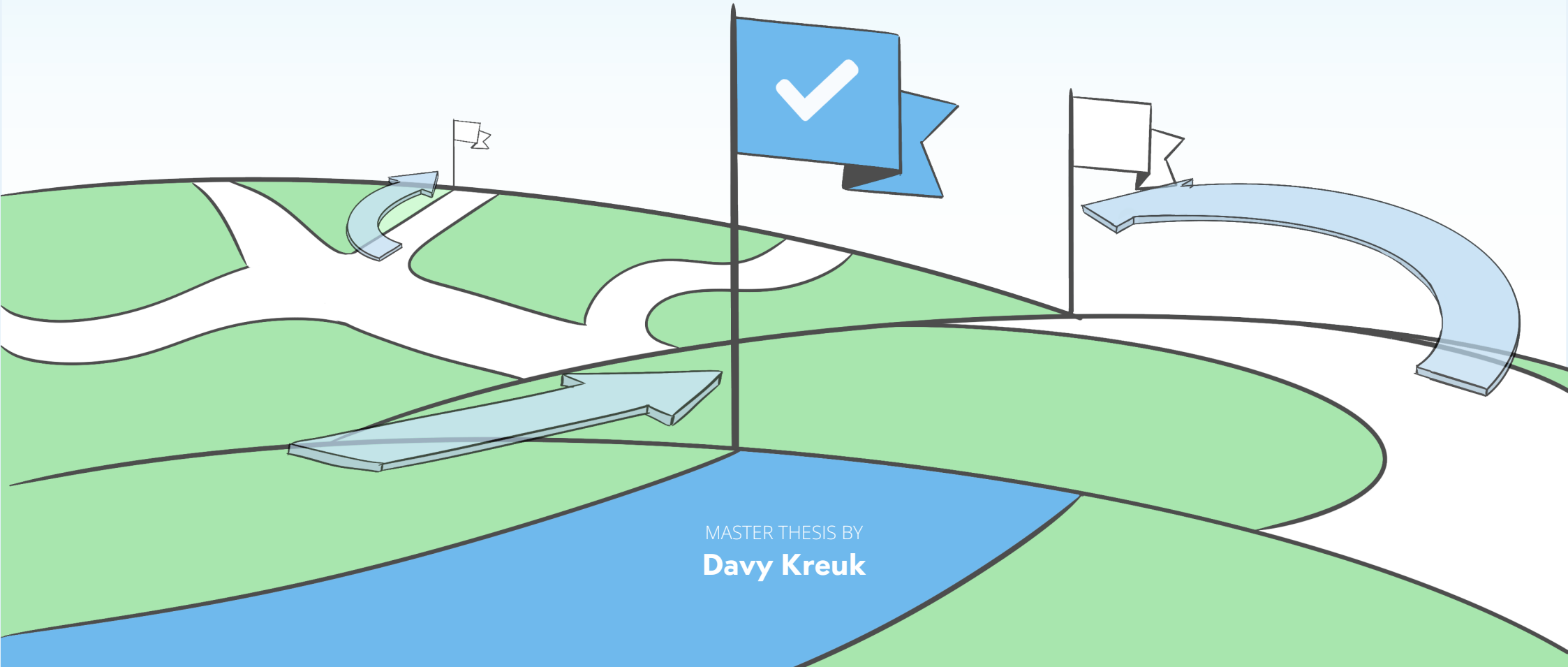
‘Mijn Hulplijn’

An intervention to empower youngsters in decision making during (j-)GGZ therapy



MASTER THESIS BY
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“Mijn Hulplijn”

An intervention to empower youngsters in decision making during (j-)GGZ therapy

Graduation project

Msc. Design For Interaction
Delft University of Technology
Faculty of Design Engineering

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Abbreviations

	Dutch	English
(basic) GGZ	(basis volwassen) Geestelijke Gezondheidszorg	(basic adult) Mental Healthcare
sGGZ	(volwassen) Specialistische Geestelijke Gezondheidszorg	(adult) Specialized Mental Healthcare
(basic) jGGZ	(basis) jeugd- Geestelijke Gezondheidszorg	(basic) youth- Mental Healthcare
j-sGGZ	jeugd- Specialistische Geestelijke Gezondheidszorg	youth- Specialized Mental Healthcare
GP	Huisarts	General Practitioner
POH	Praktijk Ondersteuner Huisarts	Practice Assistant General Practitioner
VNG	Vereniging van Nederlandse Gemeenten	Association of Dutch Municipalities
Ministry of VWS	Ministerie van Volksgezondheid, Welzijn en Sport.	Ministery of Public Health, Welfare and Sport
Ministry of SZW	Ministerie van Sociale Zaken en Werkgelegenheid	Ministry of Social Affairs and Employment
FOWP	Fit Op Weg Poli	Fit On The Road Outpatient Clinic
MVP	Minimum Viable product	Minimum Viable product

Executive Summary

Extensive waiting times for youth Mental Healthcare have a significantly negative effect on youngsters well-being. The Ministry of Public Health, Welfare and Sport (Ministry of VWS) therefore commissioned Shoshin to research the cause of waiting times in order to address them. Shoshin is a social design agency that believes waiting times are not only the result of a shortage of staff, but also of inefficiencies and ineffective elements in the youth care system. They aim to make strategic interventions to create true system change (Haarlemmer et al.).

This thesis aims to support Shoshin in their mission to reduce waiting times for youngsters. Youngsters are defined as 16 till 23 year people in this report.

Specifically, the aim of this graduation project is to come up with a design that helps youngsters get more appropriate care. According to Van der Bijl-Brouwer (2021) systemic problems (such as problems in the mental youth care sytem) are interrelated and can therefore not be solved independently. Therefore reseach was conducted in various contexts regarding the youth Mental Healthcare system:

1) The organisation involved with decisions regarding the youth care system. (Macro context)

2) The process of getting into care. (Meso context)

3) The interaction between youngsters and their therapists. (Micro context)

These analyses showed that youngsters often feel unheard and are not included in decision making. Therapists rely too much on their own vision and focus too little on background/individual factors of the youngsters. This leads to missing the core of the youngsters mental problems, which contributes greatly to ineffective and inefficient care. The analyses also showed that youth Mental Healthcare (j-GGZ) therapists are the most promising target audience to design for. In fact, other therapists - such as district members or therapists of the child and family centre (CJG) - often do not have the skills to find the core of the youngsters' mental problems as they are often not specialized enough.

Following these analyses, the design goal has been to empower youngsters in decision making during GGZ therapy. A "Mijn Hulplijn" app was developed that helps youngsters to actually give feedback and incorporate it into therapy. The app allows youngsters to think of their own needs and wants in therapy, and helps to actually incorporate this as well. Moreover, it provides background information that is relevant for the therapist in question. Furthermore, the app offers suggestions for alternative therapies and gives an overview of the youngsters' healthcare history. This way, the app can improve the success of the therapy and the youngster-therapist interaction. To actually make and measure this impact, this study also provided a plan for implementation of the app.

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Chapter 1

Introduction

This chapter introduces the problem with waiting times in youth care.

The social design agency Shoshin and other important stakeholders are presented. Furthermore, the project challenge is explained with the initial problem statement and research questions. Lastly, the project's scope and approach is mentioned.

