

Increasing the use of eHealth at Karakter Nijmegen by improving the experience of the therapist: a case study

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Executive summary

This project was done for and in cooperation with Karakter Kinder- en Jeugdpsychiatrie, a psychiatric hospital for children. The aim was to give Karakter knowledge and tools to improve the experience of the therapists during the implementation of Jouw Omgeving, a digital environment that allows patient, parent and therapists to communicate about the therapy process.

At the beginning of this project it was clear that the therapists at Karakter Nijmegen made little use of the digital environment JO, but it was not clear why this was the case and how the usage of JO could be increased. A plan was set up to try and improve the experience of the therapists during the implementation process and use of JO in such a way that the therapists would want to use JO. This plan included qualitative research consisting of interviews and observations. First the experience of the therapists during the implementation process and their daily activities were studied in order to find answers to the following research questions:

1. What is the current state of implementation of JO according to the employees?
2. What are a) barriers that prevent employees from using eHealth or JO, and b) motivations for employees to use eHealth or JO?
3. What are the wishes and needs of the therapists?
4. What are moments of value to use eHealth according to the therapist?

The answers to these questions gave insight into the barriers that the therapists experienced to use JO, but also in the possibilities and the requirements for a solution that would help the therapist in finding their intrinsic motivation to use JO.

The most important barriers that were found were the lack of knowledge and skills and the lack of guidance from management. For the therapists it was not explicitly clear what the added value of using eHealth is and what goal Karakter wants to meet with eHealth. The therapists were also expected to explore JO on their own, for which they lack the intrinsic motivation and time.

A design brief was set up to address these problems and the following design goal was described:

“I want to design a system in which the team of therapists is independent from management and is empowered to discover and create benefits for the program JO, allowing the therapists to have positive experiences with the program.”

The result of fulfilling this goal is a training that focuses on finding intrinsic motivation to use JO by connecting it to personal values and to improving the situation for the mentor child: something that all therapists found important.

Independency from management

The training that was designed for the team of therapists allows for taking initiatives in using JO without needing the involvement from management. Only for some eHealth options there is still discussion with and permission needed from staff members, but formulating the action points during the training was considered helpful in thinking about which actions are needed to be able to use a certain eHealth option at the clinic.

Being empowered to discover and create benefits

After going through the simplified steps in the test the therapists felt motivated to explore more of the eHealth options. However, the fact remains that environmental constraints, like time and the children not having accounts for JO yet, keep the therapists from using the eHealth options with and for the children. Participating in the actual training instead of in the simulated and simplified training of the test is expected to reduce the time constraint because the preparing tasks of figuring out what eHealth options to use and what is needed to use them is already done during the training. All that is left to do during working hours is carry out the action points that are formulated during the training.

Positive experiences

Providing the opportunity to have positive experiences with JO was done letting the therapists explore the eHealth options on cards instead of with a computer, so that there is a clear overview of the options and the computer illiterates are not overwhelmed by the amount of options and the difficulties of navigating through JO.

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List of abbreviations

CGT	Cognitief gedragstherapeut Cognitive Behavioural Therapist
EHR	Electronic Health Record
EKJP	Expertisenetwerk Kinder en Jeugd Pscychiatrie Expertise network Child and Youth Psychiatry
GTM	Gedragstherapeutisch medewerker Behaviour Therapy Assistant
HCD	Human Centred Design
IBC	Intensief Behandelcentrum Intensive Treatment Centre
IBM	Integrated Behaviour Model
IPG	Intensieve Psychiatrische Gezinsbehandeling Intensive Psychiatric Family Treatment
JO	Jouw Omgeving Your Environment
LAMH	Levels of Adoption in eMental Health
PMT	Psychomotorisch therapeut Psychomotor therapist

1

1 Introduction

The failure rate of implementing change within organisations has stayed constant at 60-70% for about 40 years (Ashkenas, 2013; Beer & Nohria, 2000; Bibler, 1989). This indicates that for many organizations change implementation (definition 1) or change management (definition 2) does not come naturally. Many research has been done to define what influences implementation processes; what makes an implementation process fail and what could or should be done to make an implementation successful. Klein and Knight (2002) define innovation failure as follows: "the failure of an innovation to achieve the gains expected by the adopting individual or individuals". Even though many innovations (definition 3) work perfect in theory, they don't seem to work in practice. Often enough they are simply not used. Terms as behavioural intention, communication, learning and adopting are widely mentioned in a variety of research. Despite the fact that a lot of knowledge and theories exists on the matter, this does not mean that organizations have acquired this knowledge and the skills for successful change management or implementation.

"eHealth is the use of information and communication technology to reinforce health and health care."

Ossebaard & van Gemert-Pijnen (2016)

This is also the case in the field of healthcare, where innovation is a huge subject as well. eHealth is seen as a potential solution to worldwide problems and the Dutch government sees eHealth as an important tool to sustain the healthcare system. Affordability, self-management and quality of care are important reasons to apply eHealth. The goal is to give patients a more important and central position during the time that they need care. (Ossebaard and Gemert-Pijnen, 2016) However, as Black et al. (2011) conclude in their research on the impact of eHealth on the quality and safety of healthcare, there is still a huge difference between the expected outcome of eHealth and the actual outcome. They claim that cost-effectiveness and improved patient outcomes are often neither

proved nor evaluated. He claimed that eHealth evaluation should include socio-technical (definition 4) factors so that it is more likely that it is implemented and adopted (definition 5) with success.

My eyes were opened to the above described issues in 2017 when I was part of a student team from the TU Delft that did a Joint Master Project (JMP) for Karakter Nijmegen. During this project a questionnaire was send out to around 40 therapists of which 12 responded. The questionnaire contained questions about using Jouw Omgeving, a digital environment that can be used by therapist, patient and parent. It turned out that only one of the therapists that filled in the questionnaire used Jouw Omgeving regularly and eight of them never used it. The answers of the therapists contained several reasons for not using the digital environment, for example "the program is to standard", "creating an account costs a lot of time" and "cumbersome because it is an extra program". A visualisation of the results of the questionnaire can be viewed on the first two pages of Appendix A2. The results of this questionnaire made me aware of the gap between expected and actual outcome of using eHealth, but I felt like the answers in this questionnaire showed just the tip of the iceberg and that there are more underlying reasons behind not using Jouw Omgeving. As Sanders and Stappers (2012) describe questionnaires, polls and interviews as say techniques, where knowing what people say, think, do and use is seen as surface knowledge and knowing what people make, feel and dream is seen as deep knowledge. See Figure 1. With this knowledge I saw an opportunity to do valuable research into the reasons why Jouw Omgeving is barely used although it has been available at Karakter since 2014. The research will be done from the perspective of my master Design for Interaction, meaning that the research will focus on the experience of users and the improvement of their experience.

Definition 1: Change implementation

"Defining and managing the process of deploying and integrating IT capabilities into the business in a way that is sensitive to, and fully compatible with business operations."

Definition 2: Change management

"Minimizing resistance to organizational change through involvement of key players and stakeholders."

Definition 3: Innovation

"The process of translating an idea or invention into a good or service that creates value or for which customers will pay."

Definition 4: Socio-technical

"The interrelatedness of social and technical aspects of an organization."

Definition 5: Adoption

"The act of accepting or beginning to use something."

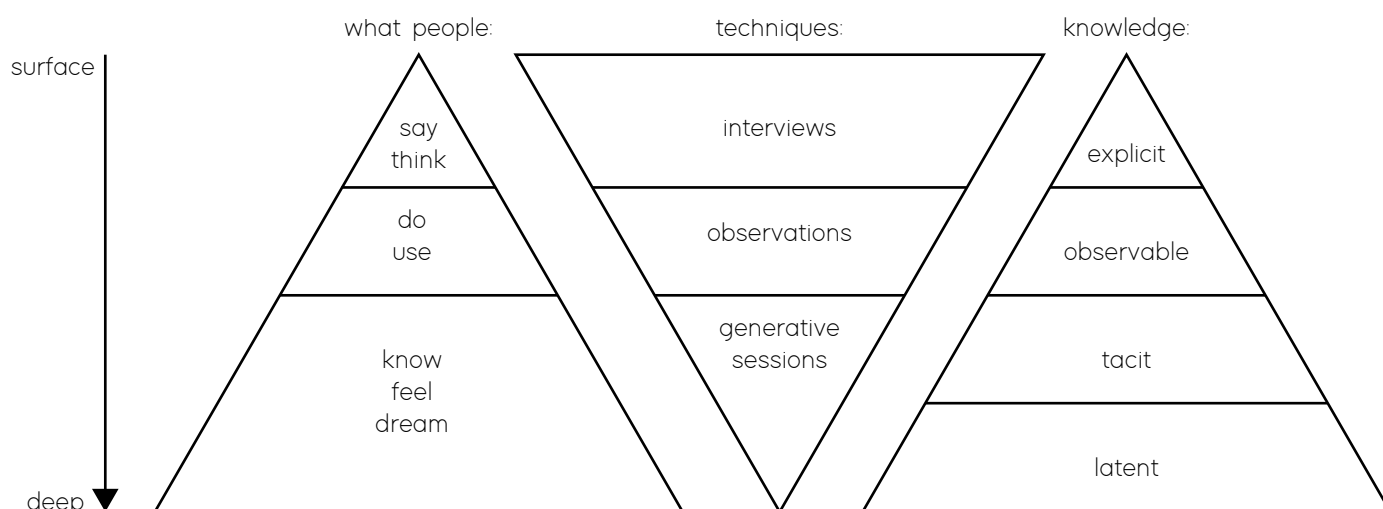


Figure 1 - Different types of techniques result in different kinds of knowledge, adapted from Sleeswijk Visser et al (2005)

1.1 Karakter

As mentioned, this project will be fulfilled for and in cooperation with Karakter Kinder- en Jeugdpsychiatrie. The remainder of this chapter explains what Karakter Kinder- en Jeugdpsychiatrie is and what their vision is. Furthermore, the challenge and significance of this project are formulated and the aim and approach to the project are explained.

1.1.1 Karakter Child and Youth Psychiatry

Karakter is a psychiatric hospital for children and youth in the age of 0 till 23 years old and has 15 locations in the Netherlands. The locations are divided in three regions: Gelderland, Overijssel and the University Center (Universitair Centrum).

Karakter has a focus on sharing knowledge and doing research to create knowledge on evidence-based and best practice interventions. As a member of the EKJP (Expertise Network Child and Youth Psychiatry) they work together with other healthcare organisations to create new forms of care.

Karakter offers diagnosis and treatment of ADHD, autism, depression, OCD, behavioural disorders, psychosis and other psychiatric problems to children living in the Netherlands. They focus on children with complex care demands, meaning that their clients can have a combination of psychiatric problems or problems that cause substantial interference in the child's life. (Karakter, n.d.)

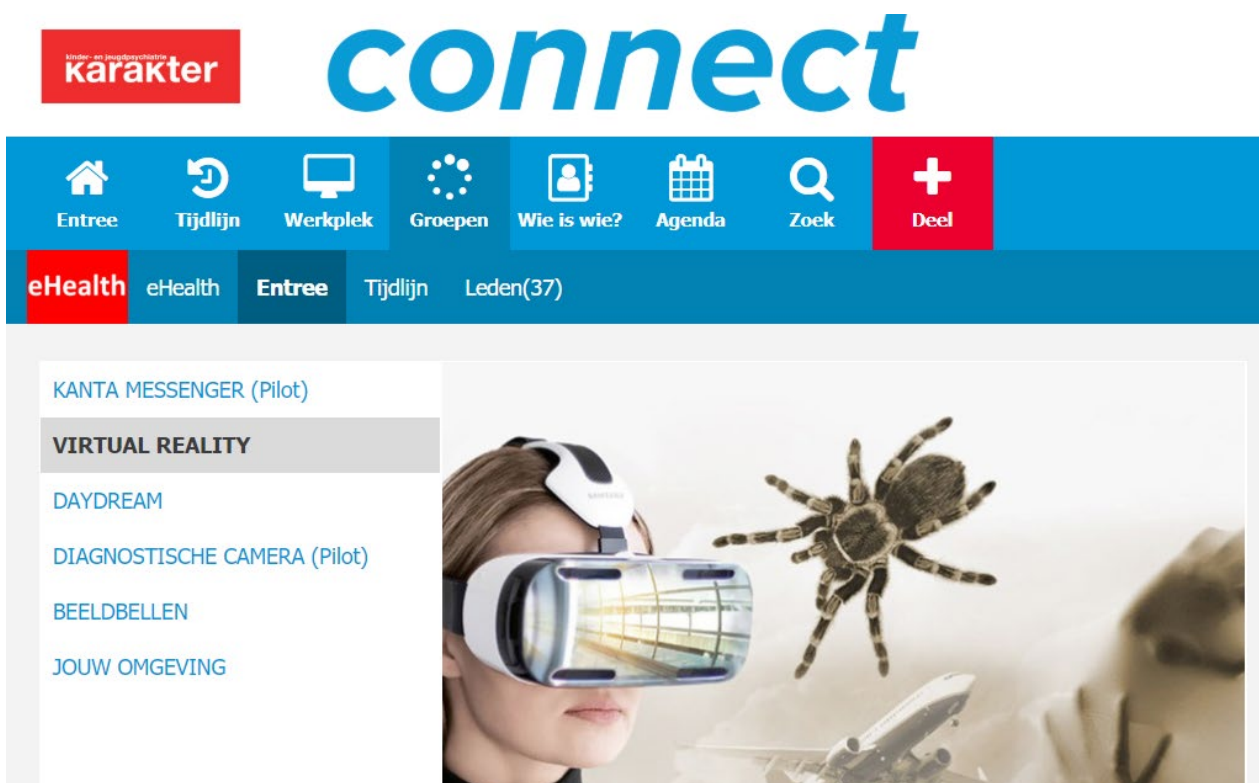


Figure 2 – eHealth options available at Karakter presented on Karakter's intranetpage Connect

1.1.2 Vision of Karakter

Karakter wishes for children to have an as normal as possible development. This is why they want to treat children at their own homes whenever this is possible. They want to be available for their clients 24 hours a day, 7 days per week and believe in a close collaboration between client, parent and therapist. (Met Karakter - Visie en missie statement, 2014) They see online treatment as one of the ways to create benefits for the client and their family, for instance by reducing travelling time, by making it possible to work on the process at the place and time that the client prefers, by offering online availability of the therapist, but mostly by allowing the patient to have more insight in his or her therapy process.

1.1.3 eMental health at Karakter

In the Vision and Mission statement of Karakter (2014) eHealth is also mentioned briefly. About the intentions of Karakter to apply eHealth, it states:

"Initiating and implementing eHealth, as permanent blended element of care programmes."

This shows that Karakter would like to integrate eHealth in the current way of working, but this is not further specified in the Vision and Mission statement.

Currently, Connect, the intranet page of Karakter, presents safe messaging, virtual reality, serious gaming, diagnostic camera, video calling and Jouw Omgeving as options for eHealth at Karakter. See Figure 2. Most of these are alone-standing digital tools for communication or treatment. However, 'Jouw Omgeving' (from now on referred to as JO) which translates to 'Your Environment', is a digital environment focused on mental healthcare. JO is developed in collaboration with the EKJP. It is not an Electronic Health record (EHR), but could be compared to it. An EHR is a digital system in which patient information is documented. JO has a strong focus on the patient and caretaker as active users of the EHR and does not have functionalities like agendas and financial documentation. This is why JO is officially not an EHR.

JO offers a variety of functions, where transparency, efficiency and control for the client are priorities. Their slogan is 'Your help, at your moment, at your place'. Karakter sees JO as a tool that can help realise their vision.

Building a support network around the patient

'Netwerkgeneeskunde' is a Dutch term that entails building a network around the patient. It is focused on organising care close to the patient in cooperation with the patient. In this way the patient has more control over their own care. JO makes this possible with their platform by allowing patient and parent to read the documentations and by allowing other people from the network of the child to connect via their digital environment as well. These people could be school teachers, family or other doctors.

1.1.4 Focus on location in Nijmegen

Karakter has access to JO since 2014 and for example at the IBC Kind (Intensive Treatment Centre Children) department of Karakter Zwolle it is already used quite a lot. However, despite the fact that JO has been available for some years, it is not implemented in the work routines of most of the therapists yet. Because the previous research at Karakter Nijmegen (mentioned in the introduction) made it clear that JO is only used by a small amount of the therapists at Nijmegen, the project focused on team of therapists on this location so that profound and qualitative research can be done. This team is the IBC Kind (Intensive Treatment Centre Children) team in Nijmegen. The IBC Kind departments of Karakter are selected to pilot test JO, meaning that they are one of the first teams within Karakter that are starting to use JO as a team. The research that is done at IBC Kind Nijmegen gives insights in the experiences of the therapists about the implementation of JO and serve as input to improve the implementation process and with that increase the using of JO.

1.2 Challenge and Significance

As explained Karakter wants to use JO to create more benefits for their clients, making mental healthcare more efficient and transparent by giving the patients and the parents a more active role in the therapy process. In order to assess if JO can have this intended effect the usage of JO needs to be increased. Karakter has assigned ambassadors for every location to promote the use of eHealth. However, in a meeting with the ambassadors it became clear that for many therapists and even ambassadors it is not clear what the exact goal of using JO is and what is expected of them. For more information about this meeting and the insights gained from it, see Appendix A6.

1.2.1 Challenge

The challenge in this project is to discover what the current state of implementation is, why therapists are or are not using the digital environment, and how the experience of therapist during the implementation process of JO can be improved. In short I would like to state this as: "How to make sure that the therapists **want** to use Jouw Omgeving?".

1.2.2 Significance

Many health and mental health organisations start using digital environments because they want to innovate, but as described before the problem is that often this innovation is not implemented well. Management wants to make a change, but the employees are not guided in adapting their work routine to the new situation. Every change within a company has to be planned and managed in order to make it a successful change, because the technology does not have any effect unless it is used by the employees. The employees are in turn just people that have personal wishes and needs.

Karakter

Karakter wants JO to have the effect they envisioned it to have when they deployed it in 2014. If the use of JO can be increased they can evaluate whether it actually brings this desired effect. As mentioned Karakter also has a focus on sharing knowledge and although this is meant to increase knowledge about psychiatric diseases, the insights from this project could also be of value to other organisations. So if the method to improve the usage of JO works, they can share these insights with other organisations and increase the impact of the research.

Therapists

Although the management of Karakter has decided to deploy JO, it is the therapists that are expected to use the digital environment and make a change in their work routines. Identifying their wishes and needs will hopefully lead to a better working experience for the therapists.

Clients and parents

When the use of JO at Karakter can be increased the therapy process where clients and parents are part of can be improved in terms of transparency and having control over the process.

Society

Research in the field of innovations in healthcare is of great importance since the innovations determine how future healthcare is shaped. When healthcare can become more efficient, either by being more effective or by having faster communication between parties, more people can be treated in the same amount of time. With the current waitinglists for mental healthcare (see Appendix B1) increasing efficiency is one way to improve this situation and make sure that people receive healthcare without having to wait months before treatment can start.

1.3 Aim and Approach

The aim of this project is to give Karakter knowledge and tools to improve the experience of the therapists during the implementation of JO using the outcome of the research as input for the possible solution, so that the usage of JO can be increased.

Research questions

1. What is the current state of implementation of JO according to the employees?
2. What are a) barriers that prevent employees from using eHealth or JO, and b) motivations for employees to use eHealth or JO?
3. What are the wishes and needs of the therapists?
4. What are moments of value to use eHealth according to the therapist?

The project consists out of three phases: Analysis, Synthesis and Evaluation. (Roozenburg & Eekels, 1996) Every phase has a different purpose and entails different activities and methods.

The analysis phase serves to analyse the current situation and results in answers to the research questions 1-4.

The analysis consists of giving an overview of the context of this research (JO), collecting relevant information from literature and collecting qualitative data by holding interviews and doing observations.

The synthesis phase is a translation of the results of the analysis phase into a possible answer to the question "how can we make sure that the therapists want to use JO?" in the form of a design concept.

In the evaluation phase the design concept is evaluated for its effectiveness. This is done by testing the concept with the end user.

The activities and methods per phase are shown in Figure 3.

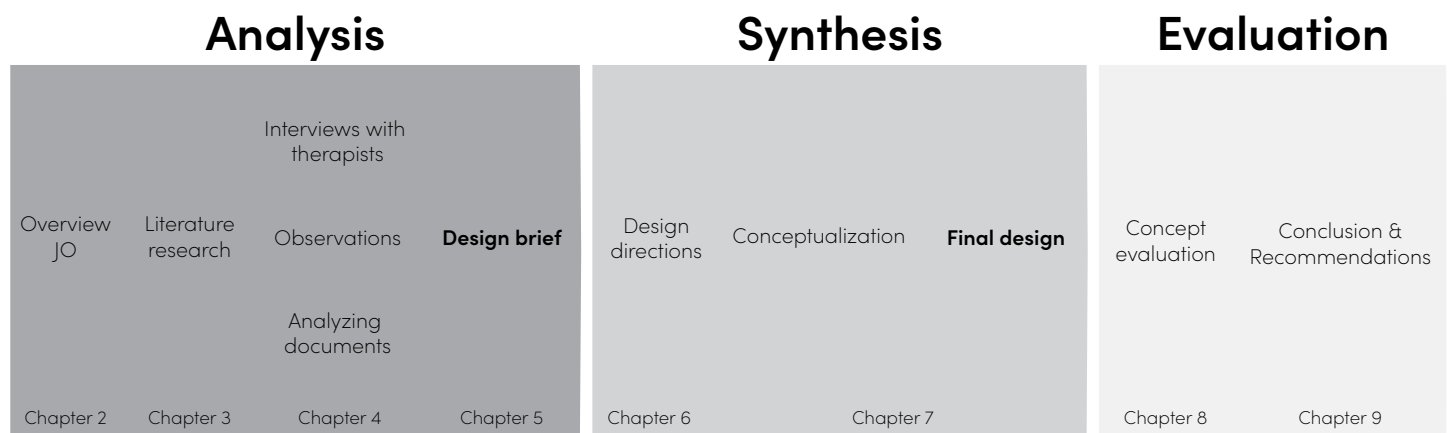


Figure 3 - Overview of phases and the different activities in each phase

Analysis

In this phase an understanding of the problem and its context is acquired by analysing knowledge gathered through user research that is based on existing literature. First Jouw Omgeving as a company and its platform is briefly introduced so that the context of the research is clear. Following on that is literature research about relevant topics like change management, behaviour change, (intrinsic) motivation and implementation. Then the research questions and method are explained and the results of the research are presented. Finally, this part of the report describes a problem definition, which is translated into a design vision and concludes this phase.

2



Jouw
Omgeving



ng

2 Jouw Omgeving

The introduction chapter explained the origin of this project, some context and the challenge, significance, aim and approach. As explained the project will focus on the implementation and usage of JO, the platform created by the company that shares the same name: Jouw Omgeving.

This chapter explains the goals and work method of the company Jouw Omgeving, so that it is clear how they work and what their role in the implementation of JO at Karakter is. Besides that an overview is given of the digital platform of Jouw Omgeving: the functions and possibilities it offers are explained in relation to what these functions and possibilities mean to their users.

2.1 Jouw Omgeving: the company

Jouw Omgeving exists for over six years and their office is located in Utrecht. According to their website they focus on transparency in healthcare and on making it possible for patients to have more control over their own therapy process. By combining technology with valuable content and an engaging look, they try to create a platform that is of meaning in mental health care. To make sure that JO offers this added value they work closely together with healthcare providers; their knowledge, experience and needs are the starting point for the development of JO. Clients are also involved in the constantly ongoing development of the platform. Figure 4 shows the reasons to use JO that are mentioned on their website. These are:

- Safe contact between therapists
- Online healthcare, modules and programmes
- Transparant documentation
- Visual, interactive and user friendly

(Over Jouw Omgeving)

2.1.1 Vision

As mentioned in the introduction chapter the slogan of Jouw Omgeving is 'Your help, at your moment, at your place!'. See Figure 5. Their goal is to contribute to making healthcare more transparent and to giving more control to the patient. They want those concerned in the therapy process to be able to interact more efficiently and see technology as a mean to improve healthcare and not as a goal in itself. (Over Jouw Omgeving)



Figure 5 - The slogan of Jouw Omgeving

Waarom Jouw Omgeving?

✓ Beveiligd online contact
tussen hulpverleners

✓ Online hulpverlening, modules
en programma's

✓ Transparante
rapportages

✓ Visueel interactief en
gebruikersvriendelijk

Figure 4 - Reasons to use Jouw Omgeving mentioned on the website of Jouw Omgeving (Jouw Omgeving, n.d.)

2.1.2 Implementation method

An interview was held with an implementation advisor of Jouw Omgeving in order to gain knowledge about the functionalities of the program and of the implementation method of Jouw Omgeving. A summary of the interview held with JO can be found in Appendix A4. The interview made clear that besides using technology as a mean to improve healthcare another way to make sure that JO has added value is for Jouw Omgeving to be involved in the implementation of the digital environment into the organisations. Most organisations that start using eHealth assign eHealth ambassadors. The ambassadors are meant to be available for therapists to ask questions regarding the use of JO, so it is important that the ambassadors become knowledgeable about the use of JO themselves. Jouw Omgeving offers meetings and so called 'knoppentrainingen' to teach the ambassadors of an organisation how the platform works and what the goal is of the different functions. The idea is that ambassadors can pass on their newly gained knowledge to the therapists of the organisation. See Figure 6.



Figure 6 - Intended knowledge transfer from implementation advisors to ambassadors to therapists

2.1.3 Implementation at Karakter

In the interview it also became clear that in 2017 Jouw Omgeving did a preliminary research including an implementation scan at Karakter. This research was conducted because it became known to Jouw Omgeving that the usage of JO at Karakter was still very limited even though the program has been available within Karakter since 2014. The research was held among people with different disciplines and different locations at Karakter. In the report Jouw Omgeving concludes that all the ingredients for successful usage of JO are present and they advise to formulate concrete goals and to ensure managing of these goals. The following paragraph is a quotation of part of the conclusion:

"eHealth can only be successfully implemented when the people involved believe in it, are willing to change and are able to use the technique in such a way that added value for the professional and the patient arise. It seems that these ingredients are present in the culture's organisation. At this point, the most value can be achieved by maintaining the booked success and by making it more explicit, and focus the attention on the formulation of concrete goals and the management of these goals."
Implementatie Jouw Omgeving (2017)

The research of this project shows a.o. whether the ingredients that the document speaks of are indeed also present at the IBC Kind team. Do the therapists believe in JO, are the therapists willing to change and are the therapists able to use JO in such a way that added value for the professional and the patient arises? Next to that the research answers the question whether maintaining the booked success and formulating and managing concrete goals are found to be valuable ways to increase the usage of JO among the therapists.

2.2 Jouw Omgeving: the platform

As mentioned the goal of Jouw Omgeving is to make healthcare more *transparent*, give *more control* to the patient and to enable *efficient interaction* between the people involved in a therapy process. This section shows what functionalities makes reaching these goals possible.

2.2.1 Functionalities

A personal page for every user and connection between them

Every user of Jouw Omgeving has his own account that gives access to a personal page. The content of this personal page differs according to the type of user: therapist, child/patient, or parent.

The different accounts are connected, allowing for communication between the three types of users and allowing the therapists and parents to watch along with the activities of the child. See Figure 7. Larger images of the parent and patient dashboard can be found in Appendix D1

In order to build a supporting network around the patient, other people that play an important role in the therapy process, can receive accounts in agreement with the therapist. This could for example be a school teacher. The therapists and patient can decide what information would be visible for the people involved in the therapy process.

This makes it possible for all parties to keep track of the therapy process (= *transparency*) and to view the content and *directly communicate* about the content.

Goals and actions / Insight in the therapy process

For every patient at Karakter a treatment plan is set up describing what the goal of the treatment is. This goal is divided in subgoals and actions, making it more explicit how the treatment goal can be reached by taking smaller steps.

JO offers the possibility to document the subgoals and actions in PLAN. The goals and actions can be reviewed by the therapist and the patient can react on this review, for example to ask a question. See Figure 8.

In this way the patient has an overview over the steps that he should take or has taken during the therapy process, making the documentation *transparent* and giving the patient *more control* because he or she can always view the plan and perform the action points when he or she wants.

Digital toolbox

Within the JO platform a number of tools are available, of which a part is interactive. See Figure 9. The interactive tools are mostly digital versions of activities that are currently done without a computer, like the 'fear ladder' or the 'G-scheme'. The tools can be connected to action points of the treatment plan.

Using the online tools allows for all the actions taken to be documented online, where patient, parent and therapist can view and review them. This makes the documentation of the therapy process more *transparent*.

Mail and chat

Next to the possibility to react on action points, JO allows messaging between therapists, patient, parent and others with an account. There is also an app that provides the updates and messaging function, to make it more accessible

This allows the users to have safe and *efficient communication*.

2.2.2 The therapist's perspective

Since this project focuses on the therapists an overview of the therapist's dashboard is shown in Figure 10. All functionalities that the dashboard shows are briefly described. Some of the more elaborate elements are shown in more detail, like the digital toolbox, e-learning and the link to the client pages that appear when the functionality is opened.

The Figure also shows that the updates and message functions are available on a smartphone as well and that instead of a computer a tablet could be used to visit the online environment.

