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# DATA AVAILABLE FROM THE TIME-USE DIARY, WAVE 5 OF COHORT '08 (INFANT COHORT) IN *GROWING UP IN IRELAND*

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## 1. Introduction

Data collection for the fifth wave of the Infant Cohort '08 (at 9 years) of the *Growing Up in Ireland* study included a self-complete diary, consisting of a one-day Time-Use Diary. There is an AMF (Anonymised Microdata File) version and an RMF (Research Microdata) version of the time-use diary data. The Time-Use Diary recorded details on the activities of the 9-year-old over a 24-hour period. The AMF time-use diary gives the total time the 9-year-old engaged in each of the 22 activities during the 24-hour diary day. The RMF time-use diary gives the total time for each activity and also provides a breakdown of activities for each 15-minute intervals throughout the diary day. 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 Diary sample
- How the data were prepared for dissemination
- How the data should be matched to the main Anonymised Microdata File (AMF) or Research Microdata File (RMF) from the fifth wave of the Cohort '08.

## 2. Overview of the Time-Use Diary

The Time-Use Diary divided the "Diary Day" into 96 15-minute intervals (time slots). It contained a total of 22 precoded activities as follows:

- 1. SLEEPING (including time trying to get to sleep, trying to get up)
- 2. RESTING/RELAXING (doing nothing 'time out')
- 3. PERSONAL CARE OR GETTING READY (washing, dressing, toilet, brushing teeth or hair, doing make-up, getting changed or ready for school, for training, for going out or for going to bed)
- 4. EATING/DRINKING/HAVING A MEAL (breakfast, lunch, dinner, tea)
- 5. TRAVELLING TO AND FROM SCHOOL
- 6. OTHER TRAVELLING (including leisure and domestic trips etc.)
- 7. AT SCHOOL
- 8. HOMEWORK
- 9. PHYSICAL PLAY/EXERCISE/SPORTS (playground, running, chasing, football, judo, ballet, dance)
- 10. PLAYING BOARD GAMES, CARDS etc.
- 11. GENERAL PLAY (with toys, dolls, cars etc., dressing up, 'playing house', imaginary or make believe games)
- 12. HOBBIES AND OTHER LEISURE ACTIVITIES (crafts, model making, painting, music practice etc.)
- 13. COMPUTER/INTERNET/PLAY STATION/ X-BOX etc. (playing on computer, with computer games)
- 14. EMAIL/ SOCIAL MEDIA/ MSN/ TEXTING/ ON THE PHONE (contacting, messaging friends or others)
- 15. WATCHING TV AND VIDEOS/DVDS etc.
- 16. READING BOOKS, COMICS, MAGAZINES ETC.
- 17. HOUSEHOLD CHORES / HOUSEWORK
- 18. VISITS TO A RELATIVE'S HOUSE FOR PURPOSES OTHER THAN PLAY
- 19. ON A FAMILY OUTING (a trip out as a family)
- 20. ON A SHOPPING TRIP
- 21. RELIGIOUS ACTIVITY (attending religious services, prayer etc.)
- 22. NOT SURE

A copy of the Time-Use Diary is included in Appendix A. From this, one can see that the Time-Use Diary was set out as a rectangular matrix of 22 rows (representing the pre-coded activities) by 96 columns (each representing a 15-minute

time slot in the "Diary Day"). The 9 year-olds were asked to draw a horizontal line to indicate the activities in which they were principally involved throughout the Diary Day<sup>1</sup>.

Although the 9-year-old was encouraged to record just one activity for each time slot, up to three activities could potentially be recorded concurrently in the TIME-USE DIARY. 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 level 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 9-year-old was also asked to:

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

(b) Indicate when the Diary was completed (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?)

(c) Whether or not the Primary Caregiver completed the Time-Use Diary with the study child.

## 3. Administration of the Diary

The Time-Use Diary was included as an integral component of the main interview in the 9-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. 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.

