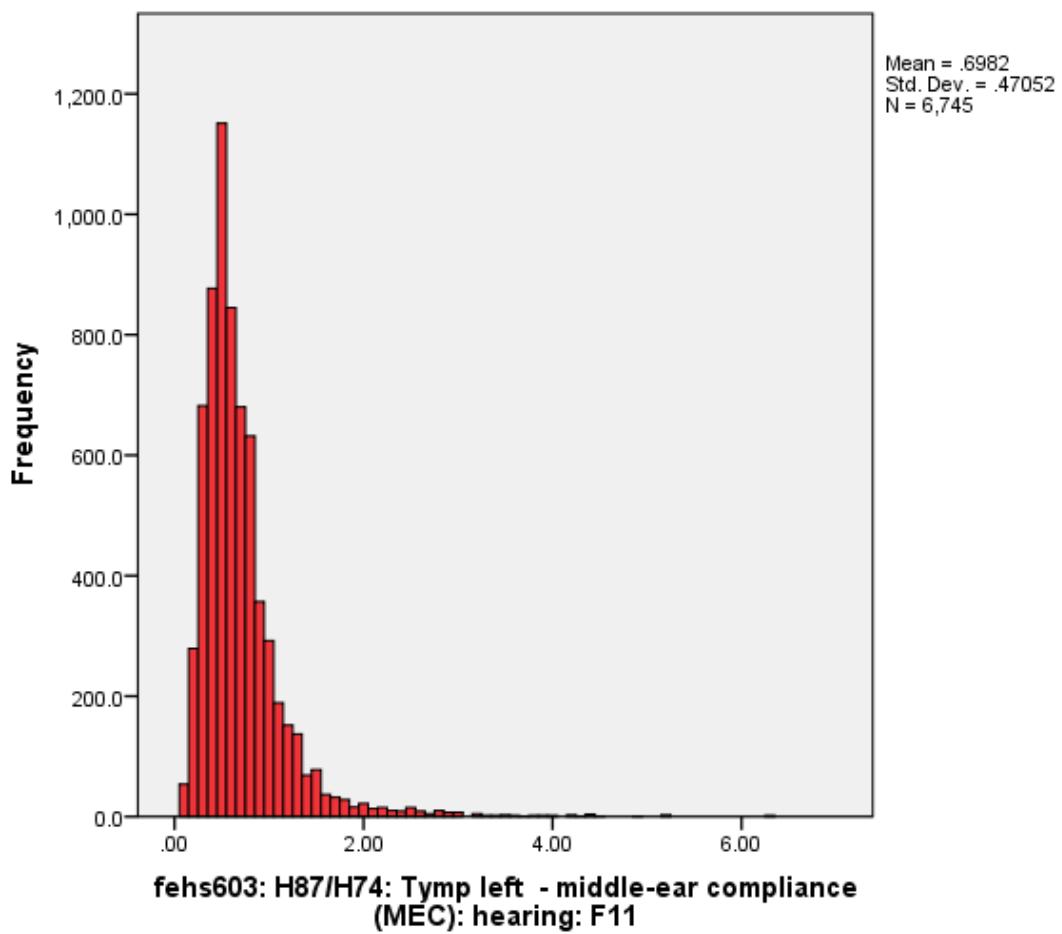
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Other	14	.2	.2	.2
	14	3594	50.2	51.1	51.3
	15	3420	47.8	48.7	100.0
	Total	7028	98.2	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	125	1.7		
	Total	131	1.8		
	Total	7159	100.0		

**fehs601 H86/H73: Tym Calibration number: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Other	23	.3	.3	.3
	2	1545	21.6	22.0	22.3
	3	671	9.4	9.5	31.9
	4	1828	25.5	26.0	57.9
	5	916	12.8	13.0	70.9
	6	1255	17.5	17.9	88.8
	7	790	11.0	11.2	100.0
	Total	7028	98.2	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	125	1.7		
	Total	131	1.8		
	Total	7159	100.0		

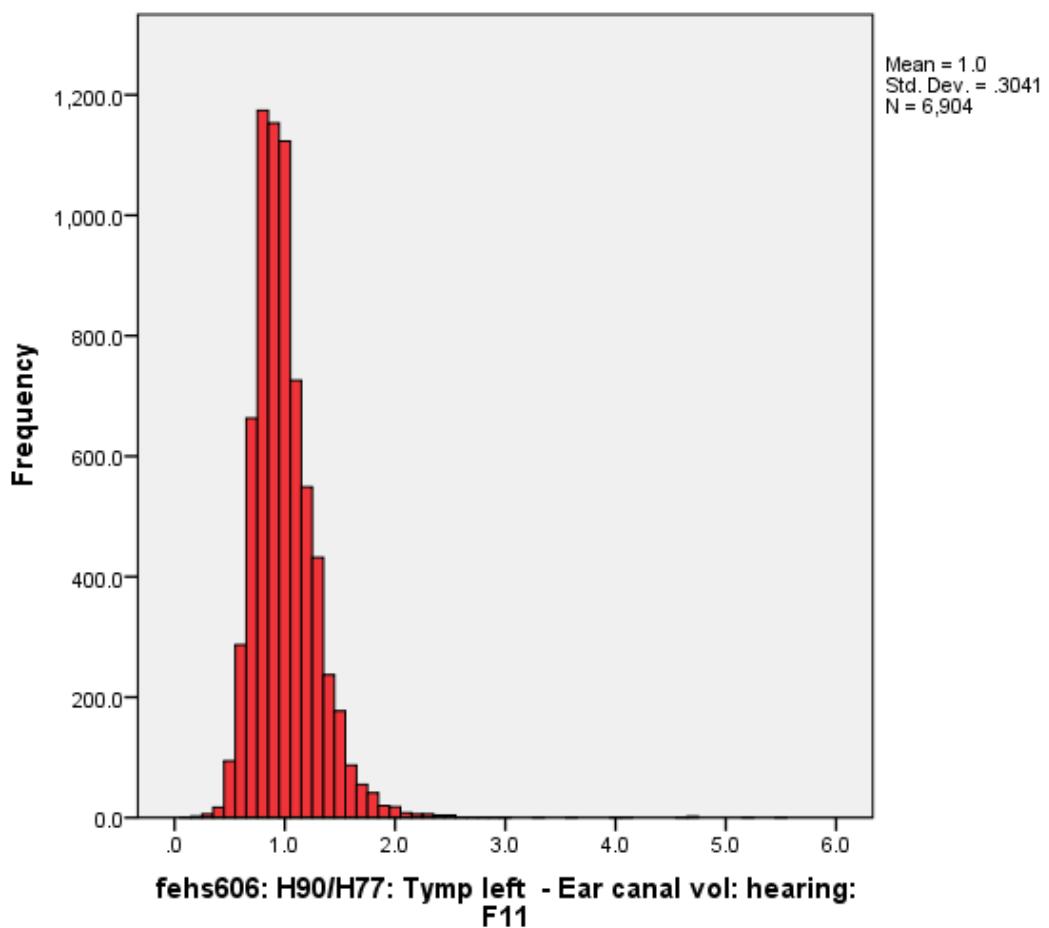
**fehs602 H84/H71: Tym done: hearing: F11**

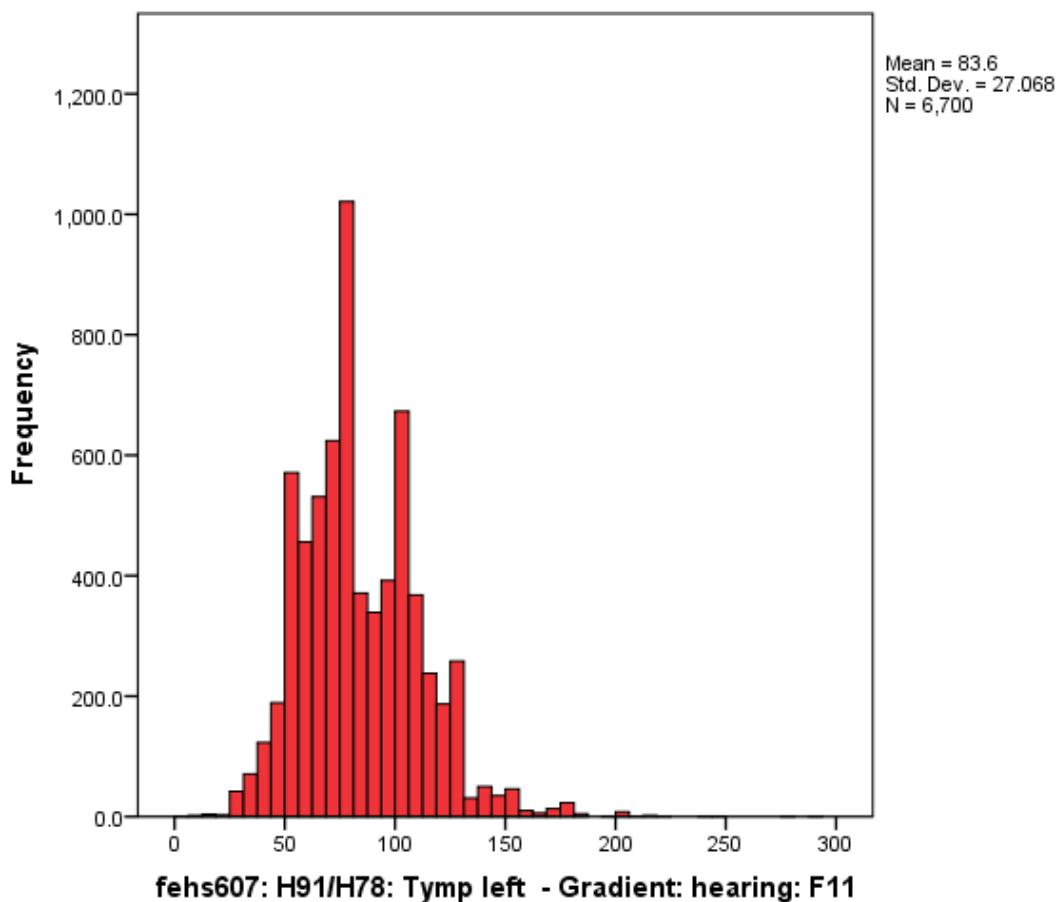
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	7019	98.0	99.0	99.0
	2 No	72	1.0	1.0	100.0
	Total	7091	99.1	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	62	.9		
	Total	68	.9		
	Total	7159	100.0		



**fehs605 H89/H76: Tymp left - Grading: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Normal	6752	94.3	97.6	97.6
	2 Flat shape	138	1.9	2.0	99.6
	3 Abnormal shape	15	.2	.2	99.8
	4 Perforation/Grommet	12	.2	.2	100.0
	Total	6917	96.6	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	236	3.3		
	Total	242	3.4		
Total		7159	100.0		



