GROWING UP IN IRELAND

DATA AVAILABLE FROM THE TIME-USE DIARY AND FOOD FREQUENCY QUESTIONNAIRE

FOR WAVE 3 OF THE CHILD COHORT (COHORT '98)

AT 17/18 YEARS OF AGE

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Contents

1. Introduction

Data collection for the third wave of the Child Cohort (at 17 years) of the **Growing Up in Ireland** study included a two-part self-complete diary, consisting of a one-day Time-Use Diary and a Food Frequency Questionnaire (FFQ). The Time-Use Diary recorded details on the activities of the 17/18-year-old over a 24-hour period. The Food Frequency Questionnaire recorded details on how often the 17/18-year-olds consumed a range of food and drinks on an average day in the last year. The purpose of the current document is to outline the following:

- Which data are available
- How these data were collected
- The response rate achieved on this component of the project
- Characteristics of the Time-Use and FFQ Diary samples
- How the data were prepared for dissemination
- How the data should be matched to the main Anonymised Microdata File (AMF) or Researcher Microdata File (RMF) from the third wave of the Child Cohort.

2. Overview of the Time-Use Diary

The Time-Use Diary (TUD) divided the "Diary Day" into 96 15-minute intervals (time slots). It contained a total of 24 pre-coded activities (as well as space to include up to 4 'other' activities) as follows:

1. SLEEPING / RESTING (including time trying to get to sleep, trying to get up)
2. PERSONAL CARE OR GETTING READY (showering, washing, dressing, brushing teeth or hair, doing make-up, getting changed or ready for school, for training, for going out or for going to bed)
3. EATING (breakfast, lunch, dinner, tea)
4. TRAVELLING (to or from school or elsewhere)
5. AT SCHOOL/COLLEGE
6. AT WORK
7. DOING HOMEWORK OR STUDY
8. JUST HANGING AROUND WITH FRIENDS (outside or inside)
9. SPENDING TIME WITH FAMILY
10. PLAYING WITH OR EXERCISING A PET
11. AT THE GYM, PLAYING SPORT OR DOING PHYSICAL EXERCISE (training, matches)
12. ATTENDING A SPORTS EVENT
13. USING THE INTERNET / EMAILING (including social networking, browsing etc)
14. PLAYING COMPUTER GAMES (e.g. Playstation, PSP, X-Box or Wii)
15. TALKING ON THE PHONE OR TEXTING
16. MUSIC LESSONS (OR PRACTICING MUSIC), DRAMA, CLASSES ETC
17. WATCHING TV, FILMS, VIDEOS OR DVDS
18. LISTENING TO MUSIC
19. READING FOR PLEASURE OR INTEREST (NOT FOR SCHOOL)
20. HOUSEWORK (preparing food, tidying bedroom, feeding pets)
21. HOBBIES AND OTHER LEISURE ACTIVITIES

22. OUT SHOPPING TO BUY THINGS (groceries, clothes, etc.)

23. GOING TO DISCOS OR BARS, ETC.

24. GOING TO PARTY OR OTHER SOCIAL EVENT (in people's houses)

25. OTHER (specify)

A copy of the Time-Use Diary is included in Appendix A. From this, one can see that the TUD was set out as a rectangular matrix of 25 rows (representing the pre-coded and other activities) by 96 columns (each representing a 15-minute time slot in the "Diary Day"). The 17/18-year-olds were asked to draw a horizontal line to indicate the activities in which they were principally involved throughout the Diary Day[1].

Although the 17/18-year-old was encouraged to record just one activity for each time slot, up to three activities could potentially be recorded concurrently in the TUD. For example, a young person may have been eating dinner at the same time as watching TV, so both of these activities may have been recorded under the same time slot. In situations where multiple activities were recorded, it was not possible to ask respondents to prioritise the activities in any way. While the level of multiple activities recorded in the **Growing Up in Ireland** Time-Use Diary was actually quite low, the data have been prepared in such a way as to leave it up to the analyst to decide how best to prioritise in such cases. It was worth noting that the levels of multiple activities is potentially under-reported as respondents were encouraged to only enter their main activity.

In addition to the core information regarding activities undertaken, the 17/18-year-old was also asked to:

(a) Describe if the Diary Day was: a school/college day; a work day; a weekend day; a holiday or family celebration; a day when something special was happening in your home (someone sick/visiting, a crisis

(b) Indicate when the Diary was complete (ticking one box only): now and then during the Diary Day; at the end of the Diary Day; the day after the Diary Day; later (about how many days after?)

3. Overview of the Food Frequency Questionnaire

Alongside the time-use diary, an additional food frequency questionnaire (FFQ) was left behind as a 'drop off' in the household, to be completed by the 17/18-year-old in their own time. This questionnaire was adapted (with minor amendments to reflect the Irish diet) from the food frequency questionnaire developed by and for the European Prospective Investigation of Cancer (EPIC) – Norfolk study (Riboli & Kaaks, 1997; Bingham et al., 2001). The amended version of the questionnaire has previously been used in an Irish setting (Harrington et al., 2008) and has been validated for use in UK (Bingham *et al*., 1997) and Irish populations (Harrington, 1997).

The FFQ is designed to measure a participant's usual food intake during the previous year. Upon completion, using a purpose-built processing tool, it is also possible to derive nutritional information from the FFQ. The questionnaire is a 7-page document which consists of a list of 150 different food items, arranged according to the main food groups consumed in the Irish diet (e.g. meat, fish, poultry; bread and savoury biscuits; cereal; fruit). The full questionnaire can be found in the appendix.

For each food item, respondents were asked to indicate how often they had consumed it over the last year. They could choose from nine frequency categories, namely: *'never or less than once a month'; '1-3 times per month'; 'once a*

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[1] The format of Time-Use Diary used in *GUI* is referred to in the literature as a 'light' Time-Use Diary, requiring the respondent only to enter a tick in each cell of the 25 by 96 matrix for the Diary Day. This in contrast to a so-called 'heavy' Time-Use Diary format which requires the respondent to record their activities as a continuous narrative throughout the day. Either the exact start and finish times are recorded in the "heavy" Time-Use Diary along with the descriptive narrative of activities or the narratives are inserted into 10-20 minute time-slots. Although the 'light' Time-Use Diary provides less detailed information, it is substantially less onerous for the respondent to complete. This was an important consideration in the context of an already intensive interview schedule administered to the participants in *GUI*.

week'; '2-4 times per week'; '5-6 times per week'; 'once a day'; '2-3 times per day'; '4-5 times per day'; and '6+ times per day'. Respondents were informed that each single serving was the equivalent to a 'medium serving' or a common household unit (e.g. a slice of bread, a medium sized bowl of cereal, a teaspoon of olive oil).

4. Administration of the Diary

The Time-Use and Food Frequency Questionnaire Diary, hereafter referred to as the Diary, was included as an integral component of the main interview in the 17/18-year-old's home. After the main household interview, the interviewer explained the Diary to the Young Person. A completed sample version of a Time-Use Diary was left with the Young Person, along with a pen-and-paper version of the Diary itself for completion and return to the Study Team. Head office pre-selected the day of the week on which the Time-Use Diary should be completed (the "Diary Day") and this was written on the front of the Diary. This was done to ensure a random allocation of days of the week, including weekend days. The Food Frequency Questionnaire could be completed on any day as it did not relate to a particular day. A pre-paid return envelope was also left and the Young Person was asked to post the completed Diary directly back to Head Office. To ensure as high a response rate as possible, two reminder mail shots were subsequently issued to those families who had not responded within 4-6 weeks of the main interview.

5. Response Rates

A total of 3,998 Diaries were returned from the 6,216 17/18-year-olds who were interviewed in the main *Growing Up in Ireland* Wave 3 study. However, in certain instances Diaries were deemed unusable if they had too much missing information; specifically those that had more than 5 hours unrecorded on the Time-Use Diary, or 10 items missing from the FFQ. Applying these criteria, 3,853 Diaries contained usable data on either the Time-Use Diary or the FFQ. However, 3,622 Diaries contained usable data on both the Time-Use Diary and the FFQ. Including the 3,853 respondents with at least one set of data would have warranted the need to provide two separate statistical weighting factors for analysis, one for those with Time-Use Diary data and one for those with FFQ data. This was considered impractical (and potentially confusing) for researchers aiming to use the data, so it was decided to include only those respondents that provided both sets of data. This gave a total of 3,622 usable Diaries for analysis, representing an effective response rate of 58% of those who participated in the main study, as summarised in Table 1. Characteristics of the two groups of respondents, those with one set of data and those with both, are compared in Table 2; this table highlights the similarity between the two groups in terms of key socio-demographic characteristics, and provides justification for the use of the smaller sample of 3,622 respondents.

Table 1: Summary response rates of Time-Use Diary Survey, Child Cohort at 17/18 years of age.

	N	Response Rate
Total Young People in main study	6,216	
Total Diaries returned	3,998	**64.3%**
Provided Usable TUD or FFQ Diaries	3,853	**62.0%**
TOTAL: Provided Usable TUD and FFQ Diaries	3,622	**58.3%**

Table 2: Characteristics of those Respondents Providing either One or Both Sets of Diary Data

	Completed TUD OR FFQ Diary (3,853)	Completed TUD AND FFQ Diary (3,622)
	%	%
Young Person's Gender		
male	47.1	46.5
female	52.9	53.5
Household Type		
one-parent-1 or 2 children	9.9	10
one-parent-3+children	2.2	2.1
two-parent-1 or 2 children	62.3	62
two-parent-3+children	25.6	25.9
PCG Age Category		
46 or less	28.1	28.1
47-49	23.6	23.9
50-52	24.1	24
53+	24.2	24
PCG Primary Economic Status		
not employed	29.5	30.1
employed	70.5	69.9
Family's Social Class		
professional workers	16.1	16.3
managerial and technical	38.6	38.4
non-manual	19	19.1
skilled manual	8.3	8.3
semi-skilled	7.4	7.2
unskilled	1.1	1
all others gainfully occupied /unknown	0.5	0.4
validly no social class	9.1	9.2
PCG Ethnicity		
Irish	92.2	92.6
non-Irish	7.8	7.4
Household Tenancy Status		
owner occupied	90.3	91
rented from local authority	4.7	4.6
rented privately	3.1	3.1
other	1.8	1.3

6. Characteristics of the Sample

6.1 Day of the Week

A perfect randomisation of Time-Use Diaries across the seven days of the week should have resulted in 14.3% of completed diaries for each day. Table 3 shows that Wednesdays and Thursdays were slightly over-reported (14.7% and 14.9%, respectively) with Saturdays and Sundays being under-represented (14.1% and 12.5%, respectively). In some cases the respondent completed the Time Use Diary on a day other than was specified by Head Office. This alternative date was recorded on the Diary and is coded on the data file. The reader should note that no attempt has been made in the weight assigned to the Time-Use Diaries to adjust for day of the week on which the Diary was completed.