1.1 The problem of waiting times in youth care

Problem Introduction and target audience

Fleur got a trauma when she was just 10 years old. Therefore, she got a need for Mental Healthcare. Due to extensive waiting times, her problems increased so much that her parents couldn't deal with her anymore. For a large part of her childhood, she had to stay at a juvenile institution. Here, she was further raised and finally being treated for her trauma. (Libelle, 2022).

Fleur is one of the 200.000 youngsters annually for whom waiting times in youth Mental Healthcare have a negative impact on mental health problems and quality of life. This is the result of an average waiting time of more than 10 months in youth Mental Healthcare (Jager et al., 2021). Unfortunately, this number will most likely only grow. The use of youth Mental Healthcare has been more than tripled in the last twenty years (Haarlemmer et al, 2022).

Research by Ballesio (2018) shows just how detrimental the effects of waiting times are for individuals. Waiting for treatment for depressive symptoms has a negative effect on the symptoms that is equally large as the positive effect that cognitive behaviour therapy (CGT) has on the symptoms. CGT is a widely used and evidence-based therapeutic approach that aims to change distorted thinking patterns as well as behaviour that's creating mental problems. (What Is Cognitive Behavioural Therapy?, n.d.)

In short, waiting times for youth Mental Healthcare have a significant negative impact on society and individuals, which will most likely only increase. Thus, the graduation project aims to improve the current situation regarding waiting times in youth care.

Youngsters

Youngsters that have a need for youth Mental Healthcare are the target audience of this graduation report. Youngsters in this graduation report have been described as 16 until 23 year old people. 16 is set as a minimum, because youngsters are then able to make care decisions themselves. There is no need anymore for permission of parents. 23 is set as an upper-limit, because that is the oldest age at which a youngster is able to make use of youth Mental Healthcare. When they are older they will be referred to regular Mental Healthcare. (Evaluatie Jeugdwet, 2016)

1.2 Shoshin

Project commissioner

Figure 1: The company Shoshin

The Ministry of VWS has assigned a team to specifically tackle waiting times. This team (Care for Youth Support Team) is called the 'Ondersteuningsteam Zorg voor de Jeugd' (OZJ). They help with building up a learning youth Mental Healthcare system that helps children and youth in the Netherlands to grow up happy and safe. (Ministerie van Volksgezondheid, Welzijn en Sport, 2023)

Shoshin

Shoshin is a social design agency that has been part of the OZJ since 2020. They are the commissioner of this project and have a unique approach in tackling waiting times (see figure 1 & 2).

They believe that waiting times are not only the result of a shortage of staff, but also of inefficiencies and ineffective elements in the youth care system. They also state that problems in the youth care system cannot be seen directly and are interconnected. Looking for solutions in isolation is therefore of limited effectiveness. After all, organizations, policy, implementation and the social context are dependent on each other. (Shoshin, n.d)

Therefore they use co-design together with relevant parties to create solutions and interventions in youth Mental Healthcare, education, and the social domain that contribute to lasting system transformation. (Shoshin, n.d)

Figure 2: Shoshin's office

These parties range from various care providers to municipalities and the Ministry of Health, Welfare and Sport among others.

To gain a proper understanding of each unique situation, Shoshin incorporated their unique vision: The Zen's concept of 'Shoshin' means 'the beginners mindset'. With an open mind and a lot of curiosity, they embrace different perspectives in order to achieve true innovation. (Shoshin, n.d)

Shoshin has nine employees from a wide range of disciplines. Varying from (social) design, change management, and business administration. Their office is located in Rotterdam. They make use of co-creation, organisational transformation and system transformation. (Shoshin, n.d)

One of the solutions has been the 'Fit op weg Poli' (FOWP) in GGZ Delfland (Mental Healthcare location in Delft). It offers direct support for youngsters with mental problems with a multidisciplinary approach. As a result, the offered care is way more effective and waiting times in the GGZ Delfland are nearly gone. (Shoshin, n.d)

The FOWP project has been the official launch of Shoshin in 2019. The project has been established by an encounter between two employees from the GGZ Delfland and the two founders of Shoshin at a TU Delft design day. A timeline of Shoshin can be found in figure 3.

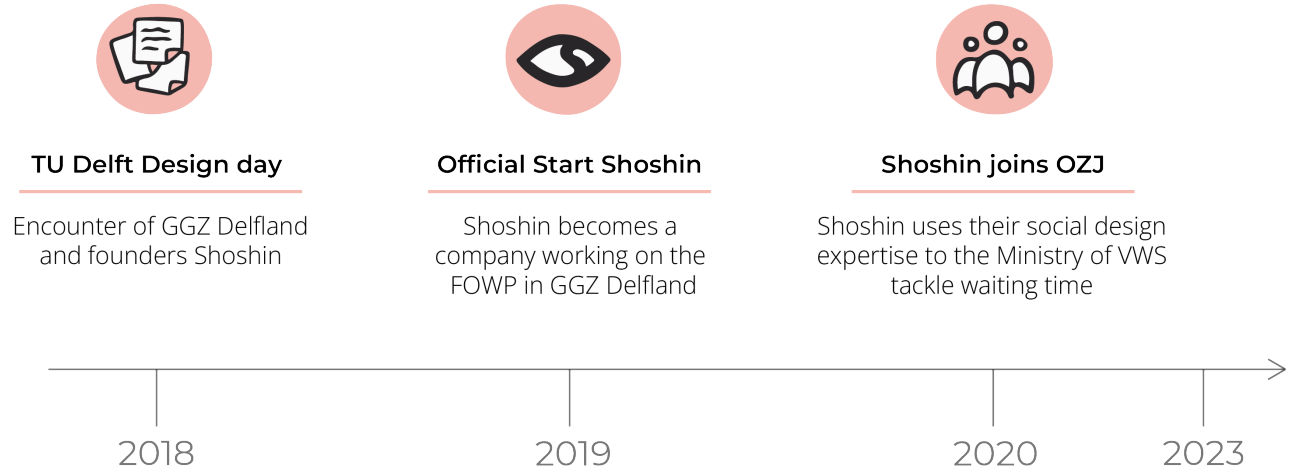


Figure 3: Emergence of Shoshin

1.3 The Dutch youth Mental Healthcare landscape

Layout of care and applying for care.

Youth Law
In 2015, the Ministry of VWS introduced the Youth law. Since then, The municipality has been responsible for the financial part as well as for the content of the youth Mental Healthcare system.
The Youth law served as an incentive for the municipality (by making them financially responsible) to reach the health-care transformation goals, which are among others: Contribute to prevention of mental problems by making more use of the youngster's and their parents' own capacity using their social network. Provide the right tailored help earlier to reduce the need for expensive specialistic care.
Before the Youth law, the municipalities hardly noticed that the use of specialized care (and thus costs) increased. (Friele et al., 2017)

This transition means that it is up to the municipality how its citizens apply for care and what kind of care is available per municipality. The Youth law includes help with mental health, intellectual disability and/or parenting problems and covers youngsters till the age of 23. (Nederlands Jeugdinstituut, n.d)

Each municipality has its own youth Mental Healthcare system. This system does always include a referring party and a treating party. They are called 'primary care' and 'secondary care' respectively. Figure 4 shows the two types of care and the other forms of care.