#### 4. Response Rates

A total of 5,125 Diaries were returned from the 8,032 9-year-olds who were interviewed in the main *Growing Up in Ireland* Wave 5 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. However, 4,823 Diaries contained usable data for analysis, representing an effective response rate of 58% of those who participated in the main study. Table 1. Shows the characteristics of the respondents.

<sup>&</sup>lt;sup>1</sup> The format of Time-Use Diary used in *GUI (Growing Up in Ireland)* 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 22 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*.

Table 1: Summary response rates of Time-Use Diary Survey, Child Cohort at 9 years of age.

	Ν	Response Rate
Total Young People in main study	8,032	
Total Diaries returned	5,125	60.0%
Provided Usable TIME-USE DIARY	4,823	58.0%

## 5. Characteristics of the Sample

## 5.1 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 2 shows that Mondays and Tuesdays were over-reported (15.4% and 15.1%, respectively) with Fridays, Saturdays and Sundays being under-represented (all 13.5% 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.

Diary Day:	N	%
Monday	745	15.4
Tuesday	728	15.1
Wednesday	685	14.2
Thursday	714	14.8
Friday	651	13.5
Saturday	651	13.5
Sunday	649	13.5
Total	4823	100

Table 2: Distribution of completed Time-Use Diaries by day of the week it was completed

## 5.2 Month of the Year

As with the main family-based data collection for Wave 5 of the Infant Cohort, the Diary data were primarily collected between June 2017 and June 2018 (93.3%). However, due to initial non-compliance and subsequent delays returning the Diary, 6.7% of Diaries were returned later than June 2018 (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 3 presents a summary distribution of the completed and usable Diaries by month of completion (based on date TIME-USE DIARY was completed).

Table 3: Distribution of completed Time-Use Diaries by month of completion

Month:	Household Interviews	Time-Use Diaries
Jun 2017	11.4%	8.2%
Jul 2017	14.7%	11.0%
Aug 2017	16.2%	12.8%
Sep 2017	17.5%	17.3%
Oct 2017	18.3%	16.0%
Nov 2017	13.4%	10.0%
Dec 2017	3.0%	2.6%
Jan 2018	1.9%	1.5%
Feb 2018	2.0%	1.1%
Mar 2018	0.6%	0.6%
Apr 2018	0.4%	4.3%
May 2018	0.5%	1.1%
Jun 2018	0.1%	6.9%
Jul 2018+	0.0%	6.7%
Total	100%	100%

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

#### 5.3 Completion Date

As outlined in Table 4, most Time-Use Diaries (68.3%) were completed on the Diary day itself, with 37.3% of respondents completing it *now and then during the day* and 31% at the *end of the day*. It was completed the *day after the Diary Day* by 18.7% of respondents and the remaining 7.6% completed it *on a later date*. The completion day was not recorded in just 5.4% of completed diaries.

Diary completed:	N	%
Now and then during the Diary day	1,799	37.3
End of Diary day	1,495	31.0
Day after Diary day	903	18.7
Other day	366	7.6
Not recorded	260	5.4
Total	4,823	100

 Table 4: Completed Time-Use Diaries by day on which the Diary was completed

#### 5.4 Nature of the Diary Day

Table 5 summarises whether or not the Time-Use Diary Day was described by participants as: a "school day"; a weekend 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 52.7% of diaries were completed on what was described by the respondent as a "school day". The figures in Table 5 add up to more than 100% as respondents could answer more than one category, for example, a respondent could say that the diary was filled in on a day which was both a school day and a day that something special was happening in the home.

Table 5: Description by respondent of the Diary Day.

	Weekday
School day	52.7%
Weekend day	26.8%
Holiday or family celebration	12.5%
Something special happening at home	2.6%
	6 of 10

## 6. 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 6 shows the response rates across a number of Young Person and family characteristics.