Table 3: Distribution of completed Time-Use Diaries by day of the week it was completed

Diary Day:	N	%
Monday	528	14.6
Tuesday	530	14.6
Wednesday	532	14.7
Thursday	539	14.9
Friday	531	14.7
Saturday	509	14.1
Sunday	452	12.5
Total	**3622**	**100**

6.2 Month of the Year

As with the main family-based data collection for Wave 3 of the Child Cohort, the Diary data were primarily collected between November 2015 and July 2016 (93.4%). However, due to initial non-compliance and subsequent delays returning the Diary, 6.6% of Diaries were returned later than July 2016 (Table 3, below).

Given leads and lags of postal reminders issued subsequent to the Diary first being left with respondents, the month in which it was completed is not spread evenly throughout the year. Analysts may wish to note this, as seasonality may be relevant for some types of analysis. Table 4 presents a summary distribution of the completed and usable Diaries by month of completion (based on date TUD was completed).

Table 4: Distribution of completed Time-Use Diaries by month of completion

Month:	Household Interviews	Time-Use Diaries
Nov 2015	3.8%	1.4%
Dec 2015	7.5%	4.5%
Jan 2016	11.6%	7.9%
Feb 2016	15.3%	11.3%
Mar 2016	21.8%	14.6%
Apr 2016	15.3%	23.0%
May 2016	12.0%	14.3%
Jun 2016	7.7%	9.5%
Jul 2016	3.7%	6.9%
Aug 2016+	1.2%	6.6%
Total	**100%**	**100%**

The reader is again reminded of the differential time lag in some instances between completion of the main family-based questionnaires and the Diaries. This is especially so in situations in which the latter were returned in response, for example, to the second reminder mail shot.

6.3 Completion Date

As outlined in Table 5, most Time-Use Diaries (63%) were completed on the Diary day itself, with 24% of respondents completing it *now and then during the day* and 39% at the *end of the day*. It was completed the *day after the Diary Day* by 22% of respondents and the remaining 11% completed it *on a later date*. The day of TUD completion was not recorded in just 4% of completed diaries.

Table 5: Completed Time-Use Diaries by day on which the Diary was completed

Diary completed:	N	%
Now and then during the Diary day	878	24.2
End of Diary day	1411	39.0
Day after Diary day	802	22.1
Other day	400	11.0
Not recorded	131	3.6
Total	3,622	100

6.4 Nature of the Diary Day

Table 6 summarises whether or not the Time-Use Diary Day was described by participants as: a "school day"; a "holiday or family celebration"; or a "day when something special was happening in your home (someone was sick, someone was visiting, a family crisis)". The table shows that 47% of diaries were completed on what was described by the respondent as a "school day". The small percentage (4%) who described their day as a "school day" at the weekend may have been attending grinds or additional classes in school at the weekend.

Table 6: Description by respondent of the Diary Day.

	Weekday	Weekend	Overall
School day	62%	5%	47%
Work day	7%	4%	6%
Holiday or family celebration	19%	6%	16%
Something special happening at home	1%	1%	1%

7. Characteristics of Diary Respondents

Table 1 indicated an overall response rate of 58% for usable Diaries among participants in the main study. There was some differential response in terms of the characteristics of Young People and their families who returned a usable Diary. Table 7 shows the response rates across a number of Young Person and family characteristics.

Significant differences in response rates were observed according to most characteristics. Girls were significantly more likely than boys to complete and return the Diary (61% versus 56%), as were those in two-parent families compared to those in one-parent families (56-62% versus 41-49%). Parental employment was also associated with response rates; young people were more likely to return a completed diary if either their Primary or Secondary Caregivers was in employment. Young people whose Primary Caregiver had a leaving certificate or higher education were significantly more likely to return a completed diary (59-63%) as were those lived in owner-occupied homes (60%) compared to those whose families rented (40-49%).

Table 7: Time-Use Diaries Response Rates according to Young Person/Family Characteristics

		Response Rate	p-value
Young Person's gender	Boy	56%	<0.001
	Girl	61%	
Household Type	One-Parent 1 or 2 children	49%	<0.001
	One-Parent 3+ children	41%	
	Two-Parent 1 or 2 children	62%	
	Two-Parent 3+ children	56%	
PCG Age Category	<47	45%	<0.001
	47-49	56%	
	50-52	62%	
	53+	68%	
PCG Economic Status	Employed Full-time	57%	0.034
	Employed Part-time	60%	
	Not Employed	57%	
SCG Economic Status	Employed Full-time	64%	<0.001
	Employed Part-time	56%	
	Not Employed	53%	
PCG Education	None or primary	39%	<0.001
	Junior Certificate or equivalent	48%	
	Leaving Certificate or equivalent	59%	
	Certificate/Diploma	63%	
	Degree	61%	
	Postgrad	58%	
Household social class	Professional Managers	66%	<0.001
	Managerial and Technical	62%	
	Non-manual	58%	
	Skilled manual	54%	
	Semi-skilled	52%	
	Unskilled	54%	
PCG Ethnicity	White Irish	58%	0.395
	Other	56%	
Household tenancy	Owner occupied	60%	<0.001
	Rented from a Local Authority	40%	
	Rented from a Private Landlord	49%	

8. Reweighting the Diary Data

The differential response by family background characteristics has implications for the representativeness of the Diary data. To ensure that they are representative of the entire population of 17/18-year-olds in Ireland (who were also resident in Ireland when they were 9-years old) a system of statistical weights was generated and included in the archived data file. As with all statistical surveys this is best practice and these weights should be applied in all analysis.

The completed sample of Diaries is effectively a subsample of the main sample of 17/18-year-olds. As noted in Table 1, a total of 3,622 Diaries were completed in respect of the 6,216 young people in the main study. Statistically adjusting the data involved re-weighting the Diary file to adjust it from a base of 3,622 to 6,216 in such a way as to ensure that the sub-sample of young people in respect of whom Diaries had been completed were representative (in terms of the socio-demographic structure) of the full sample of 6,216 young people.

To do this a non-response weight was initially calculated, to account for differential response/non-response in completing the Diaries This non-response weight for the Diary sub-sample was based on the following controls:

- Young Person's gender (girl, boy)
- Family type (1-parent, 1-2 children; 1-parent, 3+ children; 2-parent, 1-2 children; 2-parent, 3+ children)
- PCG's age group (46 or less yrs; 47-49 yrs; 50-52 yrs; 53+ yrs)
- PCG's employment status (not employed; employed part-time; employed full-time)
- SCG's employment status (not employed; employed part-time; employed full-time; no resident SCG)
- PCG's education (primary or less; lower secondary; leaving cert and/or tech/voc; non-degree; primary degree; postgrad)
- Family Social Class (Professional; Managerial; Non-manual; Skilled Manual; Semi-skilled manual; Unskilled Manual; Class not assigned)
- PCG's ethnicity (Irish; Other)
- Household tenancy (Owner occupied; rented from the Local Authority; Private Rental; Other)

The final Diary weight was calculated as the product of this Diary non-response weight and the full family weight assigned to the main survey record. This effectively meant that the sub-sample of young people for whom Diaries had been completed was re-weighted to the full sample in the main study.

The system used for generating the weights was based on a minimum information loss algorithm which ensured that the distribution of 17/18-year-olds by their socio-demographic characteristics in the completed Time-Use Diary dataset matched the distribution of all 17/18-year-olds in the population. The weights themselves were generated using an iterative approach which involved the fitting of column marginals from the completed sample of Time-Use Diaries to those of the population of 17/18-year-olds as a whole. The program used for generating the weights is known as GROSS. It was developed for the ESRI in 1996 and has been used on all survey work carried out by the Institute since that time. A weighting factor (WGTTIME17YR) and a grossing factor (GROSSTIME17YR) are provided on the Diary data file. Both of these will give the same percentage breakdown as the population. WGTTIME17YR has been rescaled from GROSSTIME17YR to yield 3,622 cases (the number of completed and usable Diaries). The weighting factor will sum to the total number of relevant cases in the completed sample of Diaries. The grossing factor will sum to the total number of cases in the population.

The analyst should use the weighting factor in all analysis except in situations in which the estimated population total is required – e.g. if s/he wished to estimate the number of 17/18-year olds in Ireland who spend more than 5 hours per day engaged in a particular activity. All such estimated population totals should be rounded, at minimum, to the nearest 100. All the usual issues of confidence limits around sample estimates apply.

As noted, WGTTIME17YR and GROSSTIME17YR statistically adjust the 3,622 respondents in respect of whom a usable Diary was returned to provide representative estimates for the population of all 17/18-year-olds as a whole. Effectively, the weighting and grossing factors in question adjust the 3,622 respondents with a completed Diary to the total population of 17/18-year-olds, just as the weighting and grossing factors do when applied to the full sample of 6,216 respondents in the main AMF and RMF for the 17/18- year-olds. In other words, the full weighted/grossed AMF/RMF containing 6,216 cases should give the same estimated population breakdown as the weighted/grossed subsample of 3,622 cases which was included in the Diary data file.

Table 8 compares summary details on the weighted breakdown of the 6,216 cases in the full AMF/RMF data with those from the 3,622 subsample of cases in respect of whom Diaries are available. In interpreting the table, it is important to note that the table contains some variables which were included in the re-weighting procedure and some which

were not[2]. The table indicates clearly that there is virtually no difference between the weighted breakdown of the full AMF/RMF (with 6,216 cases) and the subsample for whom usable Diaries were returned (3,622 cases).

