HCI
Week 6 Tutorial

Thematic Analysis

Dr Tara Capel and Dr Uta Hinrichs



THE UNIVERSITY of EDINBURGH

Coursework steps – suggested timeline

- **Weeks 1/2** Team formation
- **Week 2** Ethics & Data protection training
- **Weeks 2/3** Choose topic, technology & research methods
- **Week 4** Obtain ethics & prepare study material
- **Weeks 4/5** Recruit participants
- **Weeks 5/6** **Conduct study: collect data**
- **Weeks 5/6** **Analyse data, derive design recommendations**
- **Weeks 6 – 8** Write up your findings in form of a group report

Timeline may vary slightly across groups!

where you should be with your project

- Group formed
- General topic and technology in focus settled
- General project aim(s) defined
- General idea of “say”, “do” and “make” methods that you want to apply to address the aim(s) of your project
  - Study materials prepared (e.g., interview guide)
- Data Protection Training done (all group members individually)
  - If not, find it on on Learn under “essentials”
  - Once completed, please fill out this form to confirm your completion of the training.
- All students are clear about what is covered by the HCI ethics application (see Week 03 lecture)
- Preparation of ethics documents done and approved by tutor
  - i.e., participant information sheet & consent form
- Participants have been recruited
- Data collection has begun

Today

- Analysing qualitative data
- Thematic analysis
- Next steps

Analysing Qualitative Data

Why do we need to analyse data?

- We analyse data to:
  - Make sense of the data we have collected
  - Identify meaningful, interesting and valuable findings
  - Translate findings into design specifications, guidelines, recommendations, suggestions, implications
- Types of Data:
  - Quantitate Data: information that can be quantified or expressed as numbers (e.g. responses to closed questions, error rates, etc)
  - Qualitative Data: difficult to measure as numbers (e.g. descriptions such as field notes, responses to open ended questions, interview transcripts, think aloud talk, etc)

Thematic Analysis

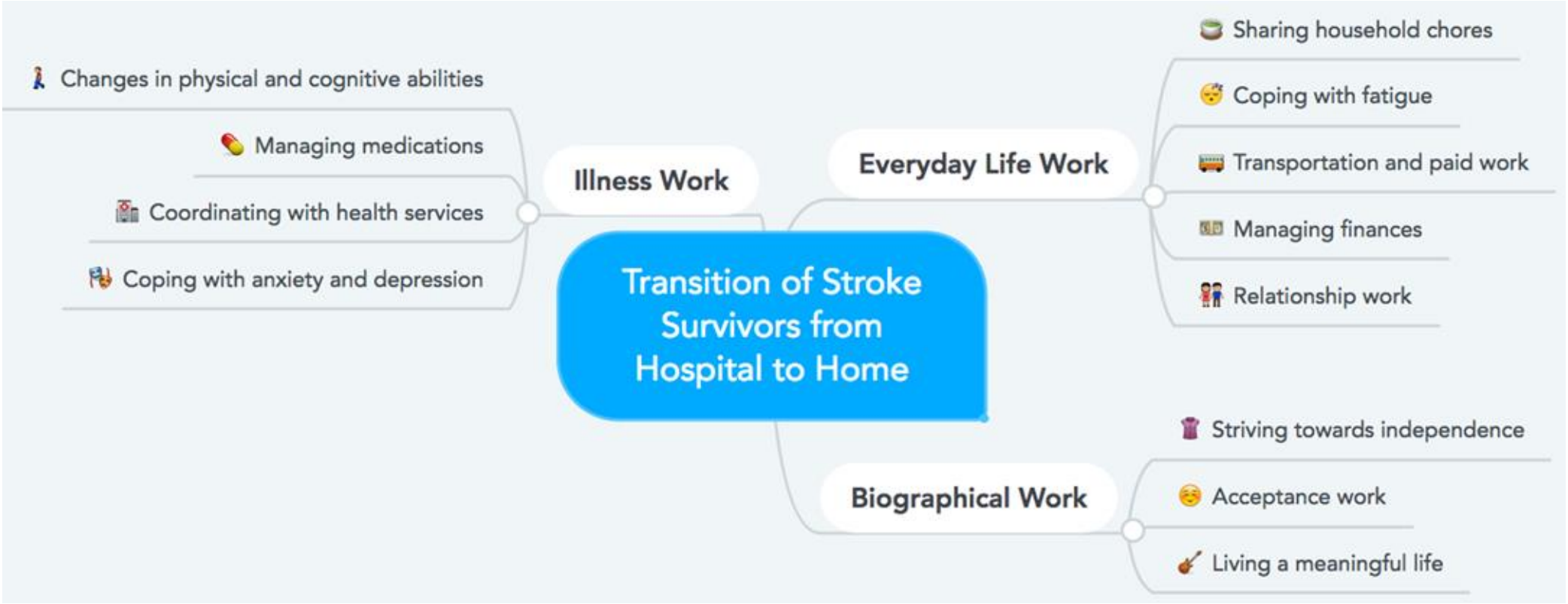
Thematic Analysis

- “Thematic analysis is a method for identifying, analysing and reporting patterns (themes) within data. It minimally organises and describes your data set in (rich) detail” (Braun and Clarke 2006).
- A six-step method for identifying, analysing and reporting patterns (themes) within data in response to a research question:
  - Familiarise yourself with the data
  - Generate initial codes
  - Search for themes
  - Review themes
  - Refine and name themes
  - Produce the report
- Thematic analysis is a practical method used across UX industry and research