Significant differences in response rates were observed according to most characteristics. Those in two-parent families compared to those in one-parent families (61-64% versus 36-44%). Young people with older mothers at birth were more likely to complete (37% for those aged <25 versus 68% for those aged 40+). 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 post-leaving certificate education were significantly more likely to return a completed diary (64-69%) as were those lived in owner-occupied homes (66%) compared to those whose families rented (31-46%). However, boys and girls were equally as likely to complete the time-use diary.

		Response Rate	p- value
Young Person's gender	Воу	60%	0.698
	Girl	60%	
Household Type	One-Parent 1 or 2 children	44%	<0.001
	One-Parent 3+ children	36%	
	Two-Parent 1 or 2 children	64%	
	Two-Parent 3+ children	61%	
Mother's Age at time of	<25	37%	<0.001
Study Child's birth	25-29	54%	
	30-34	65%	
	35-39	67%	
	40+	68%	
PCG Economic Status	Employed Full-time	65%	<0.001
	Employed Part-time	60%	
	Not Employed	55%	
SCG Economic Status	Employed Full-time	65%	<0.001
	Employed Part-time	46%	
	Not Employed	39%	
PCG Education	None or primary	17%	<0.001
	Junior Certificate or equivalent	35%	
	Leaving Certificate or equivalent	50%	
	Certificate/Diploma	64%	
	Degree +	69%	
Household social class	Professional Managers	72%	<0.001
	Managerial and Technical	67%	
	Non-manual	57%	
	Skilled manual	49%	
	Semi-skilled	48%	
	Unskilled	39%	
Mother's Place of Birth	Born in Ireland	62%	<0.001
	Born in UK	60%	
	Born in other Europe	55%	
	Born outside Europe	50%	
Household tenancy	Owner occupied	66%	<0.001
	Rented from a Local Authority (reference)	31%	
	Rented from a Private Landlord	46%	

Table 6: Time-Use Diaries Response Rates according to Young Person/Family Characteristics

## 7. 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 9-year-olds in Ireland (who were also born in Ireland and so were available to be selected in the first wave of the survey) 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 analyses.

The completed sample of Diaries is effectively a subsample of the main sample of 9-year-olds. As noted in Table 1, a total of 4,823 Diaries were completed in respect of the 8,032 young people in the main study. Statistically adjusting the data involved re-weighting the Diary file to adjust it from a base of 4,823 to 8,032 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 8,032 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 at the time of the study child's birth (24 or less years; 25-29yrs; 30-34yrs; 35-39yrs; 40+ years)
- 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/vocational; non-degree; primary degree or higher)
- Family Social Class (Professional; Managerial; Non-manual; Skilled Manual; Semi-skilled manual; Unskilled Manual; Class not assigned)
- Mother's place of birth (Ireland; UK; Other EU; Other non-EU)
- 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 9-year-olds by their socio-demographic characteristics in the completed Time-Use Diary dataset matched the distribution of all 9-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 9-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 (WGT9YRTU) is provided on the Diary data file. WGT9YRTU will sum to the total number of relevant cases in the completed sample of Diaries.

The analyst should use the weighting factor in all analyses except in situations in which the estimated population total is required - e.g. if s/he wished to estimate the number of 9-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, WG9YRTU statistically adjusts the 4,823 respondents in respect of whom a usable Diary was returned to provide representative estimates for the population of all 9-year-olds as a whole. Effectively, the weighting factor in question adjusts the 4,823 respondents with a completed Diary to the total population of 9-year-olds, just as the weighting factor does when applied to the full sample of 8,032 respondents in the main AMF and RMF for the 9-year-olds. In other words, the full weighted AMF/RMF containing 8,032 cases should give the same estimated population breakdown as the weighted subsample of 4,823 cases which was included in the Diary data file.

Table 7 compares summary details on the weighted breakdown of the 8,032 cases in the full AMF/RMF data with those from the 4,823 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<sup>2</sup>. The table indicates clearly that there is virtually no difference between the weighted breakdown of the full AMF/RMF (with 8,032 cases) and the subsample for whom usable Diaries were returned (4,823 cases).