Table 8: Comparison of weighted breakdowns of 6,216 cases in full AMF/RMF data with those from 3,622 cases in the subsample for whom usable Diaries are available.

	WEIGHTED WGT_17YR		WEIGHTED WGTTIME17YR	
	N	%	N	%
	6216	100	3622	100
YOUNG PERSON'S GENDER				
male	3024	48.6	1684	46.5
female	3192	51.4	1938	53.5
HOUSEHOLD TYPE				
one-parent-1 or 2 children	740	12	362	10.0
one-parent-3+children	182	2.9	77	2.1
two-parent-1 or 2 children	3597	58.2	2245	62.0
two-parent-3+children	1659	26.9	938	25.9
PRIMARY CAREGIVER AGE CATEGORY				
46 or less	1958	31.5	1017	28.1
47-49	1449	23.3	867	23.9
50-52	1404	22.6	868	24.0
53+	1405	22.6	870	24.0
PRIMARY CAREGIVER PRIMARY ECONOMIC STATUS				
not employed	1909	30.7	1092	30.1
part-time hours (<35 hours)	2348	37.8	1417	39.1
full-time hours (>=35 hours)	1959	31.5	1113	30.7
SECONDARY CAREGIVER PRIMARY ECONOMIC STATUS				
not employed	585	9.4	309	8.5
part-time hours (<35 hours)	1499	24.1	843	23.3
full-time hours (>=35 hours)	3200	51.5	2031	56.1
no resident SCG	932	15	439	12.1
PRIMARY CAREGIVER HIGHEST LEVEL OF EDUCATION				
none or primary	142	2.3	56	1.5
lower sec	564	9.1	270	7.5
hi sec /techvoc /uppsec+tech	2301	37	1346	37.2
non degree	1281	20.6	802	22.1
primary	875	14.1	535	14.8
postgrad	1053	16.9	613	16.9
FAMILY'S SOCIAL CLASS				
professional workers	892	14.4	590	16.3
managerial and technical	2256	36.3	1392	38.4
non-manual	1192	19.2	693	19.1
skilled manual	558	9	300	8.3
semi-skilled	506	8.1	261	7.2
unskilled	69	1.1	37	1.0
all others gainfully occupied /unknown	35	0.6	16	0.4
validly no social class	708	11.4	333	9.2
PRIMARY CAREGIVER ETHNICITY				
Irish	5741	92.4	3354	92.6

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[2] One would, by definition, expect that the weighted breakdown of the controlled variables in the sub-sample of 3,622 cases from whom Time-Use information is available would correspond exactly with the breakdown from the weighted AMF/RMF file of 6,216 cases.

	WEIGHTED WGT_17YR		WEIGHTED WGTTIME17YR	
	N	%	N	%
non-Irish	475	7.6	268	7.4
HOUSEHOLD TENANCY STATUS				
owner occupied	5460	87.8	3297	91.0
rented from local authority	419	6.7	167	4.6
rented privately	229	3.7	111	3.1
other	108	1.7	47	1.3

9. Data Issues

9.1 Time-Use Diary Data Issues

As with all questionnaire-based data there were some data quality issues with the raw Time-Use Diary data returned from the field. These issues most notably related to missing or implausible data. Some initial data edits, described briefly below, were made to the data by the Study Team in preparing the Time-Use data for release. Notwithstanding the initial edits already included in the archived data file, analysts are advised to carry out standard checks on distributions prior to their analysis.

Missing data (missing time-slots) was the main issue in preparing the data. Missing time slots between 12.00am and 6.00am were coded as sleeping time. Other than that it was decided not to try to impute for any missing time. Cases which were missing for 5 or more hours out of the day (equal to twenty 15min time slots) were dropped from the dataset as it was deemed that these would have been of limited value in analysis and could be better addressed in the statistical adjustment (re-weighting of the data). A total of 145 such cases were dropped from the dataset. The remaining cases with missing time slots have been left unedited. The analyst should decide on how best to handle such cases in the course of analysis – s/he may decide that cases over a specified threshold of missingness may be excluded or some form of data imputation may be applied.

The *Growing Up in Ireland* Study Team carried out initial checks on the plausibility of the Time-Use data returned from the field to identify any obvious, systematic errors in completion of the diaries. Checks such as respondents not sleeping during the night-time, sleeping during the day-time, going to school at weekend and so on revealed small numbers of cases in which young people were reported as being involved in an activity pattern which may seem implausible. In many of these situations, there could arguably be a plausible explanation: apparently implausible sleeping patterns could be ascribed to illness, some others to sleep-overs; attendance at school at weekends could be related to a number of plausible reasons – detention, extra classes or grinds, extra-curricular activities such as sports, drama or music. As there is no way of definitively deciding on the accuracy or otherwise of the small number of cases involved it was decided to retain the data in the dataset as they were recorded by the respondent, with a view to the analyst deciding on their inclusion or otherwise in a given piece of research.

One of the assumptions underlying the light Time-Use Diary format is that the activity recorded in each time period lasts for the full 15 minutes. This may result in an overestimation of the time spent on some activities. For example, washing hands before meals may be recorded for a 15 minute block under 'personal care' when, in fact, the time actually spent on the activity may be much less. Analysts may wish to acknowledge this potential limitation.

There was also an issue with defining whether or not days were in school term time. In general, schools in Ireland have the same start and end dates for holidays and mid-terms but may use three discretionary days to extend breaks or to make up for time lost due to unforeseen school closures (such as "snow days" etc.). Again, these are issues which the analyst may want to consider when working with the data. The number of cases involved is very small and unlikely to make any substantial difference to results.

9.2 Food Frequency Questionnaire Data Issues

Researchers should note that the FFQ was originally designed for use in an adult population. As such, both the raw and derived FFQ data should be interpreted with a degree of caution when they relate to an adolescent or early-adult study population, as is the case here. For one, the default portion size estimates for adults may not be applicable to a younger age group. Also, certain foods items listed in the EPIC FFQ (e.g. fish roe) may not be particularly relevant for adolescents. In a study investigating the validity of the EPIC FFQ in an adolescent population, Lietz *et al.* (2002) noted that the questionnaire could be used to rank young people in terms of their relative consumption of different food groups, but warned that the estimated nutrient intake values may not be accurate. However, it is worth noting that the study population in Lietz's study was considerably younger (mean age 12.3 years) than that in the current study; the 17/18-year-olds in ***Growing Up in Ireland*** will arguably have dietary habits more closely associated with adults than young adolescents.

In keeping with the methodology proposed by the developers of the FFQ (Mulligan et al., 2014), respondents who failed to provide an answer for ten or more food items were excluded from further analysis. This lead to the exclusion of 263 cases from the dataset. Potential outliers from the derived nutritional data were also identified and removed from the dataset. Using the *energy intake (kcal)* variable ('energy_kcal'), outliers were identified as those scoring in the top (>5820kcal) and bottom (<547 kcal) extreme 0.5 percentiles. This lead to the deletion of the derived nutritional data for a total of 37 cases. Given energy intake is the foundation of the diet, if this measure is invalid, then all associated nutritional data will be invalid too. All raw FFQ data were retained in these cases; analyst may wish to include them in their research.

For the FFQ to be considered valid, it needed to reflect typical food consumption over a one year period (*average use in the last year*), undistorted by any bias. Intentionally or unintentionally, such bias can lead to under- or over-reporting in the FFQ; this is also referred to as 'low-energy reporting' and 'high-energy reporting'. A wide range of factors associated with potential low-energy or high-energy reporting have been identified (Livingstone & Black, 2003; Macdiarmid & Blundell, 1998), they include: weight status – low-energy reporting is associated with high BMI; age/sex – low-energy reporting tends to be higher amongst older women; socioeconomic effects; cultural effects; psychological effects; and behavioural effects – inconvenience, embarrassment, guilt or social desirability can all inadvertently lead to low-energy reporting. The combination of these factors ensures that there tends to be a systematic bias in FFQs towards underestimation of energy intake.

With this in mind, Livingstone's guidelines (2003) relating to the validity of reported energy intake were also applied to the data, with a view to identifying potential high-energy and/or low-energy reporting in the FFQ. Presumed energy requirements, as represented by the ratio of energy intake to basal metabolic rate (EI:BMR), were identified as the most suitable indicator of potential high- or low-energy reporting of EI. An acceptable EI:BMR range of 0.9 – 2.5 was established (Livingstone & Black, 2003); cases above 2.5 were considered to be potential high-energy reporters, while cases with an EI:BMR below 0.9 were classified as representing potential low-energy reporters. These cut-offs are represented in the data by the variable "*validreport*", the breakdown of which can be seen in Table 9.

Table 9: Prevalence of Potential Low- and High-Energy Reporting in the FFQ

	%	*Mean Energy Intake (95% C.I.)*
Regular Reporting	52	2033 (2007-2059)
Low-Energy Reporting	47	1215 (1202-1228)
High-Energy Reporting	1	4420 (4191-4649)
TOTAL	100	1672 (1640-1694)

10. Summary Breakdown of Data

10.1 Breakdown of Time-Use Diary Data

Table 10 gives a summary breakdown of the activities in which young people were engaged over the course of the Diary day, broken down separately for weekdays and weekends both within term and out of term. As young people may have been engaged in more than one activity at a given time, totals add to more than 24 hours / 1,440 minutes.

The reader should note the importance of incorporating weekday/weekend and also in-term and out-of-term time in analysis. It should also be noted that the amount of time 'At School' has been recorded for weekends (both in and out of term time). As noted above, it was decided to leave this information in the data, as recorded by the respondent. The amounts involved are small and it is possible that they may represent time spent (for example) at school on a Saturday for special classes, sports activities or detention. It was decided not to edit the information involved but to leave it to the researcher to decide how the data in question should be treated in their analysis. Note that the level of missingness is quite low, 10-14 minutes between the weekday and weekends.