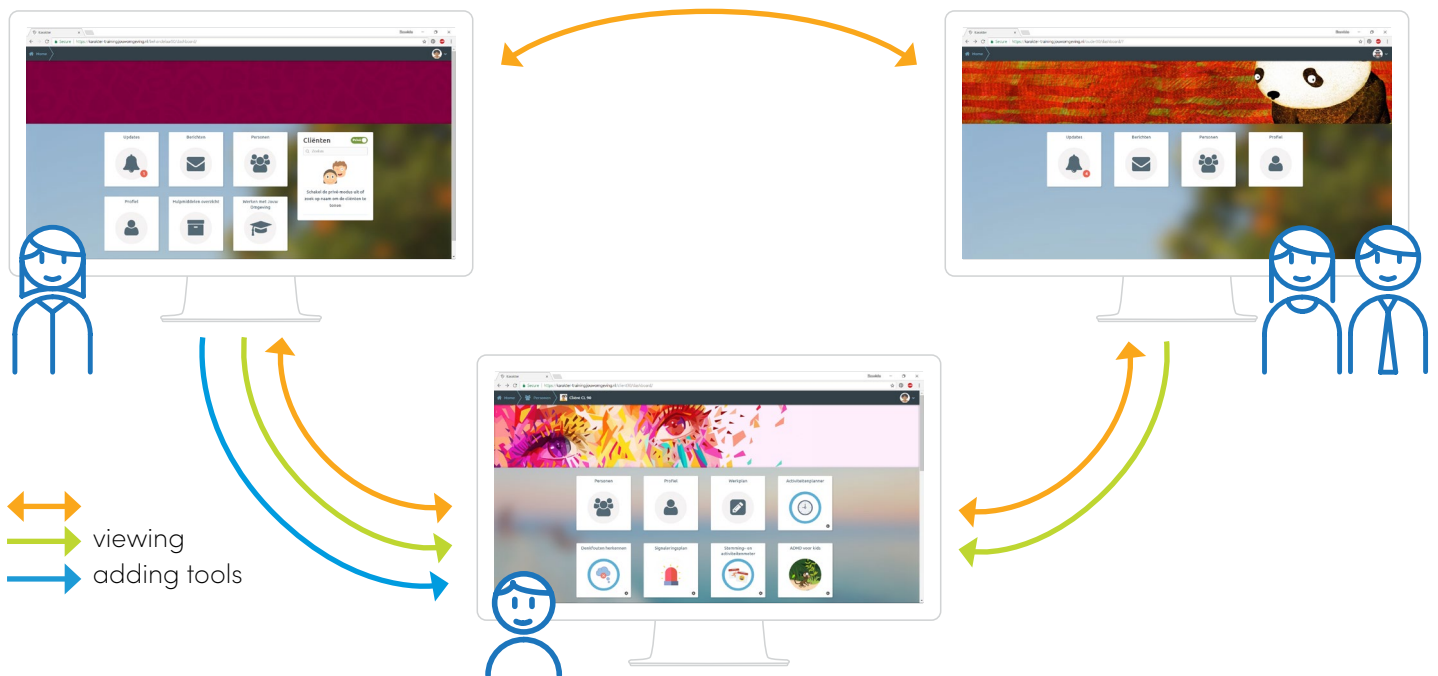


Figure 7 - Personal dashboards of therapist (left), client (middle) and parent (right), and the possible actions between them.

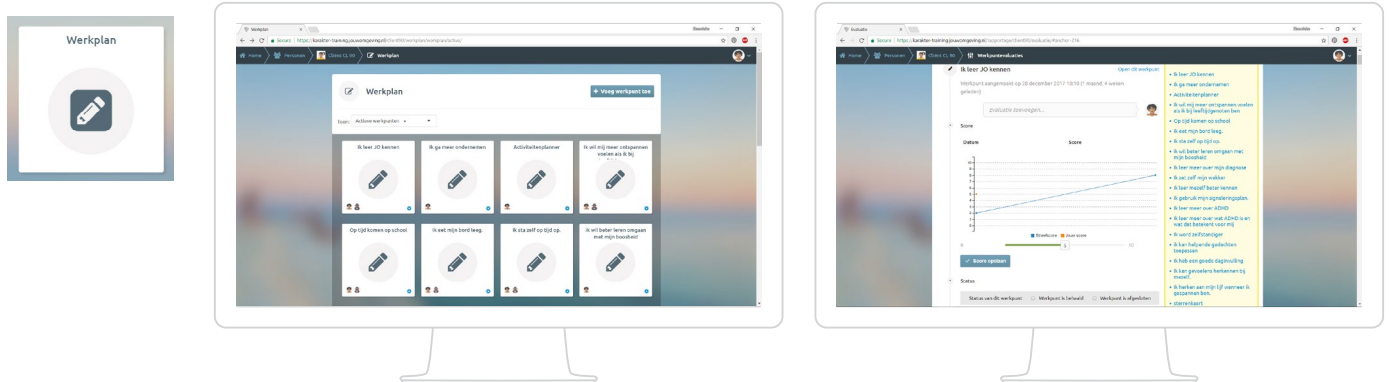


Figure 8 - The workplan tile on the patient dashboard (left) leads to an overview of goals and action points (middle). The action points can be evaluated by the therapist and the patient can react on the evaluation (right)

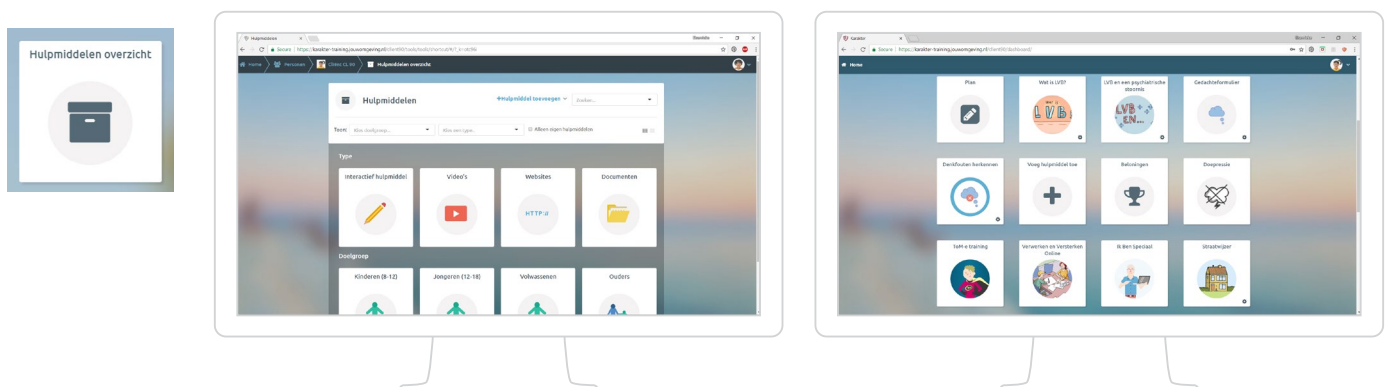


Figure 9 - The toolbox tile on the therapist dashboard (left) leads to a digital toolbox (middle) that allows the therapist to add tools to the dashboard of the patient (right)

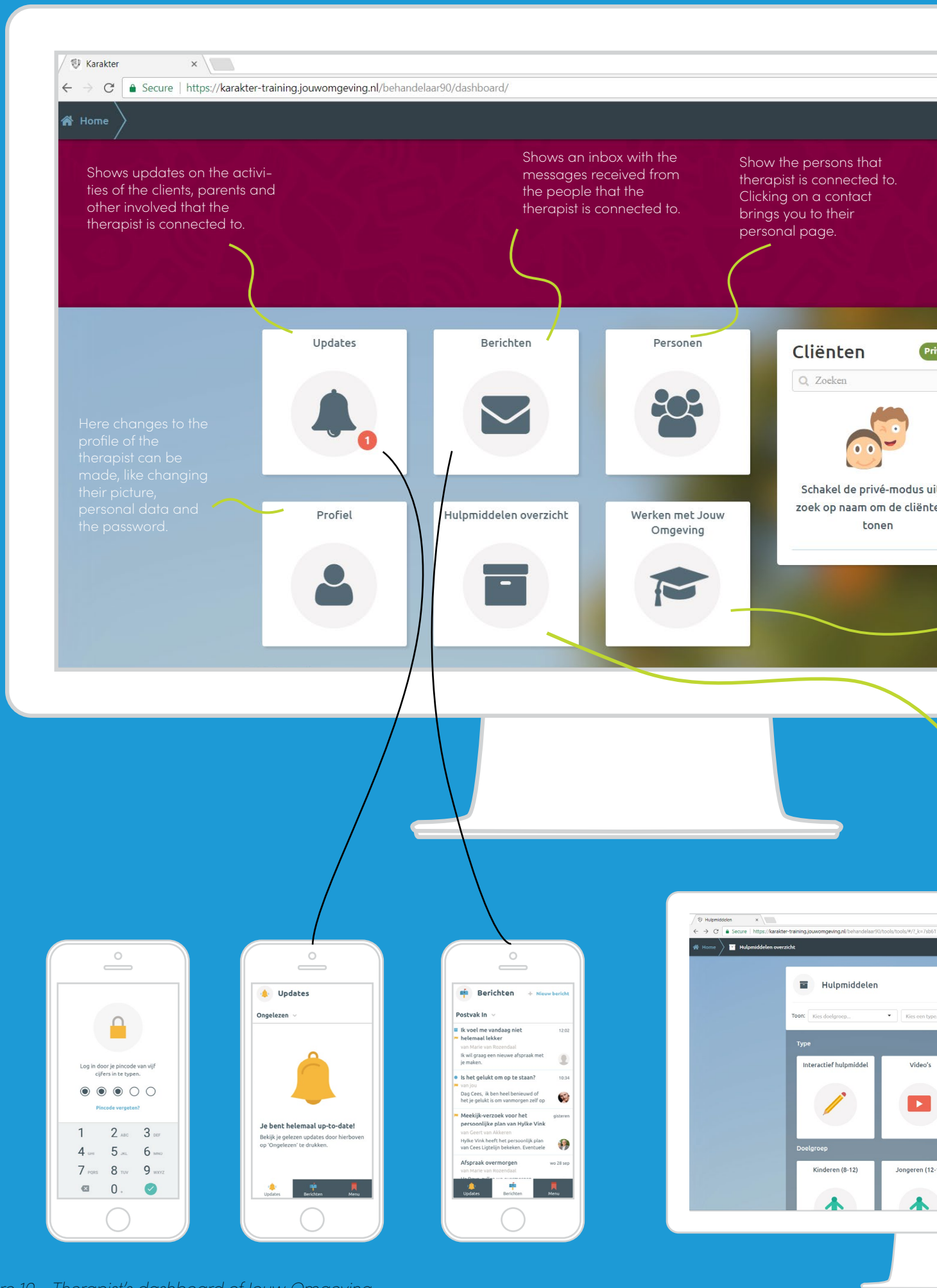
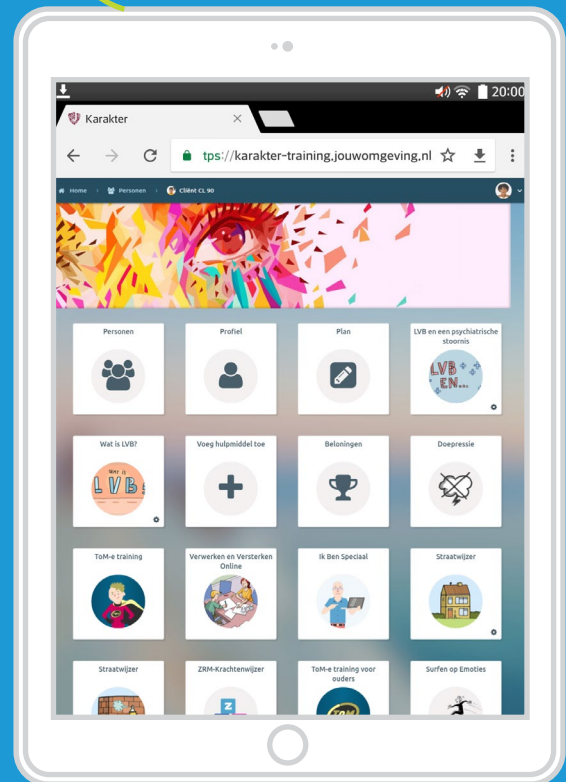
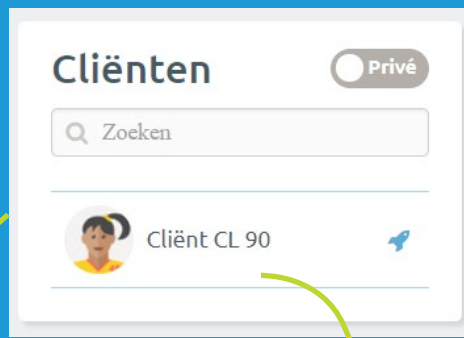
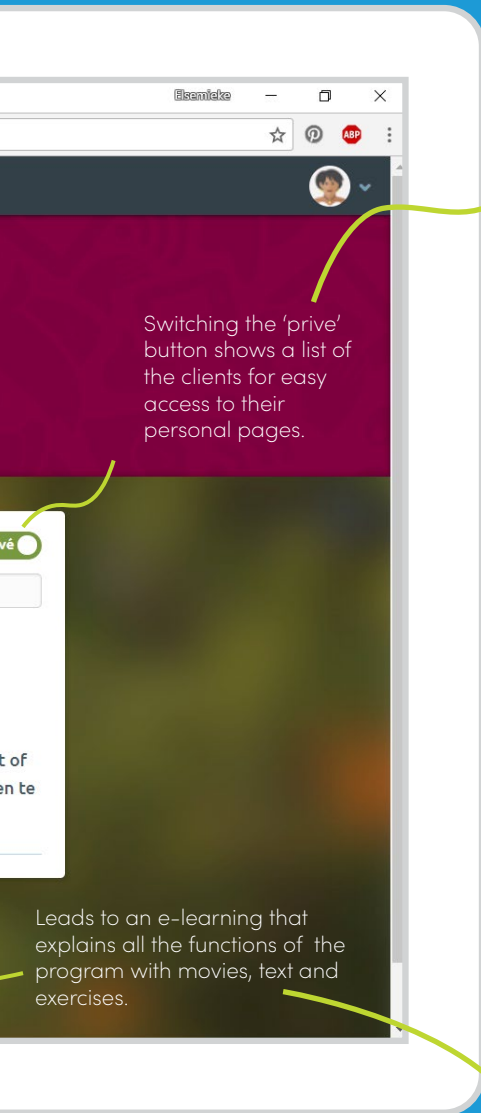
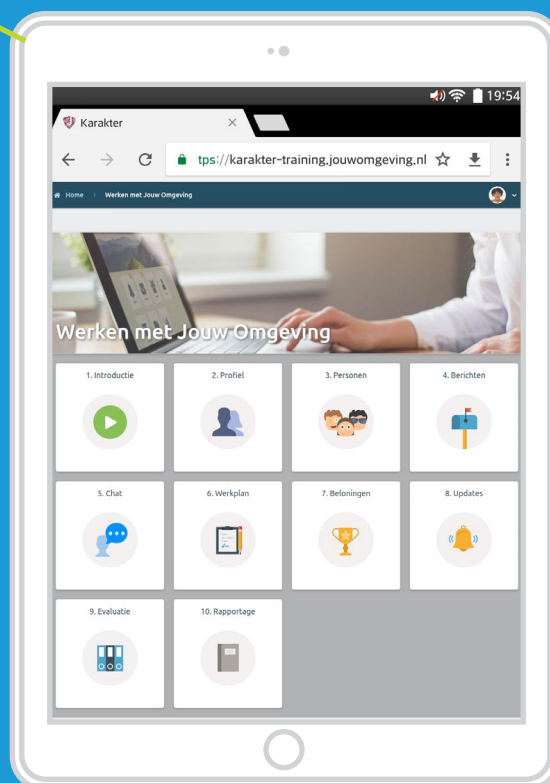
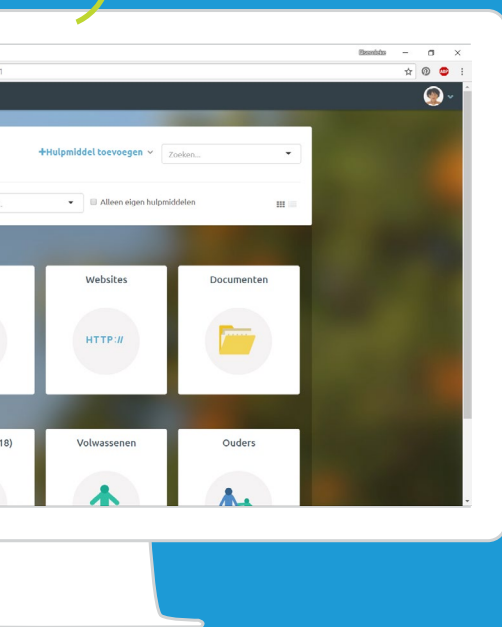


Figure 10 – Therapist's dashboard of Jouw Omgeving



Leads to an overview of tools that the therapists can browse and add to the personal page of the client.

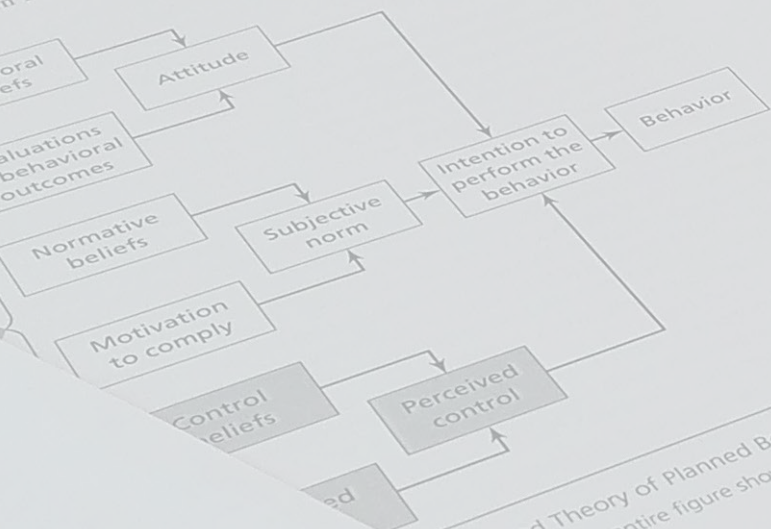


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3 Relevant literature

Now that it is clear what the challenge of the project is and how the digital environment of Jouw Omgeving plays a role in this, it is time to introduce which literature will help in setting up a research in order to fulfill the challenge.

The challenge to make therapists want to use JO consists of two parts: 1) changing the experience of the therapists during implementation of JO and 2) changing the behaviour of the therapists concerning the usage of JO. It is expected that the experience that the therapists have during the implementation will influence their behaviour: if the experiences during implementation are positive this will lead to better or more usage of JO and if the experiences are negative this will lead to less or no usage of JO.

The literature in this chapter discusses the following topics: the adoption of technological innovations, innovation implementation, change management and behaviour change. The full review of the literature can be found in Appendix B2.

The chapter closes off with a preconception map that shows the preconceptions for this project categorized according to the discussed theory.

3.1 Usage behaviour

Usage behaviour is influenced by different factors and much research is done to determine what these factors are. For this project three models that were found on behaviour are combined, in order to create a complete overview of the influencing factors that are relevant for the usage behaviour regarding JO at Karakter.

3.1.1 Occurance of a behaviour

According to Fogg (2010) whether or not a certain behaviour is performed depends on the presence of three elements: 1) motivation to perform the behaviour, 2) ability to perform the behaviour, and 3) a trigger that reminds about performing the behaviour. This is visualized in Figure 11. The model explains that when there is no motivation, but there is a high ability it is still possible for a certain behaviour to occur. The same counts for the situation where the motivation is high, but the ability is low. However, when both motivation and ability are low the behaviour is very unlikely to happen. When looking at the situation at Karakter, ideally the motivation and ability to use JO are both high and triggers are present, so that the usage of JO among therapists is very likely. The research of this project should show which of these elements are lacking, causing the low use rate of JO.

In order to identify if and/or which of these elements is lacking, it is important to know what factors these elements consist of. In other words, how is a motivation to perform a behaviour formed and what gives someone the ability to perform a behaviour? In order to explain this the model of Fogg is combined with other behavioural models of which the result is shown in Figure 12.

Motivation

The behavioural model of Talukder (2012) is selected to explain how motivation or behavioural intention is formed in the context of an organisation. This can be seen on the left side of Figure 12. The image shows that the behavioural intention is influenced by organisational, individual, and social factors, and by demographics.

Ability

The ability to perform a behaviour is formed by two factors 1) knowledge and skills, and 2) environmental constraints. This is derived from the Integrated Behaviour Model (IBM) of Montaño & Kasprzyk (2008) and shown on the top right side of Figure 12.

Triggers and habit

Other factors described in the IBM are salience of the behaviour, which would be the triggers that Fogg mentions in his model (bottom right of Figure 12). And finally whether the behaviour is a habit or not also influences the actual usage behaviour.

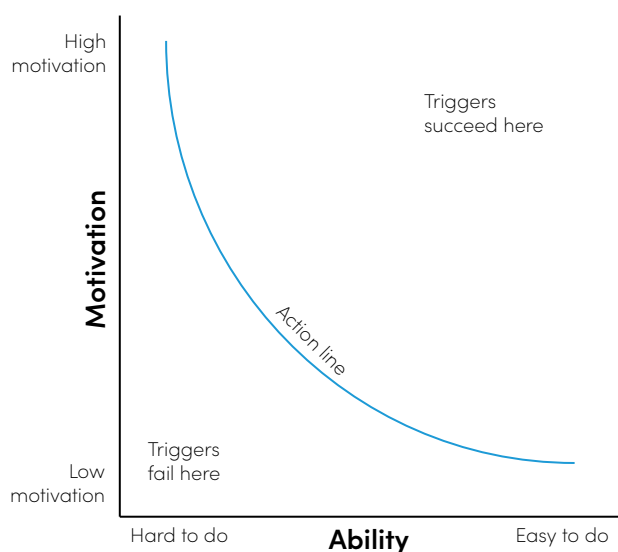


Figure 11 – Fogg's behavioural model, adapted from Fogg, 2009

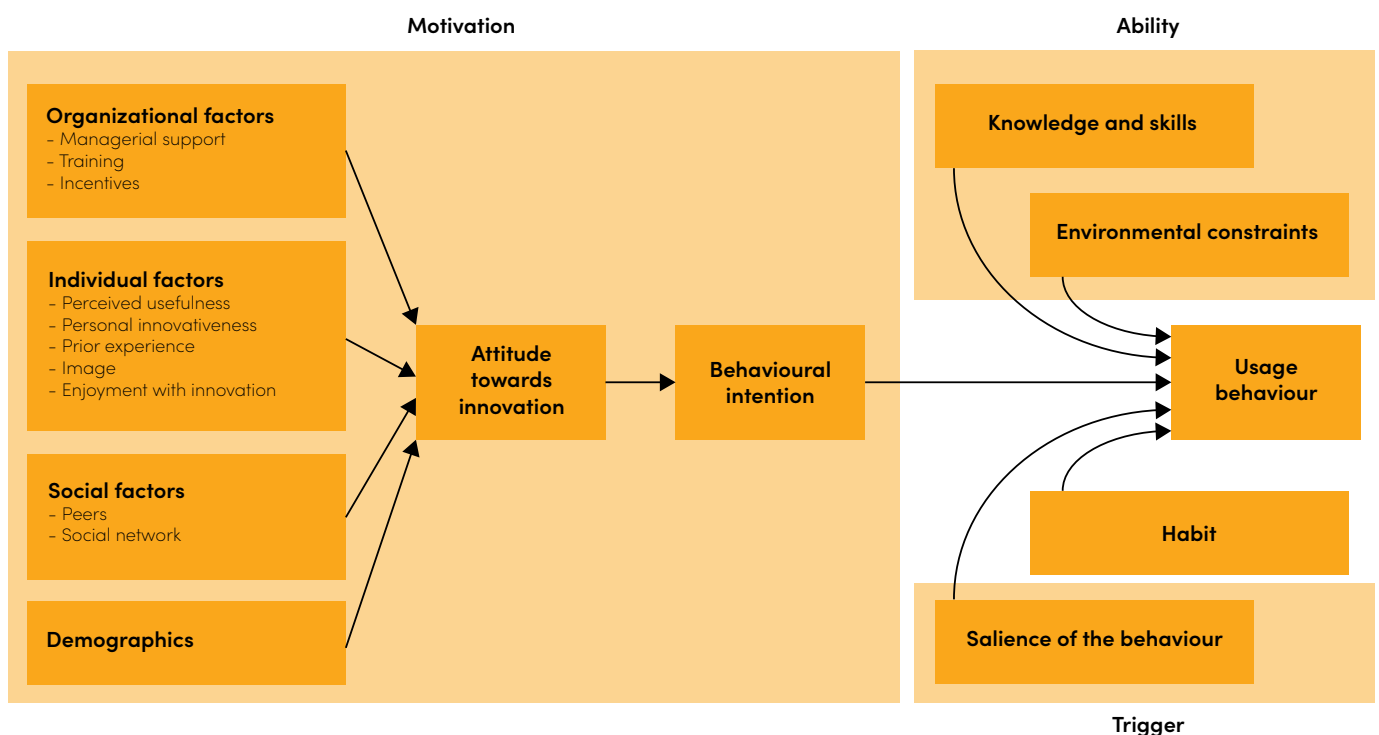


Figure 12 - Elements of different behaviour models combined (Taluker, 2012; Montaño & Kasprzyk, 2008; Fogg, 2009)

3.1.2 Personal needs of the therapists

The factors 'personal innovativeness' and 'enjoyment with innovation' can be explained by the adopter categories from Rogers (2010). See Figure 13. The adopter categories are based on a person's readiness to try out a new innovation or product (Definition 6). The LAMH (Levels of adoption in eMental Health) of Feijt et al. (2018) give an overview of what general characteristics, barriers, drivers and requirements for change each category has or needs. At the bottom of Figure 13 it is shown what the usage behaviour of each category is according to the LAMH model. The complete LAMH model is shown in Appendix B2. In the research each participant

will be categorized with the help of this model, so that it becomes more clear what the needs for that participant are.

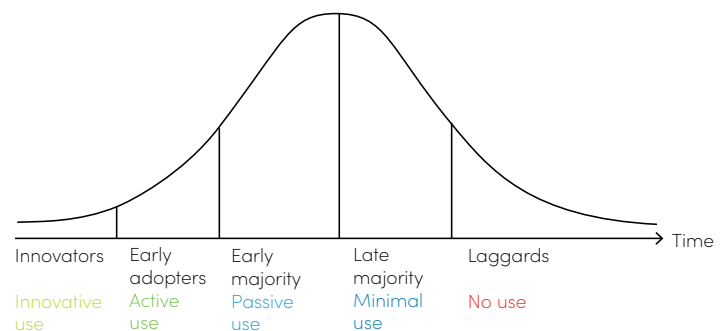


Figure 13 - Adopter categories, adapted from Rogers (2010) and Feijt et al. (2018)

3.2 Change management

The previous section has described which factors influence the behaviour of employees in an organisation. Figure 12 showed that a part of these factors are organisational factors. These factors are managerial support, training and incentives. These factors show that the motivation of the therapists to use JO is not only depending on their intrinsic motivation, but also on the performance of management in organising a successful change implementation.

Change management is a term that is used in the business world and refers to "minimizing resistance to organizational change through involvement of key players and stakeholders" (Definition 2, n.d.).

Streetcredits (n.d.), a consultancy business that teaches change management strategies to companies, describes the following ingredients for successful change management.

First of all, it is important to have a clear vision and value definition. Secondly the leaders should be engaged in implementing the change. Thirdly, the organisation should be aligned. Fourthly, the change should be effectively communicated to the employees, as this influences both the readiness for change and uncertainty about the aim, process and outcome (Elving, 2005). Fifthly, the staff must receive training and support to create the ability to make the change. And lastly, the staff should be made ready to change so that the change is sustainable.

The interviews will give insight in whether or not:

- there is a clear vision and value definition for the usage of JO,
- management is engaged in the change,
- the organisation is aligned,
- the change is communicated properly,
- training and support is sufficient to create the ability to change,
- the staff is made ready to change.

In this way it is possible to identify whether mostly change in behaviour from management is needed or whether mostly change from behaviour of the therapists is needed or both need to change in order to increase the usage of JO.

3.3 Implementation stages

Finally, the implementation stages shown in Figure 14 will provide structure to the research results about the implementation of JO at Karakter Nijmegen. The different stages and activities also give insights in the logical steps to take during implementation and allow to compare the steps taken at Karakter with these steps. In this way it will become known what kind of steps are performed well and what steps might be missing or should be improved.

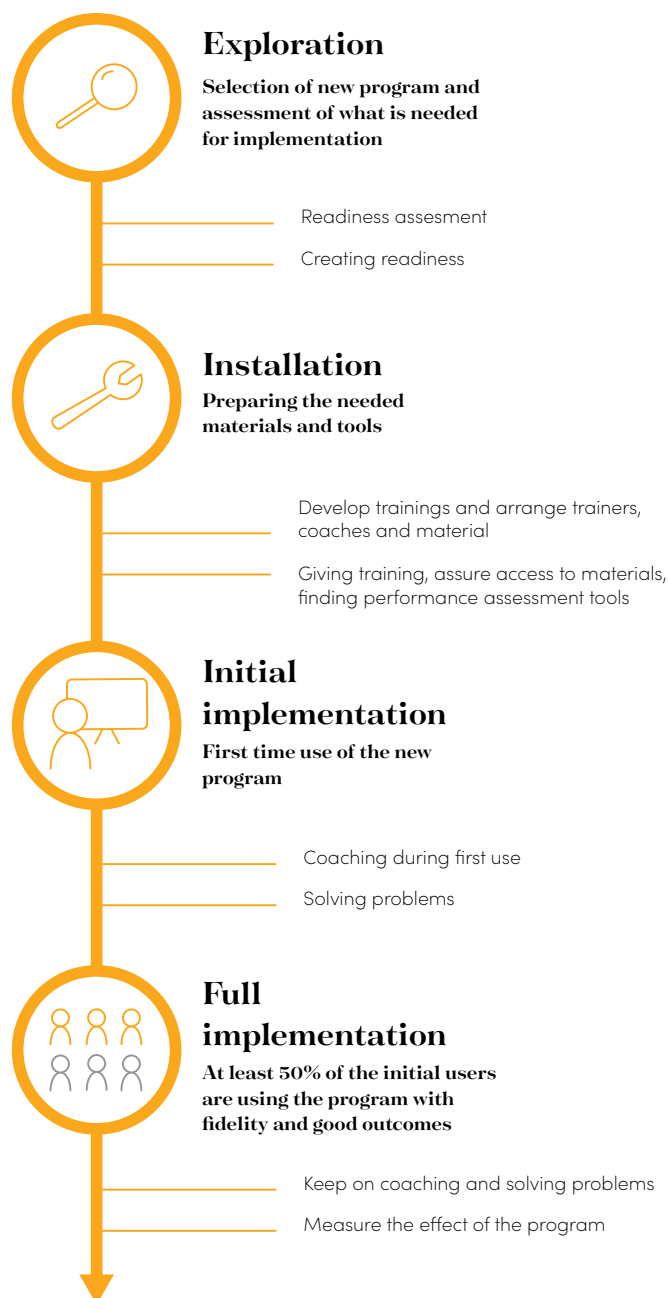


Figure 14 - Implementation stages including the goals and activities per stage

3.4 Conclusion

The goal of this chapter was to explain what factors could influence the experience of the therapists during the implementation of JO and what factors can influence the behaviour of the therapists regarding the usage of JO.