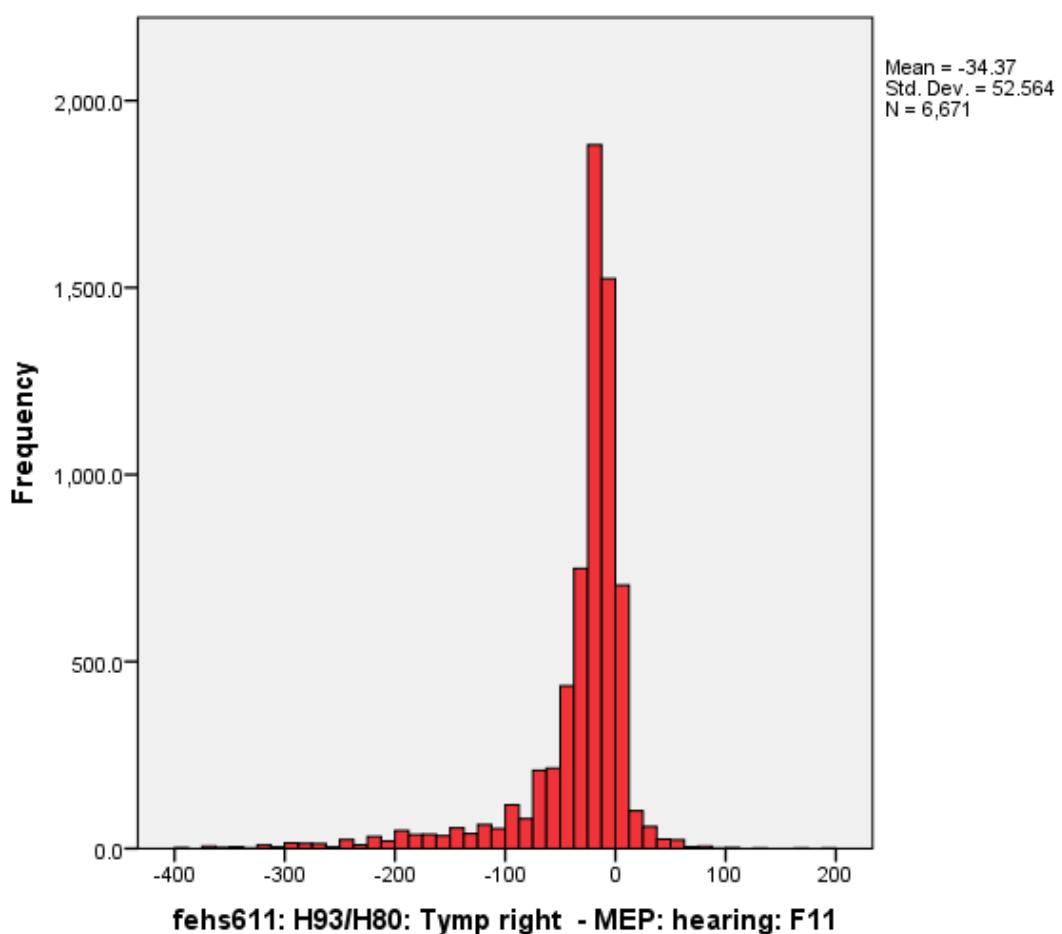
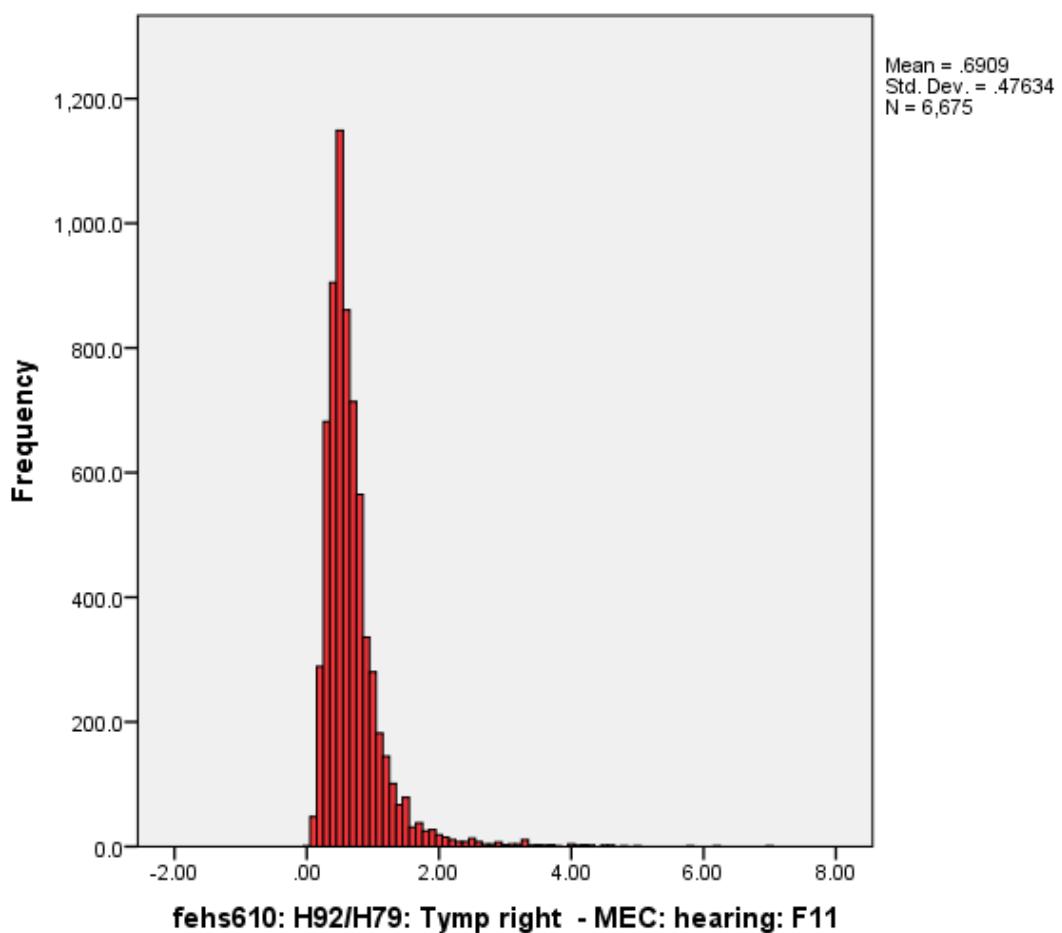


fehs608 DV: Left tympanometry classification: hearing: F11

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 A	6149	85.9	89.2	89.2
	2 C1	371	5.2	5.4	94.6
	3 C2	157	2.2	2.3	96.9
	4 B	179	2.5	2.6	99.5
	5 Perforation/Grommet	12	.2	.2	99.7
	6 Other	22	.3	.3	100.0
	Total	6890	96.2	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	263	3.7		
	Total	269	3.8		
Total		7159	100.0		

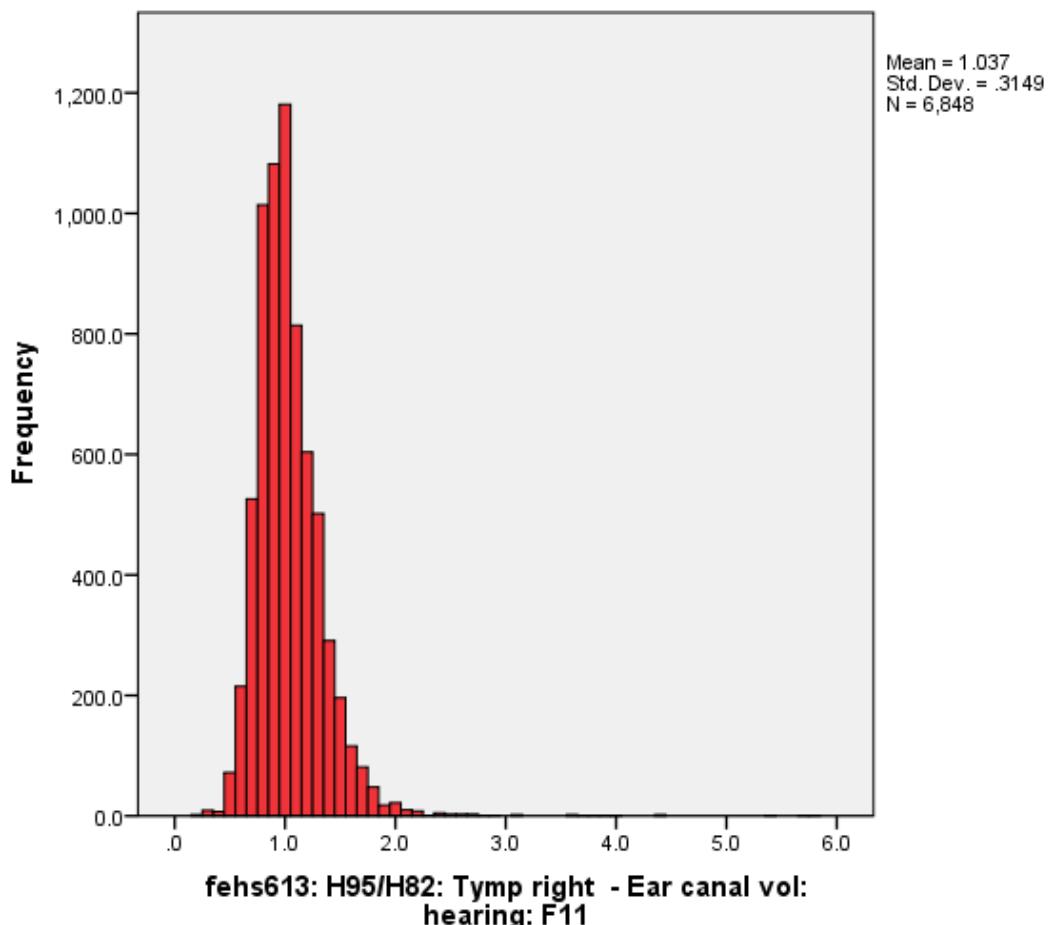
fehs609 DV: Left tympanometry recoded: hearing: F11

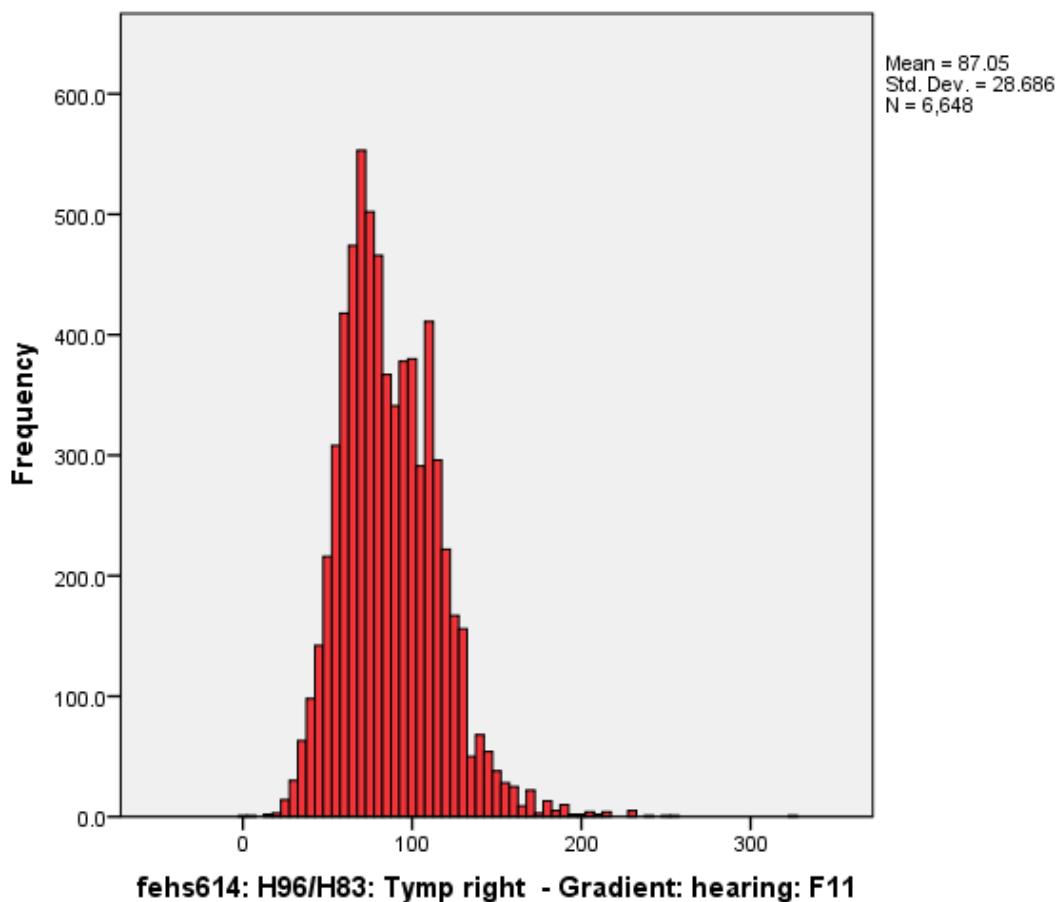
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 No OME (Type A, C1 or C2 tymp)	6677	93.3	96.9	96.9
	2 OME (B tymp or G)	186	2.6	2.7	99.6
	3 Other	27	.4	.4	100.0
	Total	6890	96.2	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	263	3.7		
	Total	269	3.8		
Total		7159	100.0		



**fehs612 H94/H81: Tymp right - Grading: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Normal	6677	93.3	97.3	97.3
	2 Flat shape	143	2.0	2.1	99.4
	3 Abnormal shape	23	.3	.3	99.8
	4 Perforation	9	.1	.1	99.9
	5 Grommet	8	.1	.1	100.0
	Total	6860	95.8	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	293	4.1		
	Total	299	4.2		
Total		7159	100.0		





**fehs615 DV: Right tympanometry classification: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 A	6131	85.6	89.6	89.6
	2 C1	368	5.1	5.4	95.0
	3 C2	132	1.8	1.9	96.9
	4 B	169	2.4	2.5	99.4
	5 Grommet	8	.1	.1	99.5
	6 Perforation	9	.1	.1	99.6
	7 Other	27	.4	.4	100.0
	Total	6844	95.6	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	309	4.3		
	Total	315	4.4		
Total		7159	100.0		

**fehs616 DV: Right tympanometry recoded: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 No OME (Type A, C1 or C2 tymp)	6631	92.6	96.9	96.9
	2 OME (B tymp or G)	177	2.5	2.6	99.5
	3 Other	36	.5	.5	100.0
	Total	6844	95.6	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	309	4.3		
	Total	315	4.4		
Total		7159	100.0		