Table 10: Summary breakdown of time spent in various activities a) in term b) out of term and c) in total
a)

IN TERM:		Weekday		Weekend		Total	
		Minutes	%	Minutes	%	Minutes	%
1.	Sleeping / resting	517	33	610	40	540	35
2.	Personal care or getting ready	44	2.8	51	3	45	2.9
3.	Eating	69	4	76	5	71	5
4.	Travelling	56	4	38	2.5	51	3
5.	At school/college	340	22	34	2.2	264	17
6.	At work	25	1.6	49	3	31	2.0
7.	Doing homework or study	133	9	119	8	130	8
8.	Just hanging around with friends	45	2.9	79	5	53	3
9.	Spending time with family	45	2.9	77	5	53	3
10.	Playing with or exercising a pet	12	0.8	14	0.9	12	0.8
11.	Gym, playing sport, physical exercise	30	1.9	38	2.5	32	2.1
12.	Attending a sports event	8	0.5	10	0.7	8	0.5
13.	Using the internet / emailing	59	4	72	5	63	4
14.	Playing computer games	15	1.0	28	1.8	18	1.2
15.	Talking on the phone or texting	42	2.7	42	2.7	42	2.7
16.	Music lessons (or practice), drama	7	0.4	9	0.6	7	0.5
17.	Watching tv, films, videos or dvds	46	3	80	5	55	4
18.	Listening to music	24	1.6	30	1.9	25	1.6
19.	Reading for pleasure or interest	8	0.5	11	0.7	9	0.6
20.	Housework	9	0.6	17	1.1	11	0.7
21.	Hobbies and other leisure activities	8	0.5	12	0.8	9	0.6
22.	Out shopping to buy things	4	0.2	11	0.7	6	0.4
23.	Going to discos or bars, etc.	3	0.2	13	0.8	5	0.3
24.	Going to party or other social event	4	0.3	17	1.1	8	0.5
25.	Other (specify)	1551	100	1538	100	1548	100

b)

OUT OF TERM:	Weekday		Weekend		Total	
	Minutes	%	Minutes	%	Minutes	%
1. Sleeping / resting	594	39	616	39	601	39
2. Personal care or getting ready	50	3	52	3	51	3.3
3. Eating	75	5	79	5	76	5
4. Travelling	40	2.6	42	2.7	41	2.6
5. At school/college	57	3.7	20	1.3	46	2.9
6. At work	70	5	51	3	64	4.1
7. Doing homework or study	70	5	64	4	68	4
8. Just hanging around with friends	96	6	93	6	95	6
9. Spending time with family	70	5	86	5	74	5
10. Playing with or exercising a pet	16	1.0	16	1.0	16	1.0
11. Gym, playing sport, physical exercise	42	2.7	31	2.0	39	2.5
12. Attending a sports event	13	0.8	13	0.8	13	0.8
13. Using the internet / emailing	89	6	81	5	86	6
14. Playing computer games	29	1.9	27	1.8	29	1.9
15. Talking on the phone or texting	53	3	50	3	52	3.4
16. Music lessons (or practice), drama	10	0.7	12	0.8	11	0.7
17. Watching tv, films, videos or dvds	78	5	86	6	81	5
18. Listening to music	33	2.1	28	1.8	31	2.0
19. Reading for pleasure or interest	15	0.9	13	0.8	14	0.9
20. Housework	21	1.3	23	1.5	21	1.4
21. Hobbies and other leisure activities	16	1.0	16	1.0	16	1.0
22. Out shopping to buy things	13	0.8	11	0.7	12	0.8
23. Going to discos or bars, etc.	8	0.5	10	0.6	9	0.6
24. Going to party or other social event	15	1.0	20	1.3	17	1.1
25. Other (specify)	1571	102	1541	99	1562	100

c)

TOTAL:	Weekday		Weekend		Total	
	Minutes	%	Minutes	%	Minutes	%
1. Sleeping / resting	537	34	612	40	557	36
2. Personal care or getting ready	45	3	51	3	47	3
3. Eating	70	5	77	5	72	5
4. Travelling	52	3	39	3	48	3
5. At school/college	267	17	30	1.9	204	13
6. At work	37	2	49	3	40	3
7. Doing homework or study	117	7	102	7	113	7
8. Just hanging around with friends	58	4	83	5	65	4
9. Spending time with family	51	3	80	5	59	4
10. Playing with or exercising a pet	13	0.8	15	1.0	13	0.9

TOTAL:		Weekday		Weekend		Total	
		Minutes	%	Minutes	%	Minutes	%
11.	Gym, playing sport, physical exercise	33	2.1	36	2.4	34	2.2
12.	Attending a sports event	9	0.6	11	0.7	9	0.6
13.	Using the internet / emailing	67	4	75	5	69	4
14.	Playing computer games	19	1.2	28	2	21	1
15.	Talking on the phone or texting	45	3	44	3	45	3
16.	Music lessons (or practice), drama	8	0.5	10	0.7	8	0.5
17.	Watching tv, films, videos or dvds	55	4	82	5	62	4
18.	Listening to music	26	1.7	29	1.9	27	1.7
19.	Reading for pleasure or interest	10	0.6	12	0.8	10	0.7
20.	Housework	12	0.8	19	1.2	14	0.9
21.	Hobbies and other leisure activities	10	0.6	13	0.9	11	0.7
22.	Out shopping to buy things	6	0.4	11	0.7	7	0.5
23.	Going to discos or bars, etc.	4	0.3	12	0.8	6	0.4
24.	Going to party or other social event	7	0.5	18	1.2	10	0.6
25.	Other (specify)	1557	100	1539	100	1552	100

10.2 Breakdown of Food Frequency Questionnaire Data

Although the FFQ data in its raw format provides extensive information on dietary habits, an open-source processing tool (FFQ EPIC Tool for Analysis; FETA) was developed by EPIC-Norfolk study researchers to calculate the average daily nutritional intake of each respondent based on their dietary habits (Mulligan et al., 2014). Prior to processing, answers to questions on the consumption of each food were coded from 1 (*'never or less than once a month'*) to 9 (*'6+ times per day'*). Free text answers relating to milk and breakfast cereals were matched and converted into the appropriate nutrient database code (see full instructions on coding of answers here: http://www.srl.cam.ac.uk/epic/epicffq/websitedocumentation.shtml). Mulligan et al. (2014) also recommended that individuals with more than 10 missing lines of data were excluded from analysis. Data were organized according to a data entry template, this data file was converted to .csv format and entered into the FETA processing tool.

The FETA tool works by converting food item frequency into a daily portion multiplier (e.g. once per week = 1/7 = 0.14), which is multiplied by portion size to produce an average daily food weight for each FFQ item. This figure is then multiplied by the nutrient composition per gram (Holland *et al.*, 1991), to obtain the overall nutrient composition for each food item. Upon combining all FFQ items, the FETA output produces an average daily nutrient intake for each participant; this consists of 46 nutrients (e.g. carbohydrate, cholesterol, iron, energy) and 14 food groups (e.g. fruits, fats/oils, sugars); the full list of each is presented in Table 11.

Table 11: List of dietary nutrients and food groups produced in the FETA output

DERIVED VARIABLE:	MEAN	S.D.	DERIVED VARIABLE:	MEAN	S.D.
ALPHA-CAROTENE (MCG)	621.0	590.3	Selenium (mcg)	53.0	25.5
ALCOHOL (G)	1.1	3.2	Carbohydrate (starch) (g)	115.1	52.4
BETA-CAROTENE (MCG)	3392.1	2799.6	Carbohydrate (sucrose) (g)	38.2	23.2
CALCIUM (MG)	721.3	318.4	Vitamin B1 (thiamin) (mg)	1.4	0.6
CAROTENE (TOTAL CAROTENE EQUIVALENTS) (MCG)	3935.4	3114.0	Nitrogen (g)	11.2	4.7
CARBOHYDRATE (TOTAL) (G)	210.3	89.3	Carbohydrate (total sugars) (g)	92.0	47.1
CHOLESTEROL (MG)	258.8	148.5	Vitamin B12 (cobalamin) (mcg)	3.9	2.6
CHLORIDE (MG)	3837.1	1749.7	Vitamin B6 (pyridoxine) (mg)	1.9	0.8
COPPER (MG)	1.1	0.5	Vitamin C (ascorbic acid) (mg)	109.5	78.0

DERIVED VARIABLE:	MEAN	S.D.	DERIVED VARIABLE:	MEAN	S.D.
ENGLYST FIBRE (NON-STARCH POLYSACCHARIDES) (G)	16.3	9.0	Vitamin D (ergocalciferol) (mcg)	2.4	1.7
IRON (MG)	9.5	4.3	Vitamin E (mg)	9.9	5.2
TOTAL FOLATE (MCG)	243.4	130.9	Zinc (mg)	8.2	3.3
CARBOHYDRATE (FRUCTOSE) (G)	19.9	13.5	Fat (total) (g)	66.7	31.9
CARBOHYDRATE (GALACTOSE) (G)	0.2	0.4	Monounsaturated fatty acids (total) (g)	23.4	11.6
CARBOHYDRATE (GLUCOSE) (G)	17.0	11.0	Polyunsaturated fatty acids (total) (g)	10.5	6.2
IODINE (MCG)	101.3	47.8	Saturated fatty acids (total) (g)	26.8	13.6
POTASSIUM (MG)	2825.7	1186.0	Alcoholic beverages (g)	21.2	57.2
ENERGY (KCAL) (KCAL)	1672.5	672.5	Cereals and cereal products (g)	254.4	149.2
ENERGY (KJ) (KJ)	7036.9	2825.2	Eggs and egg dishes (g)	18.1	25.6
CARBOHYDRATE (LACTOSE) (G)	11.9	7.4	Fats and oils (g)	20.9	19.5
CARBOHYDRATE (MALTOSE) (G)	1.9	1.4	Fish and fish products (g)	18.6	26.0
MAGNESIUM (MG)	264.2	117.1	Fruit (g)	233.5	235.1
MANGANESE (MG)	2.9	1.6	Meat and meat products (g)	111.1	76.3
SODIUM (MG)	2608.9	1203.7	Milk and milk products (g)	236.5	152.0
NIACIN (MG)	18.4	8.5	Non-alcoholic beverages (g)	410.5	381.4
PHOSPHORUS (MG)	1163.6	458.9	Nuts and seeds (g)	7.8	14.6
PROTEIN (G)	69.3	29.1	Potatoes (g)	83.1	68.6
VITAMIN A (RETINOL) (MCG)	371.0	303.2	Soups and sauces (g)	57.0	61.0
VITAMIN A (RETINOL EQUIVALENTS) (MCG)	1031.6	650.0	Sugars preserves and snacks (g)	36.6	36.2
VITAMIN B2 (RIBOFLAVIN) (MG)	1.4	0.6	Vegetables (g)	226.2	217.5

11. Matching Diary data to Main GUI Child Cohort Wave 3 data file

To complete analysis on the Diary data, the analyst will have to match it to the AMF/RMF for the Child Cohort at Wave 3. Instructions on how to do this are given below, firstly using SPSS syntax and secondly by using the SPSS drop- down menus.

