

Research Set up

Research Questions

Research Question 1:

What is the cause of non-adherence?

Sub-questions:

What is the most common phenotype? (Intelligent, Unwitting, Erratic)

What internal and external determinants are responsible for the non-adherence?

Research Question 2:

What is the current acceptance of eHealth interventions?

Sub-questions:

What is the acceptance of the Turbu+?

What are its deficits?

What are eHealth related opportunities?

Practicalities

Participants

2/3 participants that can be considered to have low health literacy and have (had) lung complaints. Preferably Dutch speaking.

Research Materials

Personas

4 persona's that have been created to carry hypothetical insights from the background literature study. These personas will not be used during the interviews but will serve as a background framework for the researcher to structure the thoughts and help to ask relevant questions regarding adherence.

Scenarios - Adherence

Based on the personas, several scenarios have been created that narrate from the perspective of the abovementioned personas. In the scenarios, a specific type of hypothetical non-adherence has been addressed and will serve as a probe in order to provoke responses and verify the hypothetical determinants.

Scenarios - Turbu+

From background research, several themes of possible problematics regarding the use of the Turbu+ by the target group have been captured in scenarios. These scenarios will be used as follow-ups of the previous scenarios. Again, these scenarios will serve as probes during the interviews, in order to find out the deficits of the current Turbu+ device and (eHealth) applications in general.

Solution strategies

Since contact with the target group can be seen as not so self-evident, making the most out of every opportunity is essential. Therefore, during this session, some preliminary solution strategies will be presented in the form of drawings/cards. These will be used together with

the participant to brainstorm about possible solutions to tackle the aforementioned problem areas.

Interview

Creating an image of the participant

General Information

Name

Age

Living place

Occupation

Disease Information

Kind of disease (Asthma (Allergic, Exercise, Non-allergic), COPD)

When was it diagnosed

Current symptoms

Treatment, what did the doctor tell to take, how often? (Sorts of medication, action plan)

What medicines are you currently taking, how often?

Non-adherence scenarios

The researcher will lay out the different hypothetical scenarios. The scenarios will be explained to the participant while walking through them. Next, the participant is asked to comment on these scenarios and to tell whether they recognise the story and what they liked disliked. According to Buskermolen & Terken (2012), this can be seen as the sensitisation phase of the co-constructing stories methodology.

Buskermolen, D. O., & Terken, J. (2012, August). Co-constructing stories: a participatory design technique to elicit in-depth user feedback and suggestions about design concepts. In Proceedings of the 12th Participatory Design Conference: Exploratory Papers, Workshop Descriptions, Industry Cases-Volume 2 (pp. 33-36). ACM.

Turbu+ Demo

At this point a short demo will be provided of the Turbu+ device. The researcher will show the Turbu+ inhaler and app. He will briefly explain the main purpose of the device: improving medication adherence through medication logging. Five main functionalities will be highlighted:

1. Using the inhaler to send data to the app
2. Inspect the timeline and view back medication usage
3. Log symptoms
4. Look at medication usage and symptoms through the trends function
5. Look for extra information in the submenus

The participant is asked to use the device and to carry out the abovementioned five tasks. After this short hands-on experience, the researcher will ask the following questions:

1. What did you like/dislike about the technology
2. Would you want to use the device?
3. Do you think it is easy to use?
4. In what way do you think it will have a benefit for you?

eHealth acceptance

Next, the researcher will lay out the different scenarios regarding the hypothetical eHealth related barriers. The scenarios will be explained to the participant while walking through them. The participant is then asked to imagine which of the scenarios he or she feels that would be recognisable when using the device.

Solution Strategies

Finally, the researcher shows and explains several solution strategies. The participants are asked to comment on what they like or dislike about the solution areas and are encouraged to think along and come up with solutions that they would want to implement in their lives. According to Buskermolen & Terken (2012), this can be seen as the elaboration phase of co-constructing stories.

Questionnaires

At the end of the interview, the participant is asked to fill in two brief questionnaires in order to collect their level of asthma control and to identify their level of health literacy.

Asthma Control:

ACQ

<https://www.hagaziekenhuis.nl/media/748485/acq-scorelijst.pdf>

Health literacy

Hoe vaak laat je je helpen bij het lezen van medische documenten?

Hoe vaak heb je moeite met medische formulieren invullen en begrijpen?

Hoe vaak heb je moeite met het begrijpen van je asthma door het moeite hebben met lezen?

Ylitalo, K. R., Meyer, M. R. U., Lanning, B. A., During, C., Laschober, R., & Griggs, J. O. (2018). Simple screening tools to identify limited health literacy in a low-income patient population. *Medicine*, 97(10).

The researcher will end the interview by expressing gratitude and asking if there are still questions left.