	WEIGHTED W	GT_9YR	WEIGHTED WGT9YRTU	
	N	%	N	%
	8032	100	4823	100
YOUNG PERSON'S GENDER				
Male	4096	51	2460	51
Female	3936	49	2363	49
HOUSEHOLD TYPE				
one-parent-1 or 2 children	562	7	241	5
one-parent-3+children	723	9	338	7
two-parent-1 or 2 children	3534	44	2170	45
two-parent-3+children	3213	40	2074	43
PRIMARY CAREGIVER AGE CATEGORY AT 1	TIME OF STUDY CHILI	O'S BIRTH		
Under 25	1285	16	579	12
25-29	1847	23	1061	22
30-34	2811	35	1785	37
35-39	1767	22	1109	23
40+	402	5	241	5
PRIMARY CAREGIVER PRIMARY ECONOMI	C <sup>'</sup> STATUS			
not employed	3775	47	2074	43
part-time hours (<35 hours)	1285	16	772	16
full-time hours (>=35 hours)	3052	38	1977	41
SECONDARY CAREGIVER PRIMARY ECONO	MIC STATUS			
not employed	1124	14	627	13
Employed	5622	70	3617	75
no resident SCG	1285	16	579	12
PRIMARY CAREGIVER HIGHEST LEVEL OF E				
none or primary	161	2	48	1
lower sec	884	11	434	9
hi sec /techvoc /uppsec+tech	2892	36	1688	35
non degree	1767	22	1109	23
Primary degree +	2329	29	1592	33
FAMILY'S SOCIAL CLASS	1			
professional workers	1044	13	675	14
managerial and technical	2651	33	1736	36
non-manual	1606	20	916	19
skilled manual	1365	17	772	16
semi-skilled	803	10	482	10
Unskilled	161	2	48	1

Table 7: Comparison of weighted breakdowns of 8,032 cases in full AMF/RMF data with those from 4,823 cases in the subsample for whom usable Diaries are available.

<sup>&</sup>lt;sup>2</sup> One would, by definition, expect that the weighted breakdown of the controlled variables in the sub-sample of 4,823 cases from whom Time-Use information is available would correspond exactly with the breakdown from the weighted AMF/RMF file of 8,032 cases.

all others gainfully occupied /unknown PRIMARY CAREGIVER PLACE OF BIRTH	402	5	148	3
Born in Ireland	6506	81	3907	81
Born in UK	482	6	338	7
Born in other EU	482	6	289	6
Born outside EU	562	7	338	7
HOUSEHOLD TENANCY STATUS				
owner occupied	5786	72	3714	77
rented from local authority	884	11	434	9
rented privately	1205	15	579	12

#### 8. Data Issues

#### 8.1 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 178 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 missing data 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. Summary Breakdown of Data

## 9.1 Breakdown of Time-Use Diary Data

Table 8 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 missing data is between 31-33 minutes for weekday and weekends.

IN TERM:	Weekday		Weekend		Total	
	Minutes	%	Minutes	%	Minutes	%
1. Sleep	617	42	658	46	627	43
2. Resting	40	3	52	4	43	3
3. Personal	41	3	49	3	43	3
4. Eating	69	5	89	6	74	5
5. To school	34	2	4	0	27	2
6. Other travel	20	1	43	3	26	2
7. At School	326	22	11	1	246	17
8. Doing Homework	37	3	5	0	29	2
9. Physical	77	5	107	8	84	6
10. Board games	8	1	12	1	9	1
11. General play	32	2	60	4	39	3
12. Hobbies	17	1	22	2	18	1
13. Computer	28	2	46	3	32	2
14. Email	4	0	5	0	4	0
15. TV	48	3	94	7	59	4
16. Reading	25	2	27	2	25	2
17. Chores	9	1	17	1	11	1
18. Relatives	9	1	30	2	15	1
19. Family outing	6	0	50	4	17	1
20. Shopping	6	0	22	2	10	1
21. Religious	2	0	11	1	4	0
22. Not sure	1	0	2	0	1	0
23. Other	0	0	0	0	0	0
Total	1455	100	1418	100	1446	100

