



# Introduction to using the Growing Up in Ireland time-use diary data

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# Overview of presentation

- What is a Time Use Diary
- Why use Time Use Diary data
- Summary of GUI Time Use Diary data available
- Activities recorded in GUI
- Preparation of GUI Time Use Diary data
- How to use the GUI Time Use Diary data
- Multiple activities
- Considering when diary completed
- Activities at 9, 13 and 17/18 years of age

# What is a Time Use Diary

- Record of activities
- ‘Heavy’ diary
  - Fuller picture of activities
  - Higher response burden – lower response rate
  - Multiple days
  - Who with and where
- ‘Light’ diary
  - Less detailed picture of activities
  - Lower response burden – higher response rate
- ‘Yesterday’ diary
  - Recorded by interviewer
  - ‘Event’ basis recording
- ‘Tomorrow’ diaries
  - Self-completed and returned by respondent
  - Regular time-slots & ‘closed’ categories

# Why use Time Use Diary data

## Questionnaire data

- Broad categories
- Retrospective data
- Recall bias
- Social desirability

## Time – Use Diary data

- May be an atypical day
- Only one 24-hour period – may not capture activities not done everyday (e.g. laundry) – under-reporting

- Despite the potential for underestimation, comparisons of questionnaires and time use diaries found the latter yield more precise, valid and reliable data (Lachance-Grzela and Bouchard, 2010)
- GUI data has both!

# GUI Time Use Diary

- 96 15-minute slots in the day – from 00:00-00:15 to 23:45-24:00
- List of activities – tick box to indicate which activity was being undertaken in each time slot
- Completed by Study Child and/or Primary Caregiver
- Specified diary day to ensure we got an even spread of weekday and weekend data

# Collection of Time Use Diary

- Diary (with sample completed diary) left for self-completion
- Interviewer specifies which day the diary is to be completed, for e.g. the next Tuesday following the interview
- Prepaid envelop provided for postal return
- Up to two reminders sent if not returned
- Note there may be a lag between main interview and completion of Time Use Diary

# Summary of GUI Time Use Diary data available

- Child Cohort '98
  - 9 Years – 6,228 / 8,568 (73%)
  - 13 years – 5,023 / 7,525 (68%)
  - 17/18 years – 3,622 / 6,216 (58%)
  - 20 years (collected but not yet archived)
- Infant Cohort '08
  - 9 Years (collected but not yet archived)
- Separate 'Time Use weight' to account for lower response rate
- Available as stand-alone files with a unique ID which allows matching to the AMF (from ISSDA) or the RMF (from CSO)
- Presentation focus on Child Cohort 9, 13, 17/18 year





# 9 Year activities

<i>Activity</i>
<b>1. SLEEPING</b>
<b>2. RESTING/RELAXING</b> (doing nothing, 'time out')
<b>3. PERSONAL CARE</b> (washing, dressing, toilet)
<b>4. EATING/DRINKING/HAVING A MEAL</b>
<b>5. TRAVELLING TO AND FROM SCHOOL</b>
<b>6. OTHER TRAVELLING</b> (incl. leisure and domestic trips; dropping to games, matches etc)
<b>7. AT SCHOOL</b>
<b>8. HOMEWORK</b>
<b>9. PHYSICAL PLAY/EXERCISE/SPORTS</b> (playground, running, chasing, football, judo, ballet,dance)
<b>10. PLAYING BOARD GAMES, CARDS etc.</b> (card games, snakes & ladders, Monopoly, Trivial Pursuit etc)
<b>11. GENERAL PLAY</b> (with toys, dolls,cars etc.dressing up, 'playing house',imaginary or make believe games)
<b>12. HOBBIES AND OTHER LEISURE ACTIVITIES</b> (crafts, model making, painting, music practice etc.)
<b>13. COMPUTER/INTERNET /PLAY STATION / X-BOX etc.</b> (playing on computer, with computer games)
<b>14. EMAIL/ BEBO / MSN / TEXTING/ ON THE PHONE</b> (contacting, messaging friends or others)
<b>15. WATCHING TV AND VIDEOS/DVDS etc</b>
<b>16. READING BOOKS, COMICS, MAGAZINES ETC.</b>
<b>17. HOUSEHOLD CHORES / HOUSEWORK</b>
<b>18. VISITS TO A RELATIVE'S HOUSE FOR PURPOSES OTHER THAN PLAY</b>
<b>19. ON A FAMILY OUTING</b> ( a trip out as a family)
<b>20. ON A SHOPPING TRIP</b> (shopping for groceries, clothes etc.)
<b>21. RELIGIOUS ACTIVITY</b> (attending religious services, prayer etc.)
<b>22. NOT SURE</b>