The factors that influence the experience are shown in Figure 12, that combines the different models on behaviour that were reviewed. The new knowledge forms the base for the research among the therapists at Karakter. The next chapter will explain the experience and the steps of the implementation process on the basis of the four implementation stages: Exploration, Installation, Initial implementation and Full implementation. Organizational, individual and social factors and demographics of Karakter and the therapists working at Karakter are determined and serve as input for the experience and the behaviour of the therapists during the implementation, as well as knowledge and skills, environmental constraints, salience of the behaviour and habits. Furthermore,

the research will determine which therapists fits in which adopter category. With this information it can become clear what the current experience and behaviour regarding the implementation and usage of JO is and what is needed to change this experience and behaviour.

Based on the knowledge gained in this chapter and the earlier insights about the implementation of JO at Karakter a preconception map was made regarding the reasons that the therapists participating in the research might have. See Figure 15. The preconceptions are divided in the categories that were found in literature, so that in a later stage it can be made visual which preconceptions were true and which were not by crossing things out and highlighting others. Doing this will clearly show what information the research has provided as opposed to what was already known. It also shows which assumptions are true.

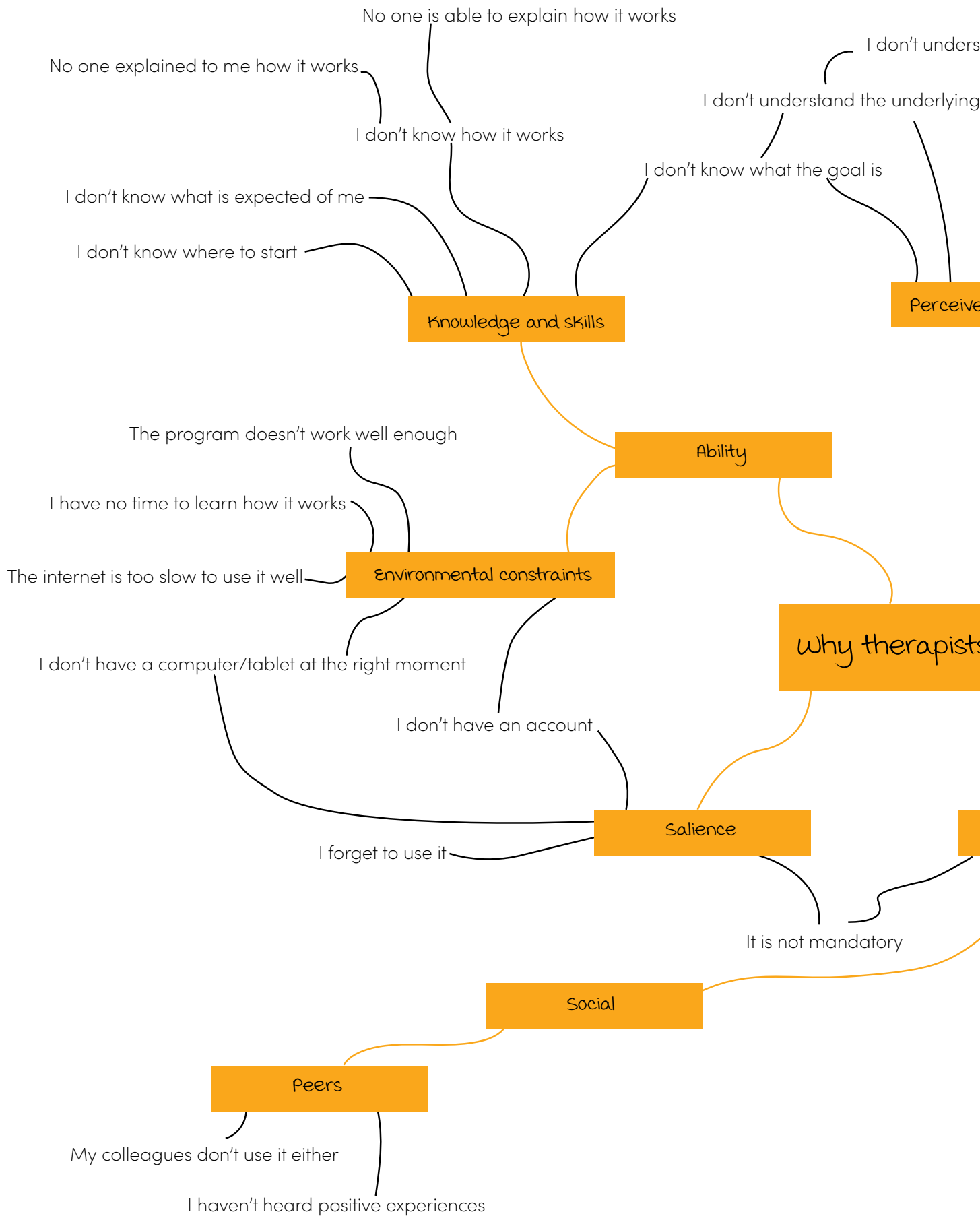
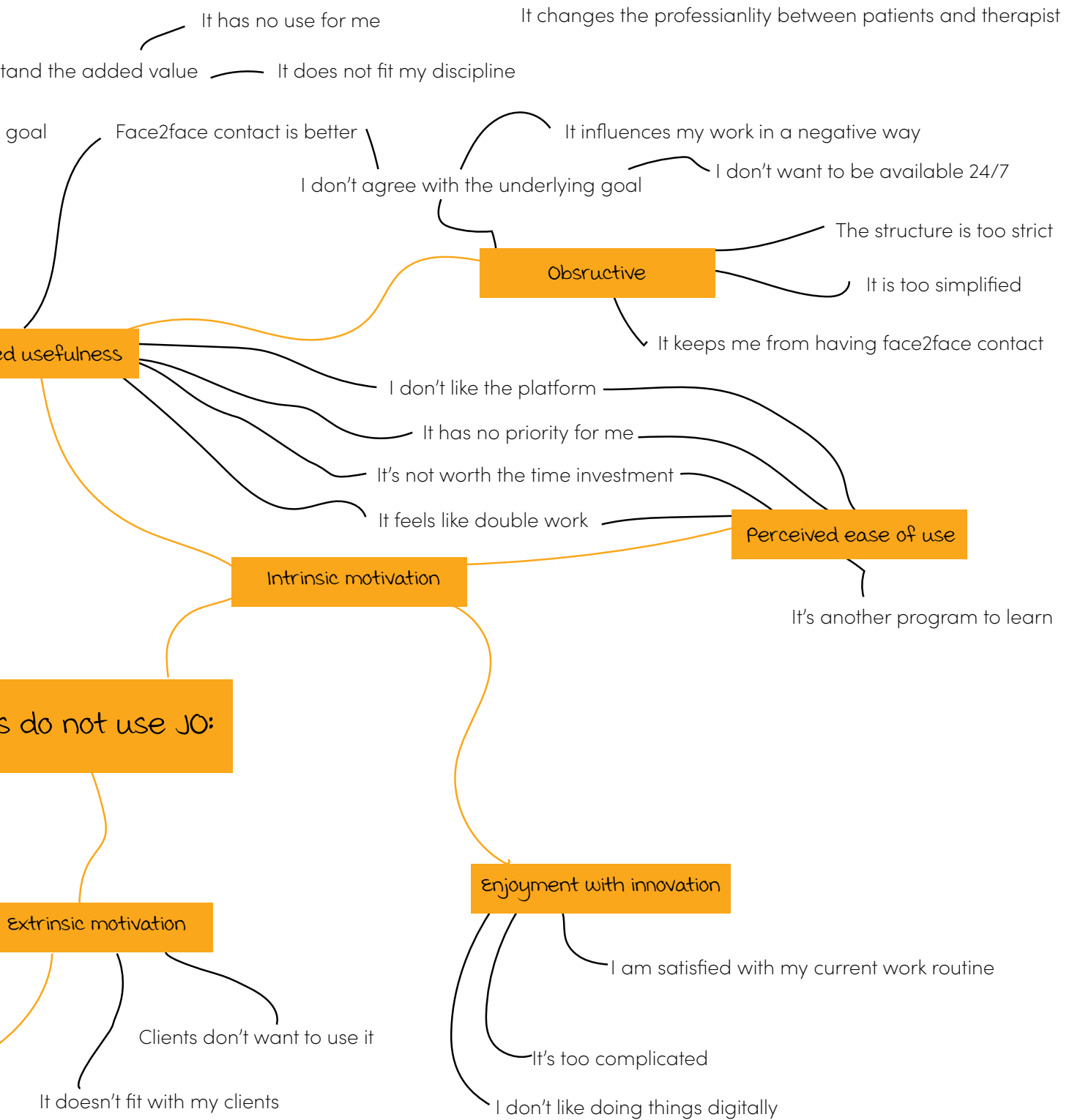


Figure 15 - Preconceptions map based on previously gained knowledge and expectations



4



Figure 16 - One of the participants during their interview



4 Research

The previous chapter described which and how this theory will be used in the interviews with the therapists.

The goal of this chapter is to show the results of the interviews and observations and to evaluate whether the experience of the therapists regarding the implementation of JO can be explained and improved with the help of these models.

This chapter will start with describing the research questions and the research set-up. Then the results of the interviews and observations are presented, followed by a conclusion. The chapter closes off with a discussion about the limitations of the research.

4.1 Aim and research questions

The aim of this research is to determine whether it is possible to explain and thus understand the intention to use JO and the experience during the implementation of JO of social therapists and staff at the department IBC Kind at Karakter Nijmegen with the help of the theory described in the previous chapter.

Interviews with the team serve to map the challenges and opportunities during a workday at 'De Uil' ('De Uil' is the name of the IBC Kind clinic in Nijmegen) and during the entire therapy process of a patient. Next to that they serve to map the experiences and expectations regarding the implementation and use of eHealth.

Observations serve to get a deeper understanding of the processes and moments that the interviewees talk about during the interviews and to get a realistic image of the work environment and the possibilities within it.

Research questions:

1. What is the current state of implementation of JO according to the employees?
2. What are a) barriers that prevent employees from using eHealth or JO, and b) motivations for employees to use eHealth or JO?
3. What are the wishes and needs of the therapists?
4. What are moments of value to use eHealth according to the therapist?

4.2 Method

As was mentioned in the introduction of this report, the research aims to gain deep knowledge about the therapists' experiences during the implementation of JO. This knowledge is gathered by doing qualitative interviews that include the use of generative tools as a way to map the context (Sanders & Stappers, 2012). This is combined with doing observations in order to get an even more clear image of the context.

4.2.1 Team and project introduction

As a kick-off for the research phase I introduced myself to the team IBC Kind during a monthly team meeting. The goal of this introduction was to introduce myself and my project to the team so that they would recognize my face and understand the purpose of my research and for me to get a basic impression of their attitude towards technology. Next to that the introduction served as a moment to collect contact details, make an interview schedule and hand out the sensitizing booklets. The presentation slides including the insights that the presentation provided can be found in Appendix C1.

4.2.2 Sensitizing

Sensitizing booklets were created with multiple goals. To get an idea of what a workday for people working in the team looks like, to identify interesting moments in that day, to get a head start before starting the interview and be able to anticipate on what was mentioned in the booklet during the interviews, to select people to interview based on the answers in the booklet, and to trigger the potential participants to think about certain topics in a certain way.

The booklet was set up like a diary for 5 days of which every day could be filled in in less than 10 minutes. The booklet was called 'Me and my work' and discussed things like: this is what makes me happy, this is what I do at work, this is what I find important about my work, most-used items on a workday, timeline of a workday, fun moments and less fun moments on that workday. The end of the booklet showed room for remarks and questions. The booklet is shown in Appendix B3 and were handed out to 15 people, of which four people filled it in, those were the participants that were interviewed first. Others said that they did not have time to fill it in and one person said she did not want to fill it in.

4.2.3 Participant selection

Since the booklets were only filled in by a few potential participants it was not used as a selection method. Instead I started with interviewing two

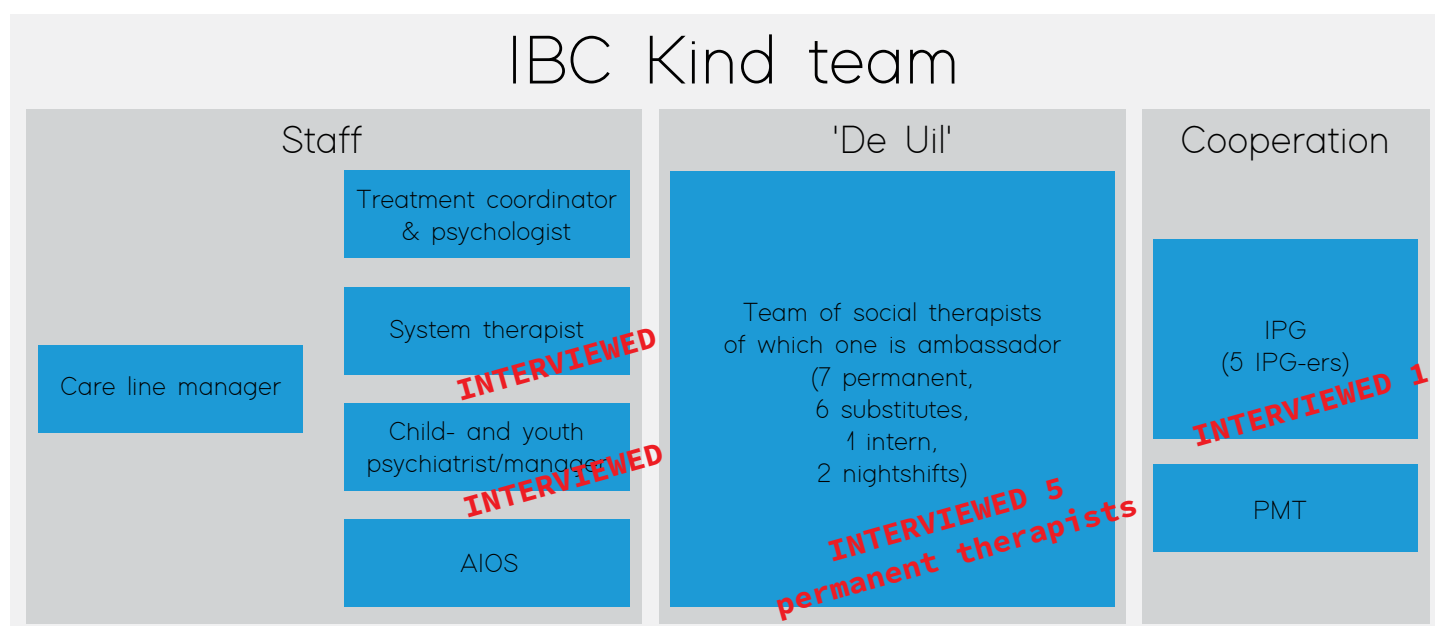


Figure 17 – Structure of IBC Kind team

social therapists based on availability. During the introductory presentation one person specifically mentioned that she thought JO was not something for her, so an interview was planned with her. The eHealth ambassador who is part of the team was one of the only ones that said to be interested in technology was interviewed as well. By including these two people in the interviews it was made sure that the extremes were covered. From the information gathered during the interviews it became more clear which people were involved with the team and some of them were selected for interviews as well, also based on availability.

In total eight people were interviewed: five social therapists (of which one is eHealth ambassador), two staff members (one child and youth psychiatrist and one system therapist) and one intensive psychiatric family therapist. This is also shown in figure 17. The functions of the people working in the team are explained in Appendix C3.

4.2.4 Interview materials

The set-up of the interview was semi-structured. A checklist with questions and time indications was used to guide the interview. Notes could also be made on this sheet. If interesting and relevant topics came up during the interview that were not on the checklist

it was allowed to further elaborate on these topics and thus deviate from the checklist. This was done because the checklist was based on assumptions so not allowing deviation from the checklist could lead to missing important issues and opportunities.

Participants were asked to bring their sensitizing booklet to the interview. A A4 sheet showing stakeholders was used to ask participants who was involved in the therapy process of a patient. A timeline for a workday on A3 was used to create an overview of their workday in combination with stickers showing communication and documentation methods to create a clear overview. A laptop was used to show a short movie. A timeline for the implementation process on A3 was used together with emotion stickers to map the implementation process. A release form was signed by the participants to give permission for voice recording and/or taking pictures during the interview. A voice recorder was used to record the interviews and a smartphone on flight mode was used as a back-up voice recorder. The smartphone was also used for taking pictures. An overview of the materials that were used is shown in Figure 18. Large images of the sensitizing booklet, guide, checklist and interview sheets can be found in Appendix B3-B6.

The interviews were held at Karakter Nijmegen either at the IBC Kind clinic or a room with a table and multiple chairs. See Figure 16 (coverpage chapter 4).

4.2.5 Procedure

1. Preparation

Goals and research questions were formulated as a starting point for the research. Sensitizing booklets were created. A preconception map was made in order to compare this with the results of the research. As explained this makes it possible to recognize the quality of the results, as the results of the research are expected to be more in-dept than the assumptions.

2. Sensitization

A sensitizing booklet was handed out to potential participants to trigger the potential participants to observe their time at work and their work environment, as well as to create a starting point for the interviews.

3. Interviews

Individual interviews of around 75 minutes were held with the participants instead of a session with multiple people. This was done to prevent dominant participants from overshadowing others and in this way make sure that individual experiences could be derived from the interviews. The individual experiences are particularly important because the research focusses on personal beliefs about e-health and personal barriers and motivation to use e-health and on discovering whether the implementation phase was experienced different by different participants. Since the participants all work in the same team the risk existed that one person would tell about an event during the implementation phase and that others would not share their own specific experience because the event was already mentioned by someone else. If this happens important details can get lost. All interview were conducted at Karakter Nijmegen either at IBC Kind or at a booked room.

The interview consisted of the following parts:

1. Introduction (2 min)
Short explanation of the different parts of the interview and the request to fill in the consent form for voice recording and taking pictures.
2. Demographics (5 min)
Age, function and function description, education, time at Karakter, previous jobs, computer knowledge. The amount of working hours was added to later interviews when it became clear that this was a relevant factor.
3. Attitude towards technology (5 min)
A few questions related to everyday situations to determine the general attitude towards

technology of the participant.

4. Sensitizing booklet (3 min)
Briefly discussing the answers in the booklet to get back into the topics and have a starting point for the first timeline.
5. Communication and documentation (17 min)
Elaborate questions about activities on a workday at Karakter and when, how and why communication and documentation takes place.
6. PsyNet video (15 min)
A 2-minute video is shown explaining the program PsyNet including building a network around a patient, where the patient has the control. The movie is followed by questions about a system like PsyNet in terms of liking, changes it would require, who would be against/pro, etc.
7. Implementation of e-health (20 min)
Elaborate questions about events within Karakter that had to do with e-health and about the emotions that come with it.
8. Closing off allowing for questions and remarks (2 min)

4. Additional research

During the interviews some things were mentioned that required further research in the form of observation or explanation. For example the transfer between the early and late shift was mentioned by several participants as being chaotic, so a transfer was attended to observe what the causes for this could be.

5. Analysis

Parts of the interview that were considered relevant were transcribed. This relevance was based on whether the part of the interview helped in answering the research questions or gave new insight into new perspectives. The quotes were sorted into different topics. A complete overview of who is involved in the communication with the social therapists during the therapy process was created to show the complexity. A user journey of the implementation process was created to show the different steps taken to implement JO and the effect that these steps had. Also, an overview of the personal goals for using JO and the goals of Karakter according to the participants was created. Both the user journey and the goal overview is supported with quotes from the interviews. As an addition, the different programs and communication media that are used are put in an overview to show that the amount of tools that are used during a therapy process causes complexity.

4.3 Results

As explained the quotes from the interviews are sorted per topic which can be viewed in Appendix F1. The sorted quotes are used to answer the research questions. A distinction can be made between different type of people regarding their attitude towards innovations. This is done according to the earlier discussed adopter category by Rogers (2010) and the LAMH (Levels of Adoption of eMental Health) model created by Feijt et al (2018). Figure 19 shows which participants fits in with category. The colours used in the image are also used with the quotes, to quickly show to what adopter category the quote belongs. An overview of the experiences that the therapists had during the implementaiton so far is shown in Figure 20 in the form of a user journey.

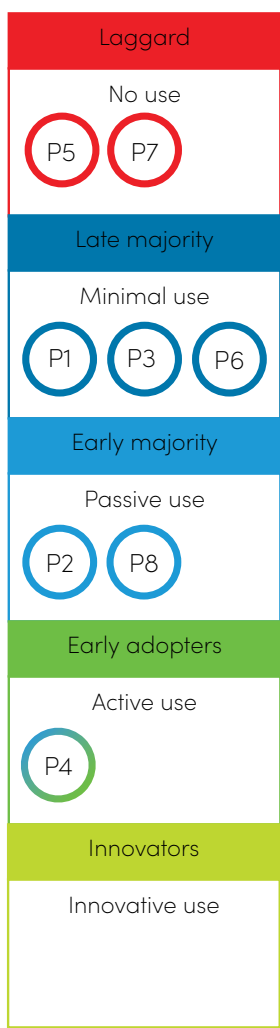


Figure 19 - Overview of the participants and which adopter category they belong to

5.3.1 What is the current state of implementation of eHealth and specifically JO according to the employees?

As explained earlier the implementation can be divided into four stages: exploration, installation, initial implementation and full implementation. An overview of the implementation was made in the form of a user journey. The activities in the user journey are derived from the information gathered in the interviews. The current implementation activities can be placed at the end of the installation stage and in the initial implementation stage.

Installation stage

At the moment of the interviews the employees had little or no knowledge of how to work with JO. They are not aware of the benefits it offers them and they don't have a clear and shared image of the exact goal of Karakter with implementing JO.

“For me it also quite unclear what benefits it has for me.” PI – st

“I am not familiar with it now. I am open to it though, if there are possibilities, but I don't see them now. [Sighs] maybe I should open it [JO].” P5 – system therapist

The first time that most of the participants heard about JO is around two and a half years ago. Employees had the opportunity to subscribe for a basic training ‘online treatment’. This training is mainly focused on how to effectively read and send emails and briefly demonstrates JO. The employees do not remember whether this training is obligated or not. The training was observed to gather more information and find opportunities for the project. This is documented in Appendix C9.

“During the training we got explanation about tools, psycho education, writing email in JO and how to register things in the rapporting system. It was quite minimal.” PI – st

After receiving the basic training the employees are expected to learn how to use JO through self-education. This can be done with the help of the e-learning that is available on JO shown earlier in Figure 10. Some employees made an attempt to

explore JO, but got stuck at logging in or encountered parts of the program that did not work which caused a passive attitude.

“A lot of things didn't work yet, so then I thought: I can't do much with this. But I only checked it [JO] once. I thought: I don't have to work with it yet anyway, I'll hear it when it works correctly.” (P1)

For other employees the main reasons to not have (further) explored JO is that it is simply not a subject that is discussed or comes forward a lot within the team, they don't make it a priority, or computer use is too unfamiliar to them.

“Why I haven't done anything with it is uhm, it is not alive in the team. It also has to do with time to uh, further explore how it works, to get to know the program.” P3 – st

“[...] for me it is all very unfamiliar.” P7 – st

For every location of Karakter an eHealth ambassador was assigned. The eHealth ambassadors serve to inspire and support their colleagues to use eHealth. The eHealth ambassador that works in the IBC Kind team is not very enthusiastic about JO, he mainly wants to test whether it works and if it doesn't he wants to move on. Others do see him as the leader and initiator regarding JO.

“I was not enthusiastic immediately. It is more that I have to do it than that I got enthusiastic.” P4-amb

“Because of Roel [ambassador] of course who is looking into that and Elma in the team you know it's coming. And that you have to work with it. But I still haven't created an account.” P7 – st

In February 2018 a new program manager eHealth was employed at Karakter. In May 2018 he facilitated a practice session about JO. The goal of this session was to give the therapists a successful experience with the program so that they would leave the session with a positive view on JO. The practice session was

observed to gather more information and find opportunities for the project. This is documented in Appendix C8. The reactions of the therapists that were overheard during the practice session were positive. Some therapists were asked specifically for their opinion about this practice session.

All above mentioned events can be placed in the installation stage of an implementation process. At the moment of gathering these results the implementation at IBC Kind is shifting towards the initial implementation stage.

“For me it went very fast, so for me the pace could have been slower. I am more careful, because I don't dare to just click something.” P7 – st

“It was okay, it was nice that we were allowed to discover things ourselves by just doing it.” st – not interviewed

“I am quite positive [about the practice session], mainly because colleagues said they found it helpful because they were actually using the JO.” P4 – st and ambassador

Initial implementation

As a follow up to the practice session the social therapists were asked to set up the workplan in JO for their pupil as a first step of starting to use JO in practice. This step fits in the stage of initial implementation of the implementation process. In the initial implementation at Karakter Nijmegen the social therapists of IBC Kind are the first ones to use JO as a team. The plan is to let them implement within their team and then learn from their experience how it can be applied within other teams or departments and in this way expand the use of JO further at Karakter Nijmegen.

Although the practice session was perceived as a positive experience, the people that did not get a follow up (IPG and staff members) are not likely to get to know or work with JO further on their own.

“I still didn't get any further than the assignment that Wouter [program manager eHealth] gave us. I didn't do anything else with it. P8 – IPG

AGES Exploration

Readiness assessment and creating readiness

Installation

Selecting staff, identifying sources for training and coaching, providing initial training for staff, finding or establishing performance assessment (fidelity) tools, assuring access to materials and equipment, etc.

CTIONS Readiness assesment

Mail to create account (IT)

Motivate staff (manager)



early adopters
early majority
and late majority
laggards



P7 "Maar ik heb nog steeds mijn account niet aangemaakt. Ik heb nog steeds een maltye met dat je dan kan, dat je dan, weet ik het, cijfertjes of zo in moet typen waarschijnlijk, zo iets. Ik heb nog niet zo'n dingetje. Jouw omgeving, snelkoppeling heet dat geloof ik uh, dus dat."

scared

Open conversation to assess wishes and needs of employees.

Providing computer illiterates with guidance and clear descriptions.

Sharing stories from experienced users.
Sharing the intended goals with implementation of the program.

P4 "Voor mij is het ook nog best wel een beetje onduidelijk wat het mij kan opleveren. Als ik dat ook maar een heel helder heb van andere instellingen werken ermee. Iemand van een andere instelling zou ik bijvoorbeeld heel fijn vinden als die een keer hier komt. Dat het duidelijk wordt van dit zijn de voordelen en zoveel tijd gaat het je kosten."

P4 "Eerst maar eens zien, leuk bedacht, maar ik wil het vooral wel ervaren."

P1 "Laat ik maar snel doen. [...] Als ik weer meer moet doen dan hoor ik het wel."