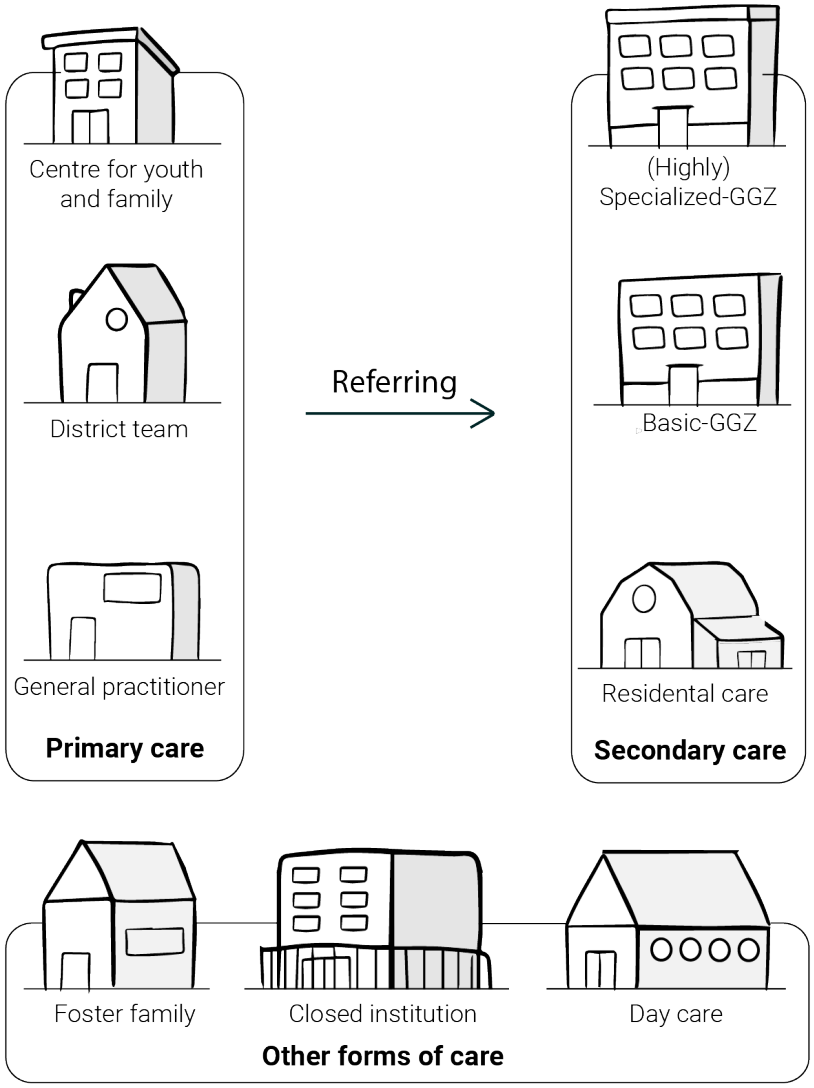


Figure 4: Parties in the Dutch youth Mental Healthcare landscape

Primary care
Authorized parties to refer youngsters to secondary care are the general practitioner (GP), the Centre for youth and family (CJG in Dutch) and district teams. In general, district teams and the CJG deal with social problems for youngsters as well as for adults. This ranges from growing-up and parenting problems to financial problems. The general practitioners mostly deal with psychological problems and they do the most frequent referrals to jGGZ (youth- Mental Healthcare) (Benda et al, 2020).

As stated before, parties in the primary care are most of the time also able to offer some treatment themselves. This does depend on the municipality involved however. According to 'Centraal Plan Bureau' around 64% of the municipalities have district teams that also treat youth and around 54% of the municipalities finance a Practice Assistant General Practitioner (POH) who is available at the general practice. The function of the POH is to offer light treatment as well as making referral decisions as they are experienced with the parties in the secondary care. Otherwise, no treatment could be given as the GP is only able to refer (Benda et al, 2020).

Secondary care
The most important parties in secondary care are the (basic) jGGZ, j-sGGZ (specialized youth-Mental Healthcare) and residential care.
The basic (j)-GGZ deals with relatively mild or single psychological problems while j-sGGZ helps children, adolescents and families with multiple and/or more complex mental health problems. (GGZ Momentum, 2022)

All these parties are part of the GGZ domain ("Geestelijke Gezondheidszorg"). According to the Dutch Ministry of Public Health (2023), the GGZ is divided in two groups: basic GGZ and specialized GGZ.

Specialized care can be further separated into extramural and intramural/residential care.

a) Extramural care is care where youngsters receive treatment at an external location but still stay at home throughout their trajectory.

b) Intramural/residential care is care where youngsters live in a community without their family. The youngsters are guided by therapists throughout the day. Here they are often treated for crisis situations or for other more serious (mental) problems (Nederlands Jeugdinstituut, n.d.) This is called 'intramural' care or residential care.

Because the focus is laid on the youth care system, jGGZ and j-sGGZ are mentioned mostly. Alternatively, GGZ and sGGZ is for adults only.

Other forms of care
Other forms of care that also fall into 'Youth care' (and require a referral) are: a (temporary) foster family, daycare or care at a closed institution (see figure 5). A foster family provides temporary care for young children or adolescents. This includes protecting the child and ensuring that he or she is supported physically, emotionally, psychologically and economically (Van Dijk, 2019). Daycare is lighter care that is offered for youngsters without completely removing them from their own environment. Whereas a closed institution is a place where youngsters are treated that have committed a crime. (Jeugdreclassering, 2022)

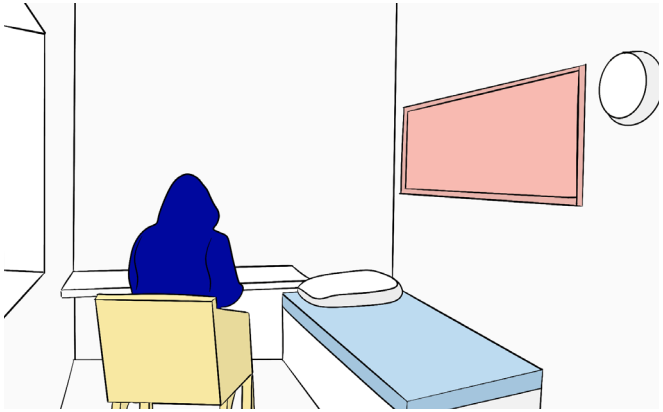


Figure 5: Youngster's stay in a closed institution.

1.4 Project challenge

Project brief

Waiting times are a symptom of a malfunctioning youth Mental Healthcare system

Despite the fact that Shoshin has been actively involved in tackling waiting times in youth care, there is still much room for improvement.

Thus, this project is about joining Shoshin in their mission to reduce inefficiencies and ineffective elements in the mental youth care system contribute to waiting times. They found that one of the causes of waiting times is the fact that youngsters are getting ineffective care.

The problem of ineffective care

Professionals often don't know what kind of care a youngster exactly needs. As a result, youngsters continue to go in and out of care. Often care is of medical nature, over-specialized and/or not effective at all, with alternatives being overlooked (Haarlemmer et al, 2022).

This is evident from the fact that 80% of all the care provided in the Netherlands appears to not contribute to solving youngsters' problems. On top of that, diagnoses are rather subjective as 80% of all diagnoses are viewed differently by different professionals. (Haarlemmer et al, 2022).

