



Measures of Daily Activity & Time Use

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Measures of teens daily activities

- Time diary structured narrative account of activities, locations in context over 24 hours
- Direct observation
- ESM
- Questionnaire items
- Administrative records
- Smart phone & related monitors

	Afternoon			Evening		
	4 pm 0 15 30 45	5 pm 0 15 30 45	6 pm 0 15 30 45	7 pm 0 15 30 45	8 pm 0 15 30 45	9 pm 0 15 30 45
What was the child doing?	Not sure what child was doing					
	Sleeping, napping					
	Awake in bed					
	Eating and drinking					
	Bathing, dressing, hair care, health care					
	Doing nothing, bored/restless					
	Sulking, upset					
	Arguing, fighting					
	Being hugged, comforted, helped to calm down					
	Being reprimanded, corrected					
	Watching TV, video, DVD, movie					
	Listening to tapes, CDs, radio, music					
	Using computer/computer game					
	Being read to or told a story					
	Reading or looking at book by self					
	Quiet free play (e.g. board game, craft, dress-ups)					
	Active free play (e.g. running, climbing, ball game)					
	Helping with chores, jobs					
	Visiting people, special event or outing					
	Travel	Organised sport/physical activity (e.g. swim, dance, Auskick)				
Other organised lesson/activity (e.g. music, drama)						
Walking (for travel or fun)						
Riding bicycle, scooter, roller blades etc. (for travel or fun)						
Travel in car						
Travel on public transport						
Being taken places with adult (e.g. shopping)						
Where was the child?	Own home (indoors)					
	Own home (outdoors)					
	School, after/before school care					
	Other (indoors)					
	Other (outdoors)					
Was in the same room nearby if outside?	Alone					
	Mother, step-mother					
	Father, step-father					
	Grandparent(s)/other adult relative(s)					
	Brother(s), sister(s)					
Other children						



Time diaries in longitudinal child development surveys

- British Cohort Study 1970, 1986-87 Youthscan
- ÉLDEQ (Longitudinal Study of Child Development in Québec) 1998-2002
- Growing up in Australia Longitudinal Survey of Australian Children (2004 – present)
- Panel Study of Income Dynamics Child Development Supplements and Transition to Adulthood, 1997; 2002-2003; 2007-2008



ESRC-funded collaboration

- ESRC small grant funding collaboration between CLS and CTUR to investigate time diary options for MCS6
 - Analysing previous surveys (BCS70, UK 2000-01)
 - Review literature on adolescent time diary design
 - Preparing training workshop on use of BCS70 to build capacity to use MCS6 time use data
 - Host conference on use of adolescents' time diaries



BCS70 1986 diaries at age 16

- Friday-Monday time diary, June & August 1986
- coded by CTUR 1989-1990
- Includes log of all TV programmes
- 3 data files, re-deposited with UK Data Archive

1 Activity Event File,

- 462,000 events, sorted
- Continuous exhaustive diary summary information

2 Television-Watching Diary

- Matched to event file
- each TV programme named, classified by programme type

3 Time budget file

- Calendar format primary sequence
- Simplified, aggregated primary activity
- Separate estimates for each day and whole weekend



UK HETUS 2000-01

- other baseline for comparison with MCS6
- all household members aged 8+
- weekend & weekday 04:00 to 04:00 diaries in 10 minute time slots
- 1885 children aged 8 to 17 completed at least one diary (only 33 completed only 1 diary)
- 1779 children completed 3527 good quality diaries



Literature review

- Reviewed 78 relevant papers on children's time use of relevance to 14-year-olds in developed, English-speaking countries to provide general overview of key issues
 - More publications in these journals:
 - Journal of Marriage and Family
 - Journal of Youth and Adolescence
 - Developmental Psychology
 - Journal of Research on Adolescence
 - Journal of Family Issues
- 1) General reviews of children's time use studies
 - 2) Child and youth time use studies



Literature review

- 3) Longitudinal (but not child development) diary studies of youth in teens
 - Canadian General Social Survey (GSS)
 - Home On-Line
 - Time Use Longitudinal Panel Study (TULPS)
- 4) Longitudinal studies of youth using other methods
 - Longitudinal Surveys of Australian Youth (LSAY)
 - National Longitudinal Survey of Children & Youth (NLSCY)
 - Survey of Young Canadians (SYC)
 - Monitoring the Future (MF)
- 5) Studies on youth media time use
- 6) Children's time use resources
- 7) Methodological issues (diaries, ESM, other methods)



Longitudinal diary applications

- Changing household and individual experiences influence patterns of
 - Physical activity & sedentary lifestyles
 - Homework & skill practice behaviours (time of day, in context with sleep & healthy or unhealthy activity patterns, use of social networking)
 - Time in higher risk locations (exposure to traffic fumes, insect bites, alone away from home, unsupervised with friends at night)
 - Environmental impact of daily behaviours
- Baseline for individual time use change used in conjunction with longer term participation questions