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3,* 77-101.
https://www.researchgate.net/publication/235356393_Using_Thematic_Analysis_in_Psychology

https://www.nngroup.com/articles/thematic-analysis/

Example: codes and themes to describe the experience of stroke survivors in their transition from hospital to homes



Ploderer, B., Stuart, J., Tran, V., Green, T. L., & Muller, J. (2017). The transition of stroke survivors from hospital to home: understanding work and design opportunities. In *Proc. OZCHI* (pp. 1-9). https://doi.org/10.1145/3152771.3152772

Phase 1: Familiarise yourself with the data

- Transcribe verbal data
- Immerse yourself in the data: read and re-read transcripts, notes etc
- Read data in an active way: search for meaning, patterns, etc, and take notes about ideas for coding

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3,* 77-101.
https://www.researchgate.net/publication/235356393_Using_Thematic_Analysis_in_Psychology

https://www.nngroup.com/articles/thematic-analysis/

Phase 2: Generate initial codes

- Codes identify a feature of the data that is important or interesting or meaningful to your research question
  - A code is a word or a short phrase that describes a piece of data - essentially a label
  - Codes can indicate the subject of a comment, the nature of a comment, feelings or emotions, etc
  - Each item can have multiple codes
- Inductive (bottom up) and deductive (top down) coding

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3,* 77-101.
https://www.researchgate.net/publication/235356393_Using_Thematic_Analysis_in_Psychology

https://www.nngroup.com/articles/thematic-analysis/

Activity 1

Generate codes

- Familiarise yourself with the transcript
- Work individually
- Annotate on paper

[10 min]

Phase 3: Search for themes

- All data has been initially coded
- Group similar codes together into overarching themes
  - Some initial codes may form main themes, others may become sub-themes, others may be discarded
  - Group codes through an affinity diagram
- Affinity diagram process:
  1. Write one code per post-it note
  2. Place notes on surface and add similar notes in close proximity
  3. Keep revising arrangements
  4. Name each group

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3,* 77-101.
https://www.researchgate.net/publication/235356393_Using_Thematic_Analysis_in_Psychology

https://www.nngroup.com/articles/thematic-analysis/

Activity 2

Group codes into themes

- Create an affinity diagram to group your codes from Activity 1 into themes

1. Work in CW groups
2. 1 code per post-it note
3. Place similar codes together
4. Give each group/theme a label

[10 min]

Activity 3

Map themes to Human Factors

For each theme, consider the relevant human factor/s:

1. Anthropometric (physical/bodily)
2. Behavioural (habits, routines, actions, patterns)
3. Cognition (mental processes, motivation, perception)
4. Social (interpersonal, cultural, context)

Ask:

- What are the opportunities or problems this theme raises?
- What need is not being met?
- What does this theme suggest about current technology and its limitations?
- What design implication/idea could address this?

[10 min]

Phase 3-6: Review themes, refine and name themes, and produce the report

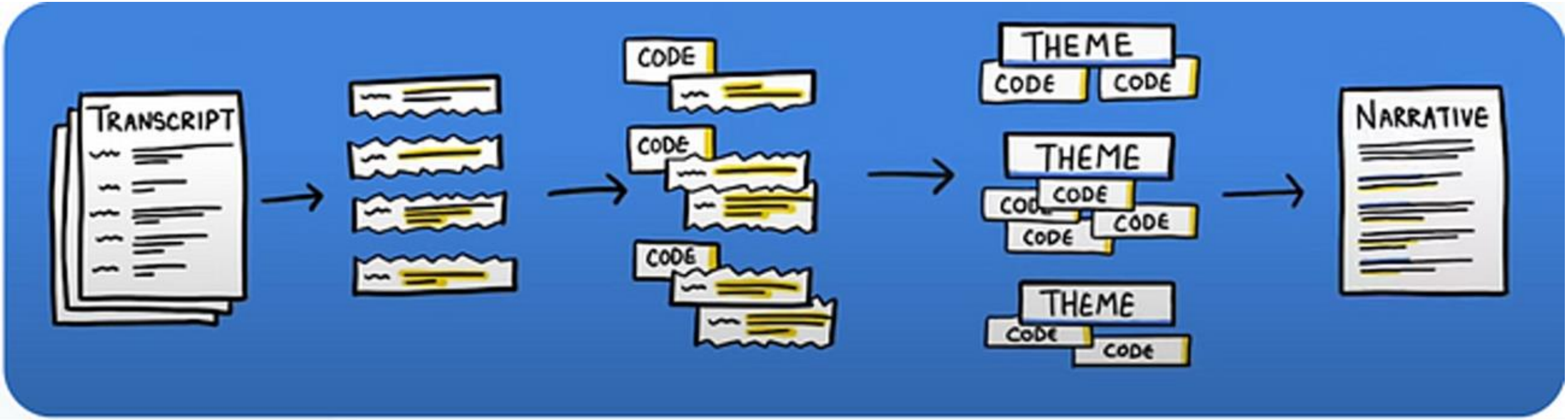


Image source https://medium.com/@aalaa.m.abdou/thematic-analysis-in-depth-ux-research-part-%E2%85%B0-6cbeca890aaa

Next steps...

Collect and Analyse Data

- Collect data
  - Use the instruments created over the past weeks to study the experiences and needs of 3 to 5 participants
- Transcribe recordings
  - Transcribe your recordings (MS Teams preferred).
  - Anonymise data (transcripts by changing names to pseudonyms; photos or images by covering or blurring faces).
- Analyse data
  - Analyse the data thematically to give an overview of key findings. Present data from all methods and participants. Present each theme together with concrete evidence (e.g., interview response, image).

Reminder that you cannot recruit participants or run any study activities before your ethics documents have been approved!

Any questions?