



The Economic and Social Research Institute  
Whitaker Square  
Sir John Rogerson's Quay  
Dublin 2  
Ph: 01-863 2000 Fax 01-863 2100



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

University of Dublin  
Trinity College  
College Green  
Dublin 2



**DATA AVAILABLE FROM THE  
TIME-USE SURVEY,  
WAVE 1 OF THE CHILD COHORT IN  
*GROWING UP IN IRELAND***

**Amanda Quail  
James Williams**

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## Table of Contents

1. Introduction .....	1
2. Overview of the Time-Use Diary.....	1
3. Administration of of the Time-Use Diary.....	3
4. Response Rates .....	3
5. Characteristics of the Sample.....	4
6. Characteristics of Time-Use Respondents .....	6
7. Reweighting the Time-Use Data.....	7
8. Data Issues .....	11
9. Summary Breakdown of Actitivites.....	12
10. Matching Time-Use data to Main GUI Child Cohort Wave 1 datafile.....	15
11. Using SPSS Syntax .....	15
12. Using SPSS Drop Down Menus .....	15
Appendix A – Time-Use Diary.....	18

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## 1. Introduction

The first wave of the Child Cohort (at nine years) of the *Growing Up in Ireland* study included a one-day Time-Use Diary. The Time-Use Diary recorded details on the activities of the Study Children over a 24-hour period. The purpose of the current document is to outline which data are available; how these data were collected; the response rate achieved on this component of the project; characteristics of the Time-Use sample; how the data were prepared for dissemination; and how the data should be matched to the main Anonymised Microdata File (AMF) or Researcher Microdata File (RMF) from the first wave of the Child Cohort.

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## 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 pre-coded activities as follows:

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 games, matches etc)
7. AT SCHOOL
8. HOMEWORK
9. PHYSICAL PLAY/EXERCISE/SPORTS (playground, running, chasing, football, judo, ballet,dance)
10. PLAYING BOARD GAMES, CARDS etc. (card games, snakes & ladders, Monopoly, Trivial Pursuit 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/ BEBO / 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 (shopping for groceries, clothes etc.)
21. RELIGIOUS ACTIVITY (attending religious services, prayer etc.)
22. NOT SURE

A copy of the Diary is included in Appendix A. From this one can see that the 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”. Parents (with their children, if possible) were asked

to include a tick (✓) to indicate the activities in which the Study Child was principally involved throughout the Diary Day<sup>1</sup>.

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.

Up to five activities could be recorded concurrently in the *Growing Up in Ireland* Time-Use Diary. For example, a child may have been eating dinner at the same time as watching TV. Both these activities would have been recorded under the same time slot. In situations where multiple activities were recorded the respondents were not asked to prioritise the activities in any way. In reality, the level of multiple activities recorded was 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.

In addition to the core information on the activities undertaken in the course of the Diary Day by the Study Child s/he was also asked to:

- (a) describe the Diary Day as:
- An ordinary day
  - A holiday or family celebration
  - A school holiday
  - A parent took some time off work
  - The family dealt with a crisis
  - A family member was away from home
  - One of the Study Child's parents was ill
  - The Study Child was ill
  - We had guests staying with us
- (b) indicate when the Diary was complete. Response options given were:
- Now and then during the Diary Day
  - At the end of the Diary Day
  - The day after the Diary Day
  - Later (date specified)

Only one of the above options could be ticked.

<sup>1</sup> The format of Time-Use Diary used in *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 (such as that used in *Growing Up in Ireland*) provides less detailed information it is substantially easier or less onerous for the respondent to complete. This was important in the context of an already intensive interview schedule administered to the participants in *Growing Up in Ireland*.

- (c) whether or not the Primary Caregiver completed the Time-Use Diary with the Study Child.

### 3. Administration of the Time-Use Diary

The Time-Use Diary was included as an integral component of the main interview in the Study Child's home. After the main household interview, the interviewer explained a completed sample version of the Time-Use Diary to the Primary Caregiver and Study Child. A copy of the completed sample Time-Use Diary was left with the family, along with a pen-and-paper version of the Diary itself for completion and return to the Study Team. Head office had pre-selected the day of the week on which the Diary should be completed (the "Diary Day"). This was written on the front of the Diary. This was done in an attempt to ensure a random allocation of days of the week, including weekend days. A pre-paid return envelope was also left and the Primary Caregiver was asked to post the completed Time-Use Diary directly back to Head Office<sup>2</sup>. To ensure as high a response rate as possible, two reminder mail shots were subsequently sent out by post to those families who had not responded within 4-6 weeks of the main interview.

### 4. Response Rates

A total of 6,412 Time-Use Diaries were returned from the 8,568 nine-year-old children who were interviewed in the main *Growing Up in Ireland* Wave 1 study. Unfortunately, 184 of these Diaries were deemed to be unusable. The main reasons for this were: too much missing information (i.e. too many missing time slots) and implausible information given (e.g. a Study Child having no or very limited sleep during what was described as an "ordinary day"). This gave a total of 6,228 usable Time-Use Diaries for analysis, representing an effective response rate of 72.6 per cent of participation in the main study, as summarised in Table 1.

