

Semi-Structured Interview Script

- for participants of study II -

1. Before starting the interviews, the interviewers and the RoMi-project are introduced. Subsequently, the procedure of the interview is briefly explained.
2. This is followed by **Part I**, in which the robot tasks are briefly introduced and three of them are selected by the caregivers.
3. Next, a general introduction to the structure of sequence analyses is given
4. This is followed by **Part II**: The discussion of the three selected tasks based on the sequence analyses created in study I.

Part I:

1. Presentation of ten possible robot tasks in nursing homes identified in study I:
 - social care -> The robot helps to entertain and engage the care recipients (e.g., by performing gymnastic exercises with the care recipients, guessing games – e.g., bingo, etc.).
 - calling system -> The robot can be called by care recipients and fulfill minor requests (e.g., turn on the heating or the television).
 - documentation -> The robot accompanies the caregiver during the examination of a care recipients and documents the information obtained. The robot provides information about critical events and answers questions at shift changes.
 - sorting medication -> The robot helps to prepare medications for care recipients.
 - distributing medication -> The robot helps distribute medications to the care recipients.
 - nutrition -> The robot assists in distribute meals to the care recipients.
 - mobilization of patients -> The robot helps to move care recipients from bed to wheelchair or from A to B using a rollator or wheelchair.
 - patient monitoring -> The robot independently determines how care recipients are doing, records vital signs, for example, and reports them back to caregivers if necessary.
 - reminder -> The robot reminds caregivers of appointments (e.g., birthdays or medication orders).
 - transfer of objects -> The robot independently transports items from A to B (e.g., bedding, medical materials or other items).
2. Selection of the three most important tasks for the caregivers.

Part II:

Questions that are asked non-specifically about all tasks:

1. Through which communication channel (e.g., speech, text on display, etc.) should the robot perceive information?
2. Through which communication channel (e.g., speech, text on display, etc.) should the robot output information?
3. How should the sequence start/stop?

4. How do you generally assess the sequence of the task? Are there any important steps missing? Do you consider steps to be unnecessary?

Specific questions about the individual tasks:

social care

1. When should the activity start?
2. How should the communication between the robot and the caregiver take place?
3. By which communication channel should the robot teach the tasks?
4. How should the robot inform people that the time of the performed activity is over?

calling system

1. How does the care recipient call the robot?
2. Through which communication channel (e.g., speech, text on display, etc.) should the robot inquire about the care recipient's wishes?
3. How should the robot inform the caregiver?
4. Is there a special group of care recipients for whom this call system could be particularly suitable, or specifically not suitable?

documentation

1. How could the robot get to the location where the documentation needs to be done? Should it drive independently, for example? Or be pushed? Or are you thinking of another method of locomotion?
2. How should the robot be informed that the documentation should start?
3. What communication channel (e.g., speech, text on display, etc.) should the robot and caregiver use to communicate during documentation?
4. Should the robot serve as a notepad (i.e. document and store received information) or additionally be a kind of checklist or memory aid (i.e. actively query information)?
5. When and by whom should the data transfer to the care recipient file or KIS system be carried out?
6. Should there be a final review of the documented information by the caregiver?

sorting medication

1. Where does the preparation of the medication take place?
2. Should the robot get all the necessary materials from "a storeroom" autonomously or should the caregiver equip the robot with the materials?
3. How should the robot be informed that medication sorting is pending (start trigger)?
4. How should the robot communicate that it is finished with the medication sorting task (end trigger)?
5. How do you imagine the process of medication sorting with the help of a robot in general?

distributing medication

1. How should the robot be informed that distribution of medication is pending (start trigger)?
2. Should the robot distribute the medication alone or together with the caregiver?

3. Is there a certain group of care recipients for whom it is particularly - or not at all - appropriate for the robot to distribute the medication independently? (Due to compliance or certain medications?)
4. Should the robot check whether the medication has been taken?

nutrition

1. How should the robot be informed that the distribution of food is about to start?
2. Should the robot distribute the food trays in the common room or in the private rooms of care recipients?
3. Should the robot place the trays in front of the care recipients or should the care recipients take the trays from the robot themselves?

mobilization of patients

1. How should the robot be informed that the transfer from bed to wheelchair/ from place A to B should start (start trigger)?
2. How exactly should the transfer take place?
3. Do you think the caregiver should be present during the transfer?
4. Could this transfer from A to B be particularly appropriate for a certain group of care recipients but not for another group?

patient monitoring

1. In which situations should the robot start patient monitoring (start trigger)?
2. If start trigger command by caregiver: How should the start trigger be implemented?
3. What data should the robot measure?
4. How should the results be reported from the robot to the caregivers?

reminder

1. About what should be reminded?
2. Through which communication channel (e.g., speech, text on display, etc.) does the caregiver communicate with the robot to enter the data?
3. How should the robot output the reminder?
4. Should there be some kind of renewal function of the reminder? ("Remind me again in 10 minutes")

transfer of objects

1. Through what channel should the robot receive the information of the transfer (What? To where?)?
2. What should be the timing of the task assignment?
3. In what situations might a robot to get or bring things be useful?