External consultation

- 11 expert replies
 - 6 women, 5 men
 - 3 from UK, 3 from USA, Australia, Belgium, Canada, Ireland & Norway
 - all use time use data from young people, 10 have collected data, 6 work on resource provision
- Michael Bittman
 - Ignace Glorieux
 - Sandra Hofferth
 - Eivind Hoffmann
 - Eithne Hunt
 - Karen Hurrell
 - Sonia Livingstone
 - Barbara Schneider
 - Frank Stafford
 - Megan Thomas
 - Jiri Zuzanek



Consultation: main themes

- Need to cover (10 using diaries; 1 using ESM)
 - activities (including simultaneous activity)
 - who else is present
 - where young people are
 - degree of physical activity
 - **use of internet, social networking**
 - scheduled versus free time
 - supervised and unsupervised time
 - **affect (enjoyment, stress, rushed, time on hands)**



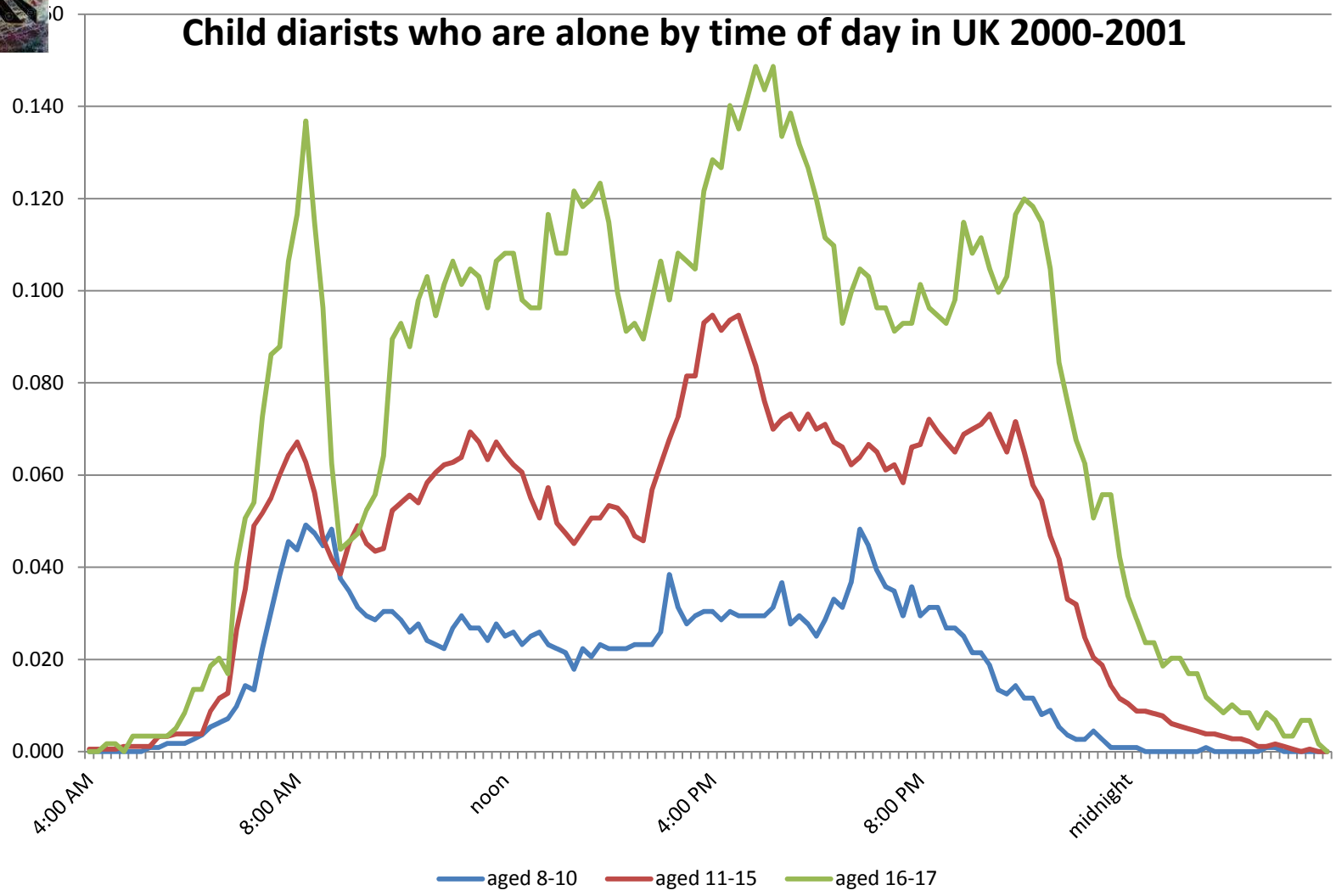
Consultation: topic needs

- Sleep
 - Need full sleep cycles, at least 24 hours, weekend & weekday
- Internet and social networking
 - Capture short episodes in always on context, may need special columns to adequately cover
 - Level of violent & sexually explicit content
 - Whether social networking aids or impedes study
- Additional longer term time use questions



