

Innovation in data collection methods

Content

Traditional methods of data collection

Innovative methods

Issues to consider

Purposes

Ethical considerations

Representativeness and inclusivity

Ease and respondent burden

Traditional behavioural data collection methods

Surveys

- Self-reporting of behaviours
- Prospective e.g. diary
- Retrospective e.g. questionnaire

Observation studies

Online survey data collection

Time Use surveys – ELiDDI* and OTUS

- Online time diary (random weekday and weekend day)
- Short online questionnaire (socio-demographic questions)

National Diet and Nutrition Surveys* (24hr recall)

National Travel Survey* (7-day diary)

*Latest rounds of these surveys offer a web alternative – telephone or paper

Learning from the review of UK time use surveys

- Think about the cognitive processes respondents go through when thinking about their time and the corresponding burden placed on them
- Clear guidance (video/text) ensures participants can navigate the tool and enter data independently
- Experimental data, from a parallel run conducted on the NatCen Opinion Panel, showed that providing participants with paper support material increased the likelihood of respondents taking notes and referring to them
- Design tools with accessibility requirements of respondents in mind. Tools should be compliant with the latest Web Content Accessibility Guidance and compatible with screen readers

Alternatives to surveys

Passive data...

'collected without the active involvement of individuals'

Struminskaya et al (2020)

- Smartphones
- Smart devices
- Apps, Sensors



Galaxy S20:
16 sensors

Secondary data ...

Data collected for another purpose

- Administrative data
- Social media data
- Transaction data



Benefits and opportunities of sensor and app-based data collection

In-situ data collection e.g. geolocation

Passive collection of detailed data through smartphone sensors

Potential reduction in measurement errors associated with recall and self-reporting

Collection of data at scale

Combined with surveys, potential to reduce response burden

Challenges of sensor and app-based data collection

Population coverage

- Selection biases

Measurement issues

Response biases

Data processing challenges

- Measurement errors
- Missing data

Data interpretation challenges

Ethical and legal considerations

We could combine data collection methods, e.g. combining survey data with sensor data and/or administrative data

Questions for the audience

Our initial thinking is that we will need to use survey methods to collect data from adults and children. What are your thoughts? Are there other methods that we should consider?

Are there other sources of data that we could potentially combine with survey data to enhance the data we might collect?

What are your thoughts on the methodological, ethical and practical challenges of collecting data on social contacts, relationships and knowledge exchange and how these could be mitigated?