# 13 Year activities

<i>Activity</i>	AM →
<b>1. SLEEPING / RESTING</b> (including time trying to get to sleep, trying to get up)	
<b>2. PERSONAL CARE OR GETTING READY</b> (showowering, 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)	
<b>3. EATING</b> (breakfast, lunch, dinner, tea)	
<b>4. TRAVELLING</b> (to or from school or elsewhere)	
<b>5. AT SCHOOL</b>	
<b>6. DOING HOMEWORK OR STUDY</b>	
<b>7. JUST HANGING AROUND WITH FRIENDS</b> (outside or inside)	
<b>8. SPENDING TIME WITH FAMILY</b>	
<b>9. PLAYING WITH OR EXERCISING A PET</b>	
<b>10. PLAYING SPORT OR DOING PHYSICAL EXERCISE</b> (training, matches)	
<b>11. USING THE INTERNET / EMAILING</b> (including social networking, browsing etc)	
<b>12. PLAYING COMPUTER GAMES</b> (e.g. Playstation, PSP, X-Box or Wii)	
<b>13. TALKING ON THE PHONE OR TEXTING</b>	
<b>14. MUSIC LESSONS (OR PRACTICING MUSIC), DRAMA, CLASSES ETC</b>	
<b>15. WATCHING TV, FILMS, VIDEOS OR DVDS</b>	
<b>16. LISTENING TO MUSIC</b>	
<b>17. READING FOR PLEASURE OR INTEREST (NOT FOR SCHOOL)</b>	
<b>18. HOUSEWORK</b> (preparing food, tidying bedroom, feeding pets)	
<b>19. HOBBIES AND OTHER LEISURE ACTIVITIES</b>	
<b>20. ON AN OUTING</b> (e.g. to the beach, to the mountains, to a shopping centre, to the theatre, to a match etc)	
<b>21. OUT SHOPPING TO BUY THINGS</b> (groceries, clothes etc).	
<b>22. OTHER 1 (SPECIFY)</b>	
<b>23. OTHER 2 (SPECIFY)</b>	
<b>24. OTHER 3 (SPECIFY)</b>	
<b>25. OTHER 4 (SPECIFY)</b>	

# 17/18 Year Activities

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

# Preparation of Time Use Diary

- Initial data edits
- Missing time slots between 12am and 6am – coded as ‘Sleep’
- No other imputations
- Missing > 5hours dropped from data file
- Plausibility checks – sleeping during the day, school at weekend etc.
  
- Activity may not last the full 15 mins – possible overestimation

# Time Use Diary Data

9	bt00_1_A1	Numeric	2	0	T00.00 - 00.15am Activity 1	{1, Sleeping}...
10	bt00_1_A2	Numeric	2	0	T00.00 - 00.15am Activity 2	{1, Sleeping}...
11	bt00_1_A3	Numeric	2	0	T00.00 - 00.15am Activity 3	{1, Sleeping}...
12	bt00_2_A1	Numeric	2	0	T00.15 - 00.30am Activity 1	{1, Sleeping}...
13	bt00_2_A2	Numeric	2	0	T00.15 - 00.30am Activity 2	{1, Sleeping}...
14	bt00_2_A3	Numeric	2	0	T00.15 - 00.30am Activity 3	{1, Sleeping}...
15	bt00_3_A1	Numeric	2	0	T00.30 - 00.45am Activity 1	{1, Sleeping}...
16	bt00_3_A2	Numeric	2	0	T00.30 - 00.45am Activity 2	{1, Sleeping}...
17	bt00_3_A3	Numeric	2	0	T00.30 - 00.45am Activity 3	{1, Sleeping}...
18	bt00_4_A1	Numeric	2	0	T00.45 - 01.00am Activity 1	{1, Sleeping}...
19	bt00_4_A2	Numeric	2	0	T00.45 - 01.00am Activity 2	{1, Sleeping}...
20	bt00_4_A3	Numeric	2	0	T00.45 - 01.00am Activity 3	{1, Sleeping}...