**fehs617 Bilateral OME: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 No OME	6415	89.6	95.9	95.9
	2 Unilateral OME	206	2.9	3.1	98.9
	3 Bilateral OME	71	1.0	1.1	100.0
	Total	6692	93.5	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	461	6.4		
	Total	467	6.5		
Total		7159	100.0		

**3.6.8 Acoustic reflexes**

**fehs700 H98.H85: Acoustic ref: Equipment number: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Other	6	.1	.1	.1
	14	3593	50.2	51.2	51.3
	15	3415	47.7	48.7	100.0
	Total	7014	98.0	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	139	1.9		
	Total	145	2.0		
Total		7159	100.0		

**fehs701 H99/H86: Acoustic ref: Calibration number: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Other	12	.2	.2	.2
	2	1539	21.5	21.9	22.1
	3	669	9.3	9.5	31.7
	4	1834	25.6	26.1	57.8
	5	915	12.8	13.0	70.8
	6	1254	17.5	17.9	88.7
	7	791	11.0	11.3	100.0
	Total	7014	98.0	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	139	1.9		
	Total	145	2.0		
Total		7159	100.0		

**fehs702 H100/H87: Acoustic ref: Acoustic reflex present left ear: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 85 db	959	13.4	13.8	13.8
	2 95 db	3198	44.7	45.9	59.6
	3 105 db	1332	18.6	19.1	78.8
	4 Absent	717	10.0	10.3	89.1
	5 Not tested	763	10.7	10.9	100.0
	Total	6969	97.3	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	184	2.6		
	Total	190	2.7		
Total		7159	100.0		

**fehs703 H101/H88: Acoustic ref: Acoustic reflex present right ear: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 85 db	858	12.0	12.3	12.3
	2 95 db	2943	41.1	42.3	54.7
	3 105 db	1306	18.2	18.8	73.5
	4 Absent	739	10.3	10.6	84.1
	5 Not tested	1106	15.4	15.9	100.0
	Total	6952	97.1	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	201	2.8		
	Total	207	2.9		
Total		7159	100.0		

**fehs704 H102/H89: Acoustic reflexes done: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	7009	97.9	98.9	98.9
	2 No	80	1.1	1.1	100.0
	Total	7089	99.0	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	64	.9		
	Total	70	1.0		
Total		7159	100.0		

### 3.6.9 Personal stereo test

The child was introduced to the personal stereo test using the following script:

*“We’d like to know what volume you like to listen to music through headphones. We’re going to ask you to put these headphones on and listen to the music through the headphones. Turn the volume wheel until the music is at the volume you would normally listen to it in a quiet room. The music may not necessarily be your favourite type of music, but set the volume at the level you would normally listen to your own music”.*

They were then given the personal stereo with a CD of suitable music – William Orbit, Adagio for Strings and shown where the volume wheel was and their chosen level was recorded. The test was repeated once.

**fehs800 H105/H92: Stereo: Equipment number: hearing: F11**

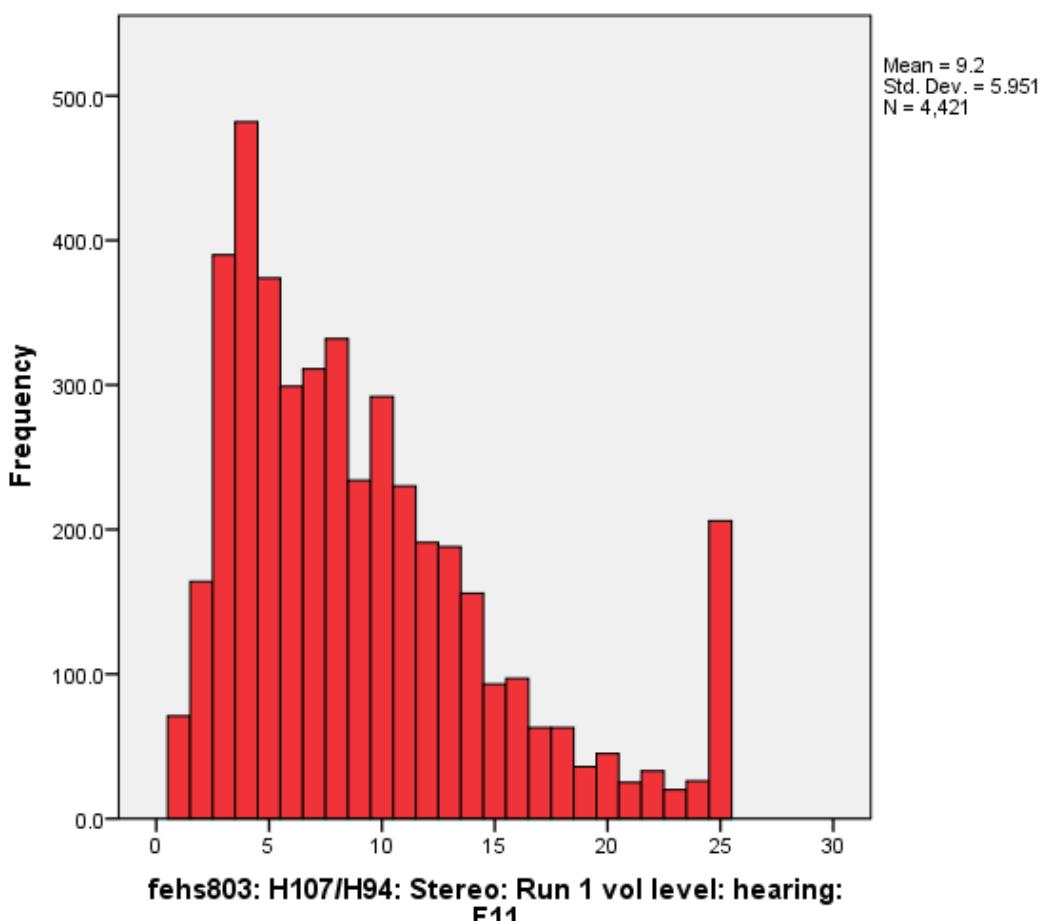
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2260	31.6	50.8	50.8
	2	2170	30.3	48.8	99.7
	3 Other	15	.2	.3	100.0
	Total	4445	62.1	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	2708	37.8		
	Total	2714	37.9		
Total		7159	100.0		

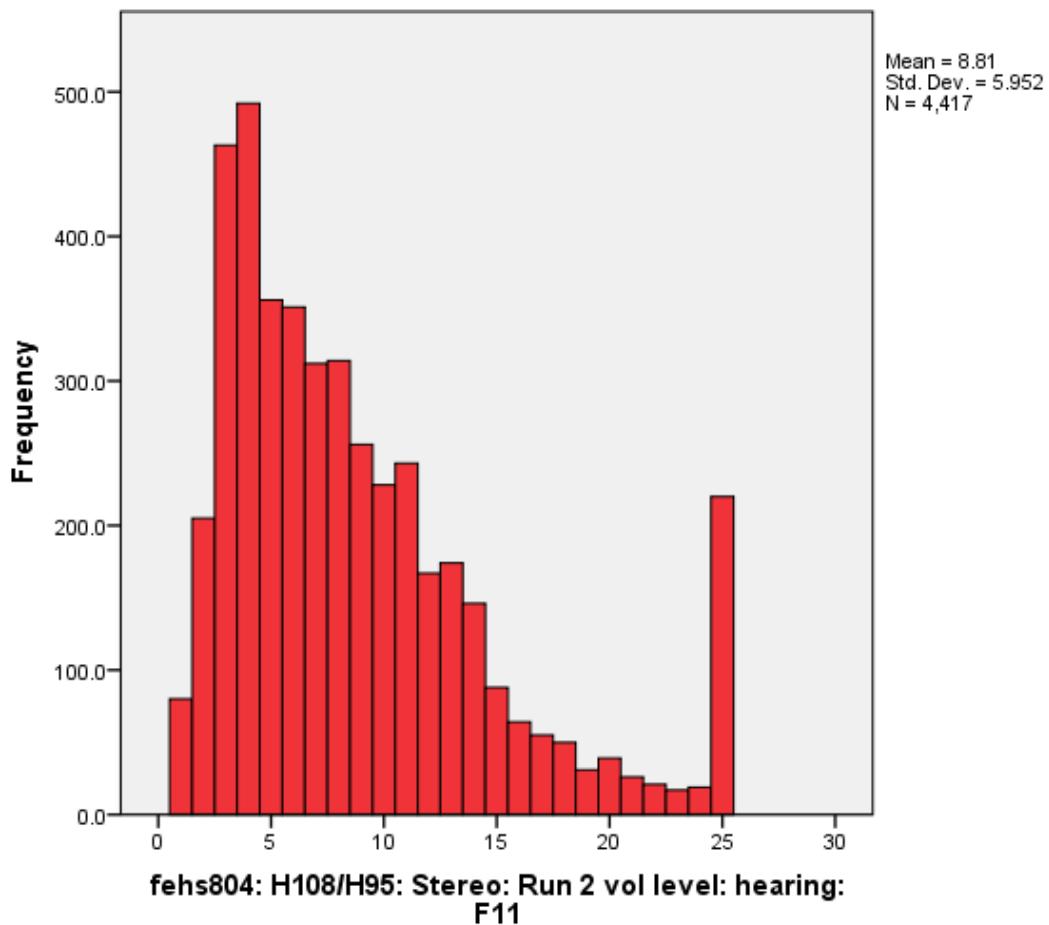
**fehs801 H106/H93: Stereo: Calibration number: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1378	19.2	31.0	31.0
	2	1196	16.7	26.9	57.9
	3	732	10.2	16.5	74.4
	4	594	8.3	13.4	87.7
	5	529	7.4	11.9	99.6
	6 Other	16	.2	.4	100.0
	Total	4445	62.1	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	2708	37.8		
	Total	2714	37.9		
Total		7159	100.0		

**fehs802 H104/H91: Stereo: done: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	4456	62.2	62.8	62.8
	2 No	2634	36.8	37.2	100.0
	Total	7090	99.0	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	63	.9		
	Total	69	1.0		
Total		7159	100.0		





fehs805 H109/H96: Stereo: Type of headphones used normally: hearing: F11

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Insert	2083	29.1	47.1	47.1
	2 Supra	964	13.5	21.8	69.0
	3 Personal stereo not used	1372	19.2	31.0	100.0
	Total	4419	61.7	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing'	2734	38.2		
	Total	2740	38.3		
Total		7159	100.0		

## Staff rating

fehs900 HCR1: Staff rating - cooperative: hearing: F11

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Coop	7033	98.2	99.2	99.2
	2 Somewhat uncoop	48	.7	.7	99.9
	3 Uncoop	8	.1	.1	100.0
	Total	7089	99.0	100.0	
Missing	-1 Missing	64	.9		
	-11 Trips/quads	6	.1		
	Total	70	1.0		
Total		7159	100.0		

fehs901 HCR2: Staff rating - shy: hearing: F11

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Not shy	7014	98.0	98.9	98.9
	2 Somewhat shy	66	.9	.9	99.9
	3 Shy	9	.1	.1	100.0
	Total	7089	99.0	100.0	
Missing	-1 Missing	64	.9		
	-11 Trips/quads	6	.1		
	Total	70	1.0		
Total		7159	100.0		

fehs902 HCR3: Staff rating - fidgety: hearing: F11

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Not fidgety	6921	96.7	97.6	97.6
	2 Somewhat fidgety	143	2.0	2.0	99.6
	3 Fidgety	25	.3	.4	100.0
	Total	7089	99.0	100.0	
Missing	-1 Missing	64	.9		
	-11 Trips/quads	6	.1		
	Total	70	1.0		
Total		7159	100.0		

fehs903 HCR4: Staff rating - over-active: hearing: F11

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Not o/active	7021	98.1	99.0	99.0
	2 Somewhat o/active	51	.7	.7	99.8
	3 O/active	17	.2	.2	100.0
	Total	7089	99.0	100.0	
Missing	-1 Missing	64	.9		
	-11 Trips/quads	6	.1		
	Total	70	1.0		
Total		7159	100.0		

**fehs904 HCR5: Staff rating - attention: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Attentive	6981	97.5	98.5	98.5
	2 Attention somewhat poor	94	1.3	1.3	99.8
	3 Attention poor	14	.2	.2	100.0
	Total	7089	99.0	100.0	
Missing	-1 Missing	64	.9		
	-11 Trips/quads	6	.1		
	Total	70	1.0		
Total		7159	100.0		

**fehs905 HCR6: Staff rating - rapport: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Responsive	7030	98.2	99.2	99.2
	2 Good after effort	54	.8	.8	99.9
	3 Unresponsive	5	.1	.1	100.0
	Total	7089	99.0	100.0	
Missing	-1 Missing	64	.9		
	-11 Trips/quads	6	.1		
	Total	70	1.0		
Total		7159	100.0		