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

	N	Response Rate %
<b>Total children in main study</b>	8,568	
<b>Total Time-Use Diaries returned:</b>	6,412	74.8%
<b>Returned unusable:</b>	184	
<b>Usable Time-Use Diaries:</b>	6,228	72.6%

<sup>2</sup> In situations in which the interviewer was returning to the family's home to complete questionnaires with any of the respondents (Study Child, Primary or Secondary Caregiver) the family was given the option of having the completed Time-Use Diary collected by the interviewer at that time.

## 5. Characteristics of the Sample

### 5.1 Day of the Week

A perfect randomisation of diaries across the seven days of the week should have resulted in 14.3 per cent of completed diaries for each day. Table 2 shows that Mondays and Tuesdays were somewhat over-reported (17.6 and 16.6 per cent respectively) with Saturdays and Sundays (12.1 and 11.0 per cent respectively) being under-represented. In some cases the respondent had scored through the assigned Diary Day and date and entered an alternative on the front of the Diary. In such cases it was this alternative day which is coded on the datafile. 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 2: Distribution of completed Time-Use Diaries by day of the week it was completed**

Diary Day	N	%
Monday	1,097	17.6
Tuesday	1,035	16.6
Wednesday	883	14.2
Thursday	919	14.8
Friday	857	13.8
Saturday	755	12.1
Sunday	682	11
<b>Total</b>	<b>6,228</b>	<b>100.1</b>

### 5.2 Month of the Year

As with the main family-based data collection for Wave 1 of the Child Cohort, the Time-Use data were collected between August 2007 and July 2008.

Given leads and lags of postal reminders issued subsequent to the Time-Use Diary first being left with respondents the month in which it was completed is not spread evenly throughout the year. An increase in returns was noted in the 7-10 days following reminder mail shots. The peak in Diary returns in April 2008 reflects a mail shot to all participants in the main study who had not completed a Time-Use Diary at that time. The analyst should note that this is the case as it may be relevant for some types of analysis. Table 3 presents a summary distribution of the completed and usable Time-Use Diaries by month of completion.

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

	Household Interviews	Time-Use Diaries
<b>AUG 2007</b>	12.8	8.2
<b>SEP 2007</b>	17.8	15.5
<b>OCT 2007</b>	19.4	19.2
<b>NOV 2007</b>	20.3	18.2
<b>DEC 2007</b>	7.5	8.9
<b>JAN 2008</b>	7.9	6.8
<b>FEB 2008</b>	2	2.4
<b>MAR 2008</b>	1.6	1.6
<b>APR 2008</b>	5	12.8

<b>MAY 2008</b>	2.9	3.9
<b>JUN 2008</b>	0.8	1.4
<b>JUL 2008</b>	2.1	1.2
<b>Total</b>	100.1	100.1

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

### 5.3 Completion Date

As outlined in Table 4, most diaries (61.8 per cent) were completed on the Diary day, with 32.5 per cent of respondents completing it “now and then during the day” and 29.3 per cent at the “end of the day”. It was completed the “day after the Diary Day” by 18.2 per cent of respondents and the remaining 9.2 per cent completed it “on a later date”. The date of Diary completion was not recorded in 11 per cent of completed diaries.

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

	<b>N</b>	<b>%</b>
Now and then during the Diary day	2,025	32.5
End of Diary day	1,825	29.3
Day after Diary day	1,131	18.2
Other day	576	9.2
Not recorded	671	10.8
<b>Total</b>	6,228	100

### 5.4 Nature of the Diary Day

Table 5 summarises whether or not the Diary Day was an “ordinary day”; a “holiday or family celebration”; a “school holiday” and so on. This indicates that most diaries (82.8 per cent) were completed on what was described by the respondent as an “ordinary day”. “Holiday or family celebrations”, “family members away from home” and “guests staying” were all more common at weekends than weekdays. Whether or not the child was on “school holidays” or not (14.2 per cent were on school holidays) could be an important variable in some analyses.

**Table 5: Description by respondent of the Diary Day.**

	<b>Weekday</b>	<b>Weekend</b>	<b>All</b>
Ordinary day	85.4%	74.3%	82.8%
Holiday or family celebration	2.3%	10.0%	4.1%
School holiday	12.8%	19.2%	14.2%
Parent took time off work	2.6%	1.9%	2.5%
Family death with crisis	0.4%	0.6%	0.5%
Family member away from home	2.9%	5.8%	3.6%
Parents ill	0.3%	1.1%	0.5%
Study child ill	0.7%	1.0%	0.8%
Guests staying	1.4%	4.6%	2.2%
Other	4.0%	7.2%	4.8%

## 6. Characteristics of Time-Use Respondents

Table 1 indicated an overall response rate of just under 73 per cent for usable Time-Use Diaries among participants in the main study. There was some differential response in terms of the characteristics of Study Children and their families who returned a usable Time-Use Diary. Table 6 shows that there was a slightly higher return of Diaries in respect of boys than girls (74.2 compared with 71.2 per cent). Diaries were more likely to be returned in respect of Study Children living in two-parent families in which the Primary Caregiver was somewhat older where the family was somewhat more advantaged in terms of educational attainment and family social class.