- SPSS variable view
- 96 time slots by 3 activities – 288 variables
- 22 answer categories in each variable

# How to use the Time Use Diary data

- Calculate total time for each activity
- Count 'slots' for each activity, multiple by 15mins to give total number of minutes on each activity
- Divide by 60 to give total hours
- *All files to be re-issued with this calculation already made*
- Focus on activity of interest or regroup the activities in a way that makes sense for your research question
- Split analysis into weekday/weekend; term-time/out of term-time
- Use total time; some/none; high/low

# How to use the Time Use Diary data

- Use time use data in conjunction with main survey data
- Match to AMF / RMF using unique 'ID' (documentation gives instructions on how to do this in SPSS)
- How time use differs for different groups of children
- How children's outcomes differ for different types of time use

# Multiple activities

- Multiple activities –asked to only record their ‘main activity’, but many recorded multiple activities so these have been kept on the file
- 9 years up to 5 activities
- 13 years up to 3 activities
- 17/18 years up to 3 activities
- How to decide what is main activity?
- Include all in total count
- Considering asking specifically for multiple activities at next wave – ‘heavy’ time-use diary



# When diary completed

	9yr	13yr	17/18yr
	%	%	%
1 Now and then during the diary day	36.4	25.6	25.2
2 End of diary day	32.8	36.5	40.4
3 Day after diary day	20.4	25.4	23.0
4 Later	10.4	12.6	11.5

# Diary Day

	<b>9yr</b>	<b>13yr</b>	<b>17/18yr</b>
	%	%	%
1 Monday	17.6	15.4	14.6
2 Tuesday	16.6	15.2	14.6
3 Wednesday	14.2	14.8	14.7
4 Thursday	14.8	13.8	14.9
5 Friday	13.8	14.2	14.7
6 Saturday	12.1	13.3	14.1
7 Sunday	11.0	13.3	12.5

# Diary month

	9yr	13yr	17/18yr
	%	%	%
1 JAN	6.9	8.7	8.0
2 FEB	2.4	7.9	10.9
3 MAR	1.5	11.6	14.8
4 APR	12.8	1.0	23.0
5 MAY	3.9	0.7	14.4
6 JUN	1.4	0.4	9.5
7 JUL	1.2	0.0	6.9
8 AUG	8.4	2.0	3.2
9 SEP	15.4	13.8	1.5
10 OCT	19.1	19.9	1.2
11 NOV	18.1	21.6	1.9
12 DEC	8.9	12.4	4.5

# Weekend / Term time

	9yr	13yr	17/18yr
	%	%	%
1 Weekday	76.9	73.4	73.4
2 Weekend	23.1	26.6	26.5

	9yr	13yr	17/18yr
	%	%	%
1 In school term	85.9	90.2	72.3
2 On school holidays	14.1	9.8	27.7