Project aim

The final goal of this graduation is to:

"Come up with a design that helps youngsters get more appropriate care."

Research questions

The following research questions need to be answered to address the goal.

Main: What are the biggest contributors to therapist giving ineffective care and why?

1) What aspects in the youngster-and-therapist interactions lead to ineffective care?

- What characteristics of therapist and youngsters alike contribute to this interaction?

2) How does the organization of the healthcare system contribute to ineffective care?

- How is the youth care system currently laid out?
- In what ways does the management of the youth Mental Healthcare system contribute to ineffective care?

Desired impact

Measuring impact is crucial to determine the actual success of the design. Money is not a performance indicator of success, unlike regular designs.

Impact Centre Erasmus (2021) has established a guide to measure impact on behalf of The Ministry of Social Affairs and Employment (see figure 6) . They state that measuring impact can be done at 5 levels:

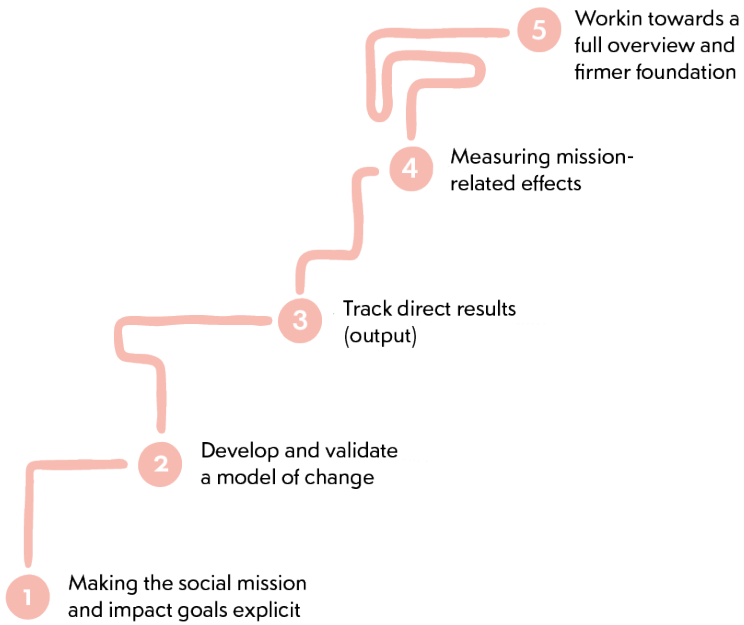


Figure 6: The impact path

1) Making the social mission and impact goals explicit

This contains an analysis of the societal problem and a precise impact goal. As stated before, the societal problem is ineffective care that creates extensive waiting times. The impact goal is to help Dutch youngsters get more appropriate care.

2) Develop and validate a model of change

At this level, a plan is made that describes activities with the most important stakeholders to find out which changes they find most valuable. The activities that have been performed and their corresponding insights about stakeholder's wants and needs can be found in chapter 2: Discover.

3) Track direct results (output)

When the design is implemented, the direct outputs are measured. The specific measurements of the impact over time can be found in the 'measurement' section in the implementation plan that can be found in chapter 5.3.

4) Measuring mission-related effects

A plan is made that describes how the most important effects can be measured. The implementation plan describes the target segments and how the insights are used to learn and improve the design.

5) Working towards a full overview and a firmer foundation

By now, the first steps in the implementation plan have been performed. At this level, the impact measurements are made increasingly complete and thorough. This level is outside the scope of this graduation project. However, Shoshin is still able to perform this step after the graduation project has ended.

1.5 Project approach

Systemic design & the Double Diamond model.

Waiting times and ineffective care in the youth care system is a complex societal problem. Therefore the field of system/social design applies in line with figure 7. (Van der Bijl-Brouwer et al. 2020)

The following **systemic design principles** have been taken into account:

1) Opening up and acknowledging the interrelatedness of problems
A system perspective on the nature of the problem situation should be adopted. Problems are interrelated and therefore cannot be solved independently. Problem framing is the key for opening up the problem space. As an illustration, the problem space in this graduation project is opened up from "too little available therapists" towards "the way youth care is organized".

2) Developing empathy with the system
Systemic design moves the focus from the individual to consider human relations. Finding tension between different stakeholders and transforming them is a key for systemic change. The diversity of perspectives across stakeholders should be explored to gain empathy for the system as a whole. Focussing on end-users only prevents true system change.

3) Strengthening human relationships to enable creativity and learning
Focusing on human relationships leads to interventions that promote new behaviours, experiences and learning. Ultimately, this leads towards system change. After all, a one-size fits all solution most likely won't exist.

4) Influencing mental models to enable change
Mental models (people's belief) can promote or inhibit change by determining the way people see the world. They are the strongest leverage point for change, because they form the deepest level of a system. Because mental models are learned, they can also be unlearned.
Making mental models explicit can facilitate discussion and change. This is hard, as they generally exist beyond our conscious awareness.

5) Adopting an evolutionary design approach to desired systemic change
This is important in order to continuously design interventions and safe-to-fail experiments in complex contexts to enable co-evolution of interventions and context.(Bijl-brouwer et al., 2020)

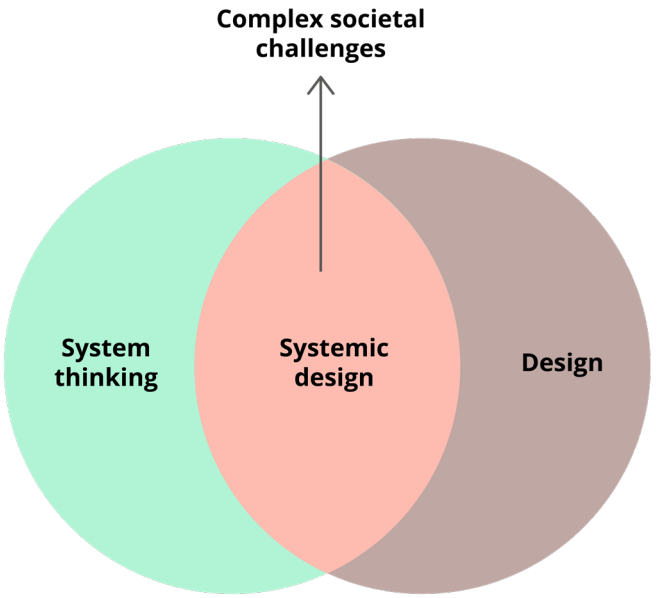


Figure 7: Systemic design framework

The design methods and other design and research activities have been executed in line with the revised double diamond model as can be seen in figure 8 (Design Council, n.d). The report and design project have both been structured according to the double diamond model.

In short, the first diamond deals with requirements, whereas the second diamond deals with the solution.

The blue arrows in the double diamond model indicate the possible need to iterate on the proposed requirements and solutions in previous phases.

More specifically the four stages are:

Discover
Start from the initial project brief and seek to understand various possible causes for waiting times and ineffective care through divergent research.

Define
Through analysis, clearly define the problem(s), design goal, and requirements.

Develop
Use methods and ideation activities to create a design that meets the identified design goal and requirements.

Delivery.
Finalize the design to improve its implementation in the real world. Quantify how the design's possible impact can be measured.