The table also presents adjusted odds ratios for completion of the Time-Use Diary. These show a strong, positive and significant effect of Primary Caregiver's education and age. Primary Caregiver's Principal Economic Status was also significant, response being higher among those not working outside the home or doing so on a part-time basis relative to those in employment on a full-time basis – most likely reflecting time constraints. Children whose Primary Caregiver was born in Ireland were also significantly more likely to complete (or have completed on their behalf) a Time-Use Diary. Family social class is not significant when Primary Caregiver's education is taken into account. It is clear from the table that this latter has the strongest relationship with return of the Time-Use Diary.

**Table 6: Time-Use Diaries returned broken down by respondent's characteristics**

		Response Rate	Logistic regression - Odds Ratio	
<b>Child's gender</b>	Boy	74.2%	1.08	
	Girl ( <i>reference</i> )	71.2%	1.00	
<b>Household type</b>	Single Parent 1 or 2 children	62.8%	2.05	***
	Single Parent 3+ children ( <i>reference</i> )	49.4%	1.00	
	Couple 1 or 2 children	75.3%	2.27	***
	Couple 3+ children	73.9%	1.99	**
<b>PCG age category</b>	30 or less	51.6%	1.00	
	31-39	69.1%	1.53	***
	40-49	77.8%	1.94	***
	50+	74.0%	1.94	**
<b>PCG principal economic status</b>	Not employed	72.1%	1.58	***
	Part-time hours (<35 hours)	74.7%	1.32	***
	Full-time hours (>=35 hours) ( <i>reference</i> )	68.9%	1.00	
<b>SCG primary economic status</b>	Not employed ( <i>reference</i> )	63.0%	1.00	
	Part-time hours (<35 hours)	79.2%	1.26	
	Full-time hours (>=35 hours)	75.9%	1.05	
<b>PCG highest level of education</b>	None or primary ( <i>reference</i> )	42.7%	1.00	
	Junior Certificate or equivalent	63.2%	2.22	***
	Leaving Certificate or equivalent	75.7%	3.57	***
	Certificate/Diploma	72.1%	2.90	***
	Primary	79.1%	4.17	***
	Postgrad	77.8%	3.44	***
<b>Household social class</b>	Professional Managers	79.9%	1.45	
	Managerial and Technical	77.5%	1.32	

	Non-manual	69.6%	1.09	
	Skilled manual	69.1%	1.03	
	Semi-skilled	64.6%	1.10	
	Unskilled ( <i>reference</i> )	57.7%	1.00	
<b>PCG Ethnicity</b>	Irish	73.6%	1.30	**
	Non-Irish ( <i>reference</i> )	63.8%	1.00	
<b>Household tenancy</b>	Owner occupied (with/without mortgage)	76.5%	1.68	***
	Rented from a Local Authority ( <i>reference</i> )	50.1%	1.00	
	Rented from a Private Landlord	57.0%	1.05	
	Other	77.8%	1.16	

p < 0.05, \*\* , p < 0.01, \*\*\* p < 0.001

## 7. Reweighting the Time-Use Data

The differential response by family background characteristics has implications for the representativeness of the Time-Use Diary data. To ensure that they are representative of the entire population of nine-year-old children in Ireland a system of statistical weights was generated and included in the archived datafile. As with all statistical surveys this is best practice and these weights should be applied in all analysis.

The completed sample of Time-Use Diaries is effectively a subsample of the main sample of 9-year-olds. As noted in Table 1, a total of 6,228 Time-Use Diaries were completed in respect of the 8,568 children in the main study. Statistically adjusting the data involved re-weighting the Time-Use file to adjust it from a base of 6,228 to 8,568 in such a way as to ensure that the sub-sample of children in respect of whom Time-Use Diaries had been completed were representative (in terms of the socio-demographic structure) of the full sample of 8,568 children.

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

<b>Child's gender</b>	(girl, boy)
<b>Family type</b>	(one-parent, 1-2 children; one-parent, 2+ children; two-parent, 1-2 children; two-parent, 2+ children)
<b>PCG's age group</b>	(30 or less yrs; 31-39 yrs; 40-49 yrs; 50+ yrs)
<b>PCG's employment status</b>	(not employed; employed part-time; employed full-time)
<b>PCG's education</b>	(primary or less; Junior Certificate; Leaving certificate; Certificate/Diploma; Degree)
<b>Family Social Class</b>	(Professional; Managerial; Non-manual; Skilled Manual; Semi-skilled manual; Unskilled Manual; Class not assigned)
<b>Country of birth</b>	(Irish; Other)

**Accommodation**

**Tenure** (Owner occupied; rented from the Local Authority; Private Rental; Other).

The final Time-Use 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 children for whom Time-Use 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 Study Children by their socio-demographic characteristics in the completed Time-Use Diary dataset matched the distribution of all nine-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 nine-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 (WGTTIME9YR) and a grossing factor (GROSSTIME9YR) are provided on the Time-Use datafile. Both of these will give the same percentage breakdown as the population. WGTTIME9YR has been rescaled from GROSSTIME9YR to yield 6,228 cases (the number of completed and usable Time-Use Diaries). The weighting factor will sum to the total number of relevant cases in the completed sample of Time-Use 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 nine-year old children 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, WGTTIME9YR and GROSSTIME9YR statistically adjust the 6,228 respondents in respect of whom a usable Time-Use Diary was returned to provide representative estimates for the population of all nine-year-olds as a whole. Effectively, the weighting and grossing factors in question adjust the 6,228 respondents with a completed Time-Use Diary to the total population of nine-year-olds, just as the weighting and grossing factors do when applied to the full sample of 8,568 respondents in the main AMF and RMF for the nine-year-olds. In other words, the full weighted/grossed AMF/RMF containing 8,568 cases should give the same estimated population breakdown as the weighted/grossed subsample of 6,228 cases which was included in the Time-Use file.