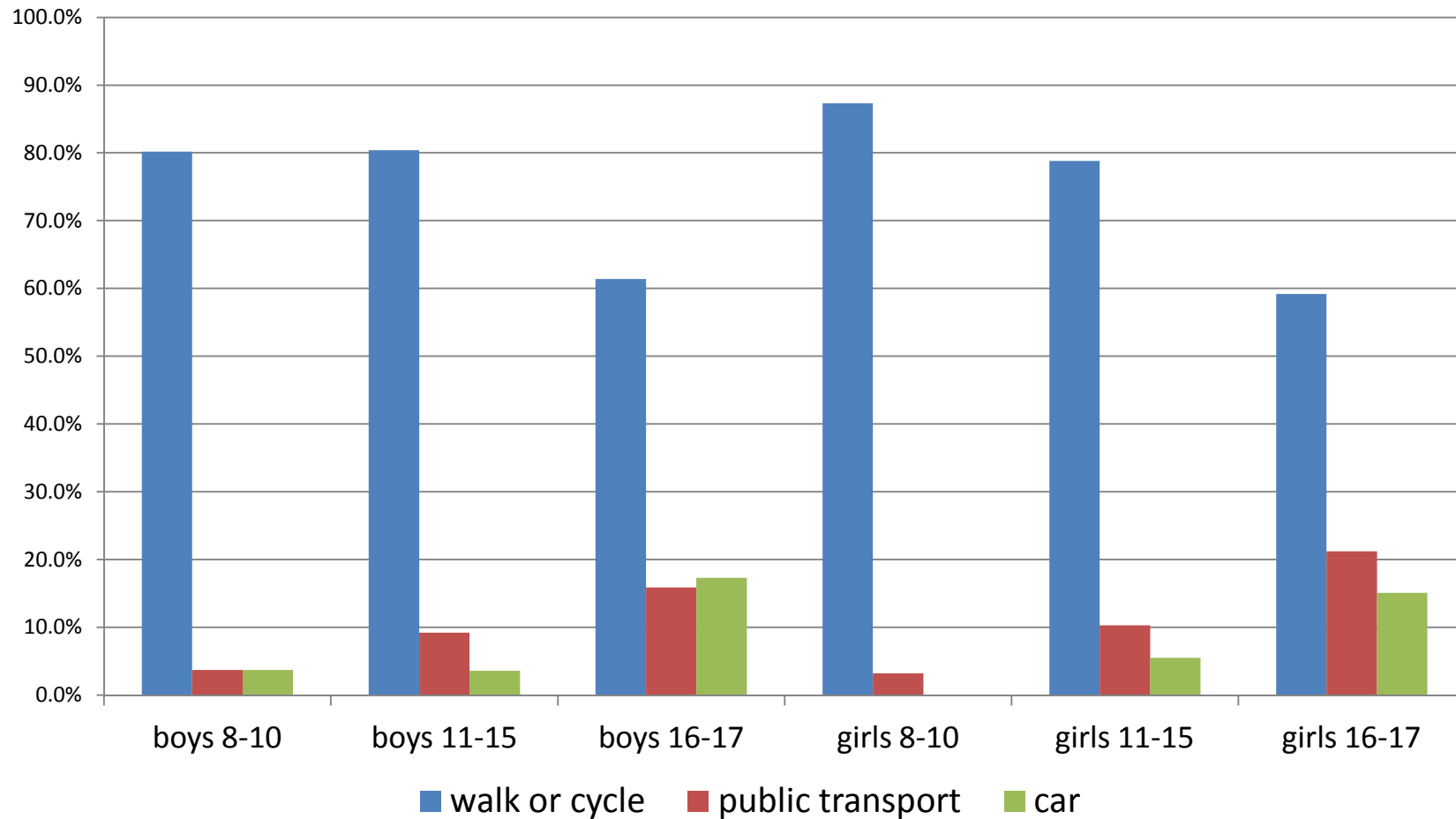
Consultation: collection

- Visually appealing & relevant instruments
- Instruments easy to complete
- Electronic diaries (ease of coding, diary quality, relevance to young people) – a game element may increase response rates
- At least two days, cover weekend and week days, or a school and a non-school day
- Need something of parents' time, include single parent & couple parents