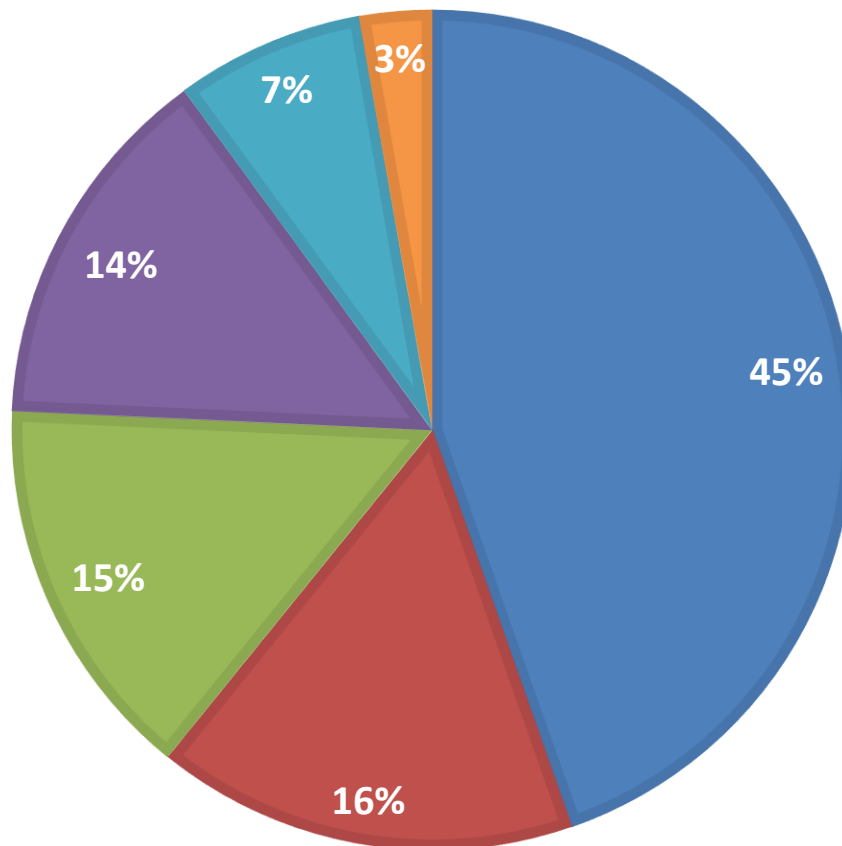
# 7 categories of activities

- Sleep
- School
- Non-discretionary:
  - Eating
  - Homework
  - Household chores
  - Shopping
  - Personal care
  - Travelling
- Discretionary:
  - General play (9yr)
  - Hobbies/other leisure activities
  - Physical play/exercise/sports
  - Playing board games (9yr)
  - Reading
  - Resting / hanging around
  - Listening to music
  - Playing / exercising a pet (13&17/18yr)
  - Music lessons, drama classes etc. (13&17/18yr)
- Screen/phones:
  - Computer/internet/playstation (9yr)
  - Email/Bebo/MSN/Texting (9yr)
  - Watching TV/Videos/DVDs
  - Internet/emailing (13&17/18yr)
  - Playing computer games (13&17/18yr)
  - Talking on phone/texting (13&17/18yr)
- Family time:
  - Family outing (9yr)
  - Religious activities (9yr)
  - Visits to a relative (9yr)
  - Spending time with family (13&17/18yr)
- 17/18yr activities:
  - Going to discos/bars
  - Going to parties/social events in peoples houses
  - Work

# Time Use at 9 years

9YR

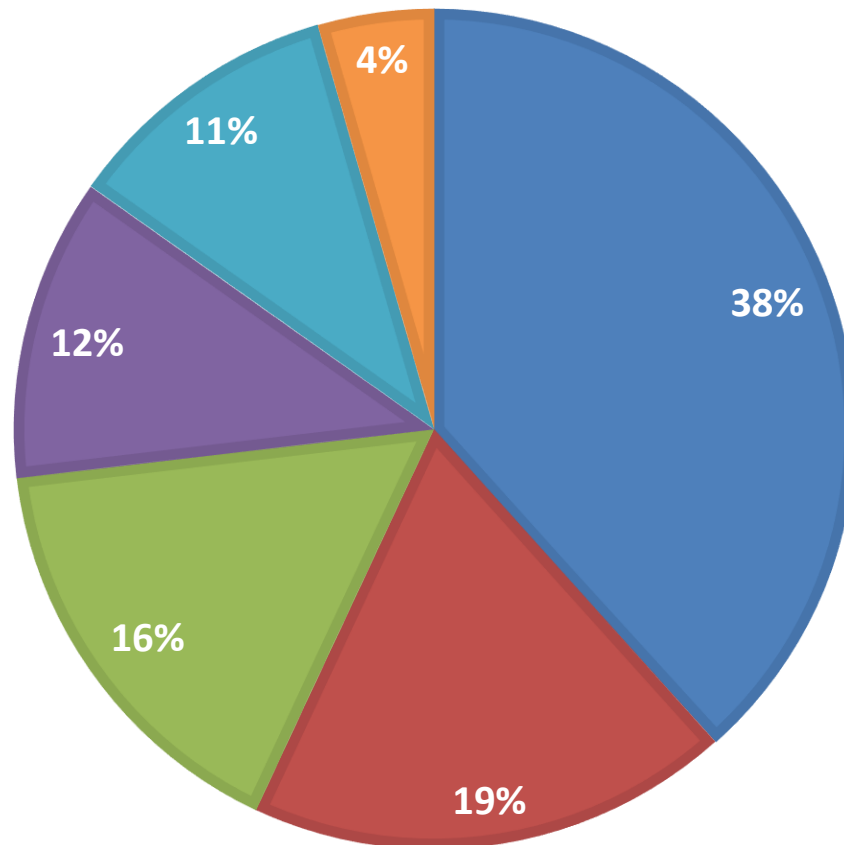
■ Sleep ■ School ■ Non-discretionary ■ Discretionary ■ Screen ■ Family



