# Reported insights from empathize sessions

### Extracted from Master Thesis: Turbuscope – Designing an eHealth solution to improve medication adherence for asthma patients with low health literacy by Jasper Faber

In total, two participants participated in the interview sessions (Figure 16). One participant has had asthma complaints and has used medication as a treatment. This participant moved to the Netherlands a while ago and worked as a volunteer in 'de weggeefwinkel' in Leiden. The second participant used medication on a daily basis and was, because of a cognitive disability, considered to have a low health literacy.

The interviews took place at the facilities where the patients were recruited, either because of residential or employment status. The interviews took approximately 1 hour, and both interviews were recorded. The interview followed a topic guide (Appendix P) and was structured as follows:

1. The interview started with a general part in which general information about the patient was acquired, such as living situation and occupation.

2. In the second part of the interview, information was gathered about the disease. This included the type of asthma, whether they consider the asthma under control, the symptoms they experience, and their relationship with the healthcare provider, among other things. A full overview of the research setup can be found in Appendix O.

3. After this initial part, the sensation session began, in which the participant was asked to go through one of the scenarios. The researcher chose the scenario based on the initial part that felt most in line with the participant. Based on the participant's response, a second story was used. After this session, the participant was told that there is a device currently aimed at supporting the problem described in the scenarios: The Turbu+. The researcher provided the participants with a short explanation of the Turbu+ in which the five key tasks were discussed.

4. After this, the participant was asked to create their own story following the previously described CS methodology.

In this section, the results of the interview sessions are presented. First, the most striking results of the five scenarios regarding the non-adherence determinants are presented. Subsequently, the results of the CS are highlighted regarding the eHealth acceptance determinants. The notes of the interviews can be found in Appendix R.

Trusting the Doctor:

Participant 1 mentioned that in the country of his origin, the doctor is of higher authority, and everybody is used to listening to the doctor. In his country, the doctor is always right. Participant 2 also mentioned that, although he doesn't actually remember the why of his treatment, he still believes it's best for him.

Social Influence:

According to Participant 1, the neighborhood can have a significant influence on the perception of the patient regarding their medication. If the patients completely understand the instructions of the doctor, he or she might be more perceptive towards the opinions of the people around them.

Attitude:

Participant 1 mentioned that health, for him, doesn't mean knowing that you are doing healthy things. For him, it was more important to directly feel that you are healthy, such as having a good life, lots of friends, no struggles with family, etc. He mentioned that health, for him, is more oriented towards feeling happy instead of knowing you are doing the right thing from a scientific perspective. He mentioned that life can be hard, and there can be moments with a lot of setbacks. In these times, one might feel less healthy.

Participant 2: "According to the doctor, I just have to do it. That is what I know."

Participant 2: "I can read comics if I want. But my mother helps me to read more difficult things."

RQ2 – eHealth Acceptance Problem:

The main problem areas for Participant 2 were the inability to share data with relatives and the interpretability of the information within the app. Especially textual information and graph-like representations of data were difficult for him to understand. In addition, the menu was perceived as not very clear as it contained a lot of text. He indicated that this could result in him not using the app. Participant 2 did mention that the factors "new technology" and "time" were not issues for him. He indicated that he enjoyed exploring new technologies and that in the evening, he has enough time to look at the app and check how he is doing.

Participant 2: "If I have nothing else to do, for example before going to sleep, I would be interested to look at how my day was."

Solution:

Participant 2 particularly liked that he would be able to share the adherence data with his mother and caregivers (Figure 17). It would mean that he would receive more self-authority but that his care providers could come to aid when they see in the app that he, for example, forgot his medication. Another suggestion Participant 2 made was that it would be good to include the doctor as well. Because of this, he believed that he wouldn't need to go there that often and only when something is wrong.

Participant 2: "If I forget, others can see it. They can use the app, and I can use my medication."

Participant 2: "The more fun, the more interesting it is."

Furthermore, he mentioned that he prefers to see a visual representation of the data, instead of text and numbers. Seeing an image of the lungs or a flower was preferred above graphs. He mentioned a preference for an abstract (flower) or realistic (lungs) image. Furthermore, he replied that it would be a cool feature to add fun things to the app, such as a picture of your girlfriend in the background. When presenting Participant 2 with a story element of being able to compare with other asthma patients, he mentioned that he doesn't know other people with asthma but that it would be interesting to see how others are doing compared with himself.

The possibility to visualize the feedback not in the app but on the inhaler itself was seen as a good idea. As the medication is situated at home most of the time, he wouldn't be able to check it regularly. Therefore, displaying the information in the app would be more beneficial as you always carry it with you.

In conclusion, Participant 2 mentioned that it would be good to add some support to the app, for example, when a certain subject is not clear. He indicated that having contact with the doctor is not preferred as they are often busy. As a way to solve this, he mentioned a Siri-like function that could explain the matters to you through spoken voice. He provided a demonstration of how he is able to retrieve the latest soccer score through his Siri interface.

In the end session, where the participant was asked to create a story, he mentioned that the main problem would be that he isn't able to share the data with his care providers (mother and homecare). As a solution, he mentioned that he wanted to see a collection of several solution strategies that would make the interface more interesting.