The reader is reminded that there are 6,216 cases in the third wave of the Child Cohort and 3,622 cases in the Time-Use data. Time-Use analysis can be carried out on the matched subset of cases using the Time-Use weighting variables discussed above (WGTTIME17YR and GROSSTIME17YR).

11.1 Using SPSS Syntax

The syntax below will open the Wave 3 Child Cohort data file, sort it by the anonymised ID code and match to it the Time-Use data file (using the anonymised ID code). It then saves a matched file with the Wave 3 Child Cohort data and the Time-Use data.

(Note that the analyst will need to change the file handles to the relevant file path indicating where the relevant datasets have been saved).

```
FILE HANDLE wave3 name = "C:\GUI\GUI Data_ChildCohortWave3.sav".
FILE HANDLE tudffq name="C:\GUI\GUI Data_ChildCohortWave3_TUDFFQ.sav".
FILE HANDLE merged name = " C:\GUI \GUI Data_Wave3andTUDFFQ.sav".
GET FILE = wave3.
SORT CASES by ID.
MATCH FILES file = * / file = tudffq / by id / map.
SAVE OUTFILE merged.
```

11.2 Using SPSS Drop Down Menus

To match the third wave Child Cohort data and the Time-Use data the analyst should follow the steps below:

1. Open the third wave data file - GUI Data_ChildCohortWave3.sav

2. Click Merge → Merge Files → Add variables
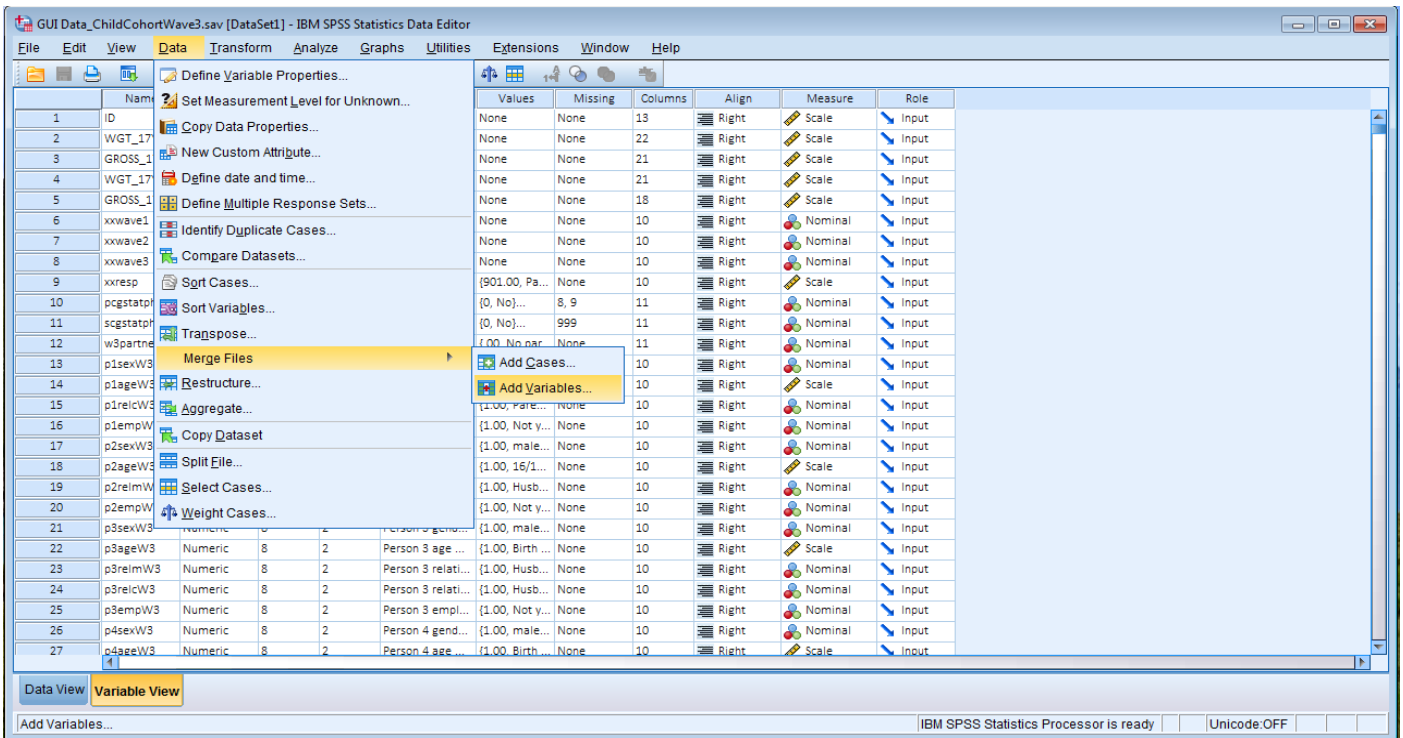
3. This will bring up the following dialog box. Click browse and select the location of the Time-Use data file – GUI Data_ChildCohortWave3_TUDFFQ.sav
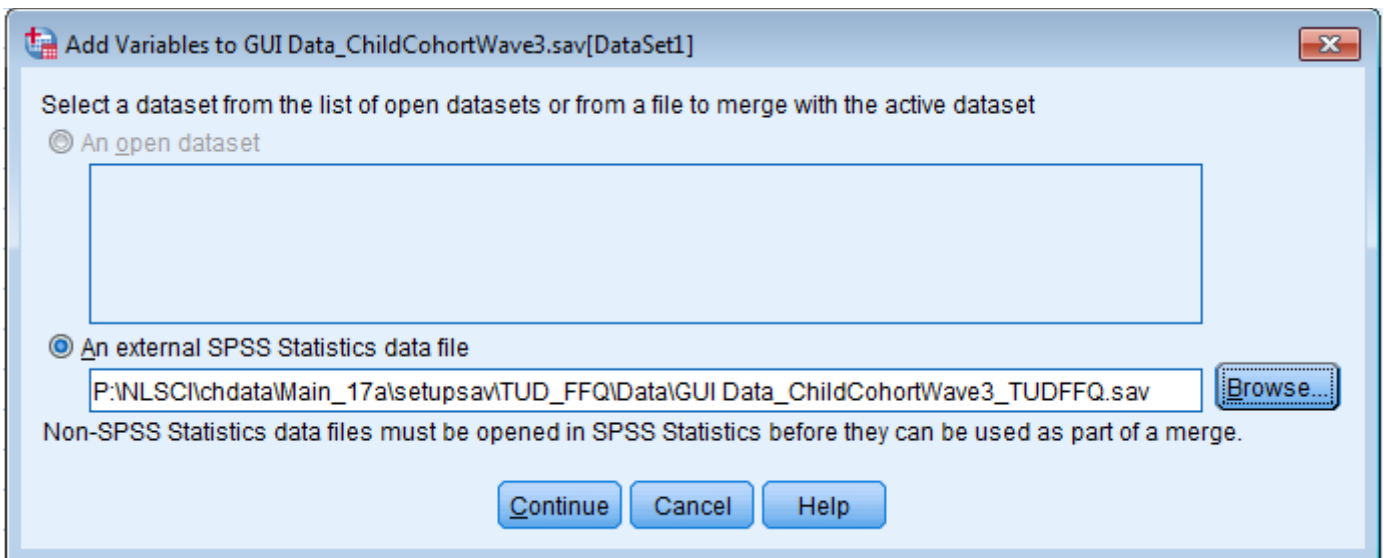
4. In the following dialog box tick 'match cases on key variables in sorted files' and (using the arrow) move the variable 'ID' into the Key Variables box.
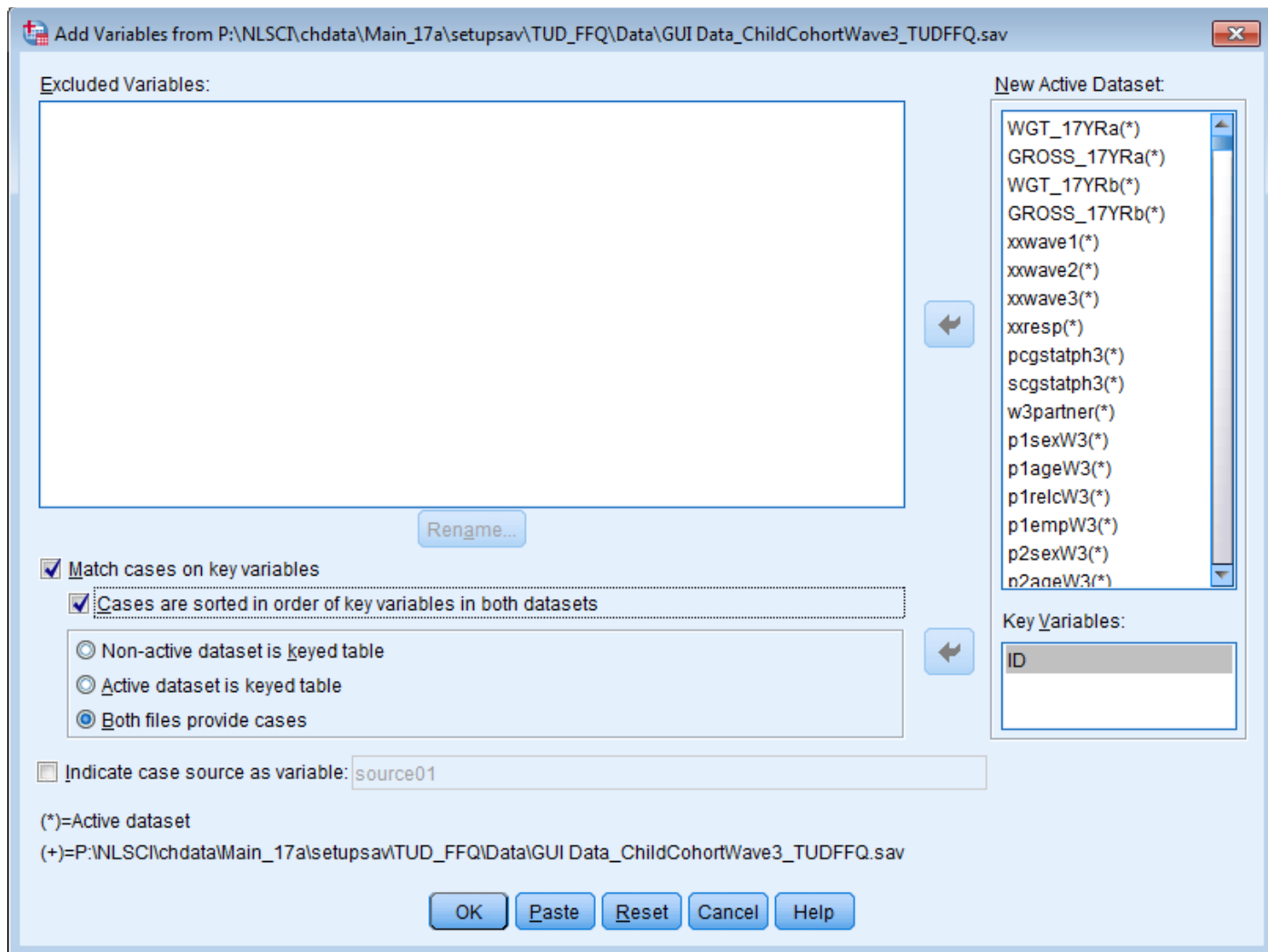
5. The following warning will appear. In order to match the files they both must be pre-sorted by the key variable used for matching – in this case 'id'. Click 'ok'.
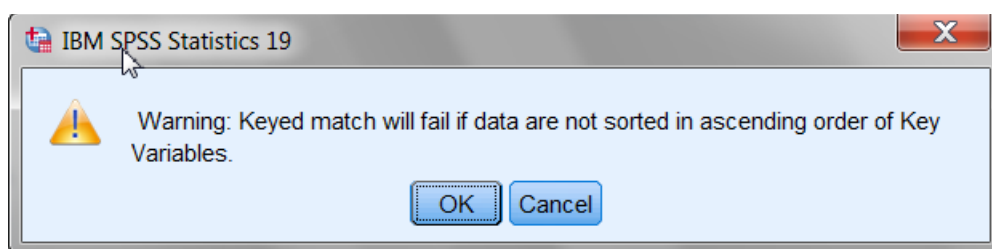
6. The matched file will contain 6,216 cases with all the variables from the third wave Child Cohort data and the Time-Use data. The Time-Use variables will be system missing (sysmis) for any cases which are not included in the Time- Use data file.