# Time Use at 13 years

13YR

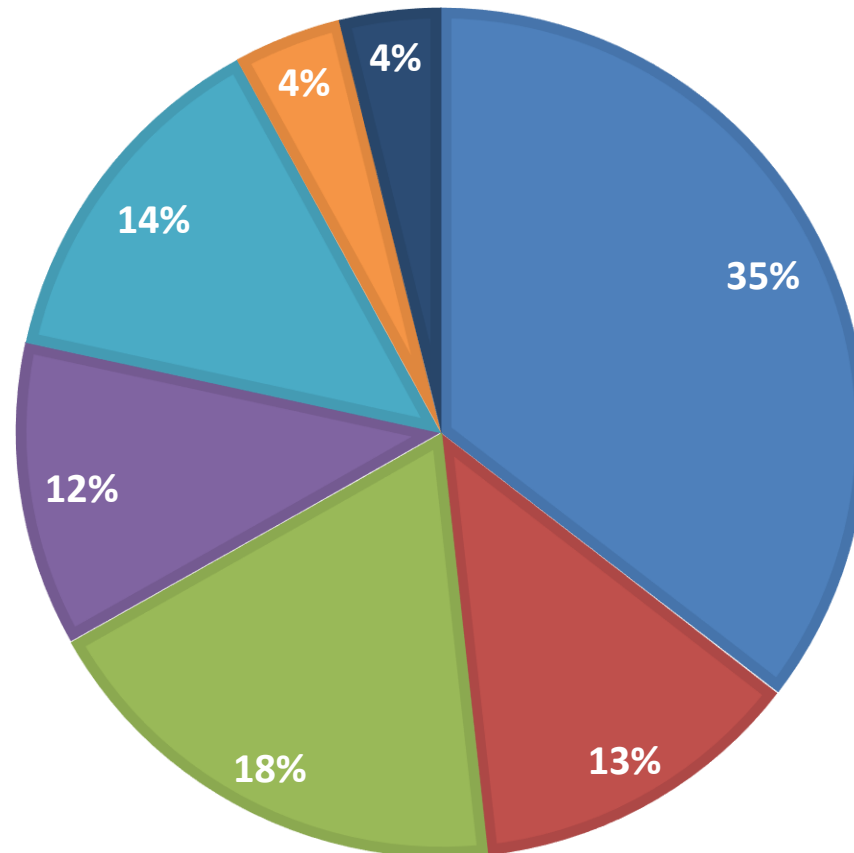
■ Sleep ■ School ■ Non-discretionary ■ Discretionary ■ Screen ■ Family