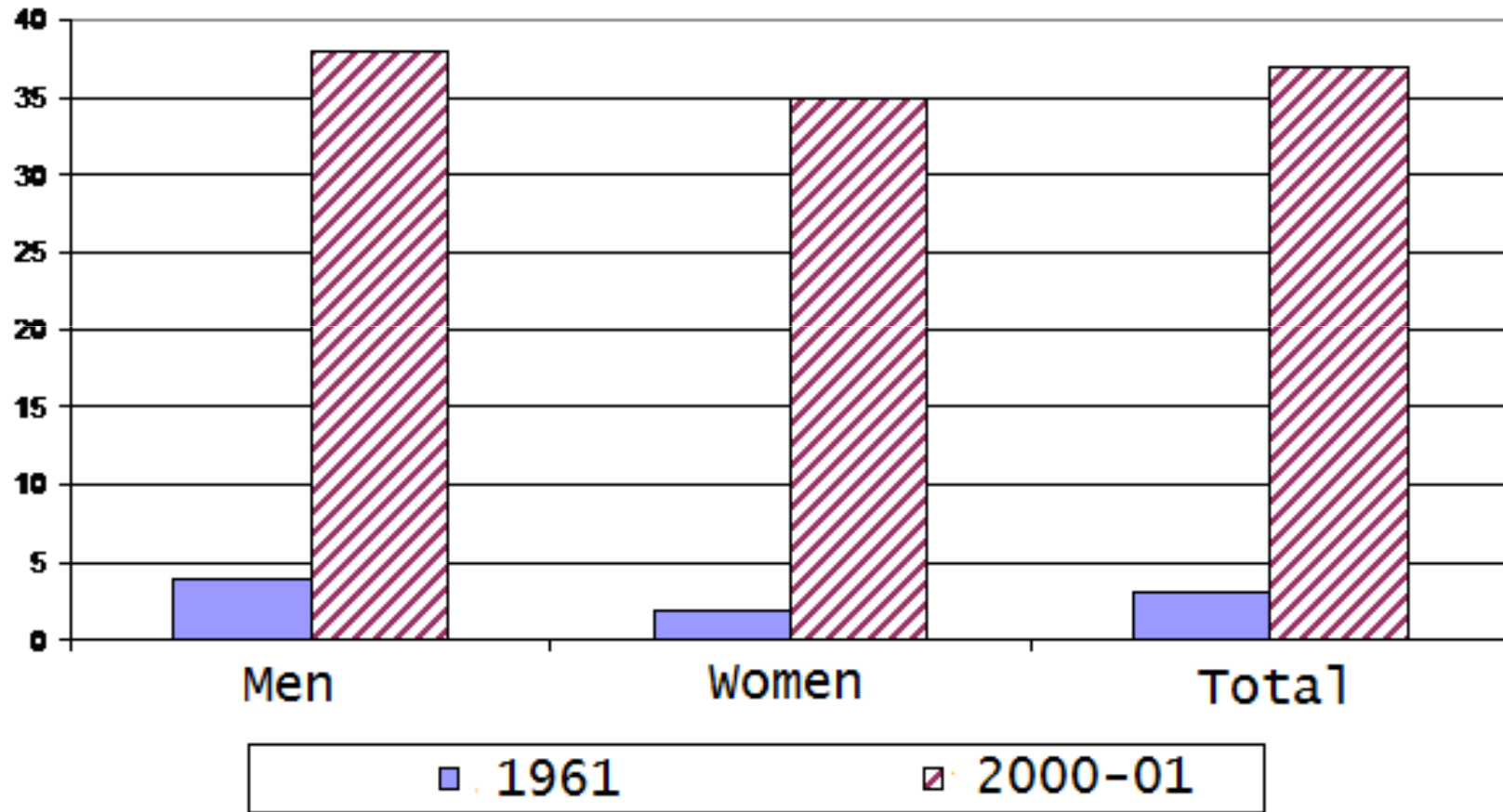


Mode of transport when British youth travel alone 2000-01





% of Total Travel Time in a Car in the UK Among People Aged 15-25





Diaries in longitudinal research

- Essence of longitudinal methods – observe changeover time at the individual level
- Diaries are the best way to measure time use
- Short (1-day) diaries do not reflect individuals activities on other days
- Intra-personal variation at time t & time $t+1$ are not the same as longitudinal time use change
- Daily variation at time t weakens association with other $t+1$ variables



Diaries in longitudinal research

- **SOLUTIONS** (incorporating diaries properly)
 - At least 2 diaries (such as reflecting school & non-school days)
 - Include longer term participation questions & when activities usually done questions
- Combination yields long-term time use estimates
- Compliment diaries with GPS &/ESM of emotions