# Time Diary Data and Research - Introduction

## Stella Chatzitheochari. Transcript.

Full video: <https://www.youtube.com/watch?v=oOLaPCPUGOo>

Welcome to the first video of the NCRM online resource on time diary data and research. In this first video, I will introduce you to the time use diary method.

Let's first clarify what we mean when we employ the term “time-use” in the social sciences. Time-use essentially refers to the way people spend their time. There are several time-use domains that are of particular interest to social scientists: These include paid work, childcare, domestic labour, sleep, exercise, as well as screen time. There are currently two ways that researchers understand and study time-use: One the one hand, time-use constitutes a topic of inquiry because it is seen as a manifestation of existing social inequalities, such as social class inequalities or gender inequalities. On the other hand, time-use is often studied as a predictor of subsequent well-being, health and labour market outcomes.

The main aim of this presentation is to discuss the optimal way of measuring time-use in large populations.

Some of you may be thinking that the most obvious way to measure time-use is to simply employ survey questions, such as these ones that I have on this slide [ppt slide 3]. As you can see, there are different types of questions that one can ask depending on what they want to find out and the type of activity they are actually studying.

These questions seem quite unproblematic at first glance. But there are substantial validity and reliability concerns that have been verified by methodological research.

To start with, when survey respondents are asked about the time they spent in a certain activity, they are likely to encounter recall and calculation difficulties. I would ask you to imagine that you have to answer a question about the number of hours you have worked last week in a social survey setting. You are likely to identify several episodes of work that you completed during the week, and you will note that the actual calculation is quite hard to conduct within a few seconds.

Another factor that threatens data quality and accuracy is social desirability. There are quite a few studies that show that time-use survey questions are prone to social desirability bias, which essentially means that respondents are likely to present themselves in a different manner than what they are in reality. An example here would be someone who overestimates the hours they spent in paid work precisely because they want to abide with the image of the “ideal committed worker” in modern society.

A third threat to data quality is that respondents are likely to have very different understandings of the boundaries of different activities. For example, in the case of paid work, there will be survey respondents who will provide broad estimates of the time they spent in paid work. They will potentially include lunch breaks or even commuting time, whereas there will be others who will actually employ a much stricter understanding of paid work in a survey context.

Another drawback of this approach is that you can only cover a narrow set of activities. It is not possible to cover everything in a conventional social survey.

There is also a lack of information about context, which actually limits the types of research questions that social scientists can answer with regards to time-use. For example, survey questions do not provide any information on who the person watches TV with, or whether they get their physical exercise done in the gym or at home. And this information is important for understanding human behaviour and societal trends.

So, the time diary method offers an alternative approach to measure time-use. Here, you can see an extract of an actual time diary that has been employed in the UK time-use survey that was conducted between 2014 and 2015. The day is broken down in 10-minute blocks – you can see that in the first column. The next column is called the main activity column, and this is where respondents describe their main activities in their own words. They also have the opportunity to report any simultaneous activity in the secondary activity column, which is just next to the main activity one. For example, you can see that at 7.10 in the morning, the diarist was having breakfast, and also reported checking emails at the same time. This level of detail cannot be attained with conventional social survey questions.

You can also see other columns, which are known as contextual columns. You can see that respondents are asked whether they were using a smartphone tablet or computer during each reported activity. They are also asked to report where they were, and they are also asked to say whether they were alone or with someone else during each activity. This is known is actually known as the co-presence column. And finally, you can see a final column that refers to what is known as affect, that is, enjoyment of activities. The time-use diary instrument covers 24 hours of a given day – it is essentially covers the full day.

This instrument is administered as a social survey. This means that there are actual individual and/or family-level questionnaires that accompany this diary, so that researchers can conduct meaningful analysis of the trends and the behaviours observed in the diary. Known as time-use diary surveys, these studies usually sample 2 days of the week, that is, one weekend day and one weekday for each participant – although there are actual variations on the number surveyed days.

In these time-use studies, individual questionnaires include questions that can actually help researchers cross-validate data they get from their diary such as longer-term time-use survey questions on activities that do not take place frequently for the majority of the population like volunteering.

The key strength of the time diary is that it provides higher quality data. There are several methodological studies that show that this data collection instrument is a lot more reliable than social survey questions when it comes to producing estimates of daily time-use. Because the instrument adds up to 24 hours, it minimises overestimation of time spent in different activities. The diary format, that I have just shown you, has also been shown to facilitate memory, and to minimise recall difficulties. Once diaries are completed and collected, researchers and statistical agencies code respondents’ descriptions using harmonised activity codes.

It is thus obvious that this method provides a holistic account of daily activities. Aside duration, timing and sequence of activities is also captured. In addition to this, location of activity, co-presence, and affect – and other dimensions of interest to researchers may be captured too.

National Centre for Research Methods (NCRM)
Social Sciences
Murray Building (Bldg 58)
University of Southampton
Southampton SO17 1BJ
United Kingdom

**Web** www.ncrm.ac.uk
**Email** info@ncrm.ac.uk
**Tel** +44 23 8059 4539
**Twitter** @NCRMUK