7. This matched file should be saved under a new name (for e.g. GUI Data_Wave3andTimeUse.sav). SIMPLY SAVING THE FILE WILL OVERWRITE THE ORIGINAL THIRD WAVE CHILD COHORT FILE

12. REFERENCES

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13. APPENDICES

APPENDIX A – TIME-USE DIARY

APPENDIX B – FOOD FREQUENCY QUESTIONNAIRE

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An Roinn Leanaí
agus Gnóthaí Óige
Department of
Children and Youth Affairs

Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

AREA ☐☐☐☐ HHOLD ☐☐☐ YP No ☐

Interviewer Name_____   **Interviewer Number**

GROWING UP IN IRELAND – the national longitudinal study of children/Young People
Time-Use Diary and Food Frequency Questionnaire

STRICTLY CONFIDENTIAL

As part of the *Growing Up in Ireland* project we would like to record details on (i) how 17-year-olds in Ireland spend their time and (ii) the foods they eat.

We would like you to complete the enclosed (i) Time-use Diary and (ii) Food Frequency Questionnaire, as shown by the interviewer.

As regards the time-use diary, simply mark the booklet to indicate what you were doing for each quarter hour in the day. To do this draw an arrow through the relevant 15 minute slots to indicate what you were doing.

If you were engaged in a number of activities in any given 15-minute time period we would like you to record your MAIN activity – for example, if at some time in the course of the day you were watching TV and also eating a snack and if you considered your main activity to have been watching the TV at that time then record this in Line 17 – Watching TV, Films, Videos or DVDs - rather than in Line 3 on Eating.

As regards the Food Frequency Questionnaire from page 4 to page 10, we would like you to record details on the types of food you eat and don't eat. We would like you to indicate how often you eat each of the foods on the Food Frequency Questionnaire. **Once again we would like to assure you that all of the information provided will be treated in the strictest confidence and will not be revealed in any way which could be associated with your name or address.**

TIME-USE DIARY
Day on which we would like this diary to be completed:
DAY_____   **DATE**_____

T1. Please record the day and date of the Time-use Diary Day, i.e. the day the activities relate to:

Day: _____   **Date:** _____
DD/MM

T2. Was this:

A school/college day ....☐₁
A work day ....☐₂
A weekend day ....☐₃
A holiday or family celebration...☐₄
A day when something special was happening in your home (someone was sick/visiting, a family crisis, etc.) ......☐₅

T3. When did you fill in the diary? Please tick (√) one box.

Now and then during the diary day ....☐₁
At the end of the diary day ....☐₂
The day after the diary day ....☐₃
Later ....☐₄ ——▶**T4. About how many days after?**_____ days

PLEASE RETURN THIS COMPLETED TIME-USE DIARY AND FOOD FREQUENCY QUESTIONAIRE IN THE ENCLOSED PRE-PAID ENVELOPE TO THE ECONOMIC AND SOCIAL RESEARCH INSTITUTE.

THE ASSISTANCE OF YOU AND YOUR FAMILY IN THE *GROWING UP IN IRELAND* PROJECT IS GREATLY APPRECIATED AND WILL HOPEFULLY HELP ALL YOUNG PEOPLE IN IRELAND OVER THE COMING YEARS.

Time Use Diary (17-year study)

<u>Worked Example</u>

The purpose of the Time-Use Diary is to record details on the way you use your time on the reference day specified on the front of this questionnaire. We would like you to fill it out at some point in the course of that day or the following.

The Time-Use Diary records what you did for each 15-minute slot in the reference day.

To fill out the Time-Use Diary we would like you to start at Midnight (00.00am) and draw an arrow through the boxes to indicate what you were doing for each 15-minute period.

In the worked example overleaf the Young Person's day was as follows:

- Sleeping until 8.00am (arrow from midnight to 8.00am shows sleeping) [Line 1]
- Personal care – getting washed and dressed – from 8.00-8.15 am. [Line 2]
- Eating breakfast from 8.15-8.30 am. [Line 3]
- Travelling to school from 8.30 to 9.00am. [Line 4]
- At school from 9.00am until 3.30pm. [Line 5]
- Travelling home from 3.30-4.00pm. [Line 4]
- Having a meal from 4.00-4.30pm on arriving home. [Line 3]
- Hanging around with friends from 4.30-5.30pm. [Line 8]
- Attending a football match from 5.30-6.30pm. [Line 12]
- Watching TV from 6.30-7.00pm. [Line 17]
- Doing a hobby or other leisure activity from 7.00 – 8.00pm. [Line 21]
- Having a meal (dinner) from 8.00-8.30 pm. [Line 3]
- Reading a book from 8.30 to 9.00pm. [Line 19]
- Playing computer games from 9.00 – 10.30pm. [Line 14]
- Personal care – getting washed and dressed – from 10.30-10.45pm. [Line 2]
- Going to bed and sleeping from 10.45pm to midnight [Line 1]

[This example is not intended to suggest that the Young Person <u>should</u> do these activities or go to bed at certain times etc. It is included only to show how the Time-Use diary is filled out.]

We would like you to fill out the Time-Use Diary in the same way as the example above to show how you spent your time on the day specified on the front of the Time Use Diary.

AM Table

Activity	AM → 00.00 am 15 30 45	01.00 am 15 30 45	02.00 am 15 30 45	03.00 am 15 30 45	04.00 am 15 30 45	05.00 am 15 30 45	06.00 am 15 30 45	07.00 am 15 30 45	08.00 am 15 30 45	09.00 am 15 30 45	10.00 am 15 30 45	11.00 am 15 30 45
1. SLEEPING / RESTING (including time trying to get to sleep, trying to get up)												
2. PERSONAL CARE OR GETTING READY (showering, washing, dressing, brushing teeth or hair, doing make-up, getting changed or ready for school, for training, for going out or for going to bed)												
3. EATING (breakfast, lunch, dinner, tea)												
4. TRAVELLING (to or from school or elsewhere)												
5. AT SCHOOL/COLLEGE												
6. AT WORK												
7. DOING HOMEWORK OR STUDY												
8. JUST HANGING AROUND WITH FRIENDS (outside or inside)												
9. SPENDING TIME WITH FAMILY												
10. PLAYING WITH OR EXERCISING A PET												
11. AT THE GYM, PLAYING SPORT OR DOING PHYSICAL EXERCISE (training, matches)												
12. ATTENDING A SPORTS EVENT												
13. USING THE INTERNET / EMAILING (including social networking, browsing etc)												
14. PLAYING COMPUTER GAMES (e.g. Playstation, PSP, X-Box or Wii)												
15. TALKING ON THE PHONE OR TEXTING												
16. MUSIC LESSONS (OR PRACTICING MUSIC), DRAMA, CLASSES ETC												
17. WATCHING TV, FILMS, VIDEOS OR DVDS												
18. LISTENING TO MUSIC												
19. READING FOR PLEASURE OR INTEREST (NOT FOR SCHOOL/COLLEGE/STUDY)												
20. HOUSEWORK (preparing food, tidying bedroom, feeding pets)												
21. HOBBIES AND OTHER LEISURE ACTIVITIES												
22. OUT SHOPPING TO BUY THINGS (groceries, clothes etc).												
23. GOING TO DISCOS OR BARS, ETC.												
24. GOING TO PARTY OR OTHER SOCIAL EVENT (in people's houses)												
25. OTHER 1 (SPECIFY)												