Table 7 compares summary details on the weighted breakdown of the 8,568 cases in the full AMF/RMF data with those from the 6,228 subsample of cases in respect of whom Time-Use 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>3</sup>. The table indicates clearly that there is virtually no difference between the weights breakdown of the full AMF/RMF (with 8,568 cases) and the subsample for whom usable Time-Use Diaries were returned (6,228 cases).

**Table 7: Comparison of weighted breakdowns of 8,568 cases in full AMF/RMF data with those from 6,228 cases in the subsample for whom usable Time-Use Diaries are available.**

	weighted wgt_9yr		weighted wgttime9yr	
	N	%	N	%
	<b>8,568</b>		<b>6,228</b>	
<b>Gender</b>				
Male	4377	51.1	3175	51.0
Female	4190	48.9	3053	49.0
<b>Household Type</b>				
Single Parent 1 or 2 children	980	11.4	716	11.5
Single Parent 3 or more children	573	6.7	417	6.7
Couple 1 or 2 children	3004	35.1	2167	34.8
Couple 3 or more children	4011	46.8	2927	47.0
<b>Primary Caregiver Age Category</b>				
30 or less	757	8.8	529	8.5
31-39	3528	41.2	2564	41.2
40-49	4011	46.8	2943	47.2
50+	272	3.2	192	3.1
<b>Primary Caregiver Primary Economic Status</b>				
Not employed	3977	46.4	2878	46.2
Part-time hours (<35 hours)	3417	39.9	2490	40.0
Full-time hours (>=35 hours)	1129	13.2	837	13.4
Missing	46	0.5	23	0.4
<b>Secondary Caregiver Primary Economic Status</b>				
Not employed	607	7.1	440	7.1
Part-time hours (<35 hours)	513	6	400	6.4
Full-time hours (>=35 hours)	5400	63	3935	63.2
No resident SCG	1554	18.1	1134	18.2
Missing	495	5.8	320	5.1
<b>Primary caregiver highest level of education</b>				
Primary or less	549	6.4	403	6.5
Junior Certificate	2035	23.8	1483	23.8
Leaving Certificate or equivalent	3145	36.7	2302	37.0
Certificate/Diploma	1363	15.9	978	15.7
Degree	962	11.2	679	10.9
Postgrad	514	6	384	6.2
<b>Household Social Class</b>				

<sup>3</sup> One would, by definition, expect that the weighted breakdown of the controlled variables in the sub-sample of 6,228 cases from whom Time-Use information is available would correspond exactly with the breakdown from the weighted AMF/RMF file of 8,568 cases.

Professional Managers	705	8.2	525	8.4
Managerial and Technical	2850	33.3	2085	33.5
Non-manual	1612	18.8	1169	18.8
Skilled manual	1420	16.6	1041	16.7
Semi-skilled	794	9.3	570	9.2
Unskilled	147	1.7	100	1.6
Validly no social class	885	10.3	624	10.0
Missing	154	1.8	112	1.8
<b>Primary Caregiver Ethnicity</b>				
Irish	7814	91.2	5673	91.1
Non-Irish	754	8.8	555	8.9
<b>Household tenancy</b>				
Owner occupied	6634	77.4	4852	77.9
Rented from Local Authority	1068	12.5	756	12.1
Rented privately	591	6.9	428	6.9
Other	275	3.2	192	3.1
<b>Study Childs health past year</b>				
Very healthy, no problems	6264	73.1	4575	73.5
Healthy, but a few minor problems	2170	25.3	1565	25.1
Sometimes quite ill	125	1.5	85	1.4
Almost always unwell	9	0.1	3	0
<b>Study Child right or left handed</b>				
Right handed	7423	86.6	5421	87.0
Left handed	1133	13.2	804	12.9
Don't know	11	0.1	2	0
<b>How often do you (PCG) try to lose weight</b>				
Very often	992	11.6	696	11.2
Often	984	11.5	725	11.6
Sometimes	1846	21.5	1301	20.9
Rarely	1109	12.9	801	12.9
Never	3637	42.4	2705	43.4
<b>Has Study Child been a victim of bullying in the last year</b>				
Yes	2012	23.5	1449	23.3
No	6547	76.4	4774	76.7
Don't know	10	0.1	5	0.1
<b>Would you describe yourself as religious/spiritual</b>				
Not at all	742	8.7	552	8.9
A little	3246	37.9	2384	38.3
Quite	2849	33.3	2111	33.9
Very much so	1525	17.8	1055	16.9
Extremely	195	2.3	123	2.0
Don't know	10	0.1	4	0.1
<b>How well doing in school work</b>				

Well	5329	62.2	3851	61.8
Average/ok	3086	36	2283	36.7
Poorly	81	0.9	58	0.9
Don't know	72	0.8	36	0.6
<b>Total</b>	<b>8568</b>	<b>100</b>	<b>6228</b>	<b>100</b>

