

Centre for Health Economics Research and Evaluation (CHERE)



An introduction to 'think aloud' + cognitive interviewing for DCEs

Alice Yu, PhD Candidate | Research Fellow

alice.yu@uts.edu.au

Introduction to cognitive interviews

‘Emerged as a prominent method for identifying and correcting problems with survey questions’ –Drennan, 2003

‘Cognitive interviewing entails administering draft survey questions while collecting additional verbal information about the survey responses, which is used to evaluate the quality of the response or to help determine whether the question is generating the information that its author intend’ – Beatty & Willis, 2007

Outcomes from cognitive interviews

'Think aloud' from participants can include (Beatty & Willis, 2007):

- How they constructed their answers

- Explanations of how they interpreted questions or material in the survey

- Reports of difficulty answering questions

- Other insights about the survey (sometimes unexpected!)

How to start planning your interviews?

Define outcomes of interviews

Prepare interview protocol sheet – a guide for the interview process

- Checklist for interview
- Introduction
- Instructions for participant
- Warm up exercise
- Targeted questions and when to ask them during the interview
- Conclusion

Interviewer role

Act as guide for interview – how interactive does depend on goals of interviews

If you want the unbiased opinion of participants:

May want to minimise your presence – as if the participant is completing the survey/tasks alone

Avoid introducing bias into interview

- Avoid saying 'yes' or nodding
- Think about how you phrase questions → prepare prompts

General prompts during interview

Reminder of task	Please continue to think aloud whilst completing the task
If can't choose	What is it about these options that makes it difficult for you to choose between them?
If asks for definition	What does the term "XXX" mean to you / What would you assume if I wasn't here?
If asks for instructions	What do you think you are being asked to do in this question? / What would you do if I wasn't here
If discusses remembering	<ul style="list-style-type: none"> • How did you remember that? • How well do you remember that?
General	How did you arrive at that answer? I noticed that you XXX – tell me, what you were thinking?
Can't answer	What was going through your mind as you tried to answer the question?
Period of silence	You took a little while to answer that. What were you thinking about?
Expresses uncertainty	It sounds like you had some difficulty answering that question? Can you tell me why?
Changed answer	What occurred to you that caused you to change your answer?
Conditional answer	You seem a little unsure. Was there something unclear about the question?
Clarify answer	Can you tell me a little more about what you were thinking as you came up with that answer?

What does 'think aloud' sound like?

For example, if one of the questions is “when was the last time you saw a doctor?”

I might just write down or select “December”, but if I was thinking aloud I might say “Well, I saw my GP when I was sick the day of my office Christmas party. I’m not sure when that was, but it was probably December. I wonder if they want the year or just the month or the actual date? I guess a GP counts as a doctor?”

How would you 'think aloud' for this task?

Please read the following health descriptions closely and imagine a **10-year old child** living in each of them. Then select which health state you would prefer for the child.

Health State A
No problems walking about No problems washing or dressing No problems doing usual activities Some pain or discomfort Not worried, sad or unhappy

Health State B
No problems walking about No problems washing or dressing No problems doing usual activities No pain or discomfort A bit worried, sad or unhappy

Tips

Plan logistics and flow of interview

- saves time and stress during the interview

Practice!

Useful resources for cognitive interviews

Willis, G. B. (2005). Cognitive interviewing. SAGE Publications, Inc. <https://www-doi-org.ezproxy.lib.uts.edu.au/10.4135/9781412983655>

Drennan, J. (2003). Cognitive interviewing: verbal data in the design and pretesting of questionnaires. *Journal of Advanced Nursing*, 42(1), 57-63. <https://doi.org/10.1046/j.1365-2648.2003.02579.x>

Paul C. Beatty, Gordon B. Willis, Research Synthesis: The Practice of Cognitive Interviewing, *Public Opinion Quarterly*, Volume 71, Issue 2, Summer 2007, Pages 287–311, <https://doi.org/10.1093/poq/nfm006>

Virginia Braun & Victoria Clarke (2006) Using thematic analysis in psychology, *Qualitative Research in Psychology*, 3:2, 77-101, doi: 10.1191/1478088706qp063oa

Ritchie, J., & Spencer, L. (2002). Qualitative data analysis for applied policy research. *The qualitative researcher's companion*, 573(2002), 305-29.

Examples of papers using cognitive interviews

Goodwin, E., Davey, A., Green, C., & Hawton, A. (2021). What drives differences in preferences for health states between patients and the public? A qualitative investigation of respondents' thought processes. *Social Science & Medicine*, 282, 114150. <https://doi.org/10.1016/j.socscimed.2021.114150>

Vass, C., Rigby, D. & Payne, K. "I Was Trying to Do the Maths": Exploring the Impact of Risk Communication in Discrete Choice Experiments. *Patient* **12**, 113–123 (2019).
<https://doi.org/10.1007/s40271-018-0326-4>

Ryan, M., Watson, V. and Entwistle, V. (2009), Rationalising the 'irrational': a think aloud study of discrete choice experiment responses. *Health Econ.*, 18: 321-336. <https://doi-org.ezproxy.lib.uts.edu.au/10.1002/hec.1369>

Whitty JA, Walker R, Golenko X, Ratcliffe J (2014) A Think Aloud Study Comparing the Validity and Acceptability of Discrete Choice and Best Worst Scaling Methods. *PLoS ONE* 9(4): e90635.
<https://doi.org/10.1371/journal.pone.0090635>

Thank you for listening!
Questions?