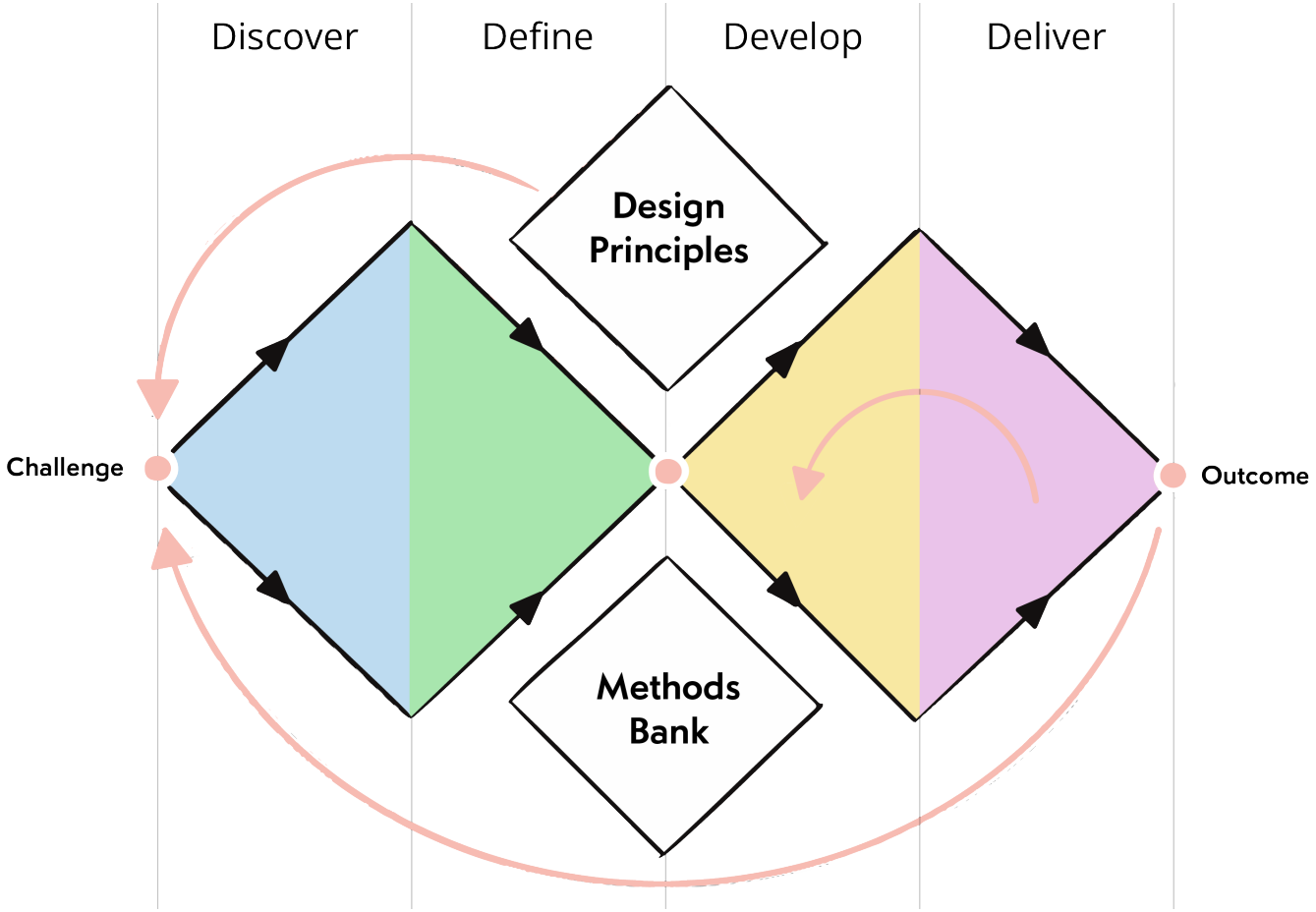


Figure 8: Design council's revised Double Diamond model

1.5.1 Research & design activities

An complete overview of all activities per phase

Figures 9 and 10 show all research- and design activities per design phase. A list of all participants can be found in Appendix A1

Research activities

Literature research
To find out more about youngsters characteristics, wants and needs.

Literature research
To find out more about the management of the youth mental heatlh care system

Semi-structured interviews
With a j-sGGZ therapist and Shoshin employees to learn more about the actual management of the youth mental health care system

Semi-structured interviews
With a GP, a district team member, three therapist and a Shoshin employee to learn more about the proces of getting in care.

Semi-structured interviews
With five youngsters, three parents and three therapists to learn more about the aspects in the youngster-and-therapist interaction that lead to ineffective care and current solutions for these problems.

Figure 9: Research activities in Discover and Define phase

Design activities

Brainstorming
Ideas were generated and clustered to come up with concept directions and refine the design goal.

Interaction Vision
To explore which design properties could help in reaching the design goal

Generative session
With four youngsters that have been in therapy and one j-sGGZ therapist to eleborate on the intital concept and user journey

Street interviews
Nine youngsters were approached on the street to find what medium for the designs resonates most with youngsters

Generative session
In a closed institution with four youngsters and three therapist to evaluate and eleborate on the iterated prototype

Semi-structured interviews
With two s-jGGZ therapists and one youngster to elebo-rate on the exact content of the concept (e.g the use of language, background factor, questions etc.)

Semi-structured interviews
With five youngsters and two therapists to find out which reflection method and questions are most suited.

Research activities

Literature research
To find out more about the design viability and feasability.

Desirability & usabilty evaluation
An evaluation of the requirements and wishes and of problems regarding task completion with six youngsters and two s-jGGZ therapists.

Figure 10: Design & Research activities in Develop and Deliver phase

Chapter 2

Discover

The project brief, scope, approach and the corresponding research question have been introduced.

This chapter dives into the relevant context. First, a clear picture of youngsters and their wants and needs is sketched. Then, the Dutch Mental Healthcare landscape and the way youngsters apply for care are explained.

Furthermore, insights about specific problems that contribute to ineffective care in the Mental Healthcare system are provided. This is done by an extensive analysis in the Macro, Meso, and Micro context. Lastly, the current solutions for some of these specific problems are explored.

RESEARCH PHASE

2.1 Youngsters

Target audience

An analysis of youngsters characteristics has been conducted to establish the desired design properties for a good fit with the target audience. According to Youngworks, (2020), they are characterized by:

- Digital nativeness, preference for digital media.
- High expectations: a need for comfort and instant gratification.
- High morality; a need for inclusivity, sustainability and transparency.
- Individualism: a need for self-development and self-expression.

Digital nativeness

Youngsters are also called 'digital natives', because the internet has been the norm ever since they were born. On average, they spend 5 hours on their phone every day (Van Benthem, n.d). Unlike popular belief, 90% of youngsters do not experience negative consequences due to social media use. (Beyens et al., 2020)
They live in a world that is both offline and online (see figure 11). However, the online world is most often an addition to the offline world and not the other way around. Research by Forrester (2017) showed that 84% of youngsters still prefer face to face contact over online contact. Simultaneously, 74% of meetups with new people that are solely online, don't end up in a friendship (Newcom, 2018).

Figure 11: Youngsters grow up with their phone

High expectations

Youngsters have high expectations of themselves and everything around them.
They expect instant gratification for all areas of their lives. They are used to instant access to knowledge, services and products. As an illustration, they have low tolerance for companies with outdated and/or slow-working websites or apps. Just as with their friendships, they expect 24/7 accessibility from companies. Because these high demands are not always met, they have a desire for improvement. This makes them innovative and critical.