Figure 20 - Therapists experience journey 1/4

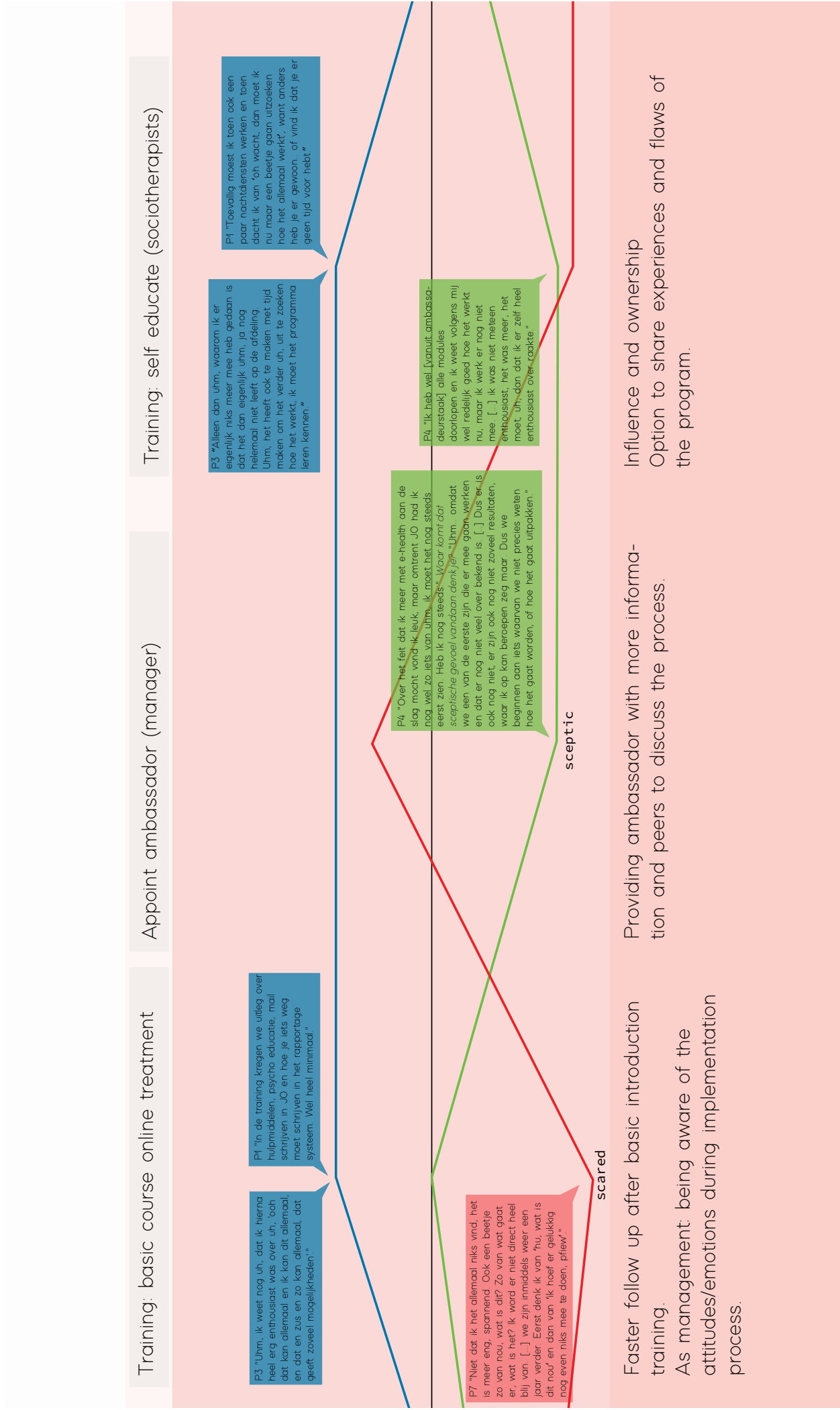


Figure 20 - Therapists experience journey 2/4

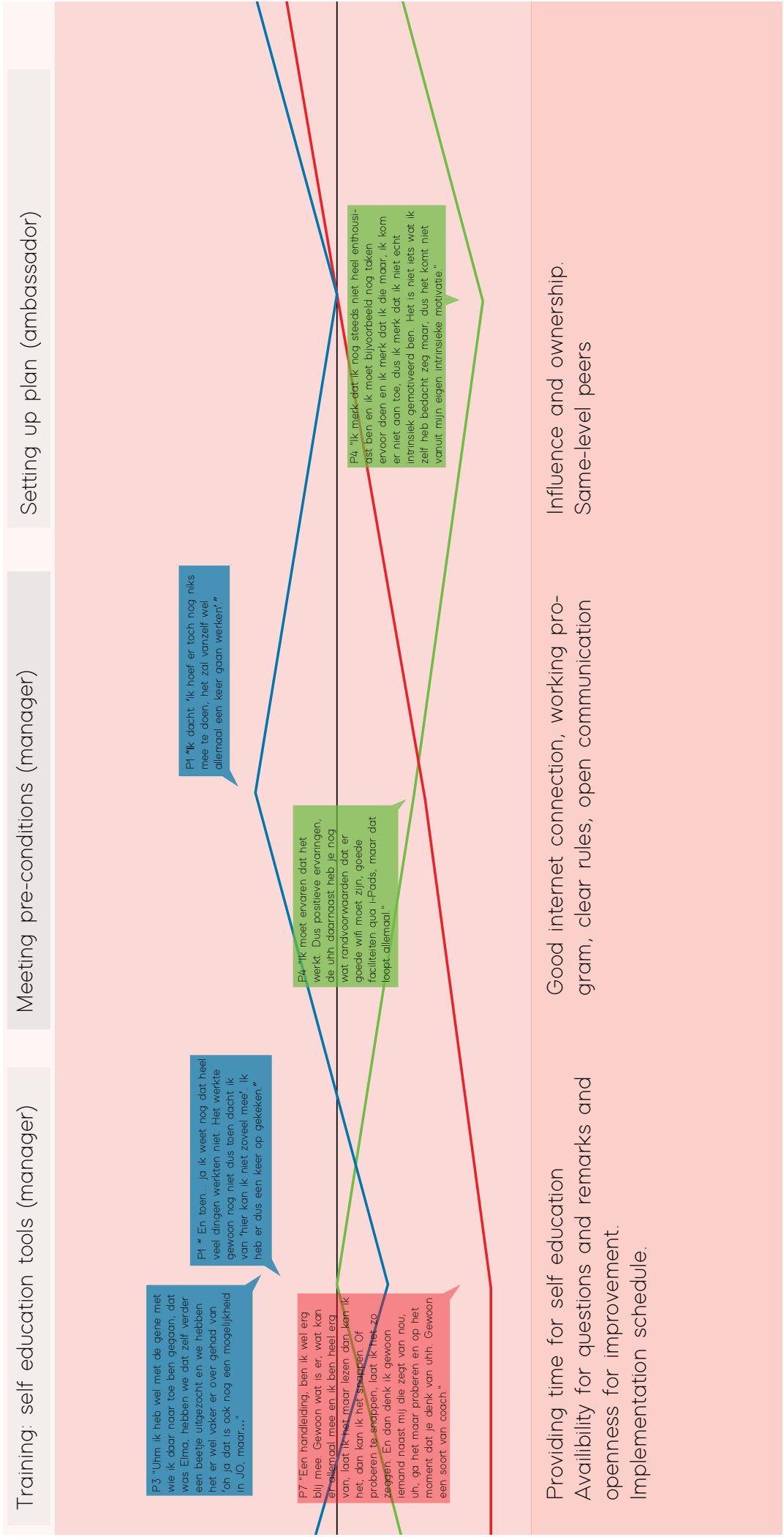


Figure 20 - Therapists experience journey 3/4: continuation of installation stage

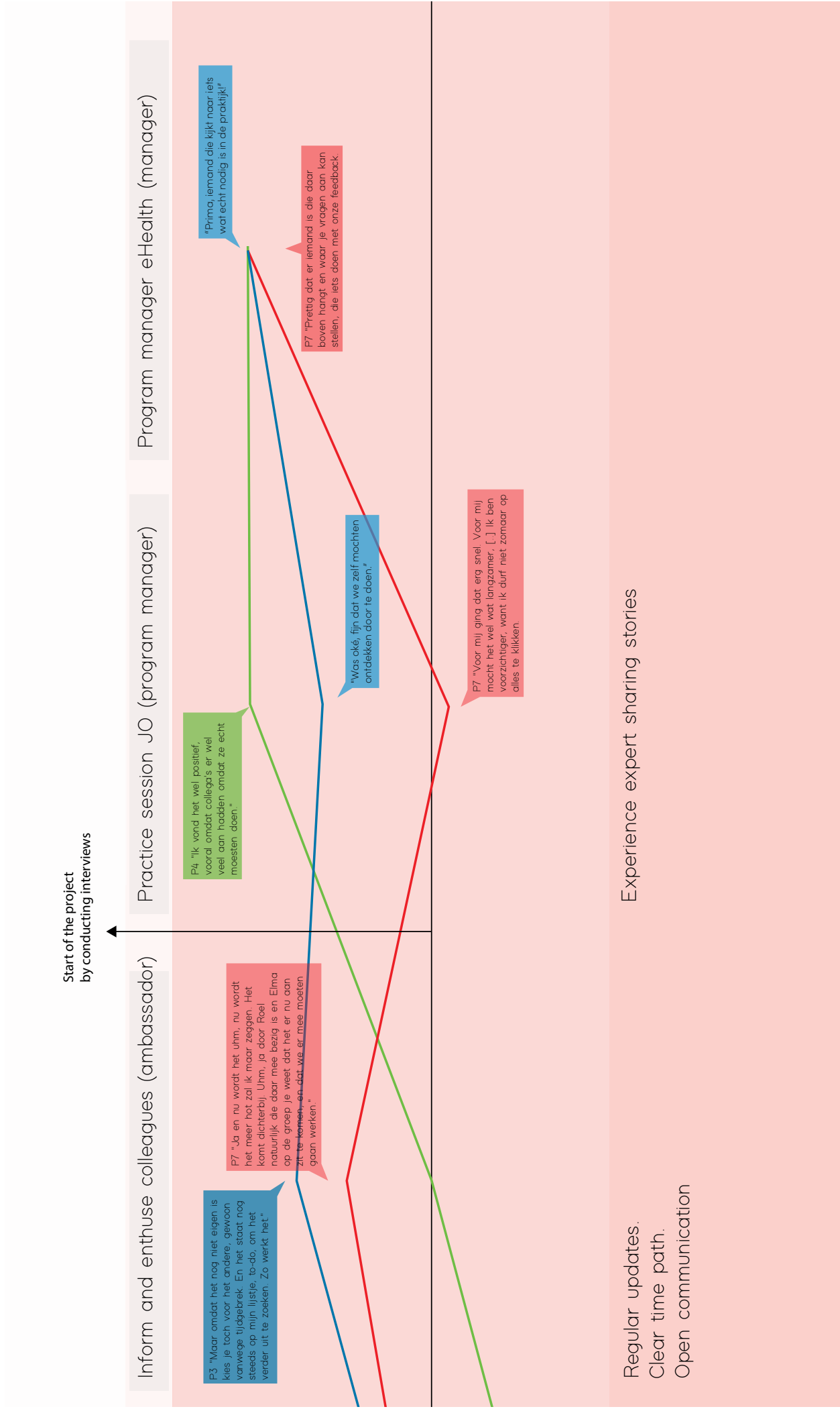


Figure 20 - Therapists experience journey 4/4: continuation of installation stage

5.3.2. What (practical or psychological) barriers do the employees experience that prevent them from using JO?

The practical and psychological barriers that the participants have experienced during implementation and that prevent them from using JO are listed below. Figure 21 shows what are found to be characteristics of the different adopter categories.

Unaware of possibilities

It is unclear to most of the participants what possibilities JO offers and what can be achieved with them.

“For me it also quite unclear what benefits it has for me.” P1 – st

“Is there a JO app actually?” P3 – st and CGT

There is also a learning environment within the platform. “Oh!” P7 – st

Lack of knowledge and skills

The participants feel like they do not know well enough how to use JO yet. For many participants the basic training was more than a year ago and they do not remember exactly what was explained there.

“I do really have the feeling that I have to try it out more, to really understand it. [...] to have seen it: to know what it looks like and how it works.” P8

Several participants said that they do not know where to find the information that could help them to start working with JO or that they don't feel motivation to find the information.

“I think a lot of things can be found on the intranet about JO, but I – I am not going to search for it.. or something. I don't really have to motivation to do that. With me it is more like: Okay, you have to just do it, all the books are burned and you have to. Yes, than I would do it.” P1 – st

Lack of time/priority

The participants do not feel like they have time to spend on learning to use JO, they prioritize other activities.

“It just doesn't have my interest. I do see the added value... If I had more time I would have done it, but now I give priority to other things.” P1 – st

Lack of guidelines

There are no clear guidelines on how to use JO regarding transparent documentation and regarding the relation to other programs used at Karakter.

“When I talk about it I think: ‘I should really do that [explore JO]’ because it can be very helpful, but in the daily activities, especially at the clinic, there just really isn't any time.” P3 – st and SGT

“[...] it has to be very clear: what do you put in JO, what do you put in user. So clear that it is a method on I A4.” P3 – st and CGT

Insecurity about future use

Not all therapists are convinced whether the program will really be used in the future and therefore do not spend time on learning to use it unless they are obligated.

“Things change often [at Karakter], so the motivation is like: ‘Yeah, but in a while it is something different. How serious is this [implementation of JO] that I have to familiarize myself with it?’” P3 – st and CGT

Computer literacy

One participant expressed that she finds the use of computers quite scary and that she sees herself as the tool in communication with the children and does not know how to work when that changes.

“It [working with JO] is just going to happen, but I think, all those things, err, video calling for the children for example, err, that they are fiddling with an iPad, all that.. For me that is all: how does it, err, I can, I don't know what they have been watching, so to speak.” P7 – st

No fit with discipline

Participants that are staff members do not feel that JO fits their discipline.

“I mean, I think eHealth and computer things are fine, but my discipline is about themes of meaning and I think that is not something for phones or screens. But if it is needed for making an appointment or something has to be done quick then I think it is very practical”. P5 – system therapist

“I also don't know if I am going to use it a lot, to be honest. I mean, my role is on a distance of the primary treatment process.” P6 – child and youth psychiatrist

Innovators	Early adopters	Early majority	Late majority	Laggard
Innovative use	Active use	Passive use	Minimal use	No use
	<p>Is exploring other eMental health possibilities that could be helpful for the children.</p> <p>Critical about what the program has to offer after looking into it.</p> <p>Feels the need to try and evaluate the program with the team.</p> <p>Depends on others to experience benefits of the program.</p>	<p>Making some attempts to discuss possibilities and consequences.</p> <p>Willing to change work methods.</p> <p>Depends on others to experience benefits of the program.</p>	<p>Quickly loses interest/ motivation when something does not work.</p> <p>Vaguely knows what possibilities the program has to offer.</p> <p>Does not prioritize to learn the program.</p> <p>Depends on others to take initiative and make guidelines.</p>	<p>Afraid of loosing self as tool.</p> <p>Afraid of loosing control.</p> <p>Not much ideas about use applications.</p> <p>Depends on others to become aware of benefits.</p>
	P4	P2 P8	P1 P3 P6	P5 P7

Figure 21 – Characteristics per adopter category based on the interviews

5.3.3 What motivations (benefits) do the employees experience to use JO?

After the basic training online treatment some therapist felt motivated to explore JO because they were curious about the possibilities that JO had to offer.

“I remember that after this [basic training] I was very enthusiastic: ‘Ooh, this is all possible and I can do this and that and all that, this gives so much opportunities.’” P3 – st and CGT

At the moment of the interviews the therapist were not using JO in practice yet, which means that they could only express how and why they would like to use JO in practice. These expressed motivations are shown in Figure 22. The main motivations for wanting to use eMental health are whether it is helpful for the patient and the therapy process, ease of use (providing overview, being able to do everything in one system) and efficiency by creation of shorter communication lines and better information transfer.

Next to that some participants say that they will be motivated to use JO when it becomes obligated and others said it would motivate when the whole team

would be working with JO, because then it would be something they did as a group.

“I do find it is interesting to look whether JO is going to be meaningful. So the moment that we are going to report in it, whether this is enough [information] for parents and that we then, for example, can start calling less with parents in the long run.” P4 – st and ambassador

“I especially don’t want to hold on too much to how we have always done it. We have to explore per case: what is helpful. That’s what I think, the underlying thought should be: it has to contribute to a positive treatment climate for a child.” P4 – st and ambassador

Innovators	Early adopters	Early majority	Late majority	Laggard
Innovative use	Active use	Passive use	Minimal use	No use
	P4: To fit with the child's needs, to create a positive and helpful treatment climate.	P2: I would like to use it for everything, so to have everything in one program. P8: For the documentation so that everyone who is involved in the child's treatment is up to date about everything.	P1: To not work from a book anymore and interest the child. And for the documentation if there are clear rules. P3: To be more efficient because communication lines become shorter and to have more content related or shorter contact with parents. P6: To be more available and to be a useful link for the patient after changing clinics.	P5: I would want to use it too work more efficient P7: I would want to use it in the way it is meant to be used.
	P4	P2 P8	P1 P3 P6	P5 P7

Figure 22 – Overview of the expressed motivations to use JO per participant

5.3.4. What are the needs and wishes of the employees?

A distinction can be made between needs and wishes for the implementation process and those for the program itself.

Needs and wishes for implementation

When it comes to implementation of the program the participants said they need support from management in the form of time to learn how to use the program, clear instructions on how to apply JO, insights about the benefits the program has to offer, clarity about when it becomes obligated to use the program and assurance that JO will stay on the long term agenda of Karakter. Also, certain criteria have to be met for the program to work correctly, like having a working and fast internet connection.

Needs and wishes laggards

“A manual would make me very happy. Just what's there, what can I do with it. And I am really like: I'll read it, then I can understand it. Or try to understand it, let me put it like that. And then I think just someone next to me that says: 'well, err, just try it'. And at the moment you think like 'Errr....' Just some sort of coach.” P7 – st

Needs and wishes late majority

“For me it is also quite unclear what benefits it has for me. If I would have a very clear image of that, like how other organisations work with it. I would for example find it very nice if someone of another organisation would come over to explain how they used to – before we worked like, now we work in this way. These are the benefits, this is how much time it would save you and this is how much time it will cost you. P1 – st

“I just like it when I know exactly what is expected of me.” P1 – st

“A one day refresher course and one day just doing things in it [JO] and then err.. time just have to be made available for us. That's it. [...] And everyone has to do it. [...] That is also just good. Just really start doing in May. But I also think Karakter has to make a choice in that, in what we should use. Err.. because should we use Alta and JO? And Connect? And then I will drop user. A choice has to be made.” P3 – st and CGT

Needs and wishes early majority

“I mostly think it is important that there is consensus within the team, because otherwise you are pulling on something. That doesn't motivate of course, if you see that your colleagues are not doing it either.” P2 – st

“The thing is that I am the kind of person that does everything on the last moment when I feel pressure. It's fine for me to figure this out on a Sunday evening if I have to know it on Monday. [...] there has to be a bit of pressure.” P8 – IPG

Needs and wishes early adopters

“I need to experience that it works. So positive experiences. Next to that you have some conditions that there should be a good Wi-Fi connection, good facilities like iPads.” P4 – st and ambassador

Needs and wishes for the program

When it comes to the program JO itself the following things are mentioned:

- Possibility to print the alert plan made for every patient.
- Possibility to include questionnaires in JO like the ADHD list that have to be filled in by teachers.

Also there is a need for a program that shows a clear overview of its functions.

5.3.5. What are moments of value for JO?

Communication and documentation

In the interviews it became clear that a lot of people are involved in the therapy process of a patient and also a lot of programs are used to document and communicate regarding the therapy process. Appendix F2 and F3 show an overview of the involved people and the used programs respectively. All these people need to stay up to date about the progress, decisions and activities in the therapy process.

Communication between colleagues

For many of the involved people it is difficult to read the documentations in time before multidisciplinary meetings. The current documentation program User/Alta is for social therapists only accessible at Karakter and not at home. As a result many documentation related things get written down in User/Alta but are also send via email, to make sure everyone stays up to date. This generates a lot of emails and causes double or extra work. JO could be of worth here, because JO is accessible from home and has a mail function. This makes it possible for social therapists to read documentations at home before a meeting for the next day and to reduce separate mail contact.

Communication between parents and social therapists

Another opportunity is the contact between parents and the social therapists. In the current situation once a week there is a fixed call moment between parents and the social therapist that is the mentor of the parents child. In addition parents can mail, WhatsApp or call the social therapists at any moment. Since JO allows parents to read what is happening during the week parents are more up to date. All questions and remarks can be done via JO and the weekly call can

focus more on content instead of also on updating the parents on what is going on.

Communication between teachers and social therapists

The children at IBC Kind go to school from around 9am to 2pm, meaning that a large part of the day they are supervised and observed by their school teachers. The school teachers report when something incidental happens, but do not report on everything. If they could be involved via JO it would be easier to write short reports on what happened at school. This could help the social therapists to get a more complete view on the child's behaviour and in this way benefit the therapy process.

Connecting to interest of the patient

The digital toolbox in JO is mostly mentioned by the participants categorized as late majority, since they have a slight idea about the possibilities of JO and happened to be part of the team of sociotherapists already for a longer time. They think that the digital tools can be a way to connect more to the interests of the patients at the clinic as opposed to using books and printed booklets.

To conclude, JO could be a tool that can make the communication between people involved more structured and efficient. It could also modernize the way they work at the clinic by making use of the digital toolbox together with the patient. In this way JO could become a complete documentation that offers the patient more insight in his or her own therapy process. However, it is not sure yet whether JO can really have this effect until it is tested and evaluated for a longer period of time.

5.3.6. Additional insights

Smaller vs. bigger contracts

Because some employees have smaller contracts, they miss more of what happens at the clinic and they have less time to read all the documentation. Therefore, to stay up to date, they often look to employees that works more to inform them about what happened during the days they were gone. The people that work more hours have already put in the work to write the documentation and in addition are asked to verbally tell what they have documented. This increases the work pressure for the people that work more.

Ambassador not completely up to date about state of the team.

At the introduction of the project to the team a list to acquire the contact information of the therapists was handed to the team. The ambassador decided to fill in the form for everyone. The form included the question whether the therapist had a JO account. He said everyone had an account, while later during the interviews it turned out that one of the laggards did not have an account yet. She received an email to create an account but did not know what to do exactly and was afraid she would do something wrong. She had just left the email in her inbox. This shows that the ambassador is not completely up to date about the team and their attempts to get familiar with JO.

Gap between therapists and ICT/technical support

During the project I had some experiences with technical issues myself. I had received an email (see Appendix C12) with a login, password, email address, and printer code. The email was sent by ICT to my company mentor and she sent it to me, which was questionable since the email contained a password. The login and password were for YouForce, a program that allows you to fill in travel expenses, etc. This

was not mentioned in the email from ICT. The email address came without a password and it was also not mentioned what email program should be used to access the email. I figured out what the program was by asking someone and tried the password that was mentioned with the login for YouForce, but was not able to log in. Eventually I called the ICT helpdesk and they explained to me that I should first log in at a computer at Karakter and change the password there. This was also not mentioned in the email. This might mean that there is a knowledge gap between therapists and the ICT department, which may contribute to some environmental constraints. When such problems occur with someone that is already a bit afraid of technology, they could be scared off easily. This happened for example with participant 7, that received an email to create an account for JO, but does not know what to do to activate the account, which is apparently not explained in the email.

Information storage

In the communication with the therapists about the upcoming pilot to start use JO it has been mentioned several times that information is stored on the inside of the closet door. For example the implementation plan/evaluation of Zwolle was stored there: a document of about 30 pages. Later also the plan made by the ambassador was stored there. In Appendix D6.1 more information can be found about the content and the usability of the implementation document of Zwolle. Although it contains very useful information (also about experiences of using JO that the some participants have said to be interested in), the length of the implementation document does not invite anyone to read it, since the therapists already experience little time for extra activities. Also it is stored in a place that is out of sight, so there is no visual trigger to pick it up and browse through it.

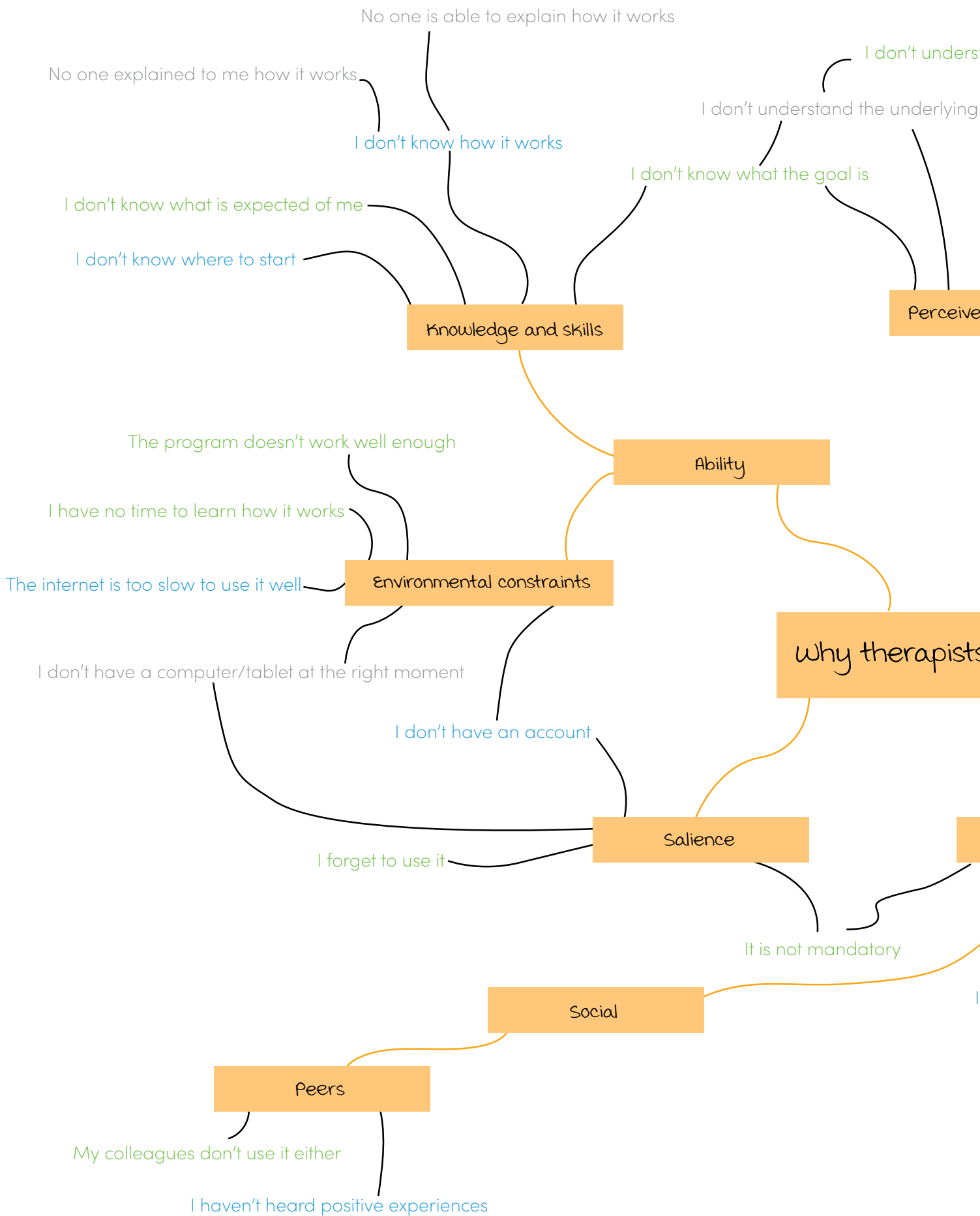
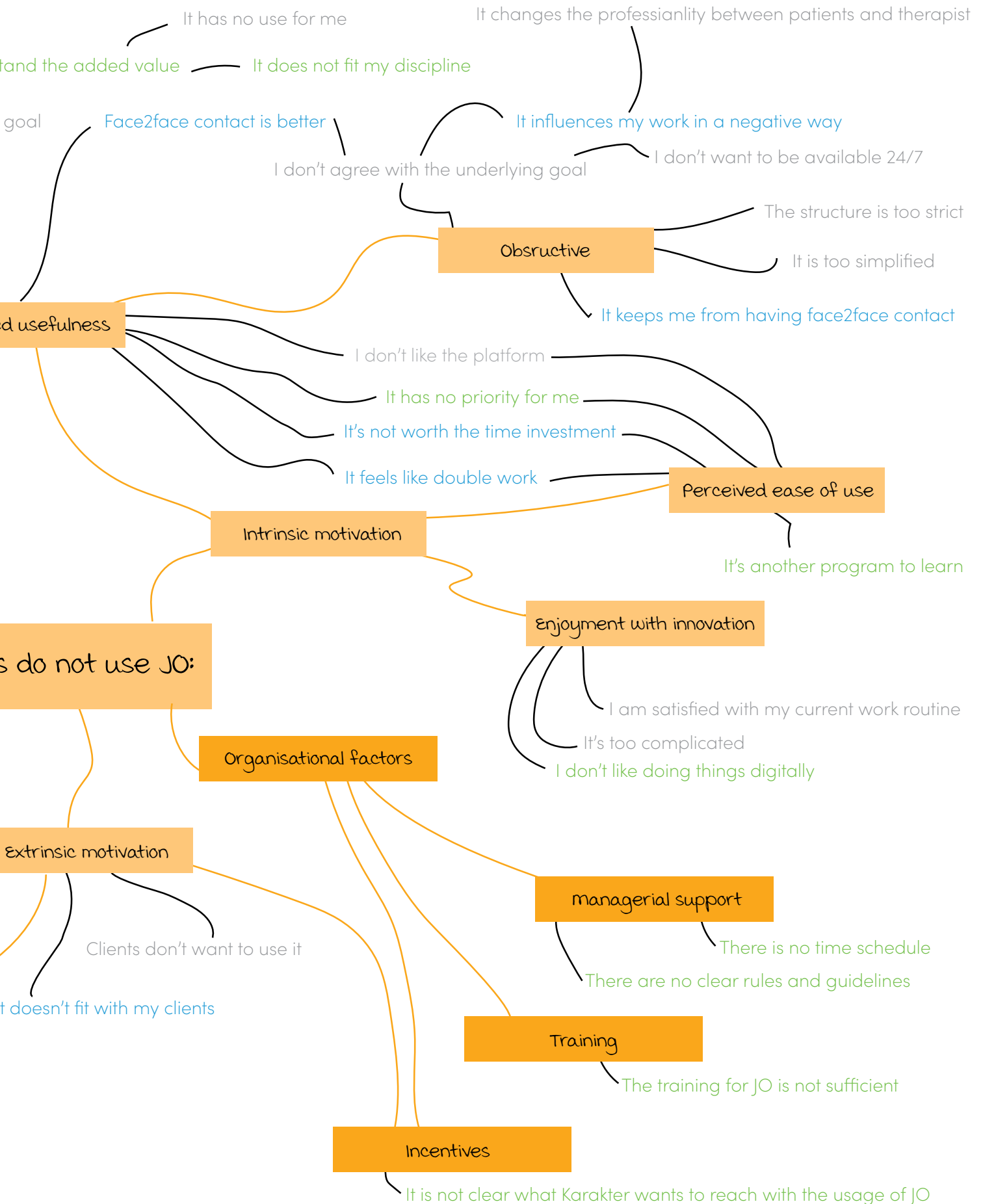


Figure 23 - Map of findings: grey is unconfirmed, green is confirmed, blue is implied



4.4 Conclusion

The research has given insights into what the biggest influencers of the behavioural intention and the actual behaviour are. The map of findings in Figure 23 shows which of the preconceptions that were shown earlier in Figure 15 are confirmed and what are new insights from the research. It shows that organisational factors like managerial support, training and incentives have also played a role during the implementation process. The research has shown that the lengthy implementation process has offered a lot of opportunity for the employees to form a passive attitude. Even though most sociotherapists have some ideas about how they want to use eHealth or JO, they are not motivated enough to initiate use on their own.