**fehs906 HCR7: Staff rating - anxiety: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Not anxious	7054	98.5	99.5	99.5
	2 Somewhat anxious	27	.4	.4	99.9
	3 Anxious	8	.1	.1	100.0
	Total	7089	99.0	100.0	
Missing	-1 Missing	64	.9		
	-11 Trips/quads	6	.1		
	Total	70	1.0		
Total		7159	100.0		

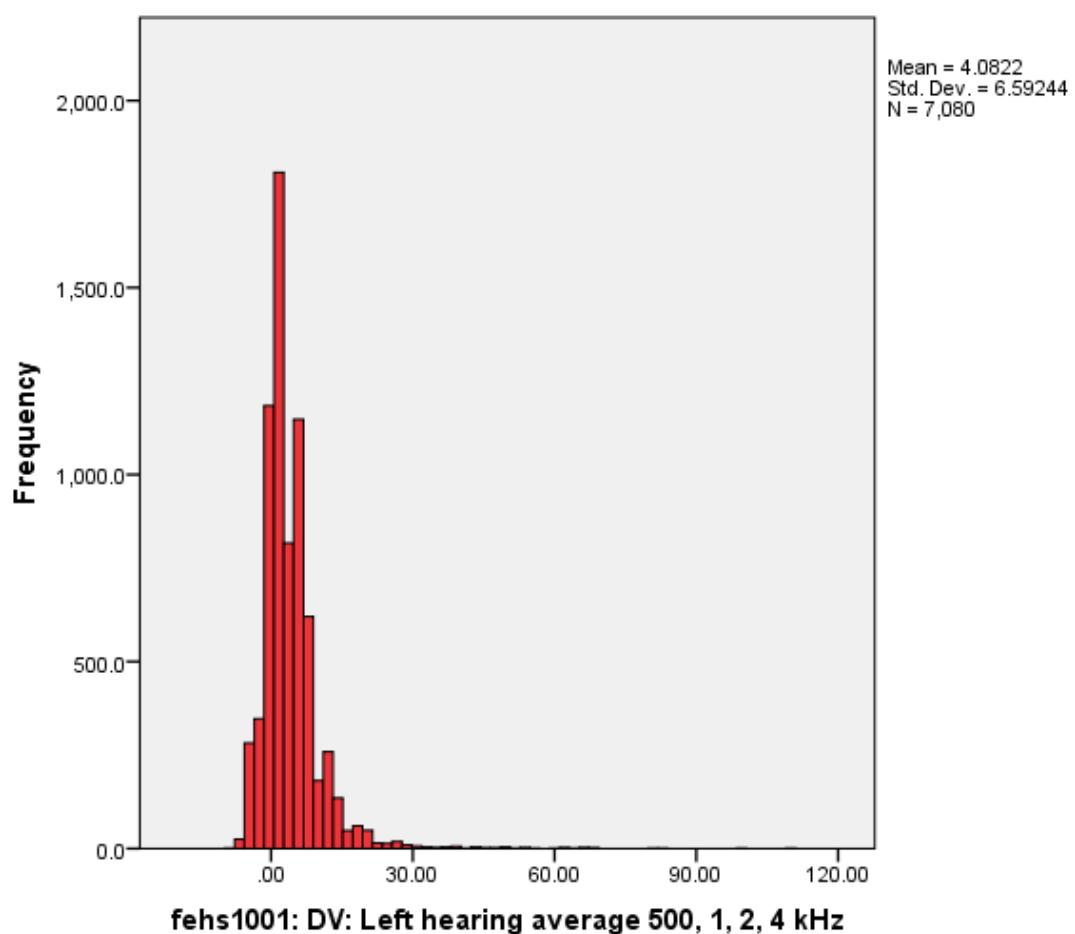
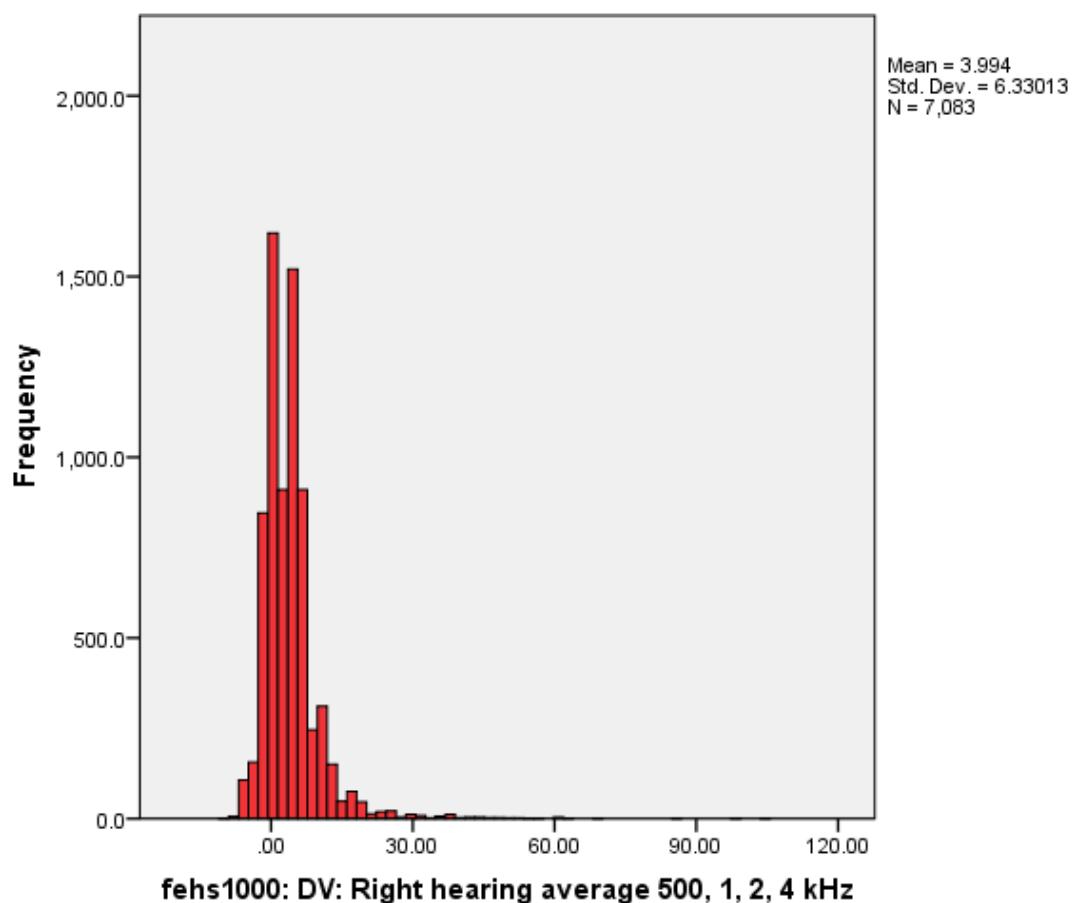
**fehs907 HCR9: Unusual behaviour: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	3	.0	.0	.0
	2 No	7088	99.0	100.0	100.0
	Total	7091	99.1	100.0	
Missing	-1 Missing	62	.9		
	-11 Trips/quads	6	.1		
	Total	68	.9		
Total		7159	100.0		

fehs907 to fehs917 Avoidance of eye contact to Other unusual behaviour - omitted – no variation – all other behaviour normal

**fehs918 HCR20: Unusual emotional reaction: hearing: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	1	.0	.0	.0
	3 No	7090	99.0	100.0	100.0
	Total	7091	99.1	100.0	
Missing	-1 Missing	62	.9		
	-11 Trips/quads	6	.1		
	Total	68	.9		
Total		7159	100.0		



### 3.7 Vision

The vision tests during this clinic used the same equipment and procedures run in previous clinics (Focus @ 7 and Focus @ 10).

The examinations were conducted in a room with a blackout blind or blacked out window. The tests were carried out under artificial light except for autorefraction for which the light was switched off. The room consisted of a desk and chair for the examiner with chairs for the child and carer placed next to it. When the first part of the assessment was finished the child would move to a swivel chair placed so that it could be turned to face different tests without the child having to move again. There were also two extra chairs in the room for other accompanying adults or siblings. At the beginning of each day the instruments were laid out and the Cannon Autorefractor was switched on allowing it time to fully 'warm up'. The ETDRS light screen was turned on but with the charts in the back compartment, as it would be left at the end of each examination to prevent the next child from seeing the chart at close range as they entered the room. To decide which eye was tested first on the visual acuity test a list of random numbers was consulted. At the beginning of each day one six-digit number was crossed off for each child expected and the datasheet marked accordingly: if the last digit of the random number was even or 0 then the right eye was tested first and the left eye if the last digit was odd. As the child was collected from reception and taken to the examination room, they were asked whether they wore glasses. The possible answers were yes, no or no longer. If yes, it was recorded whether the child had the glasses with them or not. If the child was currently wearing glasses it was noted how many months it was since the last glasses check and also how much they were worn. For the latter, the possible answers were constantly, at school, occasional or rarely. Constantly was defined as being >8 hours daily, at school 4-8 hours, occasional 2-4 hours and rarely 0-2 hours. Similar questions were asked regarding the use of contact lenses.

fevs001 Form version: vision: F11

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	350	4.9	4.9	4.9
	2	299	4.2	4.2	9.2
	3	3598	50.3	50.8	59.9
	4	2838	39.6	40.1	100.0
	Total	7085	99.0	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	68	.9		
	Total	74	1.0		
Total		7159	100.0		

fevs002 Vision session start time - Hour: F11 – available in released data

fevs003 Vision session start time - Minutes: F11 – available in released data

**fevs004 Vision tester: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	93	1.3	1.3	1.3
	2	150	2.1	2.1	3.4
	3	224	3.1	3.2	6.6
	4	314	4.4	4.4	11.0
	5	390	5.4	5.5	16.5
	6	129	1.8	1.8	18.3
	7	359	5.0	5.1	23.4
	8	90	1.3	1.3	24.7
	9	75	1.0	1.1	25.7
	10	733	10.2	10.3	36.1
	11	158	2.2	2.2	38.3
	12	816	11.4	11.5	49.8
	13	3	.0	.0	49.9
	14	426	6.0	6.0	55.9
	15	663	9.3	9.4	65.3
	16	199	2.8	2.8	68.1
	17	295	4.1	4.2	72.2
	18	491	6.9	6.9	79.2
	19	274	3.8	3.9	83.0
	20	433	6.0	6.1	89.1
	21	187	2.6	2.6	91.8
	22	136	1.9	1.9	93.7
	23	1	.0	.0	93.7
	24	101	1.4	1.4	95.1
	25	58	.8	.8	95.9
	26	140	2.0	2.0	97.9
	27	1	.0	.0	97.9
	28	145	2.0	2.0	100.0
	29	1	.0	.0	100.0
Total		7085	99.0	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	68	.9		
	Total	74	1.0		
Total		7159	100.0		

**fevs005 Clinic room: vision: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Green	1372	19.2	19.4	19.4
	2 Yellow	5713	79.8	80.6	100.0
	Total	7085	99.0	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	68	.9		
	Total	74	1.0		
Total		7159	100.0		

**fevs006 Child wears glasses: vision: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	1317	18.4	18.6	18.6
	2 No	5765	80.5	81.4	100.0
	Total	7082	98.9	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	71	1.0		
	Total	77	1.1		
Total		7159	100.0		

**fevs007 Child wore glasses in session: vision: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	850	11.9	66.5	66.5
	2 No	429	6.0	33.5	100.0
	Total	1279	17.9	100.0	
Missing	-11 Trips/quads	6	.1		
	-2 No glasses	5765	80.5		
	-1 Missing	109	1.5		
Total		5880	82.1		
Total		7159	100.0		

**fevs008 Child wears contact lenses: vision: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	40	.6	.6	.6
	2 No	7031	98.2	99.4	100.0
	Total	7071	98.8	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	82	1.1		
	Total	88	1.2		
Total		7159	100.0		

**fevs009 Child wore contact lenses in session: vision: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	9	.1	29.0	29.0
	2 No	22	.3	71.0	100.0
	Total	31	.4	100.0	
Missing	-11 Trips/quads	6	.1		
	-2 No CL	7031	98.2		
	-1 Missing	91	1.3		
Total		7128	99.6		
Total		7159	100.0		

**fevs010 GLn7: If glasses/CL, months since last check: vision: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 January	175	2.4	15.1	15.1
	2 February	132	1.8	11.4	26.5
	3 March	112	1.6	9.7	36.2
	4 April	105	1.5	9.1	45.3
	5 May	65	.9	5.6	50.9
	6 June	200	2.8	17.3	68.2
	7 July	31	.4	2.7	70.9
	8 August	37	.5	3.2	74.1
	9 September	56	.8	4.8	78.9
	10 October	47	.7	4.1	83.0
	11 November	28	.4	2.4	85.4
	12 December	169	2.4	14.6	100.0
	Total	1157	16.2	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	5996	83.8		
	Total	6002	83.8		
Total		7159	100.0		

**fevs011 GLn8: If glasses/CL, how much worn: vision: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 constant (>8 hrs)	458	6.4	37.0	37.0
	2 at school (4-8 hrs)	310	4.3	25.1	62.1
	3 occasional (2-4 hrs)	145	2.0	11.7	73.8
	4 rarely (0-2 hrs)	324	4.5	26.2	100.0
	Total	1237	17.3	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	5916	82.6		
	Total	5922	82.7		
Total		7159	100.0		

### 3.7.1 Eye preference

In each of the examination rooms three coloured boxes were standing on a table at the child's eye height. The tops of the boxes were made of a plastic material that allowed in light; otherwise they were constructed of wood. In the centre of the front panel was a keyhole, a different colour on each box, and on looking through the keyhole the child could see a different room in each box. When the child was first brought into the room they were asked to look into each of the three keyholes in turn and were asked a simple question about the contents of the box in order to maintain interest. The examiner noted which eye was used on each occasion and recorded this by ticking the relevant box i.e. right, left, both or refused.