PM Table

Activity	PM → 12.00 noon 15 30 45	01.00 pm 15 30 45	02.00 pm 15 30 45	03.00 pm 15 30 45	04.00 pm 15 30 45	05.00 pm 15 30 45	06.00 pm 15 30 45	07.00 pm 15 30 45	08.00 pm 15 30 45	09.00 pm 15 30 45	10.00 pm 15 30 45	11.00 pm 15 30 45
1. SLEEPING / RESTING (including time trying to get to sleep, trying to get up)												
2. PERSONAL CARE OR GETTING READY (showering, washing, dressing, brushing teeth or hair, doing make-up, getting changed or ready for school, for training, for going out or for going to bed)												
3. EATING (breakfast, lunch, dinner, tea)												
4. TRAVELLING (to or from school or elsewhere)												
5. AT SCHOOL/COLLEGE												
6. AT WORK												
7. DOING HOMEWORK OR STUDY												
8. JUST HANGING AROUND WITH FRIENDS (outside or inside)												
9. SPENDING TIME WITH FAMILY												
10. PLAYING WITH OR EXERCISING A PET												
11. AT THE GYM, PLAYING SPORT OR DOING PHYSICAL EXERCISE (training, matches)												
12. ATTENDING A SPORTS EVENT												
13. USING THE INTERNET / EMAILING (including social networking, browsing etc)												
14. PLAYING COMPUTER GAMES (e.g. Playstation, PSP, X-Box or Wii)												
15. TALKING ON THE PHONE OR TEXTING												
16. MUSIC LESSONS (OR PRACTICING MUSIC), DRAMA, CLASSES ETC												
17. WATCHING TV, FILMS, VIDEOS OR DVDS												
18. LISTENING TO MUSIC												
19. READING FOR PLEASURE OR INTEREST (NOT FOR SCHOOL/COLLEGE/STUDY)												
20. HOUSEWORK (preparing food, tidying bedroom, feeding pets)												
21. HOBBIES AND OTHER LEISURE ACTIVITIES												
22. OUT SHOPPING TO BUY THINGS (groceries, clothes etc).												
23. GOING TO DISCOS OR BARS, ETC.												
24. GOING TO PARTY OR OTHER SOCIAL EVENT (in people's houses)												
25. OTHER 1 (SPECIFY)												

Activity (AM)	00.00 am 15 30 45	01.00 am 15 30 45	02.00 am 15 30 45
1. SLEEPING / RESTING (including time trying to get to sleep, trying to get up)			
2. PERSONAL CARE OR GETTING READY (showering, washing, dressing, brushing teeth or hair, doing make-up, getting changed or ready for school, for training, for going out or for going to bed)			
3. EATING (breakfast, lunch, dinner, tea)			
4. TRAVELLING (to or from school or elsewhere)			
5. AT SCHOOL/COLLEGE			
6. AT WORK			
7. DOING HOMEWORK OR STUDY			
8. JUST HANGING AROUND WITH FRIENDS (outside or inside)			
9. SPENDING TIME WITH FAMILY			
10. PLAYING WITH OR EXERCISING A PET			
11. AT THE GYM, PLAYING SPORT OR DOING PHYSICAL EXERCISE (training, matches)			
12. ATTENDING A SPORTS EVENT			
13. USING THE INTERNET / EMAILING (including social networking, browsing etc)			
14. PLAYING COMPUTER GAMES (e.g. Playstation, PSP, X-Box or Wii)			
15. TALKING ON THE PHONE OR TEXTING			
16. MUSIC LESSONS (OR PRACTICING MUSIC), DRAMA, CLASSES ETC			
17. WATCHING TV, FILMS, VIDEOS OR DVDS			
18. LISTENING TO MUSIC			
19. READING FOR PLEASURE OR INTEREST (NOT FOR SCHOOL/COLLEGE/STUDY)			
20. HOUSEWORK (preparing food, tidying bedroom, feeding pets)			
21. HOBBIES AND OTHER LEISURE ACTIVITIES			
22. OUT SHOPPING TO BUY THINGS (groceries, clothes etc).			
23. GOING TO DISCOS OR BARS, ETC.			
24. GOING TO PARTY OR OTHER SOCIAL EVENT (in people's houses)			
25. OTHER (SPECIFY) _____			

Activity (PM)	12 noon 15 30 45	01.00 pm 15 30 45	02.00 pm 15 30 45
1. SLEEPING / RESTING (including time trying to get to sleep, trying to get up)			
2. PERSONAL CARE OR GETTING READY (showering, washing, dressing, brushing teeth or hair, doing make-up, getting changed or ready for school, for training, for going out or for going to bed)			
3. EATING (breakfast, lunch, dinner, tea)			
4. TRAVELLING (to or from school or elsewhere)			
5. AT SCHOOL/COLLEGE			
6. AT WORK			
7. DOING HOMEWORK OR STUDY			
8. JUST HANGING AROUND WITH FRIENDS (outside or inside)			
9. SPENDING TIME WITH FAMILY			
10. PLAYING WITH OR EXERCISING A PET			
11. AT THE GYM, PLAYING SPORT OR DOING PHYSICAL EXERCISE (training, matches)			
12. ATTENDING A SPORTS EVENT			
13. USING THE INTERNET / EMAILING (including social networking, browsing etc)			
14. PLAYING COMPUTER GAMES (e.g. Playstation, PSP, X-Box or Wii)			
15. TALKING ON THE PHONE OR TEXTING			
16. MUSIC LESSONS (OR PRACTICING MUSIC), DRAMA, CLASSES ETC			
17. WATCHING TV, FILMS, VIDEOS OR DVDS			
18. LISTENING TO MUSIC			
19. READING FOR PLEASURE OR INTEREST (NOT FOR SCHOOL/COLLEGE/STUDY)			
20. HOUSEWORK (preparing food, tidying bedroom, feeding pets)			
21. HOBBIES AND OTHER LEISURE ACTIVITIES			
22. OUT SHOPPING TO BUY THINGS (groceries, clothes etc).			
23. GOING TO DISCOS OR BARS, ETC.			
24. GOING TO PARTY OR OTHER SOCIAL EVENT (in people's houses)			
25. OTHER (SPECIFY) _____			

Activity	03.00 am 15 30 45	04.00 am 15 30 45	05.00 am 15 30 45	06.00 am 15 30 45	07.00 am 15 30 45	08.00 am 15 30 45	09.00 am 15 30 45	10.00 am 15 30 45	11.00 am 15 30 45
1. SLEEPING									
2. PERS. CARE									
3. EATING									
4. TRAVELLING									
5. SCHOOL/COL									
6. WORK									
7. STUDY									
8. FRIENDS									
9. FAMILY									
10. PET									
11. EXERCISE									
12. SPORT EVE.									
13. INTERNET									
14. COMP. GAME									
15. PHONE									
16. CLASSES									
17. TV, FILMS									
18. MUSIC									
19. READING									
20. HOUSEWORK									
21. HOBBIES									
22. SHOPPING									
23. BARS									
24. PARTY									
25. OTHER									

Activity	03.00 pm 15 30 45	04.00 pm 15 30 45	05.00 pm 15 30 45	06.00 pm 15 30 45	07.00 pm 15 30 45	08.00 pm 15 30 45	09.00 pm 15 30 45	10.00 pm 15 30 45	11.00 pm 15 30 45
1. SLEEPING									
2. PERS. CARE									
3. EATING									
4. TRAVELLING									
5. SCHOOL/COL									
6. WORK									
7. STUDY									
8. FRIENDS									
9. FAMILY									
10. PET									
11. EXERCISE									
12. SPORT EVE.									
13. INTERNET									
14. COMP. GAME									
15. PHONE									
16. CLASSES									
17. TV, FILMS									
18. MUSIC									
19. READING									
20. HOUSEWORK									
21. HOBBIES									
22. SHOPPING									
23. BARS									
24. PARTY									
25. OTHER									

FOOD FREQUENCY QUESTIONNAIRE:

YOUR DIET OVER THE PAST YEAR

For each food there is an amount shown, either what we think is a "medium serving" or a common household unit such as a slice or teaspoon. Please put a tick in the box to indicate how often, **on average**, you have eaten the specified amount of each food, to the nearest whole number **during the past year i.e. from when you receive this questionnaire to the same month the previous year**.

Please estimate your average food use as best you can. Please answer every question, do not leave ANY lines blank.

EXAMPLES:

The following are examples on how to estimate how often and how much bread and potatoes you ate over the past year. Please estimate your food intake for all foodstuffs in the same way.

Potatoes: If you ate a medium serving of potatoes 3 times per week over the past year put a tick in the box "2-4 per week". If you think you usually ate more or less than a medium serving please try to estimate which box suits best.

Potatoes, Rice and Pasta (medium serving)	AVERAGE USE LAST YEAR								
	Never or less than once per month	1-3 per month	Once a week	2-4 per week	5-6 per week	Once a day	2-3 per day	4-5 per day	6+ per day
Boiled, instant or jacket potatoes				✓					

For white bread a medium serving is one medium sized slice. Therefore if you usually ate 1 medium slice 4 or 5 times per day, you should put a tick in the column headed "4-5 per day". If you ate 2 medium slices 4 or 5 times per day, then you should put a tick in the column "6+ per day".