# Time Use at 17/18 years

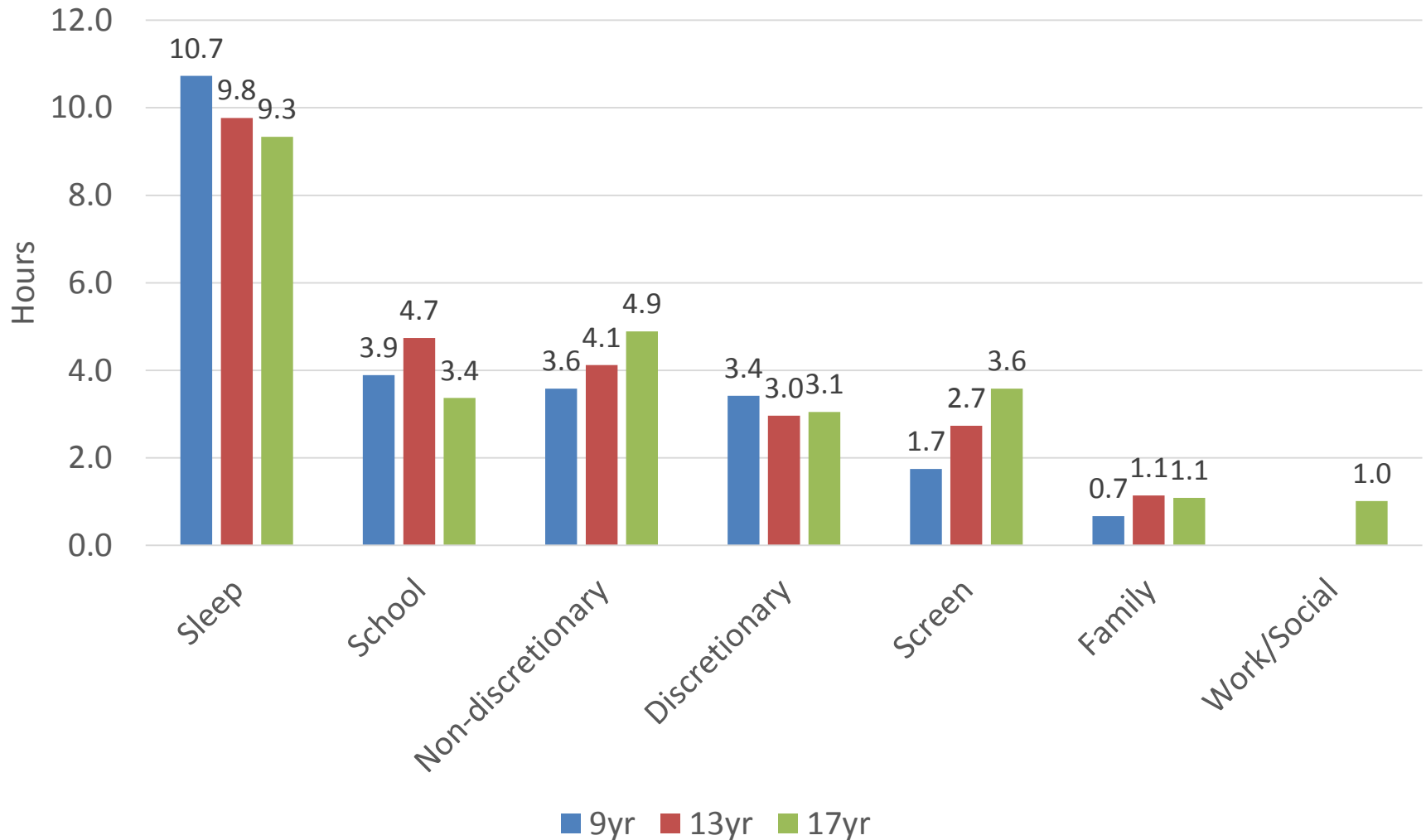
17YR

■ Sleep ■ School ■ Non-discretionary ■ Discretionary ■ Screen ■ Family ■ Work/Social