**fevs030 Eye preference, red keyhole:vision: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Right	4269	59.7	60.3	60.3
	2 Left	2725	38.1	38.5	98.7
	3 Both	87	1.2	1.2	100.0
	4 Refused	3	.0	.0	100.0
	Total	7084	99.0	100.0	
Missing	-2 Not done	1	.0		
	-1 Missing	68	1.0		
	Total	69	1.0		
Total		7153	100.0		

**fevs031 Eye preference, yellow keyhole: vision: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Right	4254	59.5	60.1	60.1
	2 Left	2714	37.9	38.3	98.4
	3 Both	113	1.6	1.6	100.0
	4 Refused	3	.0	.0	100.0
	Total	7084	99.0	100.0	
Missing	-2 Not done	1	.0		
	-1 Missing	68	1.0		
	Total	69	1.0		
Total		7153	100.0		

**fevs032 Eye preference, green keyhole: vision: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Right	4256	59.5	60.1	60.1
	2 Left	2726	38.1	38.5	98.7
	3 Both	91	1.3	1.3	99.9
	4 Refused	4	.1	.1	100.0
	Total	7077	98.9	100.0	
Missing	-2 Not done	1	.0		
	-1 Missing	75	1.0		
	Total	76	1.1		
Total		7153	100.0		

**fevs033 Summary of eye preference: vision: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 R eye 3/3 times	4089	57.2	57.8	57.8
	2 R eye 2/3 times, L 1/3 times	111	1.6	1.6	59.3
	3 R eye 1/3 times, L 2/3 times	107	1.5	1.5	60.9
	4 L eye 3/3 times	2577	36.0	36.4	97.3
	5 Both eyes 3/3 times	33	.5	.5	97.7
	6 Both 1 or 2 times	157	2.2	2.2	100.0
	7 Refuse 3/3 times	3	.0	.0	100.0
	Total	7077	98.9	100.0	
Missing	-2 Not done	1	.0		
	-1 Missing	75	1.0		
	Total	76	1.1		
Total		7153	100.0		

### 3.7.2 Stereopsis

This was measured using the Randot® Preschool Stereoacuity Test (Birch *et. al.*, 2008). This book test uses polarizing spectacles to dissociate the eyes and has a number of pictures of varying perceived 'depth'.

The child was given the polarised glasses to wear, over their own glasses if worn, and asked first to look at the animals and then the circles. If the child could correctly identify the forward projecting circle in the first triplet, successive triplets were tried until the child said that they could not find the next one or made a mistake. The previous triplet was checked again and then the next one. If they still could not proceed, the previous triplet was taken as their stereoacuity. If they proceeded accurately, they were tested on successive triplets until they made a mistake, when the checking procedure was repeated.

If they could not see any triplets or animals, then the Randot Preschool test (Book 3) was used. The child was asked to identify the black and white pictures, and then to look at the stereograms. If they could identify correctly two of the pictures in the "800" sec/arc (lower)

set of stereograms, their stereoacuity was scored as 800. If they could pass at 800, they were tested on the 400 pictures. If they passed at that, the Randot circles were tried again. If they still could not get any circles or animals or geometric shapes, they were scored as having 800 sec/arc. If on retesting they were correct on some part of the Randot test correct, they were scored accordingly. If they could not see even the 800 sec/arc targets on the Randot Preschool test, they were scored as ST1. "0001" (could not see).

Birch, E. PhD, Williams, C. PhD, FRCOphthc., Drover, J., PhD., Fu, V., PhD., Cheng, C., BS, Northstone, K. MSc., Courage, M. PhD., Adams, R., PhD. (2008) 'Randot® Preschool Stereoacuity Test: Normative data and validity'. *Journal of American Association for Pediatric Ophthalmology and Strabismus*. 12 (1): 23-26

**fevs135 Randot test result (sec/arc): vision: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	30	1	.0	.0	.0
	40	5572	77.9	81.5	81.5
	60	622	8.7	9.1	90.6
	100	403	5.6	5.9	96.5
	200	129	1.8	1.9	98.4
	400	82	1.1	1.2	99.6
	800	28	.4	.4	100.0
	Total	6837	95.6	100.0	
	Missing				
Missing	-2 Not done	240	3.4		
	-1 Missing	76	1.1		
	Total	316	4.4		
Total		7153	100.0		

**fevs136 Reason Randot not done : vision: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	0 Test done	6836	95.6	96.6	96.6
	1 Could not see	143	2.0	2.0	98.6
	2 No goggles	3	.0	.0	98.7
	3 Refusal	1	.0	.0	98.7
	4 Other reason	93	1.3	1.3	100.0
	Total	7076	98.9	100.0	
	Missing				
Missing	-1 Missing	77	1.1		
Total		7153	100.0		

### 3.7.3 Visual Acuity

This was measured using the LogMAR test. The test was carried out with glasses or contact lenses if prescribed (unless not worn for six months or more).

The child was seated on the chair four metres from the light box. The appropriate eye was occluded with a patch and ETDRS chart 1 placed on the light box. The child was asked whether they knew the alphabet and if not the carer was asked to sit near them with a matching card. The tester explained that some of the letters were very small and that if the child was not sure it was important to guess.

The child was then asked to read (or match) the first letter on each row and to go as far down the chart as possible. When they reached the point where they were unsure or made a mistake they were taken back up two rows and asked to read across the row, letter by letter, with the examiner marking off each letter seen on the datasheet. If the child did not read the whole row correctly then the next row up was tested until there was one line fully correct. The child was then asked to continue reading down the chart. If the child read a letter incorrectly (e.g. V for Y) the examiner could check with a large letter whether the child knew the correct name for that letter, otherwise any errors were noted by not crossing off that letter. If one letter on a line was seen, all the rest were attempted. If a child said that they

were not sure, they were encouraged to guess. Testing continued until they read a whole line wrong. A small number of children found guessing difficult or even stressful and some completely refused to guess at all. This was recorded in the 'comments' section by the examiner. The test was then repeated using the same chart but with the child holding up a pinhole.

The child was then turned through 180 degrees to face the Pelli-Robson charts and contrast sensitivity was measured on the first eye. They were then turned back to face the ETDRS chart and the second eye was fully covered. The ETDRS chart 2 was now used and the whole testing procedure repeated, including the pinhole.

The examiner recorded whether glasses were worn, whether a matching card was used and the test distance used for each eye. The ETDRS charts were reproduced on the datasheet and the examiner marked off each letter read correctly below the lowest fully correct line. At the end of the session the number of letters in each column not seen, below that line, were counted. It was also recorded whether each part of the test, i.e. with and without pinhole, had been fully or partly completed.

Visual acuity for each test was later calculated according to the formula:

$$\text{Visual Acuity} = -0.3 \times (\text{total errors} \times 0.02)$$

Also calculated was the 'best' visual acuity for each eye, which was the best (smallest) value from 'habitual' and 'habitual + pinhole'. This best acuity is intended as an estimate for the best corrected acuity for that eye.

**fevs151 Matching card used: vision: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Yes	27	.4	.4	.4
	2 No	7048	98.4	99.6	100.0
	Total	7075	98.8	100.0	
Missing	-1 Missing	78	1.1		
	-11 Trips/quads	6	.1		
	Total	84	1.2		
Total		7159	100.0		

**fevs152a Habitual state tested first eye: vision: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Unaided	6348	88.7	89.7	89.7
	2 With glasses	731	10.2	10.3	100.0
	Total	7079	98.9	100.0	
Missing	-1 Missing	74	1.0		
	-11 Trips/quads	6	.1		
	Total	80	1.1		
Total		7159	100.0		

**fevs152b Habitual state tested second eye: vision: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Unaided	6342	88.6	89.7	89.7
	2 With glasses	729	10.2	10.3	100.0
	Total	7071	98.8	100.0	
Missing	-1 Missing	82	1.1		
	-11 Trips/quads	6	.1		
	Total	88	1.2		
Total		7159	100.0		

**fevs153 Eye tested first: vision: F11**

		Frequency	Percent	Valid Percent	Cum. %
Valid	1 Right	3613	50.5	51.0	51.0
	2 Left	3469	48.5	49.0	100.0
	Total	7082	98.9	100.0	
Missing	-1 Missing	71	1.0		
	-11 Trips/quads	6	.1		
	Total	77	1.1		
Total		7159	100.0		

**Descriptive Statistics**

		N	Min	Max	M	SD
fevs154	ETDRS Chart 1-habitual 1st eye (a): vision: F11	70160	12	1.68	1.326	
fevs155	ETDRS Chart 1-habitual 1st eye (b): vision: F11	70170	13	1.77	1.503	
fevs156	ETDRS Chart 1-habitual 1st eye (c): vision: F11	70170	13	1.84	1.409	
fevs157	ETDRS Chart 1-habitual 1st eye (d): vision: F11	70170	14	2.18	1.405	
fevs158	ETDRS Chart 1-habitual 1st eye (e): vision: F11	70170	14	2.07	1.254	
fevs160	DV: ETDRS Chart 1-habitual 1st eye, visual acuity: vision: F11	7020	.40	1.00	-.1092	.12533

**fevs159 ETDRS Chart 1-habitual 1st eye, completion: vision: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	7017	98.0	99.1	99.1
	2 No	65	.9	.9	100.0
	Total	7082	98.9	100.0	
Missing	-1 Missing	71	1.0		
	-11 Trips/quads	6	.1		
	Total	77	1.1		
Total		7159	100.0		

**Descriptive Statistics**

		N	Minimum	Maximum	Mean	S.D.
fevs161	ETDRS Chart 1-habitual 2nd eye (a): vision: F11	6966	0	14	2.16	1.209
fevs162	ETDRS Chart 1-habitual 2nd eye (b): vision: F11	6966	0	14	2.20	1.320
fevs163	ETDRS Chart 1-habitual 2nd eye (c): vision: F11	6966	0	13	2.12	1.172
fevs164	ETDRS Chart 1-habitual 2nd eye (d): vision: F11	6966	0	14	2.45	1.242
fevs165	ETDRS Chart 1-habitual 2nd eye (e): vision: F11	6966	0	13	2.06	1.070
fevs167	DV: ETDRS Chart 1-habitual 2nd eye, visual acuity: vision: F11	6968	-.40	1.04	-.0802	.10587

**fevs166 ETDRS Chart 1-habitual 2nd eye, completion: vision: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	6966	97.3	98.3	98.3
	2 No	117	1.6	1.7	100.0
	Total	7083	98.9	100.0	
Missing	-1 Missing	70	1.0		
	-11 Trips/quads	6	.1		
	Total	76	1.1		
Total		7159	100.0		

**Descriptive Statistics**

		N	Minimum	Maximum	Mean	SD
fevs168	ETDRS Chart 1-hab+pin 1st eye (a): vision: F11	7000	0	14	2.07	1.272
fevs169	ETDRS Chart 1-hab+pin 1st eye (b): vision: F11	6999	0	14	2.03	1.499
fevs170	ETDRS Chart 1-hab+pin 1st eye (c): vision: F11	7000	0	14	2.32	1.380
fevs171	ETDRS Chart 1-hab+pin 1st eye (d): vision: F11	7000	0	14	2.11	1.401
fevs172	ETDRS Chart 1-hab+pin 1st eye (e): vision: F11	7000	0	14	2.22	1.268
fevs174	DV: ETDRS Chart 1-hab+pin 1st eye, visual acuity: vision: F11	7002	-.40	1.10	-.0851	.12167

**fevs173 ETDRS Chart 1-hab+pin 1st eye, completion: vision: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	7000	97.8	98.8	98.8
	2 No	83	1.2	1.2	100.0
	Total	7083	98.9	100.0	
Missing	-1 Missing	70	1.0		
	-11 Trips/quads	6	.1		
	Total	76	1.1		
Total		7159	100.0		