## 8. Data Issues

As with all questionnaire-based data there were some data quality issues with the raw Time-Use data returned from the field. These most notably related to missing data or implausible data. Some initial data edits 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 datafile, 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 outcomes. Cases which were missing for 5 or more hours out of the day were dropped from the dataset as it was deemed that these would have been of limited value in analysis and could be addressed in the statistical adjustment (re-weighting of the data). A total of 77 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 did some initial checks on the plausibility of the Time-Use data returned from the field in an attempt to identify any obvious, systematic errors in completion of the diaries. Checks such as children not sleeping during the night-time, sleeping during the day-time, going to school at weekends and so on revealed small numbers of cases in which children were reported as being involved in an activity pattern which may seem implausible. In many of these situations a plausible explanation could potentially be addressed. Some apparently implausible sleeping patterns<sup>4</sup> could be ascribed to illness. 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. There was also an issue with defining which days were in school term time and which were not in term time. In general, schools 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 analysis.

<sup>4</sup> This is different to missing data between 12.00am and 6.00am referred to in the previous paragraph.

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## **9. Summary Breakdown of Activities**

Table 8 gives a summary breakdown of the activities in which children were engaged over the course of the Diary day, broken down separately for weekdays and weekends both within term and out of term. As children 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.

**Table 8: Summary breakdown of time spent in various activities (measured in minutes) classified by weekday; weekend and also in-term and out-of-term**

	<b>In term</b>					
	<b>Weekday</b>		<b>Weekend</b>		<b>Total</b>	
	Minutes	Per Cent	Minutes	Per Cent	Minutes	Per Cent
Sleeping	628	42.9	673	45.9	638	43.6
Resting/relaxing	33	2.3	46	3.1	36	2.5
Personal care	36	2.5	42	2.9	37	2.5
Eating/drinking/having a meal	64	4.4	85	5.8	69	4.7
Travelling to and from school	35	2.4	1	0.1	27	1.9
Other travelling	16	1.1	50	3.4	24	1.6
At school	340	23.2	12	0.9	268	18.3
Homework	46	3.1	5	0.3	37	2.5
Physical play/exercise/sports	62	4.2	101	6.9	71	4.8
Playing board games, cards etc.	7	0.5	13	0.9	8	0.6
General play	31	2.1	62	4.2	38	2.6
Hobbies and other leisure activities	16	1.1	24	1.6	18	1.2
Computer/internet /play station / x-box etc.	18	1.2	36	2.4	22	1.5
Email/ bebo / msn / texting/ on the phone	3	0.2	5	0.3	4	0.2
Watching tv and videos/dvds etc	59	4.0	108	7.4	70	4.8
Reading books, comics, magazines etc.	21	1.5	24	1.7	22	1.5
Household chores / housework	6	0.4	16	1.1	8	0.6
Visits to a relative's house for purposes other than play	8	0.6	36	2.4	14	1.0
On a family outing	5	0.3	49	3.3	14	1.0
On a shopping trip	6	0.4	32	2.2	12	0.8
Religious activity	1	0.1	17	1.1	5	0.3
Not Sure	1	0.1	3	0.2	2	0.1
Missing	19	1.3	25	1.7	21	1.4
	1462	100.0	1464	100.0	1463	100.0
	<b>Out of term</b>					
	<b>Weekday</b>		<b>Weekend</b>		<b>Total</b>	
	Minutes	Per Cent	Minutes	Per Cent	Minutes	Per Cent
Sleeping	665	45.5	676	46.2	668	45.7
Resting/relaxing	45	3.1	49	3.4	47	3.2
Personal care	37	2.5	43	2.9	39	2.7
Eating/drinking/having a meal	87	6.0	88	6.0	87	6.0
Travelling to and from school	3	0.2	3	0.2	3	0.2
Other travelling	40	2.7	38	2.6	39	2.7
At school	24	1.6	17	1.1	21	1.5
Homework	8	0.5	7	0.4	8	0.5
Physical play/exercise/sports	133	9.1	99	6.8	123	8.4
Playing board games, cards etc.	15	1.0	10	0.7	13	0.9