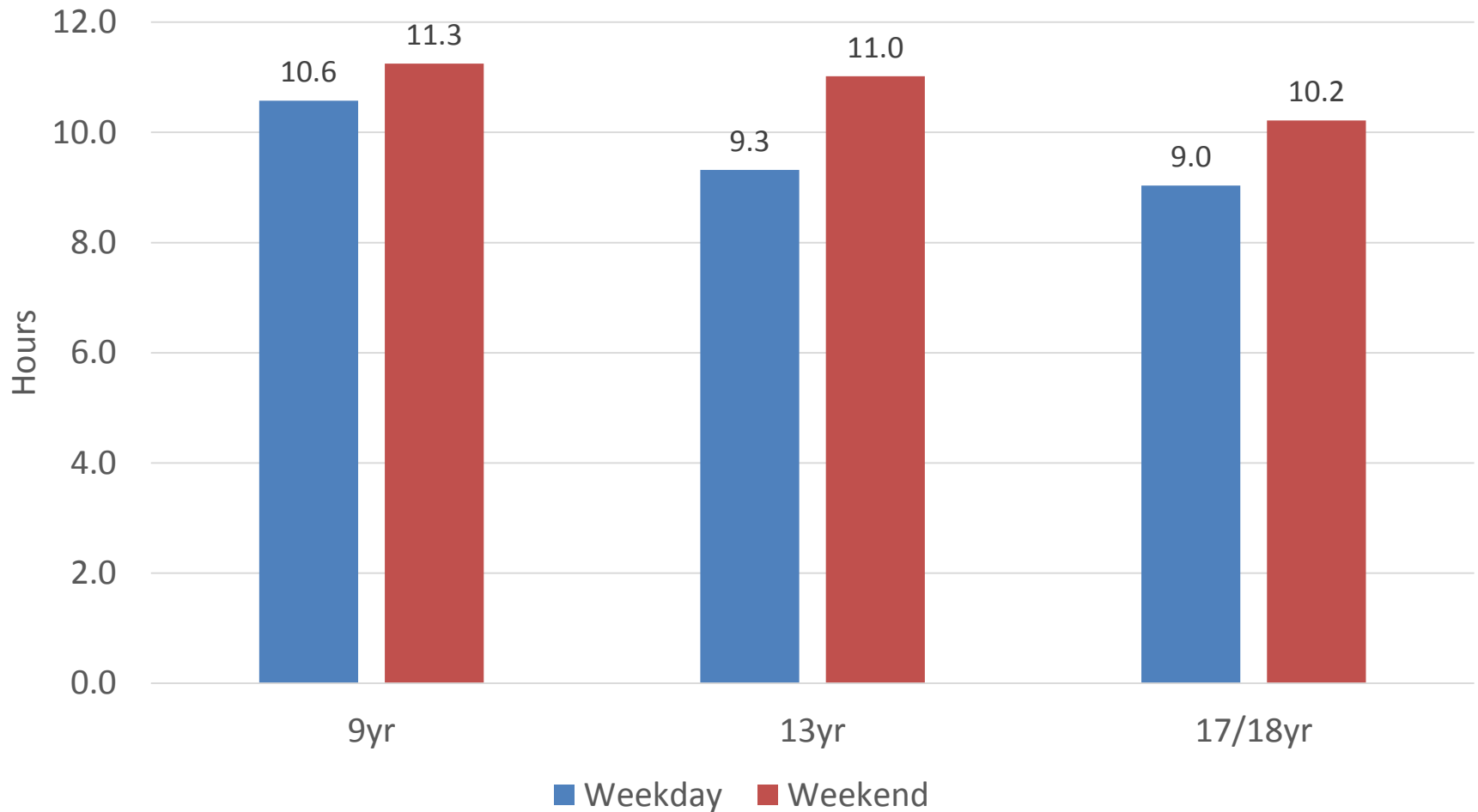


# Categories of activities by age



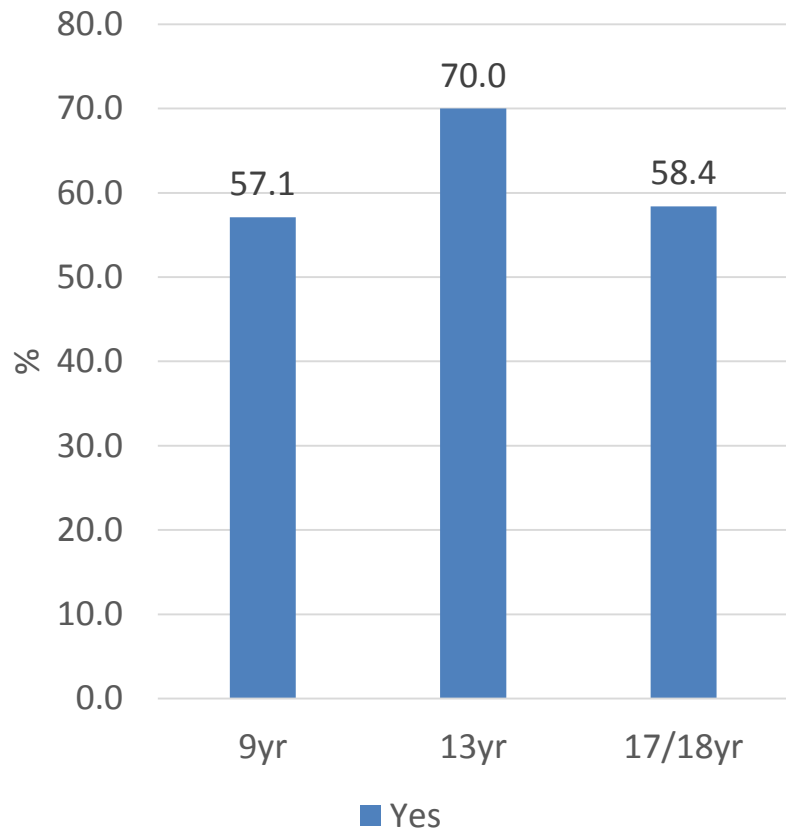
# Sleep

MEAN SLEEP HOURS

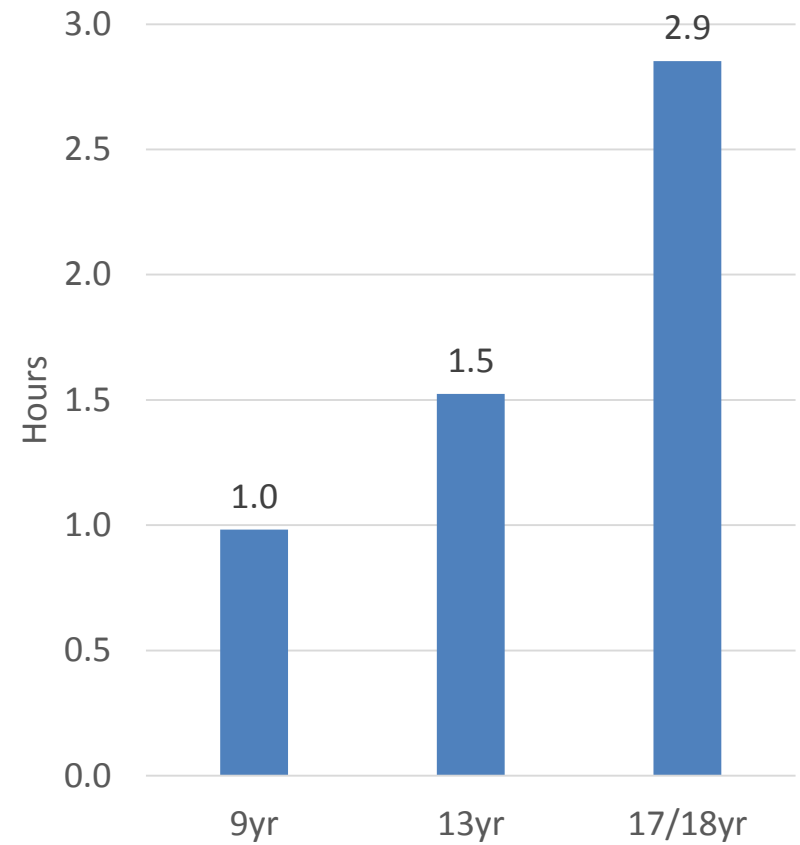


# Homework

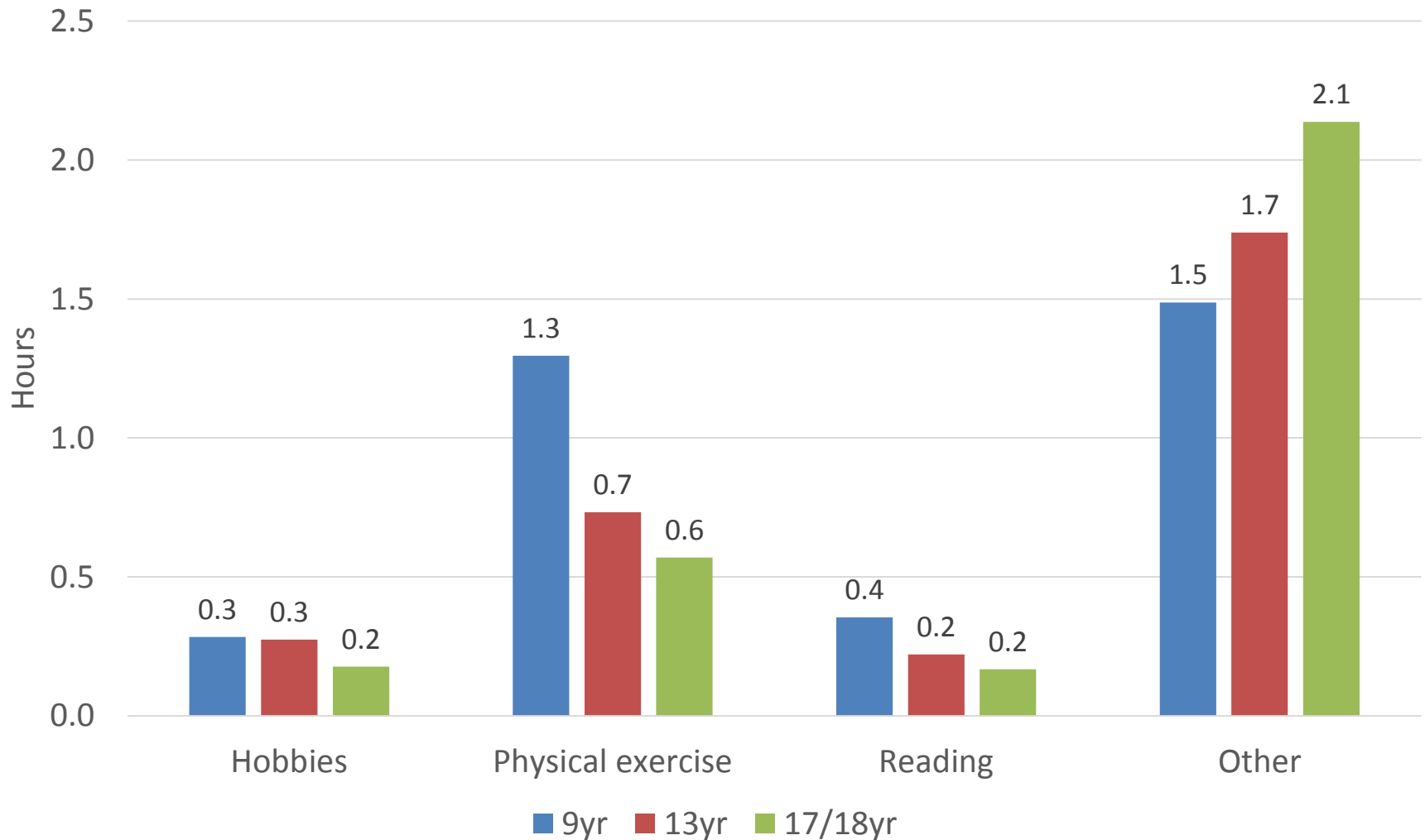
## Do homework



## Homework hours



# Discretionary activities



GUI: [www.growingup.ie](http://www.growingup.ie)  
ISSDA – AMF: [www.ucd.ie/issda](http://www.ucd.ie/issda)  
CSO – RMF: [www.cso.ie](http://www.cso.ie)

Thank you!