High morality

Equal treatment for everyone is the principle of social and work environments for youngsters

International research shows that as much as 90% of Yougsters advocate for more female leaders (Bridgeworks, 2019). According to the Netherlands institute for social research (2018), only 4% of youngsters wouldn't accept a gay friend in their friend group.

Furthermore, Yougsters have a high need for sustainability (see figure 12). Due to more extreme weather and rising water levels, they experience at first hand that something needs to change . (Youngworks, 2020)

They also experienced the credit crisis and the failing banking system in 2018. It turned out that banks put most priority on their own capital, instead of moral standards. As a result, 94% of

Figure 12: Youngsters are coming together in large numbers to demonstrate for more sustainability

youngsters worldwide distrust big companies. (Hertz, 2016). To earn their trust, they expect openness and honesty from companies and institutions alike.

Individualism

Self-development is the most important learning goal for youngsters (Psychology magazine, 2018). They have been raised with the idea that anything is possible as long as they exert maximum effort. 88% of youngsters agree with the statement "Where there is a will, there is a way". In order to be successful, you have to prove yourself and make yourself heard and seen (see figure 13). The focus lies on performance from a young age, and failing is not an option.

Figure 13: Youngsters feel pressure to perform

Therefore youngsters feel that they are the only ones responsible for happiness and success. (Youngworks, 2020)

However, this mindset comes with its downsides. A study performed by Windesheim (2018) showed that 38,9% of their students indicated they dealt with light anxiety and depressive symptoms. 25% of their students dealt with burnout symptoms that express themselves in emotional exhaustion as a consequence.

Furthermore, self-expression is important among youngsters. This way, they form their self-image (Youngworks, 2020). Social media allows them to show who they are to the world. One out of five youngsters even struggle to escape this digital norm. While Dutch data is lacking, a survey by Morning consult (2019) showed that as much as 86% of American youngsters are willing to become an influencer.

Conclusion

Youngsters in this graduation report are considered to be between the age of 16 and 23. They fall into generation Z.

This means they usally prefer digital solutions, have a need for instant gratificiation, sustainability and morality. Their focus on self-development, combined with comparison on social media makes them prone to mental problems.

Research activity

2.2 Society analysis - Macro context

The effect of political, social and economic factors on waiting times

Goal

To answer the research question:

- In what ways does the management of the youth Mental Healthcare system contribute to ineffective care?

Specifically, to understand how the political -, social - Wand economic factors contribute to youngsters not receiving effective care.

Method

A semi-structured interview was conducted with a j-sGGZ (youth-specialized mental healthcare) therapist and a Shosin employee. Desk research has been used to validate the insight's prevalence. The interview scripts can be found in Appendix A2.

The Macro context describes the influence of the Ministry of VWS, the municipality and large care providers on the youth Mental Healthcare system.

Specifically, the Macro context analysis explains how decisions by these parties contribute to ineffective care in the Micro context (see figure 14).

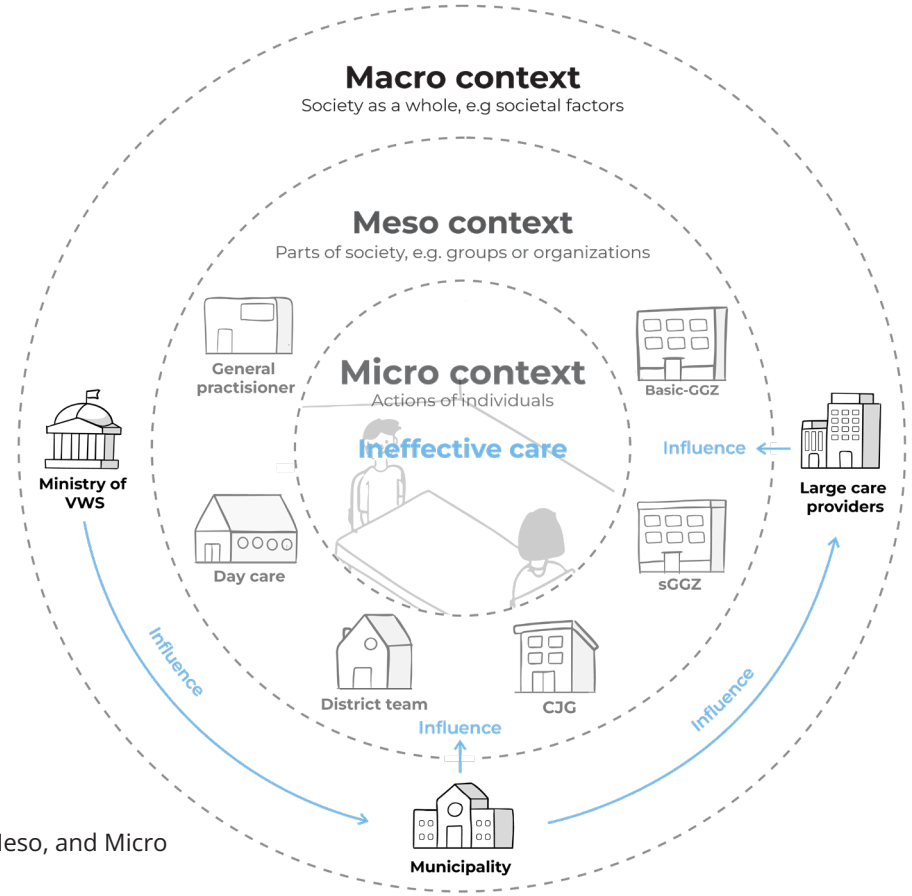


Figure 14: Macro, Meso, and Micro context map

The following problems exist in the Macro context, due to the municipality's influence.

1. Municipalities financial interest and lack of knowledge leads to a mismatch of care demand and supply
Care that is reimbursed by the municipality is not care with the highest demand, but rather based on more arbitrary requirements. This is most due to a lack of knowledge and time.

Because municipalities get a limited care budget by the Ministry of VWS, they have to closely watch their expenses. They do this by giving out annual contracts to care providers that state the kind of care and the amount of hours that are reimbursed by the municipality.

Municipalities prefer to have contracts with larger care providers instead of smaller ones. This way, they have to prepare less time consuming- and expensive contracts (see figure 15). According to Stoevelaar and Pries (2023), an average of ten hours is devoted to each care contract.

Because municipalities still have to go through a large number of possible contracts, they don't alway have the time to check the quality of the care providers. Instead, they check for more specific factors.

> "The choice is based on very general factors. They check things as whether you have an accountant and if you treat your stff well. They don't even check whether you are qualified to offer the help you claim to deliver. This makes it very easy to fraud in the j-sGGZ."
> *Trudy (62) - j-sGGZ practitioner with own practice in Ermelo*

Thus, we see that Utrecht for example only has two care providers that deal with all the j-sGGZ cases; "KOOS Utrecht" and "Spoor 30". (Gemeente Utrecht, n.d.)

This is problematic as smaller care providers are able to offer specific specialized care that larger care providers don't always have available.
To solve this, larger care providers like 'KOOS Utrecht" and 'Spoor 30' outsource part of their contract to smaller care providers. However, the smaller care providers then have to work according to the rules of these larger care providers.