Table 8: Summary breakdown of time spent in various activities a) in term b) out of term and c) in total

OUT OF TERM:	Weekday		Weekend		Total	
	Minutes	%	Minutes	%	Minutes	%
1. Sleep	650	46	648	46	650	46
2. Resting	52	4	57	4	54	4
3. Personal	41	3	42	3	41	3
4. Eating	90	6	88	6	89	6
5. To school	7	0	4	0	6	0
6. Other travel	38	3	43	3	40	3
7. At School	29	2	7	1	22	2
8. Doing Homework	6	0	5	0	6	0
9. Physical	150	11	114	8	139	10
10. Board games	14	1	17	1	15	1
11. General play	64	5	53	4	61	4
12. Hobbies	23	2	18	1	21	1
13. Computer	45	3	53	4	48	3
14. Email	6	0	7	0	6	0
15. TV	69	5	81	6	73	5
16. Reading	28	2	25	2	27	2
17. Chores	20	1	20	1	20	1
18. Relatives	19	1	29	2	22	2
19. Family outing	36	3	72	5	48	3
20. Shopping	22	2	26	2	23	2
21. Religious	2	0	10	1	5	0
22. Not sure	2	0	2	0	2	0
23. Other	0	0	0	0	0	0
Total	1416	100	1421	100	1417	100

TOTAL:	Weekday		Weekend		Total	
	Minutes	%	Minutes	%	Minutes	%
1. Sleep	625	43	655	46	633	44
2. Resting	43	3	54	4	46	3
3. Personal	41	3	47	3	43	3
4. Eating	74	5	89	6	78	5
5. To school	28	2	4	0	21	1
6. Other travel	24	2	43	3	29	2
7. At School	259	18	10	1	192	13
8. Doing Homework	30	2	5	0	23	2
9. Physical	93	6	109	8	98	7
10. Board games	9	1	13	1	10	1
11. General play	39	3	58	4	44	3
12. Hobbies	18	1	21	1	19	1
13. Computer	32	2	48	3	36	3
14. Email	4	0	6	0	5	0
15. TV	52	4	90	6	63	4
16. Reading	26	2	27	2	26	2
17. Chores	12	1	18	1	13	1
18. Relatives	11	1	30	2	16	1
19. Family outing	13	1	57	4	25	2
20. Shopping	9	1	23	2	13	1
21. Religious	2	0	11	1	4	0
22. Not sure	1	0	2	0	1	0
23. Other	0	0	0	0	0	0
Total	1446	100	1419	100	1439	100

## 10. Matching Diary data to Main GUI Infant Cohort Wave 5 data file

To complete analysis on the Diary data, the analyst will have to match it to the AMF/RMF for the Infant Cohort at Wave 5. 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 8,032 cases in the fifth wave of the Infant Cohort and 4,823 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 (WGT\_9YRtu and GROSS\_9YRtu).

#### 10.1 Using SPSS Syntax

The syntax below will open the Wave 5 Infant 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 5 Infant 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 wave5 name = "C:\GUI\GUI Data\_InfantCohortWave5.sav". FILE HANDLE Time-Use Diary name="C:\GUI\GUI Data\_InfantCohortWave5\_TimeUse9yr.sav". FILE HANDLE merged name = "C:\GUI \GUI Data\_Wave5andTimeUse9yr.sav". GET FILE = wave5. SORT CASES by ID. MATCH FILES file = \* / file = Time-Use Diary / by id / map. SAVE OUTFILE merged.