General play	68	4.6	56	3.8	64	4.4
Hobbies and other leisure activities	21	1.4	17	1.2	20	1.3
Computer/internet /play station / x-box etc.	33	2.2	29	2.0	32	2.2
Email/ bebo / msn / texting/ on the phone	4	0.3	6	0.4	5	0.3
Watching tv and videos/dvds etc	95	6.5	110	7.5	100	6.8
Reading books, comics, magazines etc.	28	1.9	28	1.9	28	1.9
Household chores / housework	20	1.4	17	1.1	19	1.3
Visits to a relative's house for purposes other than play	24	1.7	48	3.3	31	2.1
On a family outing	46	3.1	63	4.3	51	3.5
On a shopping trip	35	2.4	27	1.9	33	2.2
Religious activity	2	0.1	17	1.1	6	0.4
Not Sure	4	0.3	3	0.2	4	0.3
Missing	23	1.6	17	1.2	21	1.5
	1460	99.9	1467	100.2	1462	100.0
	<b>Total</b>					
	<b>Weekday</b>		<b>Weekend</b>		<b>Total</b>	
	Minutes	Per Cent	Minutes	Per Cent	Minutes	Per Cent
Sleeping	633	43.3	673	46.0	642	43.9
Resting/relaxing	35	2.4	46	3.2	37	2.6
Personal care	36	2.5	42	2.9	37	2.6
Eating/drinking/having a meal	67	4.6	85	5.8	71	4.9
Travelling to and from school	31	2.1	2	0.1	24	1.6
Other travelling	19	1.3	48	3.3	26	1.8
At school	299	20.5	13	0.9	233	15.9
Homework	41	2.8	5	0.3	33	2.2
Physical play/exercise/sports	71	4.9	101	6.9	78	5.3
Playing board games, cards etc.	8	0.6	13	0.9	9	0.6
General play	35	2.4	61	4.2	41	2.8
Hobbies and other leisure activities	17	1.1	22	1.5	18	1.2
Computer/internet /play station / x-box etc.	20	1.3	34	2.3	23	1.6
Email/ bebo / msn / texting/ on the phone	3	0.2	5	0.4	4	0.3
Watching tv and videos/dvds etc	64	4.3	109	7.4	74	5.1
Reading books, comics, magazines etc.	22	1.5	25	1.7	23	1.6
Household chores / housework	8	0.6	16	1.1	10	0.7
Visits to a relative's house for purposes other than play	10	0.7	38	2.6	17	1.1
On a family outing	10	0.7	51	3.5	19	1.3
On a shopping trip	10	0.7	31	2.1	15	1.0
Religious activity	1	0.1	17	1.1	5	0.3
Not Sure	2	0.1	3	0.2	2	0.1
Missing	20	1.3	24	1.6	21	1.4
	1462	100.0	1465	100.0	1463	100.0

One can see that the level of missingness is quite low, 20-24 minutes between the weekday and weekends. In addition to this only 2-3 minutes were classified as “Not Sure” by respondents.

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## 10. Matching Time-Use data to Main GUI Child Cohort Wave 1 datafile

To complete analysis on the Time-Use data, the analyst will have to match it to the AMF/RMF for the Child Cohort at Wave 1. 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 8,568 cases in the first wave of the Child Cohort and 6,228 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\*TIME9YR and GROSSTIME9YR).

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## 11. Using SPSS Syntax

The syntax below will open the Wave 1 Child Cohort datafile, sort it by the anonymised ID code and match to it the Time-Use datafile (using the anonymised ID code). It then saves a matched file with the Wave 1 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 wave1 name = "C:\GUI\GUI Data_9YearCohort.sav".
FILE HANDLE time name = "C:\GUI\GUI Data_9YearCohort_TimeUse.sav".

FILE HANDLE merged name = " C:\GUI \GUI Data_9YearandTimeUse.sav".

GET file = wave1.
SORT CASES by ID.
MATCH FILES file = * / file = time / by id / map.