> "Then you become a subcontractor of a big care provider, which means everything becomes commercial. They don't tell that to the client, which is confusing for them as well."
> *Trudy (62) - j-sGGZ practitioner with own practice in Ermelo."*

This disrupts their own way of work and is not beneficial for effectiveness.

As a results, research shows that the director youth care of FNV Care & Welfare states that municipalities simply don't always have the knowledge and expertise to buy the right expertise care (van Marrewijk, 2021)

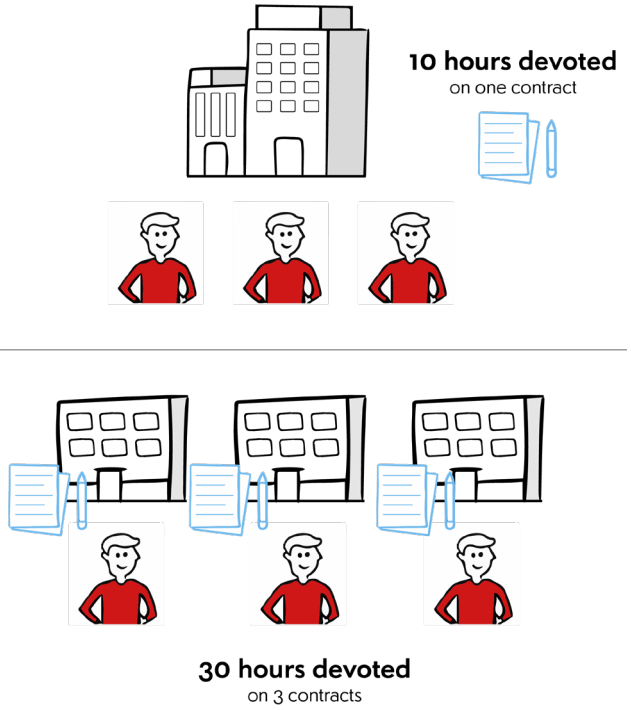


Figure 15: Smaller care providers require more contracting for the same amount of care as larger care providers.

2. Municipalities effort to control expenses leads to wrong diagnoses
Municipalities' effort to reduce expensive specialistic care can lead to ineffective care in the CJG and district teams as described in figure 16. This is due to the fact that:

1. These municipalities don't invest (enough) in sufficiently specialized therapists to do a proper assessment of more complex mental problems.
2. Both parties are instructed by the municipality to treat internally as much as possible to reduce the use of expensive specialized care.

> The municipality owns the CJG and wants to be in control. They instruct to treat as briefly as possible and watch out for too many referrals to the j-sGGZ"
> *Trudy (62) - j-sGGZ practitioner with own practice in Ermelo*

Furthermore, municipalities try to exert more control by minimizing the referrals of the GP. This means a bigger percentage of referrals and treatments are done by the CJG and district teams. As a reminder, these actions are taken because of the fact that municipalities have no say in the referrals from the GP.

The Association of Dutch Municipalities (VNG) allows municipalities to force GP's to refer only to parties that have a contract with municipalities. However, this is in violation of the Youth law.

As an illustration, even the commission of the Association of Dutch Municipalities (VNG) recommends reducing the number of referrals by GP's. (De koster, 2021)
On top of that, they allowed municipalities to force GP's to refer only to parties that have a contract with municipalities in order to gain more control about referrals, even though this is in violation of the Youth law.

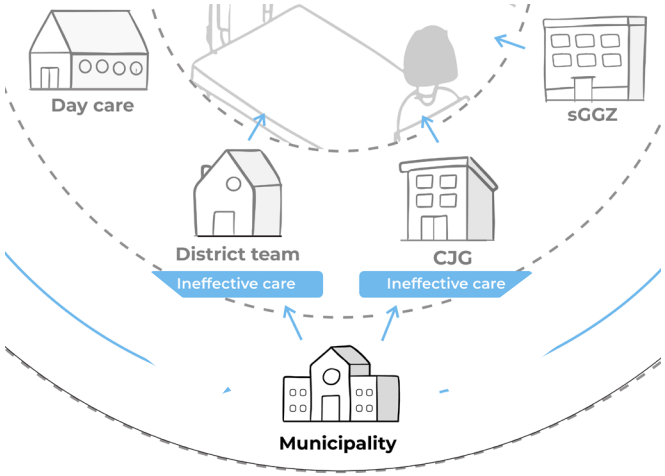


Figure 16: Decisions of the municipality lead to ineffective care at district teams and the CJG.

3. Insights among municipalities are not shared, which hinders improvements
Insights about the effect on the quality of the health-care system of different choices (choosing specialization versus variety, the model of steering and working together with external parties) are not shared among municipalities. This could help a lot in avoiding common mistakes in the structure of getting care. The arbitration board of the Ministry therefore recommends to better utilize the potential to learn from other municipalities. This could be as simple as translating best practices to do's and don't (Rijksoverheid, 2021).

A case study of 5 municipalities (Capelle aan den IJssel, Huizen, Steenwijkerland, Tilburg en Utrecht) shows that they all have different structures for getting care. We see that either municipalities focus on specializing parties or just focus on a wide variety of parties to cover aspects of youth care. Some municipalities even work together with external parties while others manage the system of getting care themselves. This led them to suggest that the actual differences in all the different municipalities in the Netherland will be even bigger (Friele et al.,2019)

According to the same research, two models of steering can be distinguished: one more focused on content (Capelle aan den IJssel and Utrecht) and one more focused on the organization of

access and referral (Steenwijkerland, Huizen and partly also Tilburg). It is argued that the focus on organization of access and referral while also focussing on budget control leads to more ineffective care as municipalities sometimes lack knowledge to buy the right type of care (van Marrewijk, 2021)

> **"The municipalities Barneveld and Nijkerk are very concerned with the content of care and listen to professionals. The focus on cost-saving is a problem in our municipality. They're not at all concerned with the content."**
> Trudy (62) - j-sGGZ practitioner with own practice in Ermelo

However, these differences wouldn't have to exist if more insights would have been shared.

Conclusion

Municipalities often lack resources and competence, to provide effective care that meets the demands in that particular municipality.

Their conflicting role as treasurer- and content manager plays a role as well.

Research activity

2.3 Organisation analysis - Meso context

The effect of the structure of getting care on waiting times

Goal

To answer the research question:

- In what ways does the management of the youth Mental Healthcare system contribute to ineffective care?

Specifically, to understand how the process of getting in care contributes to youngsters receiving ineffective care.

Method

Semi-structured interviews have been conducted with a GP, a district team member, three therapists and a Shoshin employee about their experiences with referring, treating and/or waiting times. These interviews took either place in the actual context or via phone and lasted half an hour at most, as time from professionals in the health-care system has been very limited. The interview scripts can be found in Appendix A3.

The Meso context describes the process of getting in care and the parties involved. The analysis explains how referring decisions by the parties in the Meso context lead to ineffective care in the Micro context (see figure 17).