Problem statement

The lengthy implementation process and the *lack of clarity* with regards to the different implementation steps has caused employees to lose *enthusiasm, motivation* and *trust* during and in the implementation process.

The yellow parts of the problem statement are explained in more detail.

Lack of clarity

- There are no clear goals and deadlines set for implementation.
- The added value of JO is not communicated clearly.
- There are no guidelines or rules indicating which program should be used for what.
- Therapists are expected to learn and use JO on their own after the basic course online treatment, but it is not clear to the therapists how they can achieve this.

Enthusiasm

Some therapists were enthusiastic about JO after having seen JO in the basic training 'online treatment'. However, when JO did not come forward

often after receiving the training and it was unclear how JO should be used and learned to be used the enthusiasm was lost again. Others were scared from the beginning to use JO and need others to motivate, enthuse and teach them. The ambassador that is supposed to enthuse the team is not convinced of the benefits of JO because he hasn't had any positive experiences with it or proof that others had.

Motivation

Because it is unclear to most therapists what the goal and added value of using JO is, and because it is a new program to learn in their limited time, many therapists are not intrinsically motivated to use JO.

Trust

Especially therapists that are not skilled in computer use see JO as an extra program of which they need to learn how to use it next to Alta, User and Connect. They await whether JO will really become policy before they prioritize learning how to use JO.

Although Karakter did attempt to give clarity about the topics described under *Lack of clarity*, this message did not completely come across with the therapists. Therefore, when trying to convey a message, it is always important to check whether the message is received correctly by your public.

For now it is important to replace the negative experiences of the therapists with positive ones, so that the employees can build up a new view on using JO. This is already done a little through the training of the program manager eHealth. A new and positive view can be supported by management through being consistent and acting upon feedback from employees. Furthermore, in order to successfully change the experience and attitude for laggards, late majority and early majority it is important to consider what each of these groups need.

4.5 Discussion

4.4.1 Aim

The challenge of this project is to make sure that therapists at Karakter want to work with JO by improving the experience of the therapist. The goal that comes with that aim was to see whether the experience of the therapist can be explained with the models discussed in Chapter 3.

All participants share the value of wanting to create a positive treatment climate and they all agree with the idea behind creating a care/support network around the patient as shown in the PsyNet movie.

The laggards (2 out of 8 participants) have the feeling that the behaviour might negatively influence the quality of their work. And for the system therapist the platform is indeed not useful to use during sessions with clients, but the sociotherapist said that she would use the program because she is willing to do what is needed even though she finds it difficult, scary or does not enjoy using computers.

The late majority shows little intrinsic motivation, but do show willingness to do what is asked of them under the condition that there are very clear rules, guidelines and expectations.

The barriers that have the most influence fit the categories of 'knowledge and skills to perform the behaviour', 'salience of the behaviour', 'environmental constraints', and 'habit'.

Insufficient support to gain knowledge and skills to perform the behaviour

JO is available since 2014 at Karakter. For the sociotherapist the basic training 'online treatment' is the first opportunity to get familiar with JO. However, the training is not sufficient to learn how to use JO and the options to learn JO on own initiative are not clearly explained during the training.

Salience of the behaviour

The existence of JO is sometimes mentioned in meetings, but at the clinic where the therapist work it is barely a topic that comes forward. After following the basic course online treatment some therapist made an attempt to explore JO, but because there was no follow up on the course and no obligation

or deadline to use it, the relevance of it faded quickly. Because everyone could do the course at different moments, for many therapists there was no opportunity to share experiences.

Environmental constraints

Environmental constraints were experienced in the form of insufficient internet connection, lack of dedicated time to learn JO and lack of an implementation plan with clear and time bound steps.

Habit

All the before mentioned things prevented the therapists from performing the behaviour and therefore the therapists did not build a habit of using the digital environment. When Fogg's behaviour model is applied to the gained knowledge it is possible to claim that there is a lack of triggers and ability. The motivation of the therapists to use JO highly depends on the category they find themselves in regarding the adoption of innovations.

4.4.2 Limitations

The research that was done has some limitations. First of all the sensitizing booklets were not filled in by all of the people that received the booklet. Because of this it was not possible to use the booklets for any of the purposes it served. It did give me the insight that the therapists experience little time for extra things and that they rather only do things of which they really understand the purpose. The purpose of the booklet was not clear to them because I had not been able to explain it to them in the introductory presentation, this was explained in Appendix C1.

Secondly, the stickers and sheets that had to be filled in by the participants during the interview were not used as much as anticipated by every participant. This could mean that the results of the interview show less depth than they were meant to.

And lastly, participant 2 had only worked at Karakter for two weeks at the moment of the interview, meaning that she could not give any insights about a large part of the implementation process of JO.



Figure 24 - Entrance IBC Kind Nijmegen



5 Design brief

The previous chapter was concluded with a problem definition. In this chapter the problem definition is translated into a design challenge. First the desired situation is formulated, followed by a design goal. The design goal explains what functions the design should fulfill. An interaction vision is then used to explain the experience that the interaction between the users and the design should evoke. Lastly, some criteria for the design are defined.

5.1 Desired situation

To move from a problem definition towards a design goal the problems are translated into a desired situation described for the different stakeholders involved.

Management

We want the therapist to take initiative and learn to work with JO on their own.

Sociotherapists

Within the team the desired situation differs per type of person. This is shown in Figure 25.

Laggard – no use
I want to be coached during every step of the implementation process.
Early majority – minimal use
I want a program that works correctly and I want guidelines on why, when and how to use it.
Early majority – passive use
I want to be on one level with the team and use JO in a consistent way.
Early adopters – active use
I want to experience what works and only use what benefits the therapy process.

Figure 25 – Desired situation per adopter category

The laggard is the most demanding in terms of convincement and guidance needed to start using JO, because this group has experienced the same limiting factors during the implementation process as the rest of the team, but also has the limiting factor of being unfamiliar with computer use. Therefore, the design solution should primarily focus on meeting the needs of the laggard.

5.2 Design goal and interaction vision

In order to get to make these desired situation reality for every stakeholder the following design goal is formulated:

“I want to design a system in which the team of therapists is independent from management and is empowered to discover and create benefits for the program JO, allowing the therapists to have positive experiences with the program.”

The design goal explains the intention of what the design solution should make possible. In addition, an interaction vision is used to explain what kind of experience the therapist should have when interacting with the design solution. The design solution should provoke an interaction that feels *motivating, simple, direct* and *personal*. These are the so called interaction qualities of the design.

To illustrate what is meant with these interaction qualities an analogy is used. The analogy will make it easier to understand what the interaction qualities entail because they are described in a context where their effect becomes clear. The analogy, see Figure 26, is as follows:

“Interacting with the design should be like creating something out of a big pile of legos.”

At first the pile of legos might be overwhelming because of the endless possibilities it offers and it is still unclear what these possibilities are. There is a complete lack of structure and maybe you have never even used lego before so are not completely sure how you can use it. However, once you have in mind what you want to create this will help in searching for the elements that you need, and then all these legos might *motivate* you to build something. It allows you to build something *personal*, you are free to build anything you want. The principle of lego is *simple* in the way you connect the blocks, but still allows to build advanced creations. The feedback when building with lego is *direct*, because you can see directly whether the shape you make is becoming what you want to do and you can change it at any time.



Figure 26 - Illustration of the intended interaction between the therapist and the design

5.3 Design criteria

The design solution will focus on the experience that the employees have during the implementation of a digital innovation.

1. The employees should feel as if they have a say in the implementation process. For the motivation of the employees it is important that they can have an open conversation about the digital innovation and the implementation and that the things mentioned during these conversations are translated into actions.

2.1. The design is focused on the laggards, but should not have negative effect on the intended behavior of the late majority, early majority, early adapters and innovators.

2.2. The design allows to find the benefits that the digital innovation has to offer and speaks to the

different levels of adaption that the employees find themselves in.

3.1. The design evokes regular conversation about the digital innovation among colleagues.

3.2. The design triggers the employees to use JO.

Conditions

1. General information about the program should be available for the employees at any time. This includes explanation of functions, explanation about transparent documentation and guidelines on in which program to document what.

2. The basic training 'online treatment' should be changed to fit the solution. It is an opportunity to communicate to the employees how they can view eHealth and what they can do to make it fit to their needs.

Synthesis

In this phase the knowledge gained in the previous phase is translated into a solution. First the different design directions that were identified are explained and a design direction is chosen. Then the process of creating a concept and the concept itself are presented in the chapter conceptualization. The conceptualization chapter closes off with a conclusion that mentions the most important elements of the concept.

6

ICT and
therapists
brainstorm
together

create list of
responsibilities
per ~~task~~ person

invest in
you have

provide overview

poster with
steps like the
signaleringsplan.

provide clear
steps

reserve time

discover personal
motivations &
offer personal
motivations

evaluation
about the
process

create a timeline
based implementation
plan



6 Design direction

In the previous chapter a design brief was formulated making clear what the design goal for the project is and what kind of feelings the design should evoke. The research has uncovered that the motivation and the ability to use JO are both low and that there are little triggers to use JO. Solutions to these issues can be found in different directions, since they are also caused by a combination of different factors. For example, the motivation to use JO can be increased by increasing the (perceived) ease of use, since the therapists have not yet taken the step to use JO and are not convinced that it is easy to use. This chapter lists five different solution areas and explains them with the help of some examples.

Next, some theory is explained that relates to the different design directions. Finally, a conclusion explains how this would apply in practice.

6.1 Solution areas

The design goal that was formulated in the previous chapter is:

"I want to design a system in which the team of therapists is independent from management and is empowered to discover and create benefits for the program JO, allowing the therapists to have positive experiences with the program."

Looking at the design goal some keywords stand out: independent, empowered, benefits, and positive experiences. As mentioned the research showed that for the laggards both motivation, ability and the presence of triggers should be increased to make the therapists use the digital environment. The solution areas (Figure 27) were derived from the categorized quotes from the interviews, which can be found in Appendix F1. In formulating these solution areas the above mentioned keywords and requirements are kept in mind.

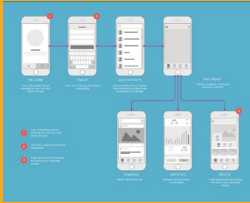




Solution area	Goal	Keywords	Examples of solutions
(Perceived) ease of use	Increase the motivation and the ability to use JO by increasing the (perceived) ease of use.	clear complete overview	Flowchart of Jouw Omgeving (complete overview of JO). 
Feeling heard	Keeping open communication between management and therapists so that the therapists feel heard and their motivation increases.	direct feedback	Open communication board. Session between management and therapists. 
Intrinsic motivation	Identifying the personal motivations of the therapists and connecting these to eHealth, so that people become intrinsically motivated to use JO.	enthusiasm ownership responsibility values	Everyone in the team gets responsibility over one eHealth subject of his or her interest. 
Information	Providing information so that the ability and the motivation to perform the behaviour increases.	efficient accessible overview step by step	Flowchart of steps to take depending on situation. Complete and visual timeline of implementation. 
Tools	Providing a complete set of tools for every step of the implementation process, so that the ability to perform the behaviour increases.	complete practical	Implementation kit with tools for each step connected to the entire therapy process. 

Figure 27- Overview of the different solution areas that were identified during analysis

6.2 Link to theory

After reviewing the solution areas it became clear that all these solution areas have connections to self-learning systems. A self-learning system is able to make changes to its parameters after analysis based on trial and error. This means it becomes more accurate and efficient over time by itself. (Self-learning, 2017). This self-learning can be illustrated by a feedback loop (see Figure 28), where the outcome of an action goal is observed and evaluated, so that it can be determined whether the action is suitable for reaching the goal. So like the self-learning system, a feedback loop also show the construct of changing parameters (actions or goals) based on the outcomes from trial and error.

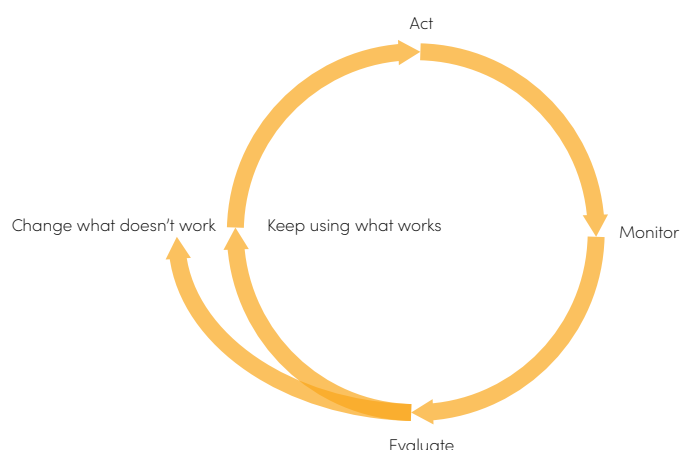


Figure 28 - Feedback loop

Since one of the main conclusions from the research was that there has been a lack of goals in the implementation process, theory was sought on goal-focused self-regulation. This combines the self-learning system with goal-setting theory. In his Generic model of goal-directed self-regulation, Grant (2003) shows the steps that should be taken to reach a goal. See Figure 29.

Connecting to goals

Grant (2012) also explains that self-concordant goals are goals that are in alignment with someone's personal values, motivations and intrinsic interests and he states that those goals have a higher chance of motivating someone in attempting to perform a certain behaviour. He shows how values, goals and actions are connected in his Goal hierarchy framework. See Figure 30. In this framework, values

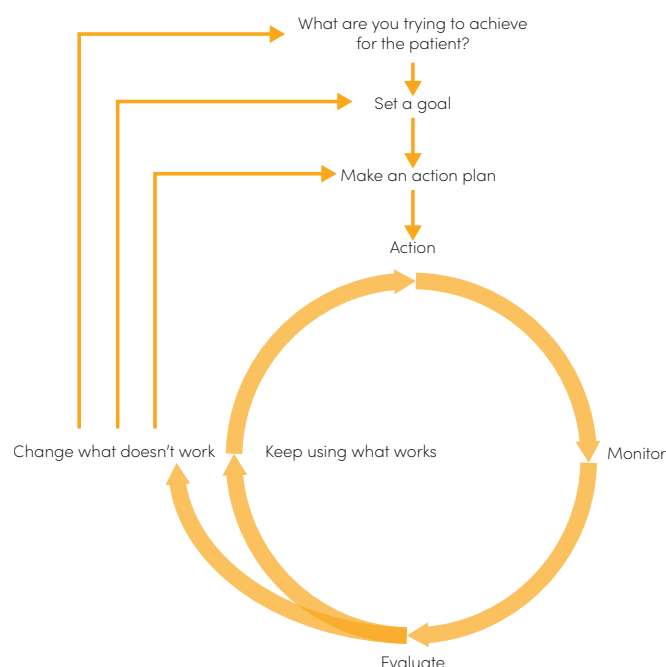


Figure 29 - Generic model of goal directed self-regulation, adapted from (Grant, 2012).

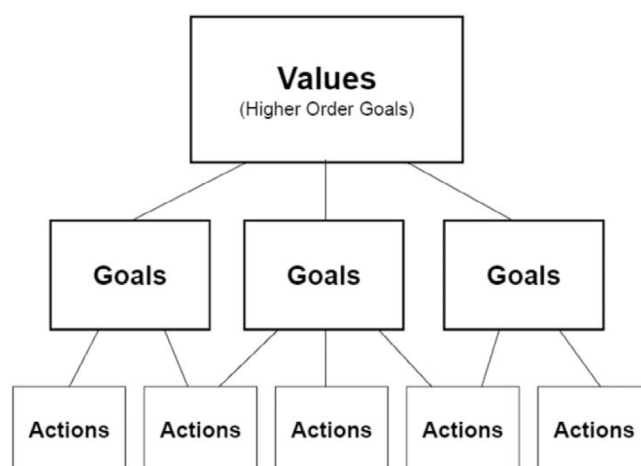


Figure 30 - Goal hierarchy framework from Grant (2012)

count as higher order goals which can be divided into smaller goals which in their turn can be divided into actions.

The model and the framework of Grant are combined into one image, Figure 31, so that it is clear on what levels they connect and how it can be connected to the therapists' situation.

6.3 Conclusion

From the explained theory it can be concluded that it in order to get the therapists to want to use JO it is helpful to connect personal values and goals to the actions that are possible in JO. In this way they are more likely to be inspired and motivated to discover benefits of JO, but also to reflect on the effectiveness of JO and to finding ways to improve the effectiveness. Using this theory would require the therapist to formulate personal values and goals themselves. In order to make it more familiar this could be done in a way that is similar to how they set goals with the children at the clinic. The goal of applying such a model would be to address issues step by step and in this way increase the skills and knowledge to work with the program but also the effectiveness of the program itself and thus the intrinsic motivation to work with the program.

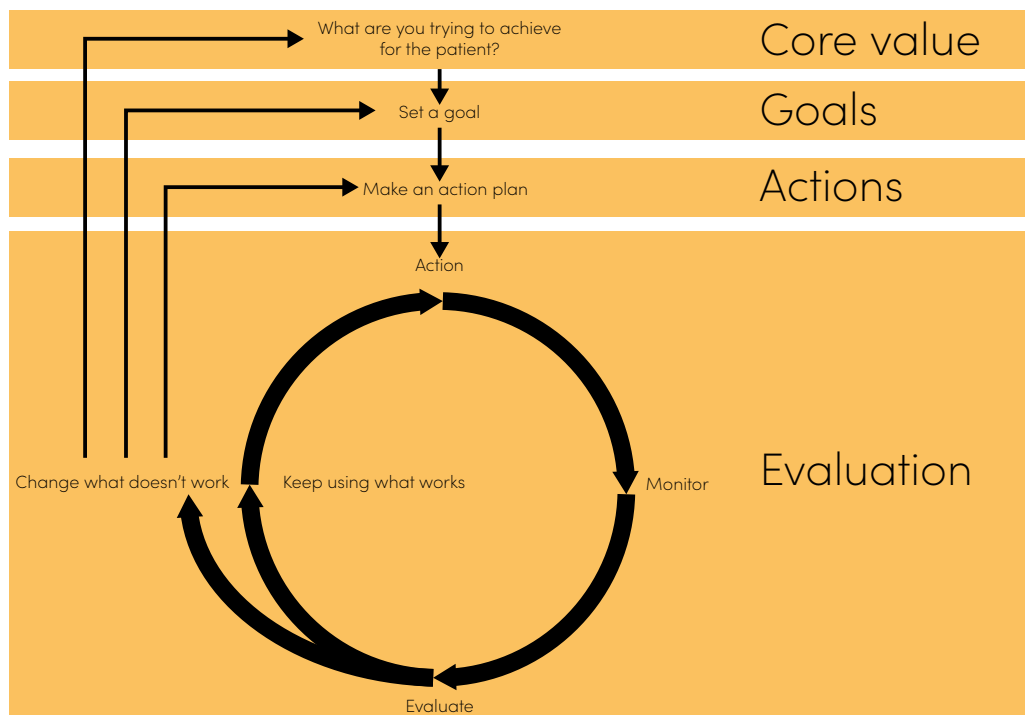


Figure 31 - Combined model for defining, applying and evaluating an action plan based on Grant(2012)



Figure 32 - One of the participants during their interview



7 Conceptualization

In the previous chapter the design direction and underlying theory for this direction are explained. The next step is to conceptualize, which in this case means creating a concept that makes it possible to successfully apply the theory in practice.

This chapter describes and explains the process of this conceptualization. As a first step a test was done about defining values, goals and actions, which gave useful insights about the effectiveness and possibilities of defining values, goals and actions. Afterwards a brainstorm session with fellow design students was held to define the requirements per step taken in defining values, goals and actions. This was followed by the creation of a scenario and description of the different steps and finally ideation was done on different ways to perform the steps. A complete set of design criteria were formulated to be able to evaluate the concepts. Then concepts were created and evaluated. The chapter ends with a final concept proposal and a conclusion that summarizes the most important elements of the concept.

7.1 Exploration

7.1.1 Ideation on information exchange

As mentioned in the conclusion of the previous chapter the selected theory requires the therapist to formulate personal values and goals. Next to that the design goal describes that the concept will focus on finding and creating benefits for the program JO. To be able to do that the therapist should actually be using JO. Therefore the concept will combine formulating personal values, goals and actions with building skills and knowledge to work with JO. The setting in which this will be done will be a training, so that the process of formulating values, goals and actions can be guided. This training will have to deal with communicating, teaching, learning, extracting information and documenting information. For each of these topics ideation was done. The ideas are combined in a morphological chart shown in Figure 33. The ideas with a yellow dot are selected to be used in the design solution, because they fit best with the target group. A larger version of the chart can be found in Appendix H2.

7.1.2 Defining values, vision, goals and actions

In order to explore the effectiveness of and possibilities for defining values, goals and actions a worksheet was created and combined with value cards (Desmet, 2016). The worksheet and value cards were tested by letting one participant fill them in and reflect on the process. See Figure 32, cover page chapter 7. Figure 34 shows a full explanation, results and insights of the exploration and large images of the (filled in) worksheet(s) and value cards can be found in Appendix H3.1. The main insights of the exploration are listed below.

Main insights

- The value cards should not be used to determine what is important to the therapist, because they are too general: it is too difficult to choose from them as they are based on the basic values of Schwartz (2012) that everyone can relate to.
- The way to document the vision, values and goals should be flexible so it is easy to make changes (taking things out, re-arranging) when new realisations come to mind during the process of

formulating values, goals and actions and in this way keep a nice overview of the results.

- The process should support formulating specific goals and actions. A specific action would describe what and how something can be done.
- The term 'vision' should be replaced with a term that allows for less interpretation.

The sheet was also filled in by myself for this project which led to the following insights that the design should enable:

- feeling conscious about personal values and apply those to using eHealth and in doing other activities at work.
- feeling of having influence over what you need to do with eHealth and the possibility to add/insert your own ideas in using eHealth.
- Feeling capable in using JO and feeling activated to face challenges.

7.1.3 Exploration of requirements per step

A brainstorm with fellow design students was held to think about the requirements for the different steps that should be taken to get to concrete actions. The complete results of this brainstorm can be found in Appendix H4.1. During the brainstorm the training for the therapists was described in 5 steps. For every step requirements and interaction qualities were defined which can also be found in Appendix H4.1. The main requirements are listed below.

Main requirements

- The interaction during the training should be activating, so that the topic eHealth becomes associated with this activated feeling.
- It should always be clear what the goal of an activity in the training is, so that the therapists have motivation to perform the activity.
- The therapist should be addressed as experts of the situation, so that they feel responsible and in charge.

7.1.4 Scenario

The results of the brainstorm were used to further specify the steps that should be taken to get to concrete actions. The steps are shown in a scenario, Figure 35, in order to visualize and explain them. Appendix H3.2 shows an elaborate overview of all the steps including the requirements for interaction and result, the ideas and the concerns with these steps.

7.1.5 Exploration of possible ways to perform the steps

The results of each step in the scenario can be reached in different ways. Since the therapists vary in personality it is valuable to see which kind of activity works best to get to a result. Therefore, for every steps how-to questions were set up and solutions were generated that required different kind of interactions and materials. The results of this are shown in Appendix H5.

7.1.6 A positive experience with JO

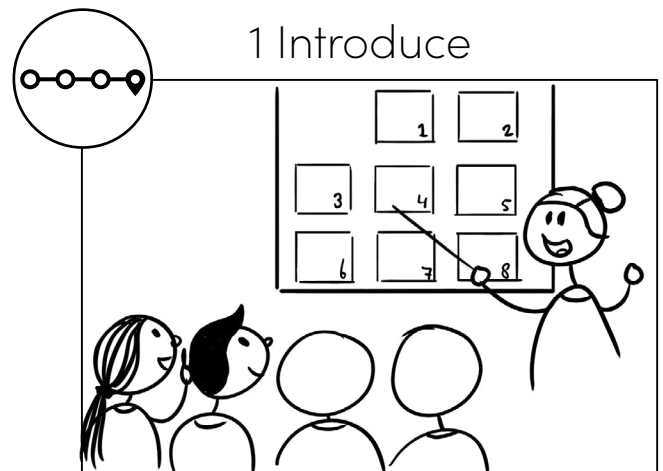
The design goal mentions allowing positive experiences with JO. So the question is how this positive experience with JO can be created? From the research it became clear that the therapists are willing to connect more to the experience of the child and that currently they work with the children from books and sheets, which is not always a working method that the children are comfortable with or are interested in. When the eHealth option within JO are used with the children and this has a positive effect on the children, this could give the therapists a positive experience with JO. So using the eHealth options within JO could be an opportunity to give the therapists positive experiences with the program. Using the eHealth options within JO instead of using non-digital tools will also make the digital file of the patient more complete and thus be a step in the direction to give the patient more insight in their therapy process.

ways of:	1	2	3	4	5	6	7
communicating information	icons	text	audio	image	infographic	flowchart	
teaching	tell	show	involve				
learning	remember	understand	apply	analyze	evaluate	create	
providing information (medium)	intranet	poster	manual	interactive document	email	interactive wall	app
extracting information	ask questions	provocate storytelling	analyzing current behaviour	drawing			
documenting information	drawing	writing	typing				

Figure 33 - Morphological chart

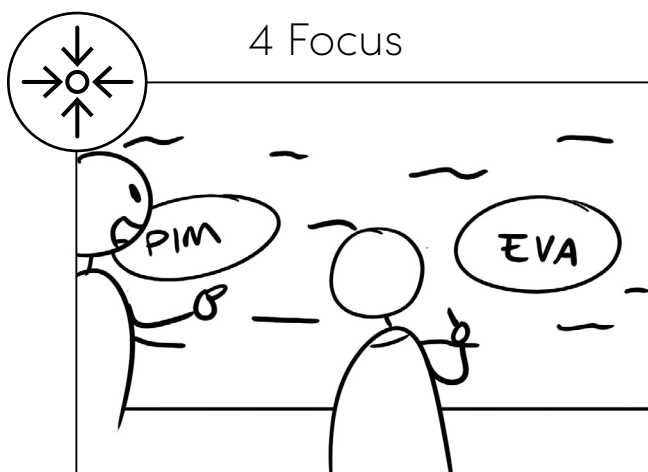
Figure 34 - Second attempt of filling in the worksheet about personal values, goals and actions.

“Working towards eHealth connected to personal values in 7 steps”



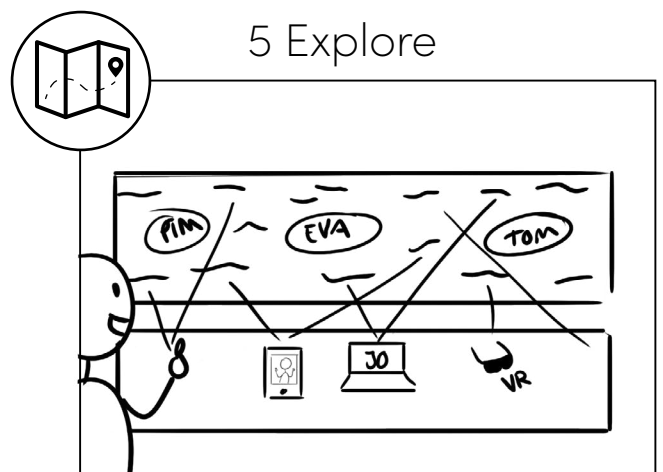
Explanation of eHealth as a concept, introducing the vision of Karakter and explanation of the goals of the training.

Goal: providing a clear context and goal so that the therapist know what they should be working towards in the training.



Reviewing the current goals of your mentor child. What is your mentor child interested in? Does this fit your current work method? Does the way you are trying to reach the goals fit your ultimate goal?

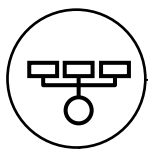
Goal: Goals that are connected to the ultimate goal.



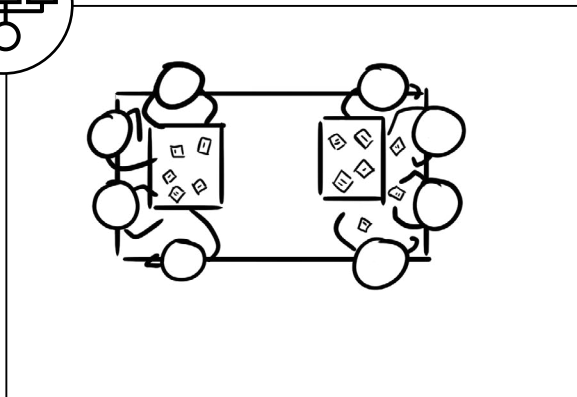
Introducing the eHealth options and exploring them. Which ones do you find attractive? And which ones do you not find attractive? Why?

Goal: Making therapists familiar with eHealth options in a non digital way.

Figure 35 – Scenario of steps of the training



2 Analyze

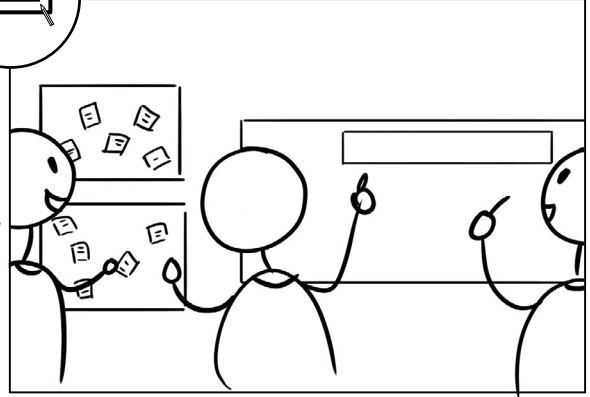


Brainstorming about: what is found important at work, what is important for the children at the clinic, what kind of activities are performed now, why is this important.