**Descriptive Statistics**

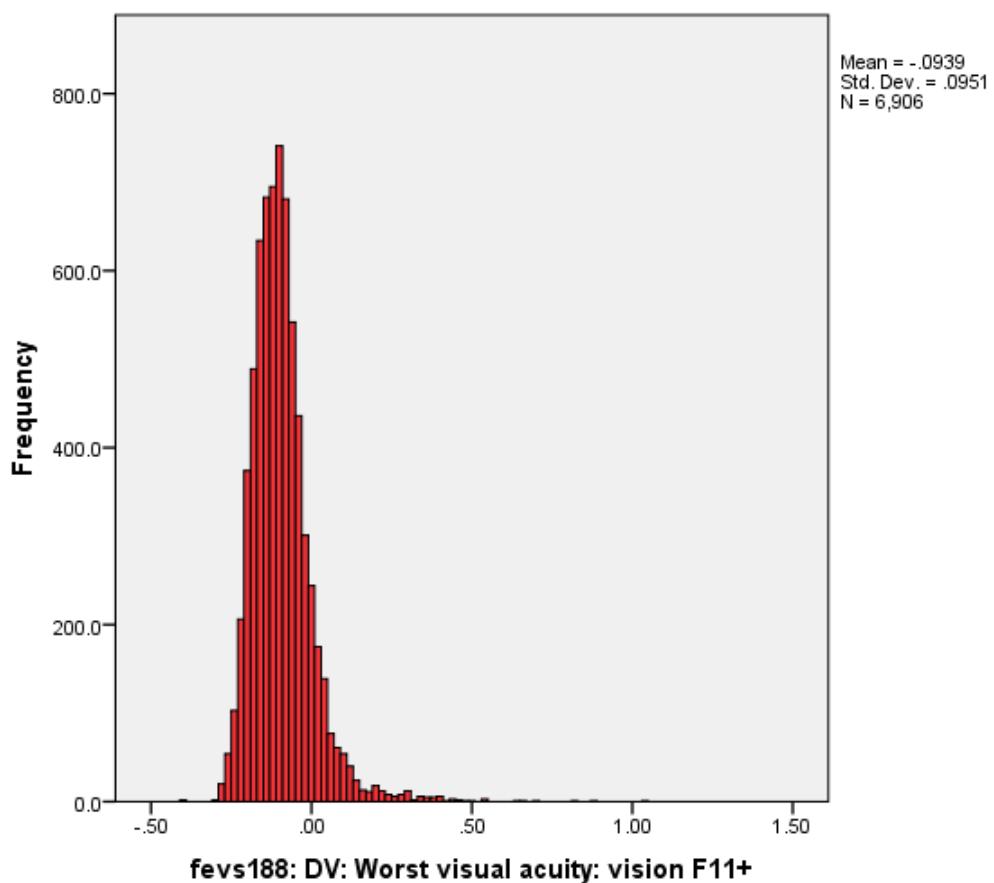
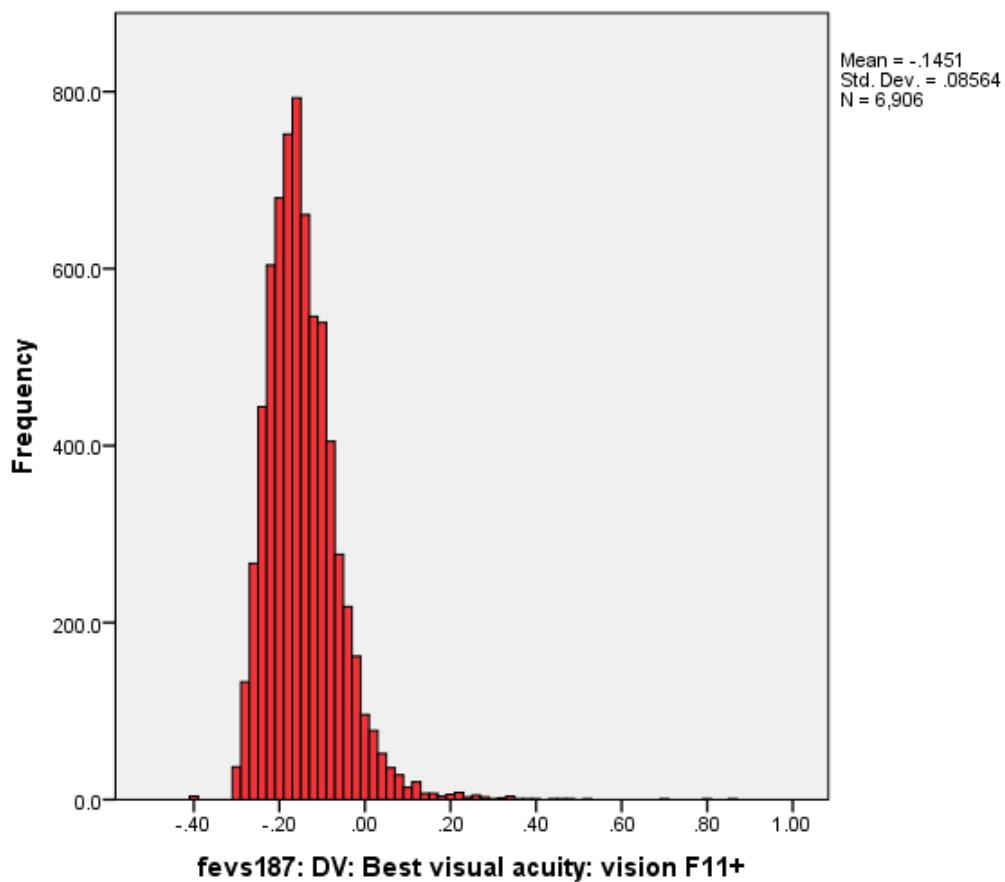
		N	Minimum	Maximum	Mean	SD
fevs175	ETDRS Chart 1-hab+pin 2nd eye (a): vision: F11	6958	0	13	2.35	1.124
fevs176	ETDRS Chart 1-hab+pin 2nd eye (b): vision: F11	6953	0	14	2.24	1.340
fevs177	ETDRS Chart 1-hab+pin 2nd eye (c): vision: F11	6953	0	13	2.53	1.201
fevs178	ETDRS Chart 1-hab+pin 2nd eye (d): vision: F11	6953	0	13	2.26	1.246
fevs179	ETDRS Chart 1-hab+pin 2nd eye (e): vision: F11	6953	0	14	2.14	1.164
fevs181	DV: ETDRS Chart 1-hab+pin 2nd eye, visual acuity: vision: F11	6956	-.40	1.04	-.0697	.10589

**fevs180 ETDRS Chart 1-hab+pin 2nd eye, completion: vision: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	6953	97.1	98.2	98.2
	2 No	129	1.8	1.8	100.0
	Total	7082	98.9	100.0	
Missing	-1 Missing	71	1.0		
	-11 Trips/quads	6	.1		
	Total	77	1.1		
Total		7159	100.0		

**Descriptive Statistics**

		N	Minimum	Maximum	Mean	Std. Deviation
fevs182	DV: Best visual acuity 1st eye: vision: F11	6987	-.40	.88	-.1335	.09901
fevs183	DV: Best visual acuity 2nd eye: vision: F11	6922	-.40	1.04	-.1054	.08665
fevs184	DV: Difference between 2 eyes in best acuities: vision: F11	6906	.00	.52	.0512	.04468
fevs185	Effect of pinhole 1st eye: vision: F11	6987	-1.12	1.18	.0239	.11023
fevs186	Effect of pinhole 2nd eye: vision: F11	6922	-1.22	1.10	.0107	.09397



**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
fevs189 Habitual crowding in 1st eye: vision: F11	6879	.000	6.000	1.00393	.629701
fevs190 Habitual crowding in 2nd eye: vision: F11	6912	.000	6.000	1.05275	.510921
fevs191 Hab+pinhole crowding in 1st eye: vision: F11	6918	.000	9.000	1.15140	.689161
fevs192 Hab+pinhole crowding in 2nd eye: vision: F11	6953	.000	6.000	1.43811	.633648
fevs193 Best crowding 1st eye: vision: F11	6775	.000	4.000	.77146	.445748
fevs194 Best crowding 2nd eye: vision: F11	6866	.000	2.000	.91747	.379525
fevs195 DV: Best crowding overall: vision: F11	6668	.000	2.000	.65450	.372067
fevs196 DV: Worst crowding overall: vision: F11	6973	.000	4.000	1.02706	.380879

### 3.7.4 Autorefraction

This was carried out using the Canon R50 autorefractor. Still with the lights off the child was seated at the autorefractor. Any glasses were taken off and the child asked to put their chin on the chin rest and forehead against the bar. Monocular measurements were then taken three times with each eye, in order to obtain an average, which was the entered value. If the child wore glasses the “over-refraction” button was pressed and the measurements repeated with the glasses. The printout was stapled to the datasheet and the average entered in the appropriate box on the datasheet. It was also recorded whether the child wore bifocals and whether the present glasses were the most recent pair.

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	SD
fevs205 Autoref R eye, sphere: vision: F11	6754	-222.00	17.50	-1.0098	13.25243
fevs206 Autoref R eye, plus cylinder: vision: F11	6730	.00	10.00	.4103	.48779
fevs207 Autoref R eye, axis: vision: F11	7085	-102.00	180.00	93.8494	73.76556
fevs208 Autoref R eye, spherical equiv: vision: F11	6754	-166.50	17.50	-.6082	9.98186

### 09 Autoref R eye, completion code (v.2+3): vision: F11

	Frequency	Percent	Valid Percent	Cum. %
Valid	0 Not done	331	4.6	4.7
	1 Full	6707	93.7	94.9
	2 Error	26	.4	.4
	Total	7064	98.7	100.0
Missing	-1 Missing	89	1.2	
	-11 Trips/quads	6	.1	
	Total	95	1.3	
Total	7159	100.0		

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
fevs210 Autoref L eye, sphere: vision: F11	6754	-222.00	9.75	-1.4300	16.41896
fevs211 Autoref L eye, plus cylinder: vision: F11	6754	.00	111.00	1.0227	8.17641
fevs212 Autoref L eye, axis: vision: F11	7085	-102.00	590.00	101.9818	71.43535
fevs213 Autoref L eye, spherical equiv: vision: F11	6754	-166.50	10.25	-.9186	12.35496

### 14 Autoref L eye, completion code (v.2+3): vision: F11

	Frequency	Percent	Valid Percent	Cum. %
Valid	0 Not done	331	4.6	4.7
	1 Full	6663	93.1	94.8
	2 Error	38	.5	.5
	Total	7032	98.2	100.0
Missing	-1 Missing	121	1.7	
	-11 Trips/quads	6	.1	
	Total	127	1.8	
Total	7159	100.0		

**Descriptive Statistics n=7085**

		Min	Max	M	SD
fevs215 Anisometropia (sphere): vision: F11	.00	229.25	1.6936	17.18859	
fevs216 DV: Anisometropia (spherical equiv): vision: F11	.00	173.75	1.3611	12.90837	

**Descriptive Statistics**

		N	Min	Max	M	SD
fevs217 Over-ref R eye, sphere (v.2+3): vision: F11	637	-11.00	4.25	-.4232	1.01277	
fevs218 Over-ref R eye, plus cylinder (v.2+3): vision: F11	634	-1.75	7.00	.4583	.73520	
fevs219 Over-ref R eye, axis (v.2+3): vision: F11	684	1	180	95.00	55.623	

**fevs220 Over-ref R eye, completion code (v.2+3): vision: F11**

	Frequency	Percent	Valid Percent	Cum %
Valid	0 Not done	224	3.1	22.0
	1 Full	672	9.4	66.0
	2 Error	122	1.7	12.0
	Total	1018	14.2	100.0
Missing	-11 Trips/quads	6	.1	
	-1 Missing	6135	85.7	
	Total	6141	85.8	
Total	7159	100.0		

**Descriptive Statistics**

		N	Minimum	Maximum	Mean	Std. Deviation
fevs221 Over-ref L eye, sphere (v.2+3): vision: F11	679	-12.50	111.00	-.2323	4.40303	
fevs222 Over-ref L eye, plus cylinder (v.2+3): vision: F11	678	-2.25	7.25	.4362	.65919	
fevs223 Over-ref L eye, axis (v.2+3): vision: F11	677	1	181	107.32	55.311	

**fevs224 Over-ref L eye, completion code (v.2+3): vision: F11**

	Frequency	Percent	Valid Percent	Cum %
Valid	0 Not done	223	3.1	22.0
	1 Full	663	9.3	65.4
	2 Error	127	1.8	12.5
	Total	1013	14.2	100.0
Missing	-11 Trips/quads	6	.1	
	-1 Missing	6140	85.8	
	Total	6146	85.8	
Total	7159	100.0		

**fevs225 Bifocals, reading add present: vision: F11**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	.1		
Missing	-11 Trips/quads	.1		
	-1 Missing	99.8		
	Total	99.9		
Total	7159	100.0		

**fevs226 Most recent glasses: vision: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	698	9.7	86.8	86.8
	2 No	10	.1	1.2	88.1
	3 Dont know	96	1.3	11.9	100.0
	Total	804	11.2	100.0	
Missing	-11 Trips/quads	6	.1		
	-1 Missing	6349	88.7		
	Total	6355	88.8		
Total		7159	100.0		

## 3.8 Physical activity

### ACTIGRAPH SESSION

The ActiGraph™ is a commonly used accelerometer in child and adolescent free-living physical activity studies. At the F11+ clinic, children were asked to wear an MTI Actigraph AM7164 2.2 accelerometer on their right hip for 7 days, beginning the morning after the clinic (Mattocks *et. al.*, 2008). Summary variables are included in the released dataset. Reinvites have been excluded. Daily variables are not included in the released data as they unlikely to be used in analyses. However, those interested in recoding the raw data are invited to contact ALSPAC.