#### 10.2 Using SPSS Drop Down Menus

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

- 1. Open the fifth wave data file GUI Data\_InfantCohortWave5.sav
- 2. Click Merge  $\rightarrow$  Merge Files  $\rightarrow$  Add variables

<u>F</u> ile	<u>E</u> dit	<u>V</u> iew	<u>D</u> ata	Transform	<u>A</u> nalyze	<u>G</u> raphs	<u>U</u> tilities	Extensi	ions <u>W</u> indow	<u>H</u> elp	
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		Nam	Se Se	et Measuremei	nt <u>L</u> evel for	Unknown		abel	Values	Missing	Columns
	1	id	<u><u>C</u></u>	opy Data Prop	erties			old ID c	None	None	10
	2	WGT_9Y	Ne Ne	ew Custom Att	tri <u>b</u> ute			ng Fact	None	None	10
3	3	WGT_9Y	📄 De	efine date and	time			ng Fact	None	None	10
- 8	4	xxwave1		efine <u>M</u> ultiple F		ata.		particip	None	None	10
3	5	xxwave2	1 2002		Response a	bets		particip	None	None	9
	6	xxwave3	V	alidation			>	particip	None	None	10
3	7	xxwave4	🔡 Id	entify D <u>u</u> plicate	e Cases			particip	{1.00, yes}	None	10
- 33	8	xxwave5	Jd	entify Unusual	Cases			particip	None	None	9
- 8	9	PCGstat		om <u>p</u> are Datase	ete			me as	{0, No}	8, 9	11
1	0							present	{0, No}	8, 9	11
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1	6	p2yearsv		lerge Files			>	Add C	ases	999	11
1	7	p3sexw5	R	estructure				Add V	<u>/</u> ariables	None	10
1	8	p3yearsv	+ R	ake Weights				3 age	{1, birth - 4}	999	11
1	9	p3relmw	H P	ropensity Scor	e Matching	10.00		3 relatio	{1.00, Husb	None	10

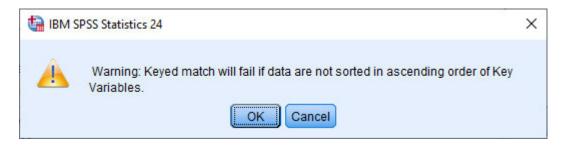
3. This will bring up the following dialog box. Click browse and select the location of the Time-Use data file – GUI Data\_InfantCohortWave5\_TimeUse9yr.sav

ook <u>i</u> n: 🔤	Fime_Use Diary wave 5	*	<b>(</b>	💽 🎹 <b>-</b>	
GUI Data_	InfantCohortWave5_TimeUse9yr.sav				
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e <u>n</u> ame: es of <u>t</u> ype:	SPSS Statistics (*.sav)			~	<u>O</u> pen Cancel

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.

Merge Method Variat	es
Excluded Variables:	Included Variables:
	<ul> <li>WGT_9YRa(*)</li> <li>WGT_9YRb(*)</li> <li>xxwave1(*)</li> <li>xxwave2(*)</li> <li>xxwave3(*)</li> <li>xxwave4(*)</li> <li>xxwave5(*)</li> </ul>
	<ul> <li>✓ id</li> <li>✓</li> </ul>
files. For non-key v	and data type must be the same in both riables, variable names cannot be the Jse Rename to change variable names.
	rtWave5_TimeUse9yr.sav

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'.



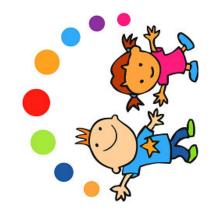
6. The matched file will contain 8,032 cases with all the variables from the fifth wave Infant Cohort data and the Time-Use data. The Time-Use variables will be system missing (sysmis) for any cases which are not included in the Time-Use data file.

7. This matched file should be saved under a new name (for e.g. GUI Data\_Wave5andTimeUse.sav). SIMPLY SAVING THE FILE WILL OVERWRITE THE ORIGINAL FIFTH WAVE INFANT COHORT FILE.