Goal: Creating an overview of what is important for the therapist, what is important for the children and of current activities.

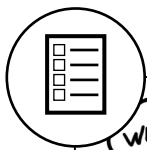


3 Formulate

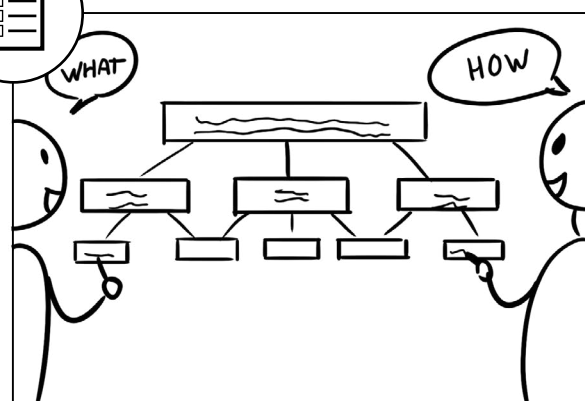


Selecting the most important values.
Evaluating if and how the activities fit to that goal.
Formulating an ultimate goal based on the values.

Goal: Formulating an ultimate goal.



6 Make concrete



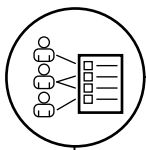
Looking at the current actions points of your mentor child, are there any that can be done with one of the eHealth tools?

Search for information on the eHealth options that appeal to you on Connect or Jouw Omgeving.

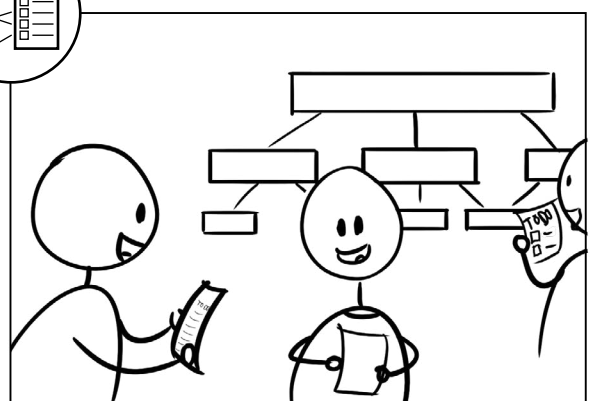
Reformulate the how of the action points.

Are there other things you want to see as eHealth option?

Goal: Action points that are connected to the goal.



7 Take with you



Choosing which action point you want to adress first.
Closing off the training

Goal: leaving the training with an activated attitude and motivation and tools/skills to apply the discovered eHealth options.

7.2 Updated design criteria

As a result from the previous described exploration activities the design criteria could be defined more. The complete set of design criteria that were derived from the different exploration steps and earlier research are listed here to provide a clear overview.

Requirements

Time

The training should be able to take place in a morning or afternoon meaning it should last no longer than 3 hours.

Connection to JO

The training should include exploration of JO and should evoke a positive experience with eHealth.

Materials

The materials used in the training should allow for flexibility.

Process

The process should support formulating specific goals and actions, meaning that they explain what will be done and how this will be done.

Goal of the training

The goal of the training should be clear to the therapists as well as the goal for every step of the training so that the therapists understand what they are working towards and feel motivated to perform the steps.

Target group

The training should be useful for the therapists in every adopter category, but should focus on the needs and wishes of the laggard.

Team support

The training should give the team of therapists the feeling that they are working on the same thing and therefore can turn to each other for support.

Tone of communication

During the training the therapists should be considered as the experts of their working field.

Skills and feelings

The training should make the therapist conscious about their personal values.

The training should give the therapists skills/tools to apply their personal values to using eHealth at work.

The training should give the therapists a feeling of influence over what they are required to do with JO.

The training should make the therapist feel like they are able to add/insert their own ideas in using eHealth.

The training should make the therapist feel like they are capable to use JO.

The training should make the therapist feel activated and motivated to face challenges.

General conditions

There are some general conditions that need to be taken into account for the concept to work successfully, namely;

- The training should be scheduled with the entire team, so that it becomes easier for the team to motivate, remind and activate each other, during and after the training.
- The training should be prioritized, meaning that once it is scheduled it should not be postponed.

7.3 Concept proposal

The previous sections explained the explorations for the development of a concept as well as the design criteria for the concept. This section will describe and explain the concept. Two collages were made based on the selected ideas in the morphological chart shown earlier in Figure 33. The collages served as inspiration for the concept and can be found in Figure 37 and Figure 38.

Base of the concept

Steps 1-4 of the training result in having formulated a goal based on values and subgoals.

Step 5-7 of the training focus on exploring the eHealth options and connecting these to formulated goals. The exploration of eHealth options is supported by cards that explain the eHealth tools that are available at Karakter. The goal of the cards is to provide a complete overview of the eHealth options with short explanations so that the therapists have the opportunity to explore the eHealth options without having to use a computer right away. An example of such a card is given in Figure 36. The cards are slightly bigger than a creditcard.

The content for the cards explaining the eHealth options is based on the eHealth tools that are listed on Connect. A large part of the eHealth options come from the tools that can be found in JO, only three of them are presented on Connect instead. The images of the eHealth options on the cards resemble the images of the eHealth options as they can be found on JO or on Connect.



Team based or individual

There are two ways to perform the training:

1. as a team, where the goals that are formulated are based on common personal values of therapists in the team. This way is explained in section 7.3.1.
2. more individual, where every therapist of the team formulates their own goal based on their own personal values. This way is explained in 7.3.2.

The benefit of formulating a goal as a team is that everyone has the same goal, meaning that the whole team works towards the same goal. In this way the motivation to work with eHealth gets higher because colleagues are doing the same thing. This is based on the results of the interviews.

The benefit of individually formulating a goal is that it stays closer to the personal values that are found in step 2. This increases the intrinsic motivation of the individual therapist.

Which way to perform the training is more suitable also depends on the coherence and the size of the team.

The two different approaches for the training differ in the way the formulated goals and actions are documented and in the way that the eHealth options are presented. This is explained in the following two sections.

Met deze tool kun je samen met de patient het sociale netwerk van hem/haar visueel in kaart brengen.

Op deze manier wordt het duidelijk voor de patient welke mensen hem/haar zouden kunnen steunen.

Ook kan er gevisualiseerd worden hoe het gewenste sociale netwerk eruit ziet, zodat hier naar toe gewerkt kan worden.

Figure 36 - Example of explanatory card eHealth tool in JO. size: 48x85 mm Left: front of card Right: back of card

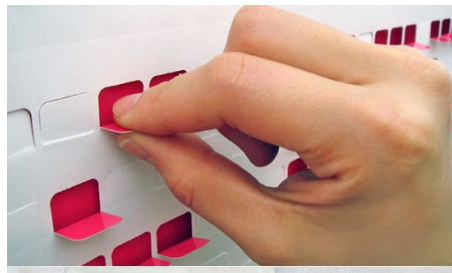
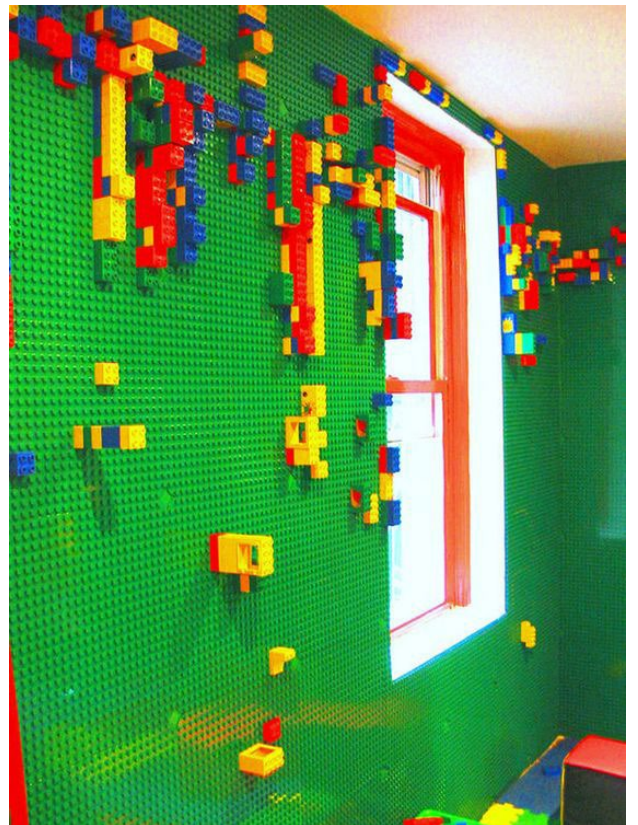


Figure 37 - Collage of inspirational images for team-based concept

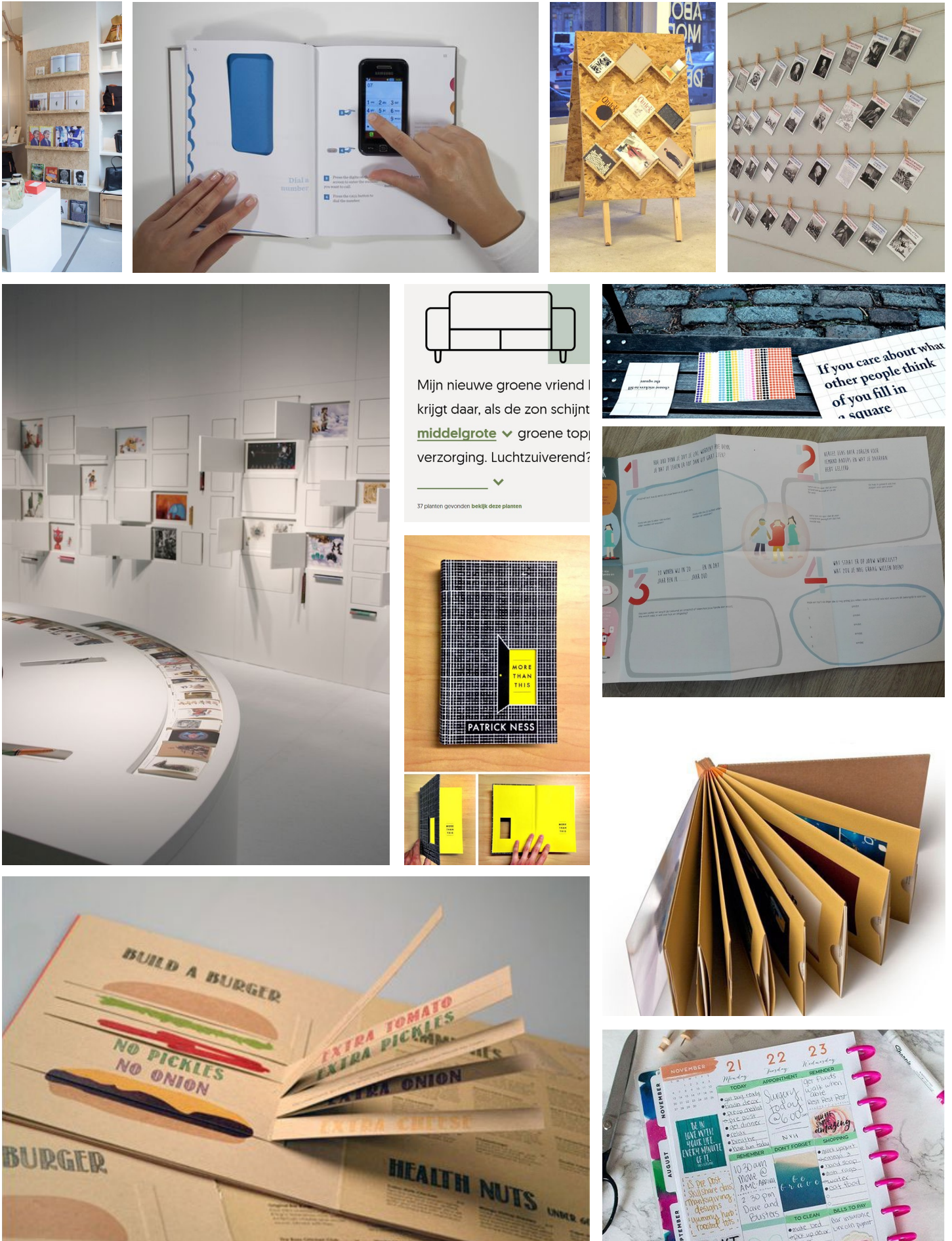


Figure 28 - Collage of inspirational images for individual concept

7.3.1 Materials used by creating team goals

As explained this way to perform the training focuses on creating a goal with the entire team based on shared personal values.

Creating an overview of the results of step 1-4

Figure 40 shows a poster in which the results of the training can be filled in and can be placed on a pinboard afterwards. On the base of the poster there is room to attach eHealth cards that connect to the formulated actions.

Step 5 - Explore (Figure 39)

Exploring the eHealth options is done by viewing the cards presented on the board in Figure 41. The therapists each pick at least three cards with eHealth options that appeal to them. Then they also pick at least three cards that they do not like. This is discussed among the team. The discussion is meant to open up the opportunity to view things from a different perspective. One therapist might not see the benefit of something, but another one might and can maybe convince the other of its usefulness. This activity is particularly valuable to bring insights of therapists in a higher adopter category to attention of the people in lower adopter categories.

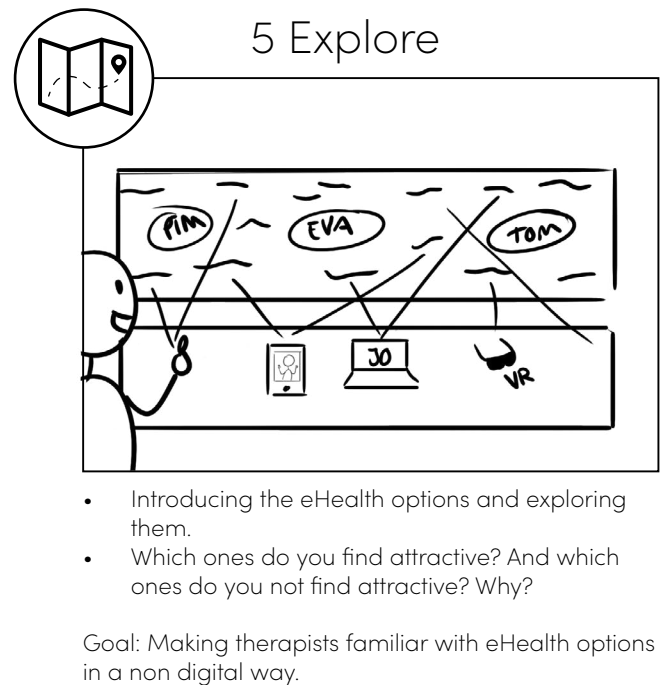


Figure 39 - Step 5 of the training: Explore

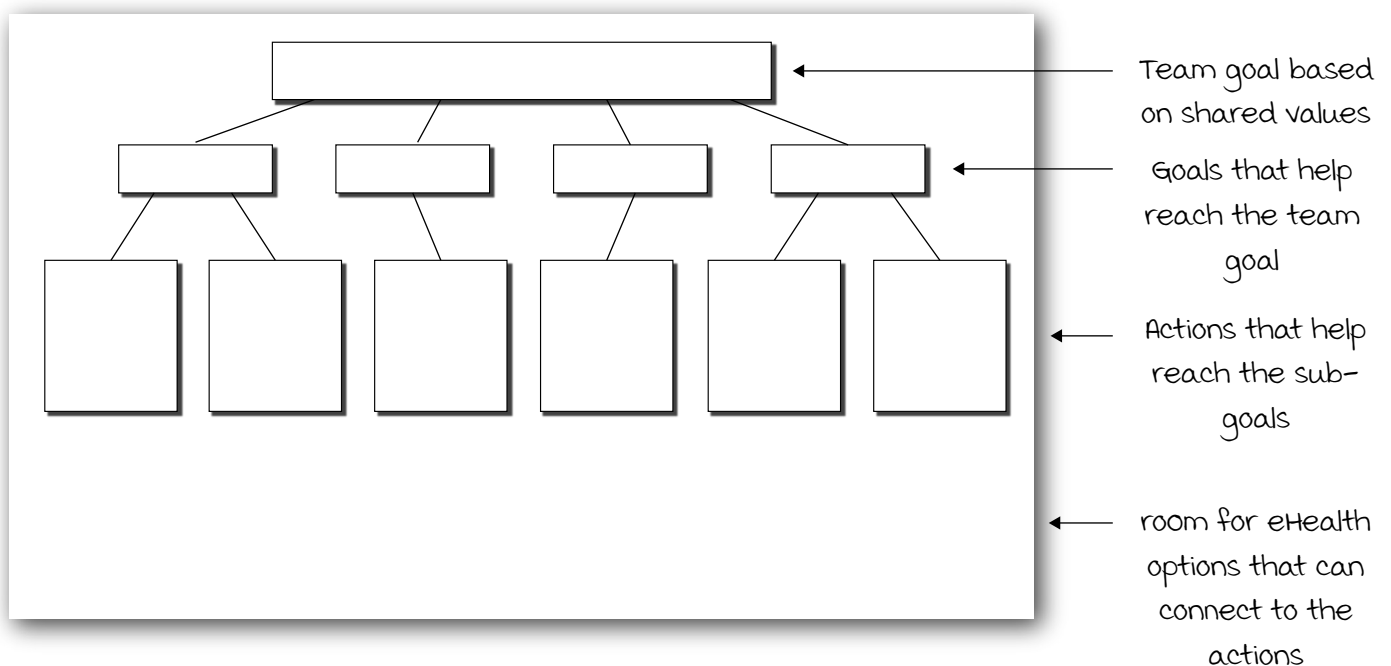


Figure 40 - Poster that shows an overview of the results of the training and that serves as a reminder to the therapists

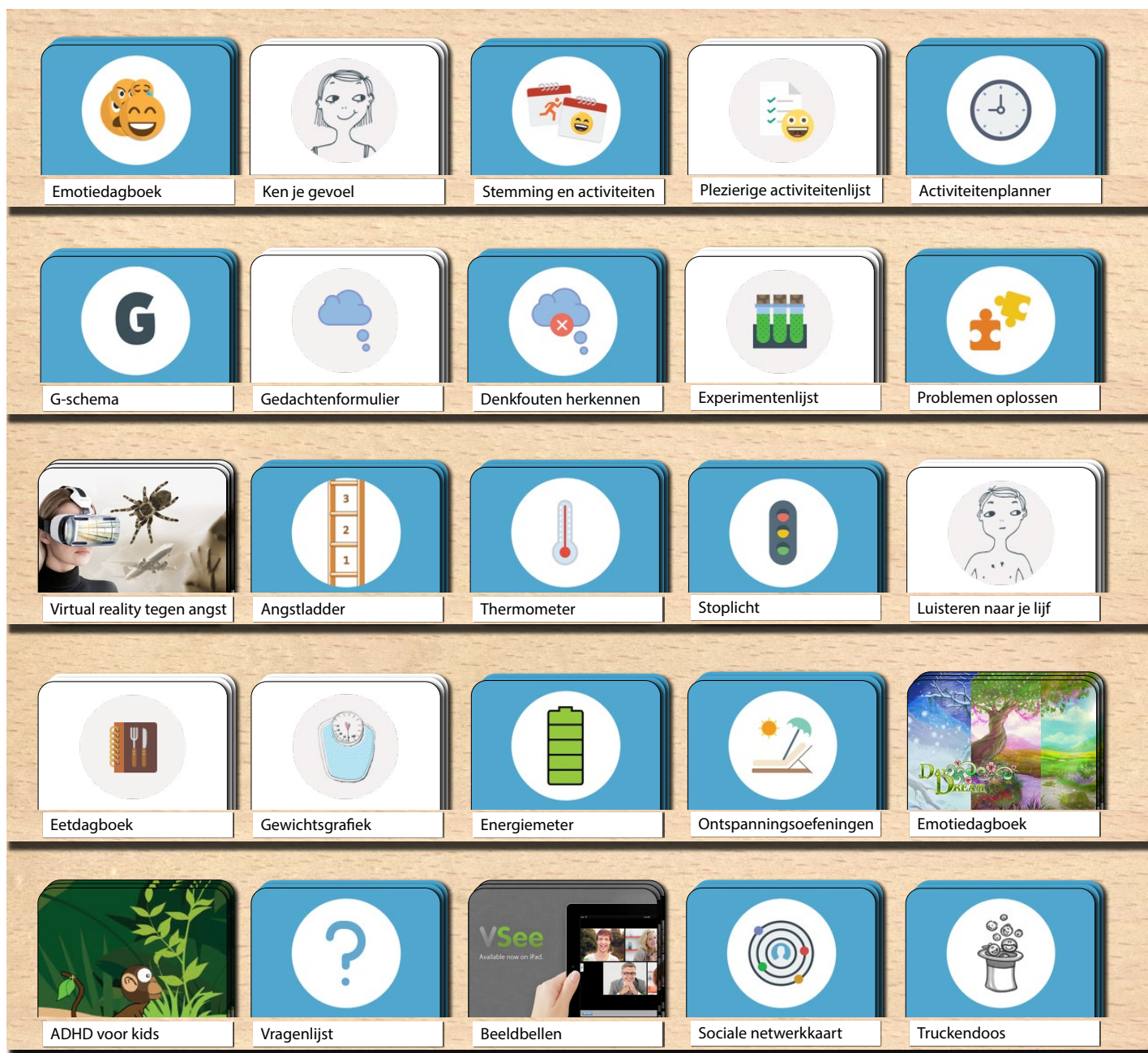
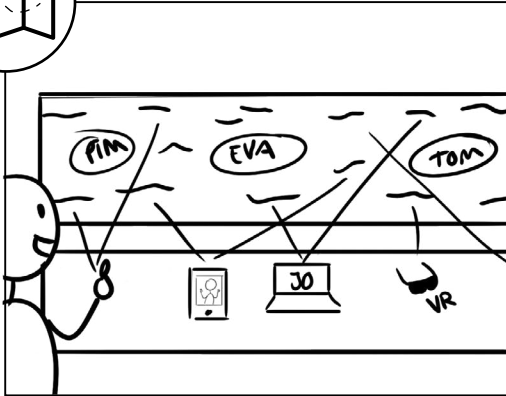


Figure 41 – Board that can be mounted on the wall and shows the eHealth options available at Karakter

This way to perform the training focuses on formulating individual goals.

Step 5 - Explore (Figure 42)

5 Explore



- Introducing the eHealth options and exploring them.
- Which ones do you find attractive? And which ones do you not find attractive? Why?

Goal: Making therapists familiar with eHealth options in a non digital way.

Persoonlijke waarden	Visie
	<hr/> <hr/> <hr/> <hr/> <hr/>

- 80 -

Doelen	Actiepunten	eHealth options
_____	_____	
_____	_____	
_____	_____	
_____	_____	
_____	_____	
_____	_____	
_____	_____	
_____	_____	
_____	_____	

Figure 44 - Pages of the booklet where the goals and actions can be filled in and connected to the eHealth options

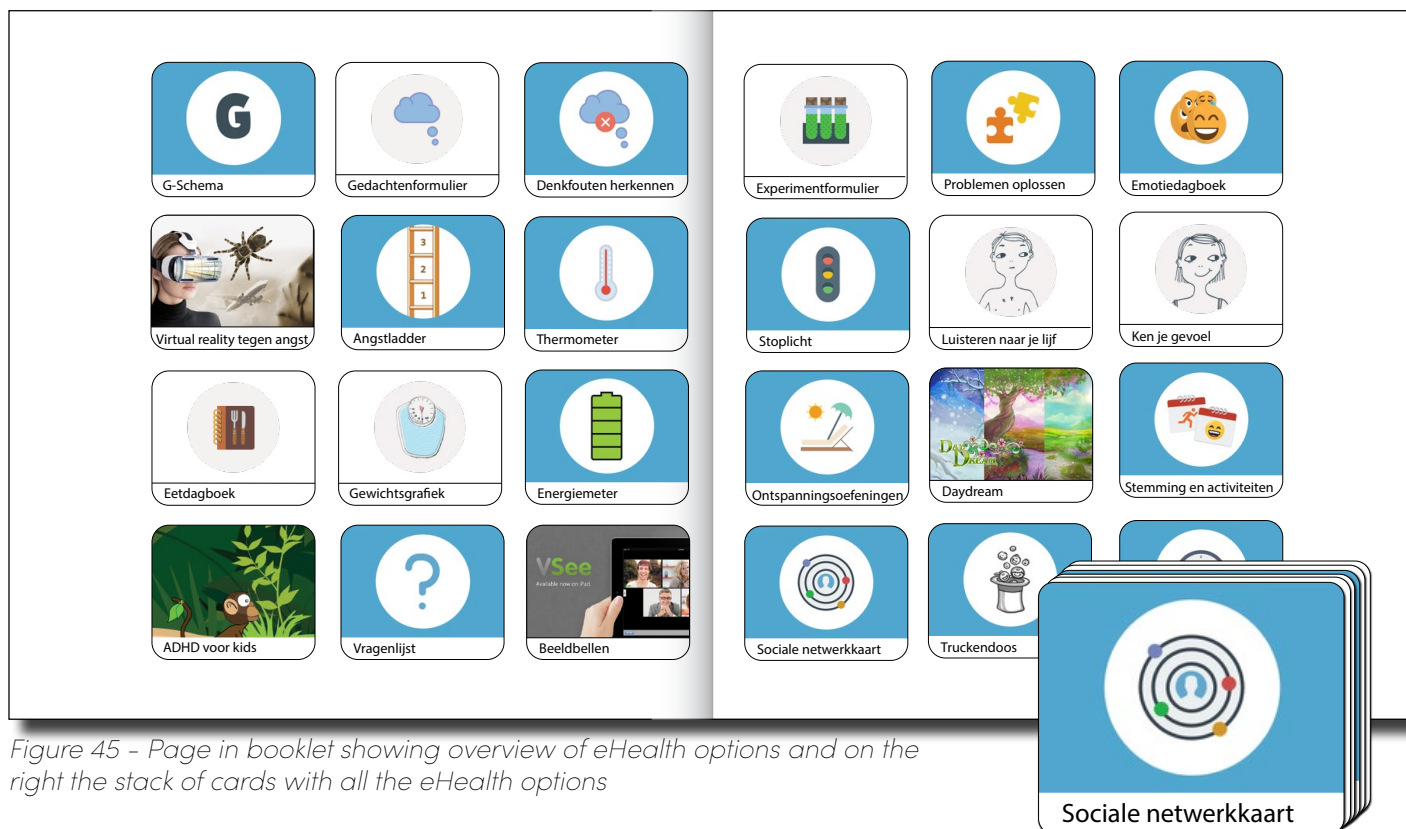
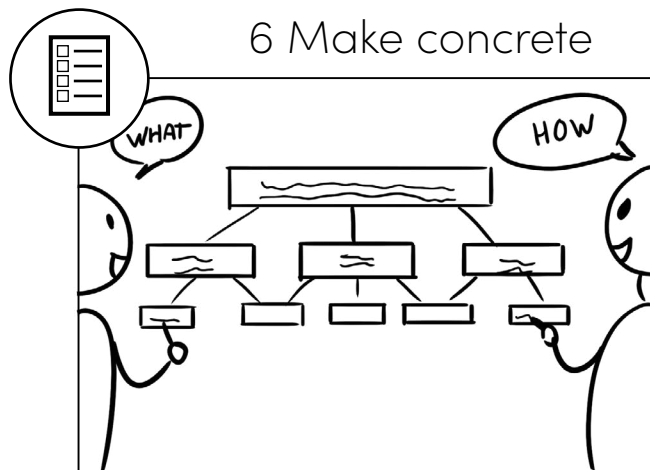


Figure 45 - Page in booklet showing overview of eHealth options and on the right the stack of cards with all the eHealth options

7.3.3 Interactions of steps 6 and 7



- Looking at the current actions points of your mentor child, are there any that can be done with one of the eHealth tools?
- Search for information on the eHealth options that appeal to you on Connect or Jouw Omgeving. Reformulate the how of the action points.
- Are there other things you want to see as eHealth option?

Goal: Action points that are connected to the goal.

Figure 46 - Step 6 of the training: Make concrete, with the activities and steps on the right

Step 6 (Figure 46)

This step of the training process has as a goal to connect eHealth options to the goals and actions formulated in the first part of the training. Therefore the eHealth options that can apply to the action points of the mentor child are selected and it is further explored if and how the selected eHealth options can be useful and what the therapist needs to know and do in order to be able to use the eHealth option. This is done by letting the therapists search for more information on the eHealth option on Connect or on JO. See figure 47.

Searching for specific information for one eHealth option that has potential benefit for the mentor child is easier and also feels more beneficial than starting to explore eHealth when there is no specific cause for the search other than 'I could maybe use eHealth for something'.

In this way the therapists can build their knowledge and skills on the eHealth options one step at the time and the chance that the therapists gets overwhelmed by the options and the amount of information decreases.