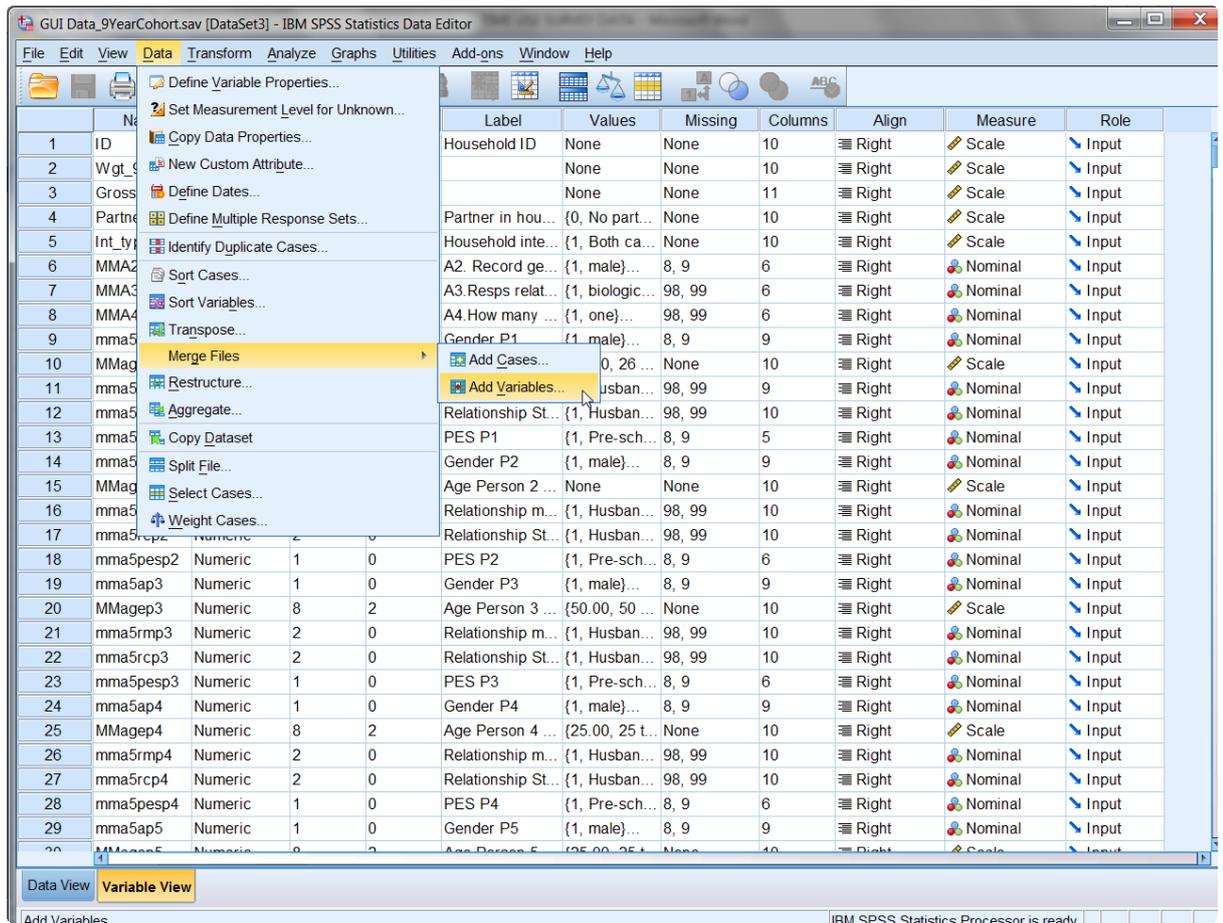
SAVE OUTFILE merged.
```

---

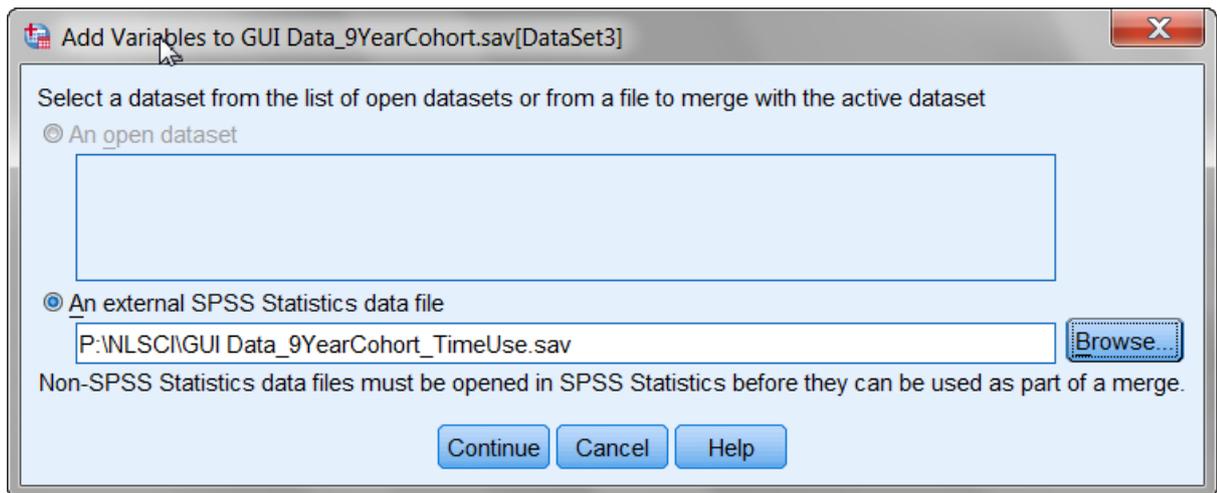
## 12. Using SPSS Drop Down Menus

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

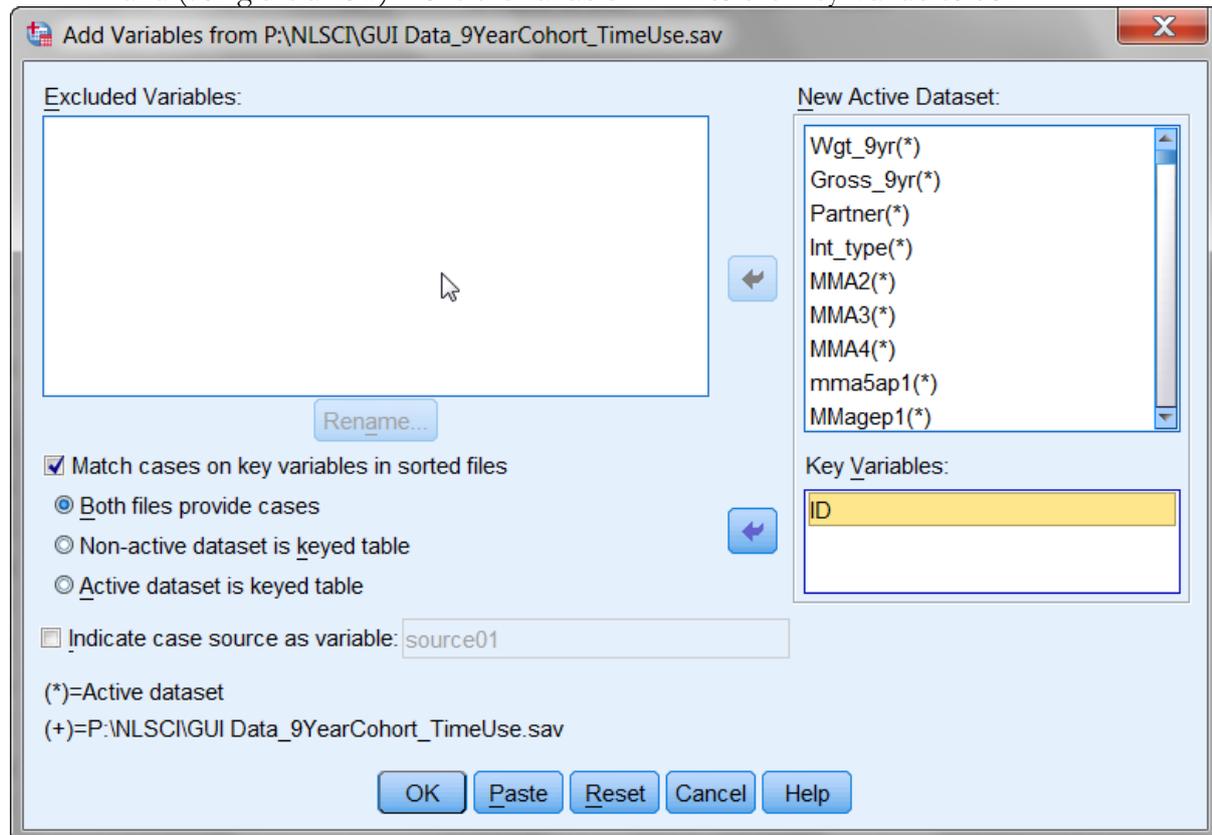
1. Open the first Wave datafile - GUI Data\_9YearCohort.sav
2. Click Merge → Merge Files → Add variables



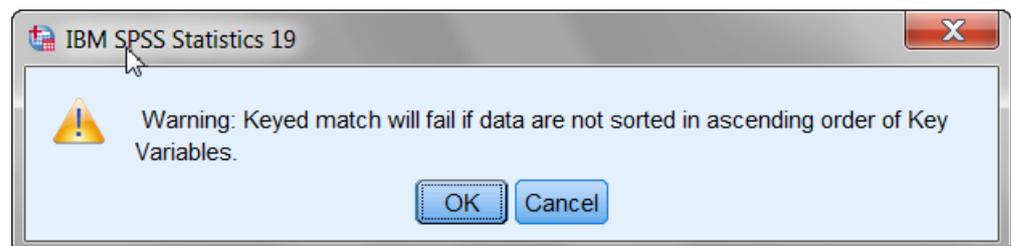
3. This will bring up the following dialog box. Click browse and select the location of the Time-Use datafile – GUI Data\_9YearCohort\_TimeUse.sav



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 'zid01'. Click 'ok'.



6. The matched file will contain 8,568 cases with all the variables from the first 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 datafile.
7. This matched file should be saved under a new name (for e.g. GUI Data\_9YearandTimeUse.sav). SIMPLY SAVING THE FILE WILL OVERWRITE THE ORIGINAL FIRST WAVE CHILD COHORT FILE.

# APPENDIX A – TIME-USE DIARY

T1. Would you describe the diary day as: [Tick all that apply]

An ordinary day	<input type="checkbox"/>	1	A family member was away from home	<input type="checkbox"/>	6
A holiday or family celebration	<input type="checkbox"/>	2	One of the Study Child's parents was ill	<input type="checkbox"/>	7
A school holiday	<input type="checkbox"/>	3	The Study Child was ill	<input type="checkbox"/>	8
A parent took some time off work	<input type="checkbox"/>	4	We had guests staying with us	<input type="checkbox"/>	9
The family dealt with a crisis	<input type="checkbox"/>	5		<input type="checkbox"/>	10

T2. When did you fill in the diary? Please tick (✓) one box.

Now and then during the diary day.....

At the end of the diary day.....

The day after the diary day.....

Later.....

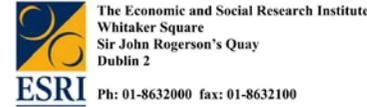
T3. About how many days after? \_\_\_\_\_ days after

T4. Did you complete it with Study Child? Yes.....

No.....