In addition to the direct measures, there are a number of derived variables that may be useful for analysis:

#### CPM

Total physical activity is the total volume activity including activities at all intensities, measured as the average counts per minute (cpm) over the period of valid recording. This variable is commonly used as it is the summary measure of total physical activity that has been validated against doubly labelled water (*ibid.*). Associations with total physical activity are usually calculated per 100 cpm as this difference is of a similar order to the differences observed between males and females in these data.

#### MVPA

MVPA is the average minutes of moderate to vigorous physical activity per valid day. This variable is commonly used as current physical activity recommendations for children are framed in terms of time spent each day in MVPA. A value of  $\geq 3600$  cpm was originally used to define MVPA at the time of the data collection (*ibid.*). More recently, following Evenson *et. al.* (2008), who calculated a lower cutpoint of  $\geq 2296$ . Both sets of data are included, where *feag100 - feag168* use a cut point of  $\geq 3600$  and *feag200 - feag238* use a cut-point of  $\geq 2296$ .

#### Valid days

At the time of writing, the definition of a valid day of wear is generally between 480 to 600 minutes. There are two marker variables in the dataset: *feag163* and *feag213*. *feag163* equals 1 when valid data is determined as at least 10 hours (600mins) of valid wear for at least 3 days. This threshold defines a valid day in variables *feag100 - feag168*. *feag213* summarises the number of valid days worn overall, based on 500 minutes of wear per valid day. This threshold defines a valid day in variables *feag200 - feag238*.

The data contains 140 continuous variables measuring physical activity. Please note that the derivations using different cutpoints and valid day thresholds are clearly defined by the variable labels using the prefix DV:  $\geq 3600$  or DV:  $\geq 2296$ .

Evenson KR, Cattellier D, Gill K, Ondrak K, McMurray RG. (2008) 'Calibration of two objective measures of physical activity for children'. *Journal of Sports Science*. (26):1557–65.

Mattocks, C., Ness, A., Leary, S., Tilling, K., Blair, S.N., Shield, J., Deere, K., Saunders, J., Kirkby, J., Smith, G.D., Wells, J., Wareham, N., Reilly, John J. and Riddoch, C. (2008). 'Use of accelerometers in a large field-based study of children: protocols, design issues and effects on precision'. *Journal of Physical Activity and Health*, 5 (1): S94-S107: <https://doi.org/10.1123/jpah.5.s1.s98>

**feag100 DV: MVPA>=3600 Number of valid (>=600 mins) days: total: activity: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	150	2.1	2.5	2.5
	1	138	1.9	2.3	4.7
	2	218	3.0	3.6	8.3
	3	313	4.4	5.1	13.4
	4	526	7.3	8.6	22.0
	5	953	13.3	15.6	37.6
	6	1588	22.2	26.0	63.6
	7	2222	31.0	36.4	100.0
	Total	6108	85.3	100.0	
Missing	-11 Trips/quads	3	.0		
	-1 Missing	1048	14.6		
	Total	1051	14.7		
	Total	7159	100.0		

**feag101 DV: MVPA>=3600 Number of valid (>=600 mins) days: weekdays: activity: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	188	2.6	3.1	3.1
	1	219	3.1	3.6	6.7
	2	328	4.6	5.4	12.0
	3	630	8.8	10.3	22.3
	4	1399	19.5	22.9	45.3
	5	3344	46.7	54.7	100.0
	Total	6108	85.3	100.0	
Missing	-11 Trips/quads	3	.0		
	-1 Missing	1048	14.6		
	Total	1051	14.7		
	Total	7159	100.0		

**feag102 DV: MVPA>=3600 Number of valid (>=600 mins) days: weekend: activity: F11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	980	13.7	16.0	16.0
	1	1873	26.2	30.7	46.7
	2	3255	45.5	53.3	100.0
	Total	6108	85.3	100.0	
Missing	-11 Trips/quads	3	.0		
	-1 Missing	1048	14.6		
	Total	1051	14.7		
	Total	7159	100.0		

#### Descriptive Statistics

	N	Min	Max	M	SD
feag103 DV: MVPA>=3600 total count for whole week (valid days): activity: F11	5958	123496.00	7361597.00	2638977.0321	1077989.04231
feag104 DV: MVPA>=3600 total minutes for whole week (valid days): activity: F11	5958	607.00	6777.00	4383.7806	1282.35165
feag105 DV: MVPA>=3600 mean cpm for whole week (valid days): activity: F11	5958	199.19	1555.09	605.7021	182.18320
feag106 DV: MVPA>=3600 total count for weekdays (valid days): activity: F11	5920	123496.00	5513557.00	2034895.9990	815206.58726
feag107 DV: MVPA>=3600 total minutes for weekdays (valid days): activity: F11	5920	602.00	5143.00	3358.7909	928.22505
feag108 DV: MVPA>=3600 mean cpm for weekdays (valid days): activity: F11	5920	178.38	1645.51	609.5462	188.04403
feag109 DV: MVPA>=3600 total count for weekend (valid days): activity: F11	5128	97269.00	2559650.00	716934.6418	370939.60355
feag110 DV: MVPA>=3600 total minutes for weekend (valid days): activity: F11	5128	600.00	2276.00	1215.7806	387.44631
feag111 DV: MVPA>=3600 mean cpm for weekend (valid days): activity: F11	5128	150.03	1652.59	589.5130	241.42570

#### Descriptive Statistics

	N	Min	Max	M	SD
feag112 DV: MVPA>=3600 daily mean cpm 7am-12pm: whole week (valid days): activity: F11	5958	33.50	1737.17	569.3115	186.48878
feag113 DV: MVPA>=3600 daily mean cpm 12pm-5pm: whole week (valid days): activity: F11	5958	.00	1918.00	695.2392	229.90860
feag114 DV: MVPA>=3600 daily mean cpm 5pm-10pm: whole week (valid days): activity: F11	5958	109.87	2278.55	571.2088	249.15119
feag115 DV: MVPA>=3600 daily mean cpm 7am-12pm: weekdays (valid days): activity: F11	5920	33.50	2540.33	561.1810	192.70675
feag116 DV: MVPA>=3600 daily mean cpm 12pm-5pm: weekdays (valid days): activity: F11	5920	.00	1994.93	704.3113	245.16261
feag117 DV: MVPA>=3600 daily mean cpm 5pm-10pm: weekdays (valid days): activity: F11	5920	109.87	2278.55	582.3089	266.62586
feag118 DV: MVPA>=3600 daily mean cpm 7am-12pm: weekend (valid days): activity: F11	5128	.00	3664.50	599.7357	350.31711
feag119 DV: MVPA>=3600 daily mean cpm 12pm-5pm: weekend (valid days): activity: F11	5128	74.80	3022.60	663.4805	334.85016
feag120 DV: MVPA>=3600 daily mean cpm 5pm-10pm: weekend (valid days): activity: F11	5128	.00	3607.10	526.6397	298.60748

#### Descriptive Statistics

	N	Min	Max	M	SD
feag121 DV: MVPA>=3600 no. 5-9 min blocks MVPA: whole week (valid days): activity: F11	5958	.00	5.25	.6392	.69704
feag122 DV: MVPA>=3600 no. 10-19 min blocks MVPA: whole week (valid days): activity: F11	5958	.00	3.00	.1344	.26018
feag123 DV: MVPA>=3600 no. 20+ min blocks MVPA: whole week (valid days): activity: F11	5958	.00	1.33	.0121	.05914
feag124 DV: MVPA>=3600 no. 5-9 min blocks MVPA: weekday (valid days): activity: F11	5920	.00	6.50	.6785	.77659
feag125 DV: MVPA>=3600 no. 10-19 min blocks MVPA: weekday (valid days): activity: F11	5920	.00	3.40	.1439	.30258
feag126 DV: MVPA>=3600 no. 20+ min blocks MVPA: weekday (valid days): activity: F11	5920	.00	1.60	.0124	.06830
feag127 DV: MVPA>=3600 no. 5-9 min blocks MVPA: weekend (valid days): activity: F11	5128	.00	9.00	.5196	.89804
feag128 DV: MVPA>=3600 no. 10-19 min blocks MVPA: weekend (valid days): activity: F11	5128	.00	4.00	.1012	.31554
feag129 DV: MVPA>=3600 no. 20+ min blocks MVPA: weekend (valid days): activity: F11	5128	.00	2.00	.0112	.09836

**Descriptive Statistics**

	N	Min	Max	M	SD
feag130 DV: MVPA>=3600 total spent 5-9 min blocks MVPA: whole week (valid days): activity: F11	5958	.00	35.00	3.9643	4.41824
feag131 DV: MVPA>=3600 total spent 10-19 min blocks MVPA: whole week (valid days): activity: F11	5958	.00	40.00	1.6784	3.33727
feag132 DV: MVPA>=3600 total spent 20+ min blocks MVPA: whole week (valid days): activity: F11	5958	.00	41.17	.2963	1.50992
feag133 DV: MVPA>=3600 total spent 5-9 min blocks MVPA (valid weekdays): activity: F11	5920	.00	42.50	4.2124	4.94133
feag134 DV: MVPA>=3600 total spent 10-19 min blocks MVPA (valid weekdays): activity: F11	5920	.00	45.00	1.7980	3.87147
feag135 DV: MVPA>=3600 total spent 20+ min blocks MVPA (valid weekdays): activity: F11	5920	.00	49.40	.3021	1.71806
feag136 DV: MVPA>=3600 total spent 5-9 min blocks MVPA (valid weekend days): activity: F11	5128	.00	61.00	3.2077	5.64751
feag137 DV: MVPA>=3600 total spent 10-19 min blocks MVPA: weekend (valid days): activity: F11	5128	.00	50.00	1.2556	4.00008
feag138 DV: MVPA>=3600 total spent 20+ min blocks MVPA (valid weekend days): activity: F11	5128	.00	50.00	.2754	2.44976