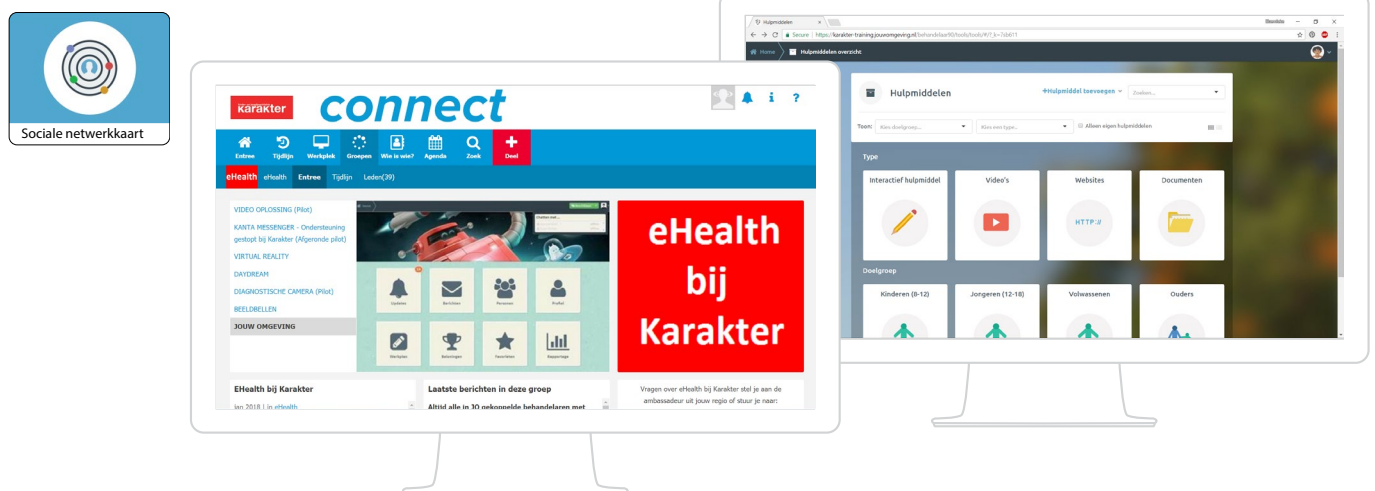


Figure 47 - In step 6 therapists explore if and how a specific eHealth option can be beneficial for the workplan of their mentor child by searching for more information on Connect or JO

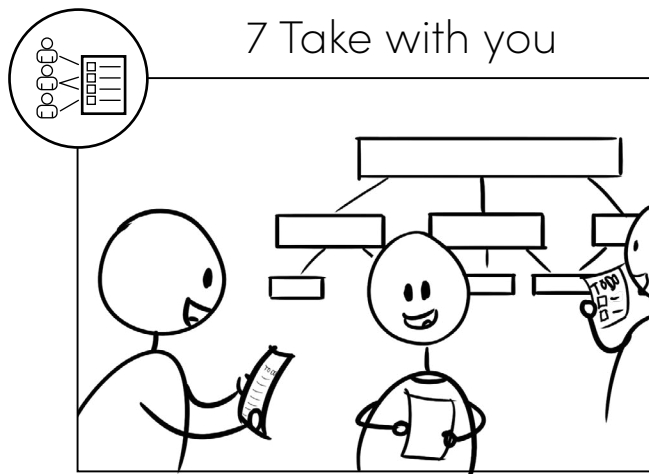


Figure 48 - Step 7 of the training: Take with you, with the activities and steps on the right

- Choosing which action point you want to address first.
- Sharing your plans with your colleagues.
- Closing off the training.

Goal: leaving the training with an activated attitude and motivation and tools/skills to apply the discovered eHealth options.

Step 7 (Figure 48)

Finally in step 7 of the training the therapists plans which of the eHealth options there going to apply first. The cards of the selected eHealth options can be attached to the poster or placed in the booklet so that the decision to try and evaluate those eHealth options is remembered.

Furthermore, in this step the session is ended. It is

important that is done in a positive and reinforcing manner so that the therapists leave the session feeling activated and positively motivated to start using the selected eHealth options. The importance of ending an experience in a positive manner is stressed by Calvo and Peters (2014). They claim that the end of an experience is remembered the best and thus the ending determines whether the experience is reviewed as being positive or negative.

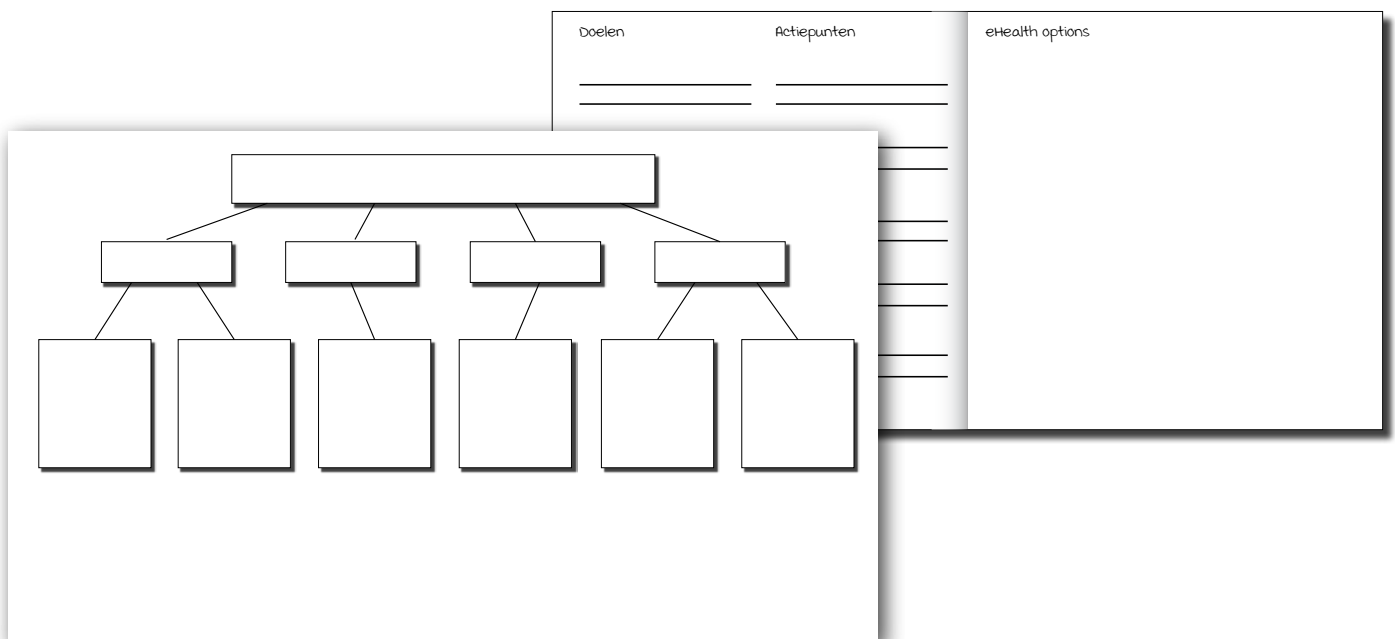


Figure 49 - Attaching selected eHealth options to the poster or the booklet so that the poster/booklet serves as a reminder

7.3.4 Focus and points of improvement

After consideration it was decided to test the concept based on individual goal setting with the therapist, because it is not known to what extent the complete team has similar personal values and goals. As explained earlier the connection with the values will be stronger if they are formulated by someone himself.

A first prototype of the booklet and the card set was created and filled in with fictional data in order to be able to quickly test the functionality of the prototype. See Figure 37-40. This led to the insights for a few improvements regarding the visual overview of the booklet. These improvements are described below and shown in Figure 53.

Booklet

The booklet serves to give a summary and overview of the personal values, ultimate goal, subgoals and action points and of the chosen eHealth options.

However, it can be seen right away that the booklet lacks overview because the aforementioned elements are not shown on the same spread of the booklet. The pages of the second booklet are therefore accordionfolded, allowing the booklet to be flipped through like a booklet or to be folded

out completely and show all the pages at the same time. This form of the booklet also still allows for all the eHealth options to be viewed on one page, but now also gives the opportunity to use the booklet as a poster to showcase all the eHealth options. This poster could serve as a reminder or could be used as an overview of the options that are found useful by making notes on the booklet.

Secondly, the booklet could offer more visual overview by visually connecting the different elements. In this way it is more clear what the thought process behind setting up personal values, goals and actions is.

Next to that, the lines in the booklet which are meant to write on were replaced with coloured rounded rectangles, making it less crowded and more visually attractive.

Lastly, the size of the booklet was changed to allow for more writing space and for more visual balance.

Card set

The card set was printed on thicker paper in order to make the cards more sturdy. This makes the card set more suitable to use more often and makes the set look more professional.

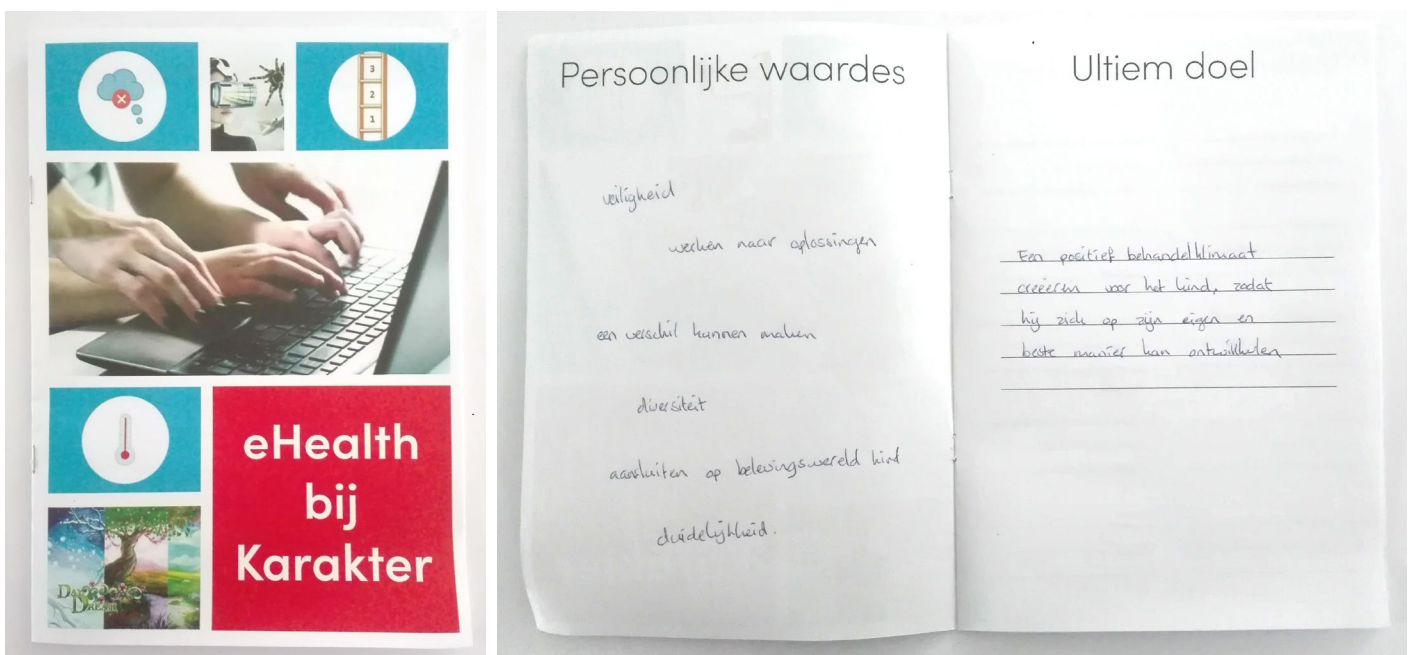


Figure 50 - First prototype of booklet and card set: front page (left) and page 1 and 2 (right): room for personal values and the ultimate goal



Figure 51 - Page 3 and 4: Room for goals, action points and chosen eHealth options in booklet (left), front of an eHealth option card (upper right) back of an eHealth option card (bottom right)



Figure 52 - Page 5 and 6: eHealth options available at Karakter in booklet (left) and on card set (right)

Also, pointers on where to find more information on the eHealth option were added to the bottom of the back of the cards, so that all therapists know where to look for more information on the eHealth option that they want to explore.

A few cards were added as well, those show the possibility to add helpful websites, videos or documents to the dashboard of the patient and the possibility for the patient to keep a diary.

Scenario

Every step of the scenario, consisting of a visual and text explaining the activities of that step of the training, is combined with images of the materials that are used. This is done to make it more clear to the therapists what activities are done and what materials are used with that step. Every one of the seven explanations of the parts of the training is printed on a different card, so that the cards can be used as reference for the activities done in each step.



Figure 53 - Second prototype of booklet and card set

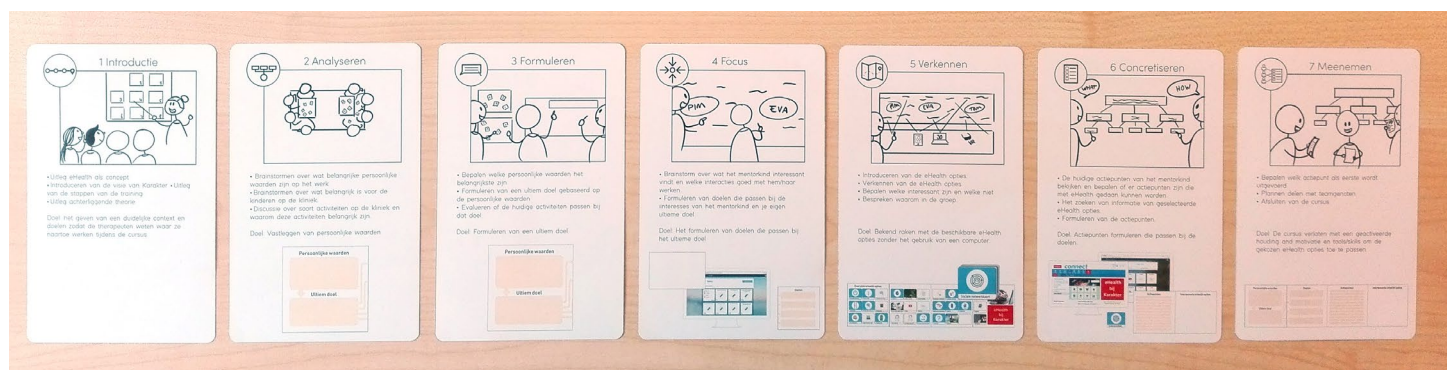


Figure 54 - Scenario cards that explain the different steps of the training

7.4 Final concept

The goal of the training is to empower therapist to discover and create benefits of eHealth, while having a positive experience with JO. The steps of the training can be viewed on the cards in Figure 55 that show the activities, goal and materials of each step.

The training focuses on finding intrinsic motivations to use eHealth by connecting personal values and goals to eHealth options available at Karakter.

The booklet designed for the training serves two main purposes. One is that the therapist are guided through the reflective steps and in this way learn an alternative way of thinking about eHealth. The second purpose is to more or less force participants in the training to make things concrete by writing down the conclusion of the activities done in each step. Doing this should make it clear to the therapist why they would want to use eHealth or in other words what the benefits of eHealth can be for them and their mentor child.

The card set of the available eHealth options is a tool to discover the eHealth options without having to deal with the possible negative effects of using the computer to discover the eHealth options.

For the laggard these negative effects can be that using the computer is a bit scary and that there is no visual overview over all the eHealth options so the options seem overwhelming. This lack of having a complete overview also applies to other adopter categories.

Besides that, using a computer to explore the options would make it easier to focus right away on one of the options by diving in the information available for that option. In this way other eHealth options that might also be interesting or valuable can be easily overlooked. By giving a non-digital overview of all the options with a limited amount of information this could be avoided.

Another negative aspect of using a computer is that the laptops at Karakter take quite some time to start up and log in, which could make the experience of exploring eHealth options less positive.

Use of the materials after the training

It is not necessary to fill in another booklet when a therapists gets a new mentor child, since the booklet serves to show the therapists their own perspective on eHealth. New goals and action points can simply be written down on a piece of paper and ideally action points are put in their agendas. However, after the training the booklet can still be used as a reminder of what the formulated values and goals were and of the action points that should be performed. It can also be used as a poster that shows an overview of the eHealth options at Karakter.

After the training the card set could still be used to discover eHealth options or select eHealth options to use with the mentor child.

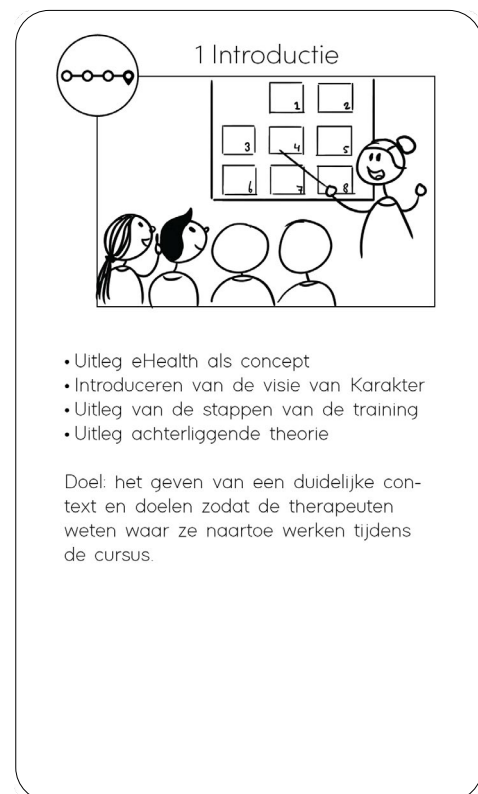




Figure 55: part 1/2 - Card explaining step 1 of the training

2 Analyseren


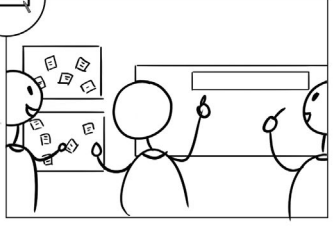



- Brainstormen over wat belangrijke persoonlijke waarden zijn op het werk.
- Brainstormen over wat belangrijk is voor de kinderen op de kliniek.
- Discussie over soort activiteiten op de kliniek en waarom deze activiteiten belangrijk zijn.

Doel: Vastleggen van persoonlijke waarden.




3 Formuleren






- Bepalen welke persoonlijke waarden het belangrijkste zijn.
- Formuleren van een ultiem doel gebaseerd op de persoonlijke waarden.
- Evalueren of de huidige activiteiten passen bij dat doel.

Doel: Formuleren van een ultiem doel.




4 Focus

- Brainstorm over wat het mentorkind interessant vindt en welke interacties goed met hem/haar werken.
- Formuleren van doelen die passen bij de interesses van het mentorkind en je eigen ultieme doel.

Doel: Het formuleren van doelen die passen bij het ultieme doel.



5 Verkennen


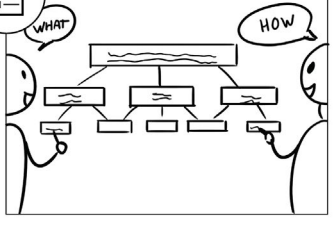



- Introduceren van de eHealth opties.
- Verkennen van de eHealth opties.
- Bepalen welke interessant zijn en welke niet.
- Bespreken waarom in de groep.

Doel: Bekend raken met de beschikbare eHealth opties zonder het gebruik van een computer.

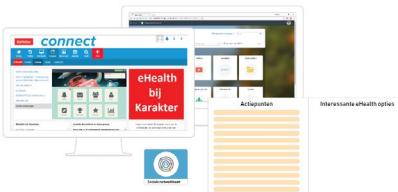


6 Concretiseren

- De huidige actiepunten van het mentorkind bekijken en bepalen of er actiepunten zijn die met eHealth gedaan kunnen worden.
- Het zoeken van informatie van geselecteerde eHealth opties.
- Formuleren van de actiepunten.

Doel: Actiepunten formuleren die passen bij de doelen.



7 Meenemen




- Bepalen welk actiepunt als eerste wordt uitgevoerd.
- Plannen delen met teamgenoten.
- Afsluiten van de cursus.

Doel: De cursus verlaten met een geactiveerde houding and motivatie en tools/skills om de gekozen eHealth opties toe te passen.



Figure 55: part 2/2 - Cards that can be used to explain step 2-7 of the training

7.5 Conclusion

This chapter covered the process of creating the final concept that will be tested with the sociotherapists of IBC Kind. The final concept is a training for the therapists at IBC Kind that focuses on different aspects. The most important aspects are summarized below.

Intrinsic motivation

First of all it focuses on finding intrinsic motivation to use eHealth. This is done by finding the connection between personal values and goals and the eHealth options that are available.

Non-digital overview of eHealth options

Secondly, the training focuses on giving a clear, non-digital overview over the available eHealth options at Karakter and on giving enough information about these options to make it possible for the therapists to decide whether they would consider further exploring this option or not. In this way getting to know the eHealth options becomes more accessible. At the same time there is a clear connection between the non-digital eHealth overview and the digital overview of eHealth options, because the images and titles of the cards are identical to those that can be found in JO or on Connect. In this way it is easy to recognize the eHealth option when it is searched for online.

Team support

Thirdly, by giving the training to a complete team at the same moment, everyone in the team is aware of what eHealth options other team members are planning to explore, use and evaluate. This means that the team members are more likely to be able to share and discuss their experiences or to motivate each other to actually do what they were planning during their working hours together.

Allocated time and realistic goals

Finally, giving the therapist a training in which there is time to explore eHealth and to plan what steps need to be taken to use selected eHealth options is a way of working around the time barrier that the therapists experience during their normal working hours. The training also changes the goal 'use eHealth' into smaller more attainable goals like 'discover whether the social network card is a useful tool for my mentor child'. Having smaller goals to work on also makes it easier to evaluate JO in a structured way and to work towards improving the different functions in cooperation with Jouw Omgeving.

The next chapter will cover the set-up and the results of testing the concept with the sociotherapists of IBC Kind. This is done to test whether or not the concept has the above mentioned effects, so that recommendations for improvement of the concept can be given.

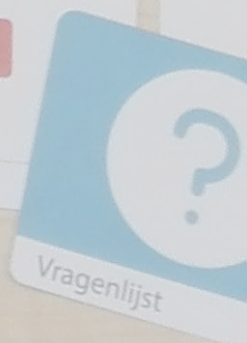
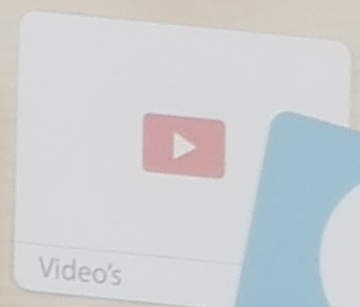
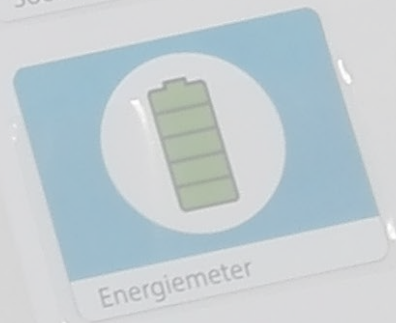
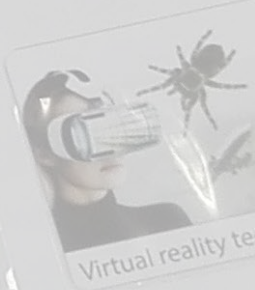
Evaluation

In this phase the concept is evaluated and the entire project is reflected upon, considering the process and the content of the report. The evaluation of the concept is introduced with research questions, followed by a description of the method and procedure used to answer these research questions. Then the results of the test are presented, followed by a conclusion. The report closes off with an overall conclusion, a discussion and recommendations for Karakter concerning the final concept and the implementation of eHealth in general.

8

Actiepunten

Interessante eHealth opties





8 Concept evaluation

The previous chapter showed the creation of the concept for the training and its materials and of the prototype of these materials.

In order to assess the effectiveness of and the interaction with the concept the use of the steps of the training are simulated and during a user test performed with five of the therapists from the IBC Kind team. This chapter describes the setup for and the process of performing the test, as well as the results and conclusions that came from it.

Step 2-4 from the scenario are important for the connection to the personal values, step 5-7 are important for the interaction and the actual experience that the therapists will have with eHealth during and after the training. The training includes a physical 'product' that the therapists can interact with. Taken into account that the therapists have little time open in their schedules it was first considered to only simulate step 4-7 and provide the therapists with a predefined goal that is allegedly set up by going through step 2-4. However, in this way the evaluation would say nothing about how the connection between performing steps 2-4 and 5-7 is experienced. Also, the test would not give any insight in what kind of values and goals the therapists come up with and whether these are similar among the team. These aspects are both important because it tells us whether formulating values and goals is doable and whether the steps need improvement to fit more with the user needs. Therefore, it was decided to let the participants perform a simplified version of all the steps and to review the steps afterwards.

Research questions

The research question for the evaluation of the concept are:

1. Do the therapists interact with the materials in the intended way?
2. How do the therapist experience the different steps of the training?
3. What is the overall experience?
4. Is there a difference between the experience of the laggards and early adopters and the categories in between?
5. What are points for improvement?

8.1 Method

Materials

All the materials that were used are shown in Figure 56. A test guide was used to guide the test and to take notes. The guide can be found in Appendix I1 (English) and I2 (Dutch). The explanation of the different steps in the training was supported by cards that explain the step in text and image and shows the materials that are used in each step. This was

shown in the previous chapter in Figure 55. For the test multiple booklets and card sets (Figure 54) were created that the therapists could use during the test, but also keep afterwards. The booklet and the card set were used to test the interaction with and the effect of interaction with the booklet and the cards. A laptop was used to allow the participants to look up more information about the eHealth option that they selected. A voice recorder was used to record the answers that the participants give during reviewing of the concept, so that quotes can be used to support the explanation of the results.

Participants

The participants for the test are part of the team of sociotherapists and are selected on availability. For those who also participated in the previous research it is known whether they fall in the category laggard, late majority, early majority or early adapters. For those who did not participate in the previous research the category in which they fit is determined during the evaluation of the concept by observing behaviour and asking extra questions if needed.

8.2 Procedure

Preparation

A prototype of the booklet and the card set was created, as well as cards that explain the steps of the training. Those are shown and explained in the previous chapter. An example of values, ultimate goal, goals and action points is written down in case the therapists are not able to come up with their own in the short time span of the test. The preparation also includes approaching participants for scheduling test moments and informing them on what to bring.

Test

The test consists of four parts:

1. Introduction

The purpose and procedure is explained to the participant with the help of the scenario cards. During this explanation the pages of the booklet and card set are shown when the step that requires filling in or using that element is explained.

2. Test

The test covers a simplified version of step 2-7 of the training. The participant is guided through the steps.

3. Reviewing

The test is reviewed with the help of a short interview.

4. Closing off

The participant is thanked for their participation and a moment is scheduled for further reflection.

Reviewing after one week

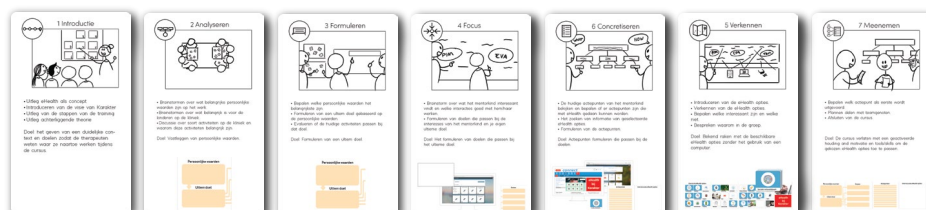
After approximately one week the sociotherapists that participated in the concept evaluation were contacted once more in order to review the effect and the usage of the materials outside the simulated training.

The questions asked during this review are:

1. Where have you kept the booklet and the cardset after we performed the test? Is that within sight or not?
2. Did you use the booklet and/or the cards after the test? If yes, what have you done with this? (This could just be having looked at them once more)
3. Did you think about eHealth in the past week as a result from the test? If yes, how often? If no, why do you think it hasn't come up again?
4. Did you use JO in the past week? If yes, for what?
5. Did you talk with your colleagues about the possibilities to apply eHealth within JO? If yes, what was the cause for this conversation?
6. Did you think about or search for any eHealth options that were not shown on the cards?
7. How many days did you work after we performed the test?



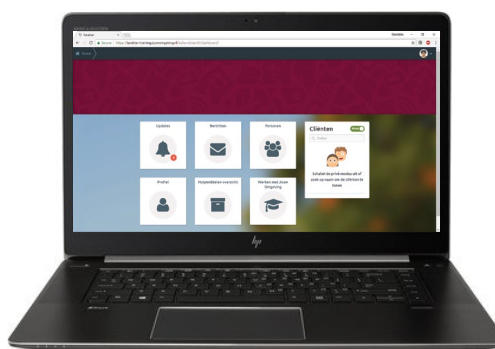
Test guide



Cards explaining the training per step



Booklet and card set



Laptop



Voice recorder

Figure 56 - Materials used during concept evaluation with sociotherapists of IBC Kind

8.3 Results

This section will present the results of the test with the sociotherapists. This will make it possible to answer the research questions that are mentioned at the beginning of this chapter:

1. Do the therapists interact with the materials in the intended way?
2. How do the therapist experience the different steps of the training?
3. What is the overall experience?
4. Is there a difference between the experience of the laggards and early adopters and the categories in between?
5. What are points for improvement?

Documentation of the performed evaluation can be found in Appendix I3.

8.3.1 Do the therapists interact with the materials in the intended way?

Interaction during the test

The booklets are filled in as intended and the cards are used like it was envisioned.

The storage space for the cards is only used by the laggard (participant 5).

Interaction after the test

Participant 5, categorized as laggard, is one of the two participants that further explored the eHealth options that she selected during the test.

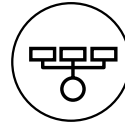
“[I have looked at the eHealth options] because I had to, because I told you I would” P5

The other participant, categorized as early adopter, looked into one of his selected eHealth options right after the test. However, that day he got a sport injury, which forced him to stay home from work. Therefore he was not able to further use the materials or involve in the use of eHealth otherwise.

The other participants, categorized as early majority, have not used the materials after the test. Reasons mentioned for this are that there is no time and it is still not a topic that is alive among the team. One of them said she would like using the cards with the children to let them pick an option that they like.

“I think I would use them [the cards] when I work with the children, that I can grab the cards to show them all the options that there are as well.”

8.3.2 How do the therapists experience the different steps of the training?



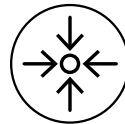
Step 2: Analyse

The therapists were quick in writing down personal values. Participant 2 had some trouble focusing on the tasks.



Step 3: Formulate

All therapists were able to come up with an ultimate goal that fitted the values, some needed a little help in the form of an example.