**PLEASE RETURN THIS COMPLETED TIMEUSE DIARY IN THE ENCLOSED PRE-PAID ENVELOPE TO THE ECONOMIC AND SOCIAL RESEARCH INSTITUTE (ESRI).**

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



Area Code  Household Code  Respondent Code

***GROWING UP IN IRELAND – the national longitudinal study of children***

**Time Use Diary**

**STRICTLY CONFIDENTIAL**

As part of the *Growing Up in Ireland* 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.

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.

**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 \_\_\_\_\_

<i>Activity</i>	<i>am</i>											
	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												
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 games, matches etc)												
7. AT SCHOOL												
8. HOMEWORK												
9. PHYSICAL PLAY/EXERCISE/SPORTS (playground, running, chasing, football, judo, ballet,dance)												
10. PLAYING BOARD GAMES, CARDS etc.(card games, snakes & ladders, Monopoly, Trivial Pursuit 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/ BEBO / 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 (shopping for groceries, clothes etc.)												
21. RELIGIOUS ACTIVITY (attending religious services, prayer etc.)												
22. NOT SURE												

<i>Activity</i>	<i>pm</i>											
	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												
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 games, matches etc)												
7. AT SCHOOL												
8. HOMEWORK												
9. PHYSICAL PLAY/EXERCISE/SPORTS (playground, running, chasing, football, judo, ballet,dance)												
10. PLAYING BOARD GAMES, CARDS etc.(card games, snakes & ladders, Monopoly, Trivial Pursuit 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/ BEBO / 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 (shopping for groceries, clothes etc.)												
21. RELIGIOUS ACTIVITY (attending religious services, prayer etc.)												
22. NOT SURE												