**Descriptive Statistics**

	N	Min	Max	M	SD
feag139 DV: MVPA>=3600 no. 10-19 min blocks sed - whole week (valid days)	5961	.00	17.00	8.1473	2.07034
feag140 DV: MVPA>=3600 no. 20-29 min blocks sed - whole week (valid days)	5961	.00	6.33	2.0102	.93690
feag141 DV: MVPA>=3600 no. 30+ min blocks sed - whole week (valid days)	5961	.00	5.60	1.2244	.87718
feag142 DV: MVPA>=3600 no. 10-19 min blocks sed (valid weekdays)	5922	.00	17.00	8.3018	2.19973
feag143 DV: MVPA>=3600 no. 20-29 min blocks sed (valid weekdays)	5922	.00	6.25	2.0895	1.02426
feag144 DV: MVPA>=3600 no. 30+ min blocks sed (valid weekdays)	5922	.00	6.00	1.3168	.98425
feag145 DV: MVPA>=3600 no. 10-19 min blocks sed (valid weekend days)	5131	.00	21.00	7.7158	3.07669
feag146 DV: MVPA>=3600 no. 20-29 min blocks sed (valid weekend days)	5131	.00	9.00	1.7753	1.34718
feag147 DV: MVPA>=3600 no. 30+ min blocks sed (valid weekend days)	5131	.00	7.00	.9155	.99503
feag148 DV: MVPA>=3600 total spent in 10-19 min blocks sed - whole week (valid days)	5961	.00	229.00	107.7703	28.22670
feag149 DV: MVPA>=3600 total spent in 20-29 min blocks sed - whole week (valid days)	5961	.00	144.67	47.3517	22.36152
feag150 DV: MVPA>=3600 total spent in 30+ min blocks sed - whole week (valid days)	5961	.00	264.00	50.5843	38.52650
feag151 DV: MVPA>=3600 total spent in 10-19 min blocks sed (valid weekdays)	5922	.00	229.00	109.9489	29.91672
feag152 DV: MVPA>=3600 total spent in 20-29 min blocks sed (valid weekdays)	5922	.00	149.00	49.2423	24.44127
feag153 DV: MVPA>=3600 total spent in 30+ min blocks sed (valid weekdays)	5922	.00	312.33	54.2193	42.92740
feag154 DV: MVPA>=3600 total spent in 10-19 min blocks sed (valid weekend days)	5131	.00	282.00	101.6036	41.57630
feag155 DV: MVPA>=3600 total spent in 20-29 min blocks sed (valid weekend days)	5131	.00	214.00	41.7186	31.96346
feag156 DV: MVPA>=3600 total spent in 30+ min blocks sed (valid weekend days)	5131	.00	358.00	38.4179	44.76231
feag157 DV: MVPA>=3600 daily no. mins at 3600-6199 (mod) counts - whole week (valid days)	5961	.00	99.25	19.6778	13.01084
feag158 DV: MVPA>=3600 daily no. mins at >=6200 (vig) counts - whole week (valid days)	5961	.00	57.00	3.3582	4.12133
feag159 DV: MVPA>=3600 daily no. mins at 3600-6199 (mod) counts - weekdays (valid days)	5922	.00	98.33	20.8542	14.22249
feag160 DV: MVPA>=3600 daily no. mins at >=6200 (vig) counts - week days (valid days)	5922	.00	46.75	3.4197	4.42936
feag161 DV: MVPA>=3600 daily no. mins at 3600-6199 (mod) counts - weekend (valid days)	5131	.00	132.00	15.9171	15.06100
feag162 DV: MVPA>=3600 daily no. mins at >=6200 (vig) counts - weekend (valid days)	5131	.00	70.00	3.1677	5.45249
feag163 DV: MVPA>=3600 include for all analysis based on >=3 valid days	6111	.00	1.00	.9170	.27585
feag164 DV: MVPA>=3600 daily mean (mins) at <199 (sedentary) counts - whole week	5961	160.00	706.50	426.0384	68.67739
feag165 DV: MVPA>=3600 daily mean (mins) at >200<3600 (light) counts - whole week	5961	135.00	563.33	327.3731	59.65320
feag166 DV: MVPA>=3600 daily no. mins MVPA - whole week (valid days)	5961	.33	125.50	23.0360	15.53311
feag167 DV: MVPA>=3600 daily no. mins MVPA - weekday (valid days)	5922	.00	125.50	24.2738	16.89542
feag168 DV: MVPA>=3600 daily no. mins MVPA - weekend (valid days)	5131	.00	146.00	19.0848	18.28160

### Descriptive Statistics

	N	Min	Max	M	SD
feag200 DV: MPVA>=2296 Number of valid days worn overall: F11	6063	0	7	6.03	1.522
feag201 DV: MPVA>=2296 Total minutes worn over all valid days: F11	6063	0	8863	4699.81	1300.748
feag202 DV: MPVA>=2296 Mean minutes worn per valid day: F11	5972	505	1266.14	774.7043	64.76932
feag203 DV: MPVA>=2296 Total counts over all valid days: F11	6063	0	128725963	2864662.93	2700381.09
feag204 DV: MPVA>=2296 Counts per minute over all valid days: F11	5972	6.32	14523.97	607.2895	398.57018
feag205 DV: MPVA>=2296 Total sedentary minutes over all valid days: F11	6063	0	4982	2146.82	734.879
feag206 DV: MPVA>=2296 Mean sedentary minutes per valid day: F11	5972	85.83	711.71	353.3252	74.58253
feag207 DV: MPVA>=2296 Total light minutes over all valid days: F11	6063	0	4067	2210.48	687.997
feag208 DV: MPVA>=2296 Mean light minutes per valid day: F11	5972	9.00	608.00	364.6774	61.31927
feag209 DV: MPVA>=2296 Total MVPA minutes over all valid days: F11	6063	0	4184	342.30	206.051
feag210 DV: MPVA>=2296 Mean MVPA minutes per valid day: F11	5972	.00	597.71	56.6659	30.05436
feag211 DV: MPVA>=2296 Total vigorous minutes over all valid days: F11	6063	0	3955	102.77	117.534
feag212 DV: MPVA>=2296 Mean vigorous minutes per valid day: F11	5972	.00	565.00	16.9587	17.70622
feag213 DV: MPVA>=2296 Number of valid weekdays: F11	6063	0	5	4.39	1.107
feag214 DV: MPVA>=2296 Total minutes worn over all valid weekdays: F11	6063	0	7132	3488.81	969.494
feag215 DV: MPVA>=2296 Mean minutes worn per valid weekday: F11	5948	502	1426.40	790.8019	71.35014
feag216 DV: MPVA>=2296 Total counts over all valid weekdays: F11	6063	0	122916285	2151044.62	2369243.18
feag217 DV: MPVA>=2296 Counts per minute over all valid weekdays: F11	5948	6.32	17234.48	612.9465	441.33666
feag218 DV: MPVA>=2296 Total sedentary minutes over all valid weekdays: F11	6063	0	3975	1600.10	553.743
feag219 DV: MPVA>=2296 Mean sedentary minutes per valid weekday: F11	5948	80.60	795.00	362.0242	79.04864
feag220 DV: MPVA>=2296 Total light minutes over all valid weekdays: F11	6063	0	3142	1625.37	511.122
feag221 DV: MPVA>=2296 Mean light minutes per valid weekday: F11	5948	9.00	628.40	368.9023	65.15470
feag222 DV: MPVA>=2296 Total MVPA minutes over all valid weekdays: F11	6063	0	3927	263.18	162.920
feag223 DV: MPVA>=2296 Mean MVPA minutes per valid weekday: F11	5948	.00	785.40	59.8380	32.59305
feag224 DV: MPVA>=2296 Total vigorous minutes over all valid weekdays: F11	6063	0	3773	79.24	98.270
feag225 DV: MPVA>=2296 Mean vigorous minutes per valid weekday: F11	5948	.00	754.60	17.9531	20.28497
feag226 DV: MPVA>=2296 Number of valid weekend days: F11	6063	0	2	1.64	.629
feag227 DV: MPVA>=2296 Total minutes worn over all valid weekend days: F11	6519	0	2880	1186.65	520.752
feag228 DV: MPVA>=2296 Mean minutes worn per valid weekend day: F11	5558	500	1368.50	732.9395	92.86339
feag229 DV: MPVA>=2296 Total counts over all valid weekend days: F11	6063	0	21210538	713618.31	621368.76
feag230 DV: MPVA>=2296 Counts per minute over all valid weekend days: F11	5558	59.11	18449.90	590.1475	425.13293
feag231 DV: MPVA>=2296 Total sedentary minutes over all valid weekend days: F11	6063	0	1745	546.72	267.979
feag232 DV: MPVA>=2296 Average sedentary minutes per valid weekend day: F11	5558	53.00	910.00	330.5949	94.04724
feag233 DV: MPVA>=2296 Total light minutes over all valid weekend days: F11	6063	0	1252	585.11	263.105
feag234 DV: MPVA>=2296 Mean light minutes per valid weekend day: F11	5558	66.00	640.00	354.3109	77.19093
feag235 DV: MPVA>=2296 Total MVPA minutes over all valid weekend days: F11	6063	0	789	79.12	68.662
feag236 DV: MPVA>=2296 Mean MVPA minutes per valid weekend day: F11	5558	.00	533.00	48.0025	36.15180
feag237 DV: MPVA>=2296 Total vigorous minutes over all valid weekend days: F11	6063	0	695	23.53	32.579
feag238 DV: MPVA>=2296 Mean vigorous minutes per valid weekend day: F11	5558	.00	525.00	14.3140	18.93936

### 3.9 Fractures

A Wellcome Trust Fellowship by Dr Emma Clarke had the aims of describing the epidemiology of fractures in children within a large population-based cohort, to investigate the association between bone mass measured at aged 9.9 years and the risk of fracture over the following two years, and to investigate the association between other factors and fracture risk.

In order to identify children who had fractured a bone parents were asked in reception about their child's history. Further follow-up (documented elsewhere) occurred for those children who had fractured a bone in the previous year.

**fefr001 Fracture Questionnaire completed: F11**

	Frequency	Percent	Valid Percent	Cum. %
Valid 1 Yes	7057	98.6	98.6	98.6
2 No	102	1.4	1.4	100.0
Total	7159	100.0	100.0	

**fefr002 Child ever broken a bone: F11**

	Frequency	Percent	Valid Percent	Cum. %
Valid 1 Yes	1205	16.8	17.1	17.1
2 No	5843	81.6	82.9	100.0
Total	7048	98.4	100.0	
Missing -9 Q not completed	102	1.4		
-1 Missing	9	.1		
Total	111	1.6		
Total	7159	100.0		

**fefr003 Child broken bone in last year: F11**

	Frequency	Percent	Valid Percent	Cum. %
Valid 1 Yes	469	6.6	39.5	39.5
2 No	719	10.0	60.5	100.0
Total	1188	16.6	100.0	
Missing -9 Q not completed	102	1.4		
-2 Not broken bone	5843	81.6		
-1 Missing	26	.4		
Total	5971	83.4		
Total	7159	100.0		

## 4 References

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## 5 Appendix: Personnel and Funding

**Focus visits manager:** Sue Sadler **Deputy manager:** Amanda Carmichael **Clinical director:** Dr John Henderson

**Data Administration:** Sue Bonnell, Maureen Brennan, Kate Northstone

### **Measuring team:**

**Team Leader:** Hazel Blake

Bev Bowden, Julie Clapp, Nicki Craven, Sue Evans, Katie Howe, Nicky Lawson, Elizabeth Miller, Claire Sewell, Kate Sherlock, Alison Shinn, Maggie Thurston, Rosie Tonkin, Tilly Vacher, Rachel Wilson

Trained by - Les Cox trained Hazel Blake initially. In 1998 Lyn Ahmed trained Hazel Blake and Elizabeth Miller, who then trained the team.

Advised and trained by Dr Hywel Williams (flexural dermatitis), Mr Peter Witherow and Dr John Hutchinson (scoliosis), Dr Giles Dunnill (acne), Tam Fry (Child growth foundation) for hand and feet measures.

Advised by Professor Mike Preece for anthropometry at the initial stage and Professor John Reilly for BI

### **Psychology Team**

Team Leader: Jeremy Horwood

Anna Yates, Alison McGrath, Daniel Hucker, Emma Harrison, Fiona Fox, Hannah Morris, Jaidan D'Arcy, Jane Vian, Jayne Chavez, Julia Holder, Kate Hambleton, Katie Howe, Larisa Duffy, Maeve Anglim, Natalie Mayer, Nicola Byatt, Paula Morris, Rebecca Moseley, Sue Watkins

### **Hearing**

Team Leader: Sally Jones

Salim Suleman, Jenny Harris, Susy Higgins, Amanda Young, Janice Glen, Maria Foondun, Clair Underhill, Joanne Saunders, Kevin Deere, Heidi Watts.

Advised by Amanda Hall

Trained by Amanda Hall, Sally Jones and Salim Suleman

## **Vision**

### **Samples**

Team Leader: Susan Greer

Barbara Budd, Terri Portch, Munawar Chowdhury

(Pauline Church & Dorothy Collet retired from the team in Jan'04 and Mar'04 respectively)

### **Physical activity:**

Team Leader: Initially Amanda Wyatt then Calum Mattocks, Jo Saunders, Jo Kirkby, Kevin Deere

**PI:** Chris Riddoch

**ALSPAC supervisor/ advisor-** Andy Ness

### **Reception staff:**

Team Leader: Kaija Turvey

Laura Allan, Maeve Anglim, Lisa Bassett, Patrick Bell, Kate Cashmore, Lyn Chapman, Linda Connock, Sarah Cowper, Nicola Craven, Katie Davies-Jenkins, Laura Gilbert, Kate Hambleton, Katie Hamilton, Emma Harrison, Karen Hill, Katie Howe, Patricia Hutchinson, Jan Jenkin, Alison Kinnersley, Jill Klee, Helen Loveridge, Natalie Mayer, Helen McIlvaney, Elizabeth Miller, Alice Parham, Eve Rogers, Linda Sanders, Claire Sewell, Kate Sherlock, Alison Shinn, Hannah Steele, Alison Still, Marcus Tyler, Lynda Ware, Samantha Turvill, Nicola Weir, Judy Willis, Mary Yarwood, Anna Yates

Funding secured

Funding has included:

DfES (interview questions on choice of secondary school)

Home Office (Contribution towards antisocial behaviour)

NIH: Physical activity

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