Step 4: Focus

Formulating subgoals was easier when there was more time spent on brainstorming about what interests the mentor child and what interactions work well with them.

Although the participants found it interesting to think about the personal values and goals and these steps were considered clear, the link with the child and eHealth was not always present or clear. Participant 5 expressed that using eHealth would

““Practicing the steps like how you would use it in Jouw Omgeving’, I find those very clear.” P2

“I doubt that [these first steps would help in discovering why I would want to use eHealth]. I think that using eHealth is something that I would do because I see the possibilities and learn from experience that it interests the children.” P5



Step 5: Explore

Exploring the eHealth options without the computer gave all the participants a better overview of the eHealth options than they had before the test.



Step 7: Make concrete

Making the goals that the therapists have set up concrete by formulating action points is considered helpful.

8.3.3. Is there a difference between the experience of the laggards and the early adopters and the categories in between?

The participant that was categorized as laggard looked more thoroughly at the cards to explore the eHealth options. She had not seen the options before. The participant that was categorized as early adopter found the steps of the training and the materials less helpful than the laggard. He was already familiar with most of the options.

- “I would look in JO earlier than here [cardset]. Although I do find it useful that there is a short text on the back of the card. [...] This is faster.” P4 – ambassador

He did find the steps of formulating personal values and goals interesting to think about.

All participants got a better overview of the eHealth options that are available regardless of what adopter category they fall under.

8.3.4 What is the overall experience?

The overall experience of the therapists was positive. The quotes below show parts of their reaction to the training.

- “[My first reaction to these training steps is that it is] an eye-opener of what is possible [with Jouw Omgeving].” P1
- “If I would have had this [training] I think I would have started using JO sooner, because it is all a bit more clear. [As the situation is] now you have to explore everything yourself.” P3
- “Nicely made as well [layout of the booklet]” P3

- “I find the cards very helpful, at least for myself, that you really have them in your hand and are able to put them in here [last page of booklet]. And the actions points, that you can make it concrete what it is that you need, so that is good. Only the bridge from the personal values to the subgoals, that is the only thing that I worry about a little. [...] if you would fill in the values for the children, than you would do the same, because than you place yourself in the child's position, I think it would be more logical that way.” P1

- “‘Practicing the steps like how you would use it in Jouw Omgeving’, I find those very clear.” P2

- “For me it is mostly about facilitation of hours [...] It is very nice to work on your personal values, but I notice that it is difficult when you do groupwork.” P4 – ambassador

8.3.5 What are points for improvement?

Link between personal values and child/eHealth

The link between the personal values and using eHealth for the child should be improved. This can be done by filling in the values for the child instead of for someone personally. The therapists explained that they will then still have a personal connection with the values.

- “When I can work on my personal values, then this will indirectly be applicable to the children as well.” P4 – ambassador

8.3.5 Additional insights

Selected eHealth options

Figure shows which cards were selected as interesting eHealth options by the participants. Participant 1 and 4 both choose an eHealth option that they had never used before, but did find interesting. Searching for information about this eHealth option raised question like: who is in charge of deciding if virtual reality is suitable as exposure therapy for a child? The action points were therefore focused on finding answers to such questions.

Participant 2 chose one eHealth options that she thought was interesting for het mentor child. And the other one she selected because she already knew the principle and find it a very helpful tool.

Participant 3 selected an option that she had tried to use before by attempting to print it, but this was not possible, so she did not use it. When asked why she wanted to print it she told me that everyone in the team usually work sfrom paper and the children do not have an active account yet.

The options chosen by participant 5 were clearly focused on the interests and the needs of the mentor child. It were both options that she did not know, because she had not seen the digital toolbox before.

User-friendliness of the program

The program was not considered user friendly by participant 5 in the sense that it was not possible to see how the tool would actually work when exploring options via the therapist account.

Name for the training

The participants were asked about their preference for a name out of the following four options:

- Introductie eHealth
- Jouw plek in Jouw Omgeving
- eHealth met een doel
- eHealth op jouw manier

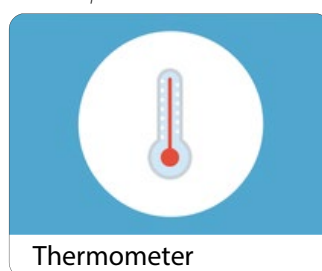
They were also allowed to give their own suggestion. Three out of four participant chose for 'Jouw plek in Jouw Omgeving', because they found this fitted with the training the best and they found it concrete. One participant mentioned that he thought people would have a negative connotation with the word eHealth. One out of four participants chose for 'Introduce eHealth', since then people would be pleasantly surprised by the content of the training.



Participant 2



Participant 3



Participant 4



Participant 5

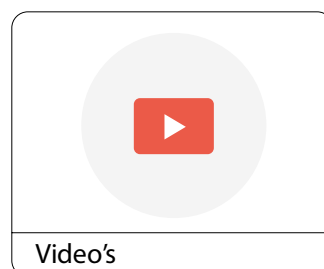


Figure 57 - The selected eHealth options per participant

8.4 Conclusion

General conclusions

Exploring the eHealth options with the help of the overview and the cards is considered helpful to get a more clear overview of the options and to be able to quickly find out what an eHealth options contains. Participants also feel invited or motivated to look further into the eHealth options after having seen the cards and the overview.

Defining personal values, a goal, subgoals and action points was something that went well as was expected, because defining the goals and action points is as it is done in JO itself.

Only the connection between the personal values and the goals for the child/eHealth were not completely clear. This asks for some changes in the training steps.

The formulated goals were similar in the sense that they focused on creating a good environment for the children. This shows that the team is like-minded and thus giving the training to the entire team will not form any restraints in that sense.

Laggard still needs proof of success

For the laggard the training steps were an eye-opener of the possibilities within JO. She did not, however, expect the personal values and goals to help her in finding out why she would want to use eHealth. She still requires 'proof' that the tools work with the children, through experiencing the effect of the tools. Despite that she shows willingness to do what is necessary. For her the most important thing is that the training provides her with knowledge and tools to actually use the eHealth options and then the eHealth tools should prove their success and convince her that eHealth is a valuable tool.

Early adopter can be challenged more

For the early adopter the opposite was true. Although he did get a better overview of the eHealth options, defining personal values and a goal was more interesting for him. His goals focused more on challenging himself in relation to knowledge and innovation. He would play a vital role in the training because he can show new perspectives to the lower adopter categories. This does not happen a lot during the normal work hours, because the team is busy with the daily tasks at the clinic. However, he could be challenged more during the training by

taking time to explore other eHealth options outside of the scope of JO.

Environmental constraints

Although the therapist had a better overview of the options after the test and felt invited to take another look at the possibilities, there are still barriers that prevent the therapists from using JO. There is little time during regular work hours to further explore the eHealth options and the children do not have an account yet, so the eHealth options can not be used with the children yet. These barriers fall under the category environmental constraints.

Other use for the cards

The cards could also serve another purpose by using them together with the children, to show what options are available.

Overall, the training steps in the test created a positive experience with eHealth. However, there are still constraints in terms of time and the patients not having active accounts. The latter makes it impossible to use the eHealth options with the children and experience whether the eHealth options have a positive effect. For the laggard the usability of the program is still a factor that forms a barrier to use JO.

8.5 Discussion

In order to evaluate the proposal for the training the steps of the training were explained to the participants and the participants went through a simplified version of the steps. The test was conducted with five participants, all part of the same team and all sociotherapists. Three of the participants also participated in the research done earlier in this project. After going through the simplified steps of the training the participants reviewed the concept by answering a set of questions about their experience during the steps and about their expectation of the further effect of the training. In general the proposal for the training was received positively. Some points of improvement followed from the test.

8.5.1 Limitations of the test

The test that was conducted to evaluate the proposal for the training did have some limiting factors. These factors, their effect and possible solutions are listed below.

Simplified steps

As explained the steps of the training were simplified in the test in order to be able to perform test within 30 minutes. This means that the effect of the steps in the test will be different than the steps in the actual training. The assumption is that when the effect of the test is positive, the effect of the actual training will certainly be positive.

Especially the final step, where in the full training it is chosen which action points will be executed first and this is shared with team members, was not addressed during the test, because the evaluations were individual. However, this step is very important because it makes use of people's urge to be consistent with what they say they will do (Cialdini, 2001) and it makes the plan for applying eHealth more complete.

Circumstances/Environment

The test was done at the clinic during workhours of the therapists and therefore the circumstances of the test were quite different from the intended circumstances for the actual training. For the first two participants performing the test at the clinic during

workhours meant that they had to do the test at the same time, because there wasn't enough time for both of them to test separately and that they had to stay available for the children and other colleagues. The test was done at the office located at the clinic, where other colleagues walked in and out during the test. For one of the participants the fact that the test was done together and in a busy environment was quite distracting and caused her to have trouble focusing on performing the steps of the training. This distraction might have influenced the way she performed the steps and her evaluation afterwards. For the next two participants the test was held in a more separate part of the clinic, where there was no disturbance.

Sample size

As mentioned the test was performed with five therapists. This is quite a low sample size, but just enough (reference). The test was successful in evaluating whether the training would be effective for the therapists, since this design was specifically aimed at this group of therapist. The test could be repeated in other teams of sociotherapists to see if the same training could also work for them.

Participant selection

As described in chapter 8.1 Method the participants were selected on availability. As a consequence the training steps are not tested with a participant that was categorized as late majority. The test showed that the laggard found the training eye opening. The early majority and the early adopters were already more familiar with the eHealth options and thus the training was less eye opening for them. The question still remains how a therapists that is categorized as late majority would experience the training steps.

In order to fully evaluate and improve the training I suggest that the entire training is given to the complete team of sociotherapists and to evaluate the experience during the training and the effect of the training together with the people that took part in it. In this way the training can be improved for the next team that will receive the training. (reference to importance of evaluation of training)

9

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9 Conclusion, discussion & recommendations

The research done in this project has given insight into the therapists' experience during the implementation of JO so far, the needs and wishes they have regarding the implementation and usage of JO, as well as the opportunities for the implementation and usage of JO. With these insights a concept was developed that focused on finding the intrinsic motivation of the therapists and translate this motivation into actions that also focused on applying eHealth in order to improve the therapy process of the patients. This chapter will discuss whether the approach that was applied in this project has been useful in finding an answer to the main question: How do we make sure that the therapists **want** to use JO?

9.1 Overall conclusion

At the beginning of this project it was clear that the therapists at Karakter Nijmegen made little use of the digital environment JO, but it was not clear why this was the case and how the usage of JO could be increased. A plan was set up to try and improve the experience of the therapists during the implementation process and use of JO in such a way that the therapists would want to use JO. This plan included qualitative research consisting of interviews and observations. First the experience of the therapists during the implementation process and their daily activities were studied in order to find answers to the following research questions:

1. What is the current state of implementation of JO according to the employees?
2. What are a) barriers that prevent employees from using eHealth or JO, and b) motivations for employees to use eHealth or JO?
3. What are the wishes and needs of the therapists?
4. What are moments of value to use eHealth according to the therapist?

The answers to these questions gave insight into the barriers that the therapists experienced to use JO, but also in the possibilities and the requirements for a solution that would help the therapist in finding their intrinsic motivation to use JO.

The most important barriers that were found were the lack of knowledge and skills and the lack of guidance from management. For the therapists it was not explicitly clear what the added value of using eHealth is and what goal Karakter wants to meet with eHealth. The therapists were also expected to explore JO on their own, for which they lack the intrinsic motivation and time.

A design brief was set up to address these problems and the following design goal was described:

“I want to design a system in which the team of therapists is independent from management and is empowered to discover and create benefits for the program JO, allowing the therapists to have positive experiences with the program.”

The result of fulfilling this goal is a training that focuses on finding intrinsic motivation to use JO by connecting it to personal values and to improving the situation for the mentor child: something that all therapists found important.

Independency from management

The training that was designed for the team of therapists allows for taking initiatives in using JO without needing the involvement from management. Only for some eHealth options there is still discussion with and permission needed from staff members, but formulating the action points during the training was considered helpful in thinking about which actions are needed to be able to use a certain eHealth option at the clinic.

Being empowered to discover and create benefits

After going through the simplified steps in the test the therapists felt motivated to explore more of the eHealth options. However, the fact remains that environmental constraints, like time and the children not having accounts for JO yet, keep the therapists from using the eHealth options with and for the children. Participating in the actual training instead of in the simulated and simplified training of the test is expected to reduce the time constraint because the preparing tasks of figuring out what eHealth options to use and what is needed to use them is already done during the training. All that is left to do during working hours is carry out the action points that are formulated during the training.

Positive experiences

Providing the opportunity to have positive experiences with JO was done letting the therapists explore the eHealth options on cards instead of with a computer, so that there is a clear overview of the options and the computer illiterates are not overwhelmed by the amount of options and the difficulties of navigating through JO.

9.2 Discussion

As was mentioned in the introduction of this report, the aim of this project was to give Karakter knowledge and tools to improve the experience of the therapists during the implementation of JO, so that the usage of JO can be increased. The research has offered a lot of insights in the way the therapists have experienced the implementation of JO so far and what elements of the implementation steps have caused these experiences. In fact, a lot more of the in theory identified influencing factors were of significant influence to the usage behaviour of the therapists than expected. The theories that were selected to interpret the experience of the therapists during the implementation phase were found to be adequate, as they helped explaining the experience and gave insights in how the experience could be improved. The tools that were created to improve the experience of the therapists and increase the usage of JO were not able to address all of the factors that the theory discussed, but focused on improving some of these factors, or elements of certain factors. To conclude, this project has offered Karakter knowledge and tools to make a first step in improving the experience of the therapists during the implementation of JO and thus to increase the usage of JO.

9.2.1 Limitations of the approach

Focus of the study

The research has focused on a small group of therapists. Other teams and other locations of Karakter might show different influencing factors, because for example the steps in the implementation process could have been communicated differently at that location. So although the aim of giving Karakter knowledge and tools to improve the experience of the therapists during the implementation of JO was met for the team IBC Kind Nijmegen, further research at other locations would be needed to see whether the same tools would work for those locations.

Planning and communication

When this project was started the intention was to apply methods like co-creation and iterative cycles in order to create a design that was optimized as far as possible. However, the practical organisation

for these kind of activities were found difficult. For example, at the introductory presentation of the project there was no opportunity to plan interviews with the therapists right away. Because of this and the limited time that the therapists had the interviews took place over a longer period of time than planned. I did not anticipate on such problems before I started the project. I also had difficulty with communicating what was needed to fulfill this project in the best way. I was not used to the size of the organisation and making connections with relevant stakeholders was difficult to do from a distance. The project could have had more value if I would have been more integrated in the organisation.

Shift in goal

The project has shifted a lot from its original form. Initially my idea was to test the usability of JO with the therapists and create a proposal for an improved digital environment. After conversations with Karakter this goal was changed to focus more on the therapists perception of eHealth and the barriers that they experience to start using eHealth tools. For me this was a territory that I am less familiar with since it includes things like analysing communication between different parties within an organisation. This was a tough task since the organisation involves a lot of people.

9.3 Recommendations

9.3.1 Recommendations for the training

As a result from the evaluation a few steps of the training are adjusted. To show this new scenario cards are created for the different training steps. This is shown in Figure 59.

Changes

- step 2: The personal values are changed to values important to the child, so that there is a direct connection with the child. According to the therapists, this will still reflect their own personal values.
- Step 4: The usage of a computer to look at the workplan of the mentorchild is removed from this step. This is done because it is not necessary and it is expected to disturb the flow of the training, because the therapists would have to shift from paper materials to computer use twice.
- Step 5: In this step selecting eHealth options that could be useful for the child is added.
- Step 6: The selected eHealth options of step 5 and step 6 are further explored by looking for more information.

Focus on improving JO

Making sure that the therapists receive the training is not going to do the trick on its own. To make sure that JO will be used continuously it is important that JO becomes a tool that fits the need of the therapist and patient. For example, during the test of the training one participant mentioned that she did not like that she could not easily see how a digital tool from the toolbox would actually work. In order to do that she would first have to add it to the dashboard of the patient and then open it by going to the dashboard of the patient. These kind of things make the program less user friendly and cumbersome to use. This does certainly not result in more efficiency and it is therefore likely that old methods are kept being used over the digital tool, simply because it requires less actions and is faster. It is therefore important to focus on finding or developing methods for the therapists to find and communicate improvements for JO, so that the program can be improved in cooperation with *Jouw Omgeving*.

Improving the training itself

As was already mentioned in the Chapter 8.5 the training itself should be evaluated so that it can be improved further. After giving the training to the entire team, the team can be asked for feedback about the steps of the training. This feedback should cover topics like flow, possibility to ask questions, usefulness of the training and the materials and points of improvement.

Introduction of the training and a clear vision

In the first step of the training the vision and goals of *Karakter on eHealth* is explained. I recommend that a clear overview for example in the form of a small poster is created that shows this vision and goals. Bremmer (2014) also mentions the importance of goals for eHealth that are connected to the goals of the organisation in the document: 'Handreiking voor eHealth in de praktijk'. The document is initiated by GGZ Nederland. From the interviews it became clear that the therapists have a need for a clear view on the vision and goals, so that it is clear what they should be working towards when using eHealth and why the implementation of eHealth is important in the first place.

9.3.2 Recommendations for further research

Evaluating effectiveness of JO

Effectiveness of tools within JO and building habits

In general in order to evaluate something it is important to first state what the desired effect is and then determine whether this effect actually occurred. The training itself did not focus on this evaluation, but does provide a base to which evaluation could be added. See Figure 58. By using the eHealth options that they have selected, the therapists will discover whether this option helps reaching their goal and what are limiting factors. With this information they can adjust their plan or subgoal. A topic that could be researched is how this evaluation can be best fitted in their work routines in a way that a habit is built. For this kind of research the work of Charles Duhigg (2013) on building habits could be useful theory.

Overall effectiveness of JO

Knowing if working with JO has the desired effect of giving more control for the patient, efficient interaction and transparency is only possible when JO is evaluated on this effectiveness. It is therefore very important that JO is not just used, but that the effect of the use is measured in some way.

An example of this kind of evaluation done at IBC Kind 'Het Roer' of Karakter Zwolle is the research that was done by two students pedagogy from the CHE (Christelijke Hogeschool Ede). Their research (2018) was focused on the effects of transparant documentation. It is recommended that for IBC Kind Nijmegen evaluation tools are created.

Several researchers have published studies that stress the importance of evaluation of eHealth. An example of this is the study of van Gemert-Pijnen et al. (2011) about increasing the usage and effect of eHealth. In this study a model was created (Appendix H6) that shows a roadmap for eHealth implementation. The last step of the model is evaluation, but formative evaluation is also a part of every step in the model.

9.3.3 Remaning recommendations

Dedicated time for eHealth

Applying of eHealth

The training makes sure that the therapists have three hours to make a start in exploring eHealth and creating a plan to use it. However, after the training the normal work starts again and eHealth is not the top priority of the therapists. Some therapists mentioned that they checked the eHealth options during a night shift. This could be a possibility to provide the therapists with time to dedicate to eHealth.

Discussion about eHealth

Finally, it is important that eHealth becomes a topic that is discussed more often in order for the behaviour to use eHealth more salient. Therefore, it is recommended that eHealth is discussed more often during the meetings with the entire team. In other words, eHealth needs to be on everyone's agenda.

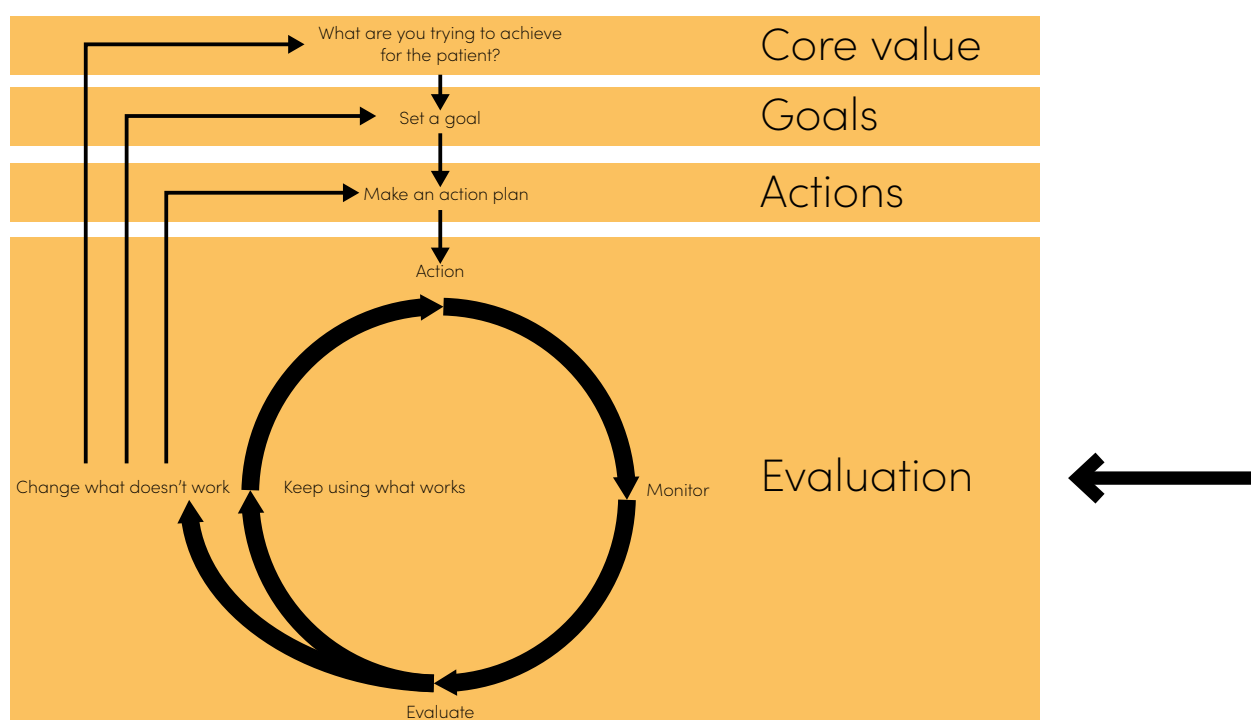
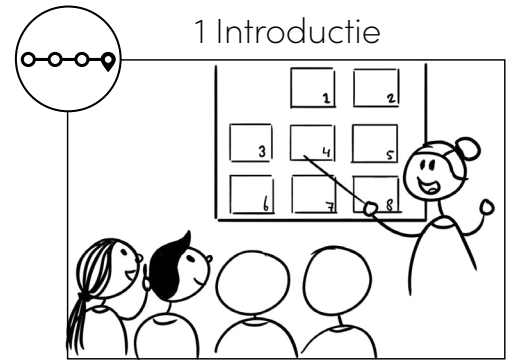


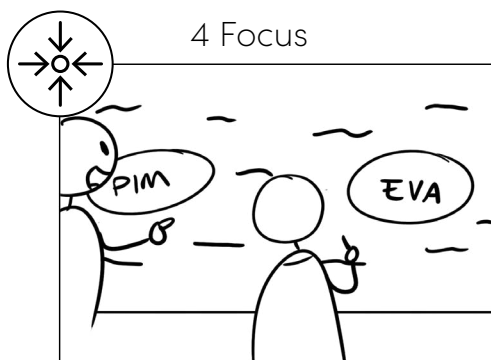
Figure 58 - Combined model for defining, applying and evaluating an action plan based on Grant(2012)

Jouw plek in Jouw Omgeving



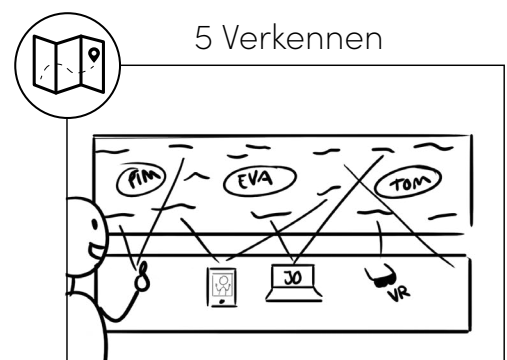
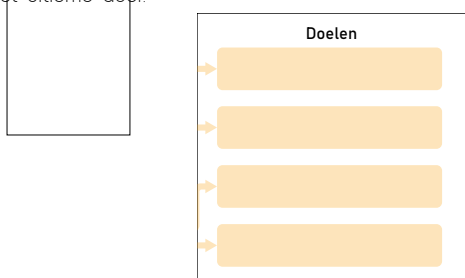
- Uitleg eHealth als concept
- Introduceren van de visie van Karakter
- Uitleg van de stappen van de training
- Uitleg achterliggende theorie

Doel: het geven van een duidelijke context en doelen zodat de therapeuten weten waar ze naartoe werken tijdens de cursus.



- Brainstorm over wat het mentorkind interessant vindt en welke interacties goed met hem/haar werken.
- Formuleren van doelen die passen bij de interesses van het mentorkind en het ultieme doel.

Doel: Het formuleren van doelen die passen bij het ultieme doel.



- Introduceren van de eHealth opties.
- Verkennen van de eHealth opties.
- Bepalen welke interessant zijn en welke niet.
- Bespreken waarom in de groep.
- Selecteren van eHealth opties die passen bij de geformuleerde doelen in Stap 4.

Doel: Bekend raken met de beschikbare eHealth opties zonder het gebruik van een computer.

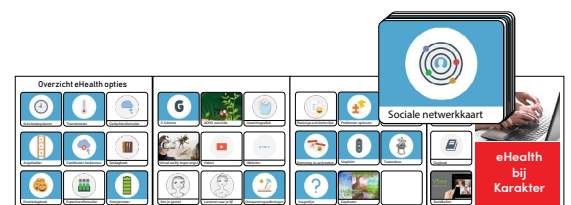
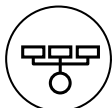
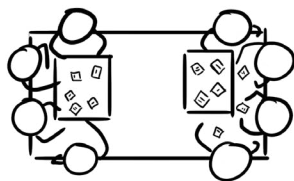


Figure 59 - Renewed scenario of the training called 'Jouw plek in Jouw Omgeving' after evaluation

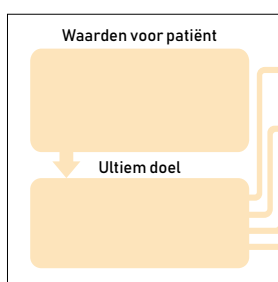


2 Analyseren

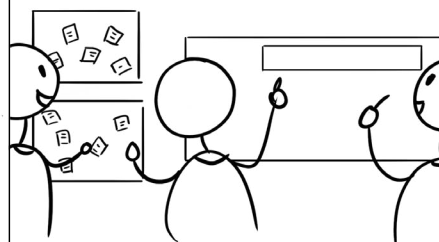


- Brainstormen over wat belangrijke persoonlijke waarden zijn op het werk.
- Brainstormen over wat belangrijk is voor de kinderen op de kliniek.
- Discussie over soort activiteiten op de kliniek en waarom deze activiteiten belangrijk zijn.

Doel: Vastleggen van waarden voor de patiënt

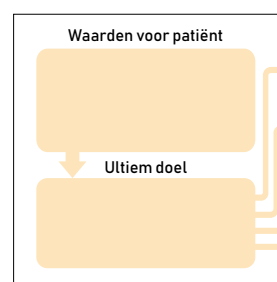


3 Formuleren

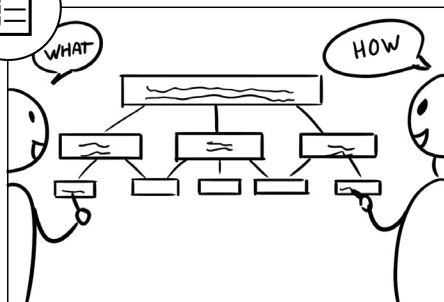


- Bepalen welke waarden het belangrijkste zijn.
- Formuleren van een ultiem doel voor het kind gebaseerd op de waarden.
- Evalueren of de huidige activiteiten passen bij dat doel.

Doel: Formuleren van een ultiem doel voor het kind.

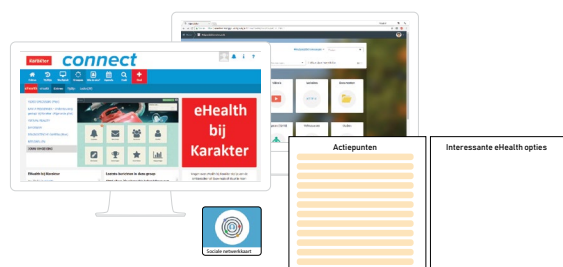


6 Concretiseren

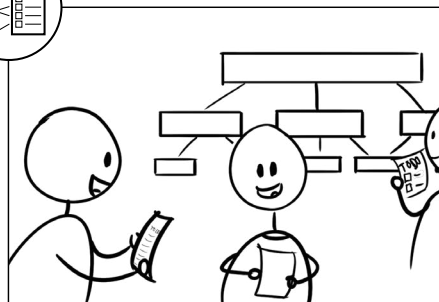


- De huidige actiepunten van het mentorkind bekijken en bepalen of er actiepunten zijn die met eHealth gedaan kunnen worden.
- Het zoeken van informatie van de eHealth opties geselecteerd in deze en de vorige stap.
- Formuleren van de actiepunten.

Doel: Actiepunten formuleren die passen bij de doelen.

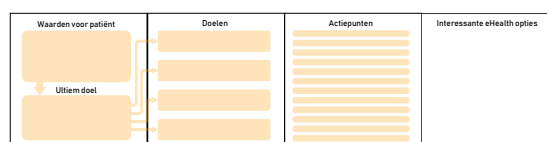


7 Meenemen



- Bepalen welk actiepunt als eerste wordt uitgevoerd.
- Plannen delen met teamgenoten.
- Afsluiten van de cursus.

Doel: De cursus verlaten met een geactiveerde houding motivatie en tools/skills om de gekozen eHealth opties toe te passen.



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