APPENDIX A – TIME-USE DIARY

	Group Household Code Child Number
	Child's date of birth://
	Interviewer Number:
	TIME USE DIARY
	STRICTLY CONFIDENTIAL
	As part of the <i>Growing Up in Ireland</i> project we would like to record details on how 9-year old children in Ireland spend their time.
	We would like you to complete the enclosed time-use diary with the Study Child as shown by the interviewer. Simply mark the booklet to indicate what the Study Child was doing for each quarter hour in the day. To do this draw an arrow through the relevant 15 minute slots to indicate what the Study Child was doing.
PLEASE RETURN THIS COMPLETED TIMEUSE DIARY IN THE ENCLOSED PRE-PAID ENVELOPE TO THE ECONOMIC AND SOCIAL RESEARCH INSTITUTE (ESRI).	If a child was engaged in a number of activities in any given 15-minute time period we would like you to record their MAIN activity - for example if the child was watching TV and also eating a snack and if you consider his/her main activity to be watching the TV at that time then record this in row 15 - Watching TV and Videos/DVDs rather than in row 4 on Eating/Drinking.
THE ASSISTANCE OF YOU AND YOUR FAMILY IN THE GROWING UP IN IRELAND PROJECT IS GREATLY B APPRECIATED AND WILL HOPEFULLY ASSIST ALL CHILDREN IN IRELAND OVER THE COMING YEARS	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. DAY ON WHICH WE WOULD LIKE THIS DIARY TO BE COMPLETED:
	Day: Date:
	TO. Please record the day and date of the Time-use Diary Day, i.e. the day the activities relate to:
	Day:
	A school day
<b>Growing Up</b> In Ireland National Londitudinal	T2. When did you fill in the diary? Please tick (√) one box Now and then during the diary day
Study of Children	About how many days after?

GROWING UP IN IRELAND



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**1. SLEEPING** 

2. RESTING/RELAXING (doing nothing, 'time out')

3. PERSONAL CARE (washing, dressing, toilet)

4. EATING/DRINKING/HAVING A MEAL

5. TRAVELLING TO AND FROM SCHOOL

6. OTHER TRAVELLING (incl. leisure and domestic trips; dropping to 7. AT SCHOOL

8. HOMEWORK

9. PHYSICAL PLAY/EXERCISE/SPORTS (playground, running, chasing,

10. PLAYING BOARD GAMES, CARDS etc. (card games, snakes & lad

11. GENERAL PLAY (with toys, dolls, cars etc; dressing up, playing hou:

13. COMPUTER/INTERNET /PLAY STATION / X-BOX etc. (playing on ( 12. HOBBIES AND OTHER LEISURE ACTIVITIES (crafts, model making,

14. EMAIL/ SOCIAL MEDIA / MSN / TEXTING/ ON THE PHONE (cont

15. WATCHING TV AND VIDEOS/DVDS etc

16. READING BOOKS, COMICS, MAGAZINES ETC.

**17. HOUSEHOLD CHORES / HOUSEWORK** 

18. VISITS TO A RELATIVE'S HOUSE FOR PURPOSES OTHER THAN PL

19. ON A FAMILY OUTING ( a trip out as a family)

20. ON A SHOPPING TRIP (shopping for groceries, clothes etc.)

21. RELIGIOUS ACTIVITY (attending religious services, prayer etc.)

22. NOT SURE

Activity

**1. SLEEPING** 

2. RESTING/RELAXING (doing nothing, 'time out')

3. PERSONAL CARE (washing, dressing, toilet)

4. EATING/DRINKING/HAVING A MEAL

5. TRAVELLING TO AND FROM SCHOOL

6. OTHER TRAVELLING (incl. leisure and domestic trips; dropping to I

7. AT SCHOOL

8. HOMEWORK

9. PHYSICAL PLAY/EXERCISE/SPORTS (playground, running, chasing,

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13. COMPUTER/INTERNET /PLAY STATION / X-BOX etc. (playing on o 14. EMAIL/ SOCIAL MEDIA / MSN / TEXTING/ ON THE PHONE (cont

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20. ON A SHOPPING TRIP (shopping for groceries, clothes etc.) 19. ON A FAMILY OUTING (a trip out as a family)

21. RELIGIOUS ACTIVITY (attending religious services, prayer etc.)

22. NOT SURE