BREAD AND SAVOURY BISCUITS (One slice or one biscuit)	AVERAGE USE LAST YEAR								
	Never or less than once per month	1-3 per month	Once a week	2-4 per week	5-6 per week	Once a day	2-3 per day	4-5 per day	6+ per day
White bread and rolls (including ciabatta and pannini bread)								✓	

Please check that you put a tick (✓) on every line

A. MEAT, FISH AND POULTRY (Medium serving – the size of a deck of cards)	AVERAGE USE LAST YEAR								
	Never or less than once per month	1-3 per month	Once a week	2-4 per week	5-6 per week	Once a day	2-3 per day	4-5 per day	6+ per day
1. Beef roast									
2. Beef: steak									
3. Beef: mince									
4. Beef: stew									
5. Beef burger (1 burger)									
6. Pork: roast									
7. Pork: chops									
8. Pork: slices/escalopes									
9. Lamb: roast									
10. Lamb: chops									
11. Lamb: stew									
12. Chicken portion or other poultry e.g. turkey: roast									
13. Breaded chicken, chicken nuggets, chicken burger									
14. Bacon									
15. Ham									
16. Corned beef, Spam, Luncheon meats									
17. Sausages, Frankfurters (1 sausage)									
18. Savoury pies (e.g. meat pie, pork pie, steak & kidney pie, sausage rolls)									
19. Liver, heart, kidney									
20. Liver paté									
21. Fish fried in batter, as in fish and chips									
22. Fish fried in breadcrumbs									
23. Oven baked/grilled fish (in breadcrumbs or batter)									
24. Fish fingers/fish cakes									
25. Other white fish, fresh or frozen (e.g. cod, haddock, plaice, sole, halibut, coli)									
26. Oily fish, fresh or canned (e.g. mackerel, kippers, tuna, salmon, sardines, herring)									
27. Shellfish (e.g. crab, prawns, mussels)									

B. BREAD AND SAVOURY BISCUITS (One slice or one biscuit)	AVERAGE USE LAST YEAR								
	Never or less than once per month	1-3 per month	Once a week	2-4 per week	5-6 per week	Once a day	2-3 per day	4-5 per day	6+ per day
1. White bread and rolls (including ciabatta and pannini bread)									
2. Brown bread and rolls									
3. Wholemeal bread and rolls									
4. Cream crackers, cheese biscuits									
5. Crisp bread, e.g. Ryvita									
6. Pancakes, muffins, oatcakes									

C. CEREALS (One medium sized bowl)	AVERAGE USE LAST YEAR								
	Never or less than once per month	1-3 per month	Once a week	2-4 per week	5-6 per week	Once a day	2-3 per day	4-5 per day	6+ per day
1. Porridge, Readybrek									
2. All Bran, Weetabix, Shredded Wheat									
3. Branflakes, Bran Buds									
4. Cornflakes, Rice Krispies									
5. Muesli (e.g. Country Store, Alpen, sugar coated)									
6. Sugar Coated Cereals (e.g.Frosties, Crunchy Nut Cornflakes, Crunchy Sugar Coated Muesli)									

D. POTATOES, RICE AND PASTA (Medium serving – about a cupful)	AVERAGE USE LAST YEAR								
	Never or less than once per month	1-3 per month	Once a week	2-4 per week	5-6 per week	Once a day	2-3 per day	4-5 per day	6+ per day
1. Boiled, instant or jacket potatoes									
2. Mashed potatoes									
3. Chips									
4. Roast potatoes									
5. Potato Salad									
6. White Rice									
7. Brown Rice									
8. White/yellow or green pastas (e.g. spaghetti, macaroni, noodles)									
9. Wholemeal pasta									
10. Lasagne (meat based)									
11. Lasagne (vegetarian)									
12. Moussaka									
13. Pizza									
14. Macaroni Cheese									

E. DAIRY PRODUCTS AND FATS	AVERAGE USE LAST YEAR								
	Never or less than once per month	1-3 per month	Once a week	2-4 per week	5-6 per week	Once a day	2-3 per day	4-5 per day	6+ per day
1. Cream (tablespoon)									
2. Full-fat yoghurt or Greek- style Yoghurt (125g carton)									
3. Dairy desserts (125g carton)									
4. Cheddar cheese (medium serving)									
5. Low-fat cheddar cheese (medium serving)									
6. Eggs as boiled, fried, scrambled, poached (one)									
7. Quiche (medium serving)									
8. Light salad cream or light mayonnaise (tablespoon)									
9. Salad cream, mayonnaise (tablespoon)									
10. French dressing (tablespoon)									
11. Other salad dressing (tablespoon)									
The following on bread or vegetables:									
12. Butter (teaspoon)									
13. Lite Butter e.g. Dawn Lite, Connacht Gold (teaspoon)									
14. Sunflower margarine e.g. Flora (teaspoon)									
15. Low-fat margarine (e.g. low- low)									
16. Cholesterol Lowering Spreads e.g. Flora Pro Active, Dairy Gold Heart (teaspoon)									
17. Cream & Vegetable Oil spread e.g. Golden Pasture, Kerrymaid, Dairy Gold – teaspoon									
18. Olive oil spread e.g. Golden Olive (teaspoon)									

F. FRUIT (1 Fruit or medium serving)	AVERAGE USE LAST YEAR								
	Never or less than once per month	1-3 per month	Once a week	2-4 per week	5-6 per week	Once a day	2-3 per day	4-5 per day	6+ per day
1. Apples									
2. Pears									
3. Oranges, satsumas, mandarins									
4. Grapefruit									
5. Bananas									
6. Grapes									
7. Melon									
8. Peaches, plums									
9. Apricots									
10. Strawberries, raspberries, kiwi fruit									
11. Tinned fruit									
12. Dried fruit e.g. raisins									
13. Frozen fruit									

G. VEGETABLES Fresh, frozen or tinned (Medium Serving – 2 tablespoons)	AVERAGE USE LAST YEAR								
	Never or less than once per month	1-3 per month	Once a week	2-4 per week	5-6 per week	Once a day	2-3 per day	4-5 per day	6+ per day
1. Carrots									
2. Spinach									
3. Broccoli, spring greens, kale									
4. Brussel sprouts									
5. Cabbage									
6. Peas									
7. Green beans, broad beans, runner beans									
8. Courgettes									
9. Cauliflower									
10. Parsnips, turnips									
11. Leeks									
12. Onions									
13. Garlic									
14. Mushrooms									
15. Sweet peppers									
16. Beansprouts									
17. Green salad, lettuce									
18. Cucumber, celery									
19. Tomatoes									
20. Sweetcorn									
21. Beetroot									
22. Coleslaw									
23. Baked beans									
24. Dried lentils, beans, peas									
25. Tofu, soya meat, TVP, vegeburger									

H. SWEETS AND SNACKS (Medium serving)	AVERAGE USE LAST YEAR								
	Never or less than once per month	1-3 per month	Once a week	2-4 per week	5-6 per week	Once a day	2-3 per day	4-5 per day	6+ per day
1. Chocolate coated sweet biscuits e.g. digestive (one)									
2. Plain sweet biscuits e.g. Marietta, digestives, rich tea (one)									
3. Cakes e.g. fruit, sponge									
4. Buns, pastries e.g. croissants, doughnuts									
5. Fruit pies, tarts, crumbles									
6. Sponge puddings									
7. Milk puddings e.g. rice, custard, trifle									
8. Ice cream, choc ices, Frozen desserts									
9. Chocolates, singles or squares									
10. Sweets, toffees, mints									
11. Sugar added to tea coffee, cereal (teaspoon)									
12. Sugar substitute e.g. canderel added to tea coffee, cereal (teaspoon)									
13. Crisps or other packet snacks									
14. Peanuts or other nuts									

I. SOUPS, SAUCES AND SPREADS	AVERAGE USE LAST YEAR								
	Never or less than once per month	1-3 per month	Once a week	2-4 per week	5-6 per week	Once a day	2-3 per day	4-5 per day	6+ per day
1. Vegetable soups: homemade/fresh (1 bowl)									
2. Vegetable soups: tinned/packet (1 bowl)									
3. Meat or cream soups: homemade/fresh (1 Bowl)									
4. Meat or cream soups: tinned/packet (1 bowl)									
5. Sauces e.g. white sauce, cheese sauce, gravy (tablespoon)									
6. Tomato based sauces e.g. pasta sauces									
7. Curry-type sauces									
8. Pickles, chutney (tablespoon)									
9. Marmite, Bovril (tablespoon)									
10. Jam, marmalade, honey, syrup (teaspoon)									
11. Peanut butter (teaspoon)									

J. DRINKS	AVERAGE USE LAST YEAR								
	Never or less than once per month	1-3 per month	Once a week	2-4 per week	5-6 per week	Once a day	2-3 per day	4-5 per day	6+ per day
1. Tea (cup)									
2. Coffee instant (cup)									
3. Coffee ground (cup)									
4. Coffee, decaffeinated (cup)									
5. Coffee whitener e.g. coffee-mate (teaspoon)									
6. Cocoa, Hot Chocolate (cup)									
7. Horlicks, Ovaltine (cup)									
8. Wine (glass)									
9. Beer, Larger or Cider (half pint)									
10. Alcopops e.g. Bacardi Breezer (bottle)									
11. Port, Sherry, Vermouth, liqueurs (glass)									
12. Spirits e.g. Gin, Whiskey (single measure)									
13. Low calorie or diet soft fizzy (glass)									
14. Fizzy Soft drinks e.g. Cocoa Cola (glass)									
15. Pure fruit drinks e.g. orange juice (small glass)									
16. Fruit squash (small glass)									

K1. What type of milk do you use most often?

None... ☐1   Super/fortified.. ☐5

Whole milk/Full fat .... ☐2   Skimmed... ☐4

Low fat.. ☐3   Soya .... ☐6

Other, please specify_____ .... ☐7

K2. How much milk do you drink each day?

None .... ☐1   One litre .... ☐4

250ml (half pint) .... ☐2   More than 1 litre .... ☐5

568 ml (one pint) .... ☐3

Thank you for taking the time to complete this questionnaire. Please return this completed Time-Use Diary and Food Frequency Questionnaire in the pre-paid envelope provided to the Economic and Social Research Institute.