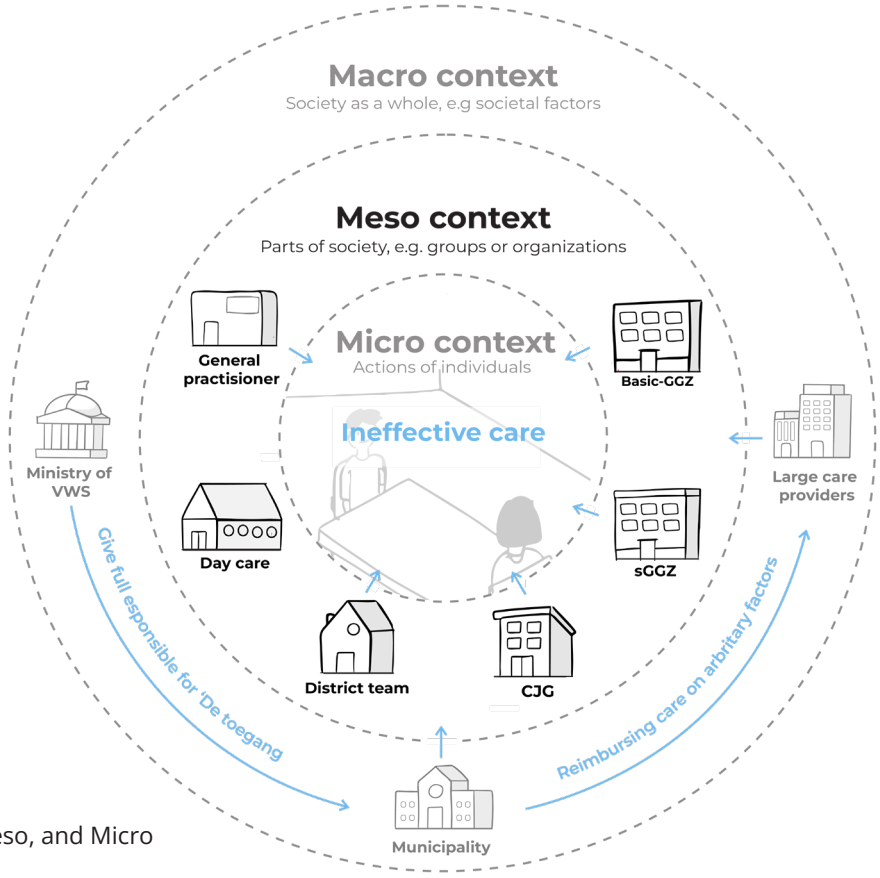


Figure 17: Macro, Meso, and Micro context map

2.3.1 Under-specialization

Problems in the structure of getting care

Under-specialization is a problem in the Meso context that contributes to ineffective care. It manifests itself in the following ways:

1. CJG and district teams don't have enough expertise to make a proper diagnosis of mental problem

A contributor to the wrong diagnoses in the Micro context is the fact that the CJG and district team often don't correctly asses mental problems and therefore make wrong referral decisions.
A therapist in Ermelo with her own j-sGGZ practice described the case that can be seen in figure 18:

We see that in this case the CJG missed to see the underlying disorder, because the therapists had insufficient knowledge to correctly assess youth's mental problems and/or treat them. Care is ineffective, until mental problems get so much worse that the need for more specialized care for the JCG finally becomes clear as well.
Ultimately even more resources are used as more extensive specialized care is now necessary, than would be the case if referring her to the youth - j-sGGZ in the first place. Then problems would not have increased so dramatically .
Besides that, light care resources (2 years therapy of a CJG member) are also wasted. Both contribute to waiting times.

This case describes *'under-specialization'*. Too little resources have been used to filfull the request for help of the youngster. In this case the request for help of Kim was help with her trauma.
This case is not an exception, because the GGZ questions whether district teams posses the expertise to properly assess problems at all.
When that's not the case, referrals to (s)-jGGZ are either too late, too early or just 'wrong' (Friele et al., 2019)

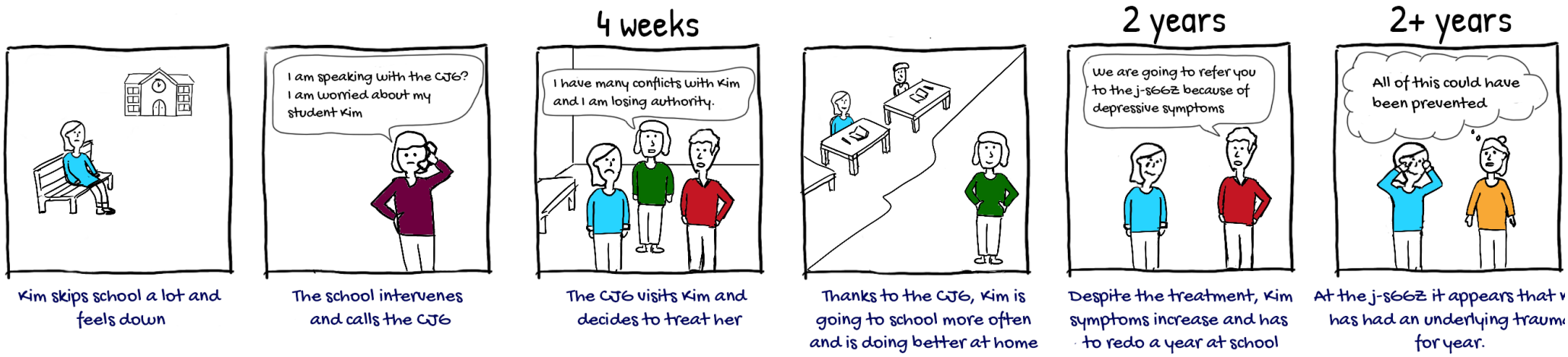


Figure 18: Real case of under-specialization as described in the interviews

2.3.2 Over-specialization

Problems in the structure of getting care

Another factor that contributes to ineffective care in the Meso context is over-specialization:

2. GP's tend to refer to over-specialized care options (over-specialization)
A sGGZ therapist claimed to have a wrong referral from the GP of about 1 out of 5 cliënts. A case as described in the interviews is shown in figure 19.

This case illustrates over-specialization. Too much resources are being used to solve the request for help. Because the s-jGGZ therapist notices this, she refers Tim to the regular jGGZ. Inefficiencies like these, lead to additional waiting times as well.

In the case of the sGGZ therapist, 20% of cliënts are offered temporary treatment until they can apply for basic GGZ.
When interviewing a GP in Amersfoort about this topic, she claimed to have send youngsters to j-GGZ for years until the municipality eventually called to inform her that she could also send youngsters to district teams.

While nationwide data is lacking on this topic, a case study of five different municipalities showed that especially referrals from the GP were sometimes made too quickly (Friele et al., 2019). The main health-care provider in Utrecht (Lokalis) even claims to have an incorrect referral rate of 30-50%. Lastly, specialized care is reduced up to 70% in the municipalities Rotterdam,Maastricht and Kennemer Heuvelland by correctly employing a POH (praktijk ondersteuner huisarts). (Stoevelaar et al., 2022). Although this seems like an easy to implement option, some practices simply don't have a physical space for a POH. (Stoevelaar et al, 2022)

An interview with a Shoshin member showed that it takes additional time for a GP to refer a youngster to a district team compared to a j-sGGZ referral, which contributes to more unnecessary j-sGGZ referrals and thus over-specialization. It is not uncommon that additional phone calls have to be made or an extensive list has to be filled in, while the GP already has a shortage of time. Another factor according to interviews with Shoshin members is the fact that available mental care options in the 'zorgdomein' program are rather limited, which results in a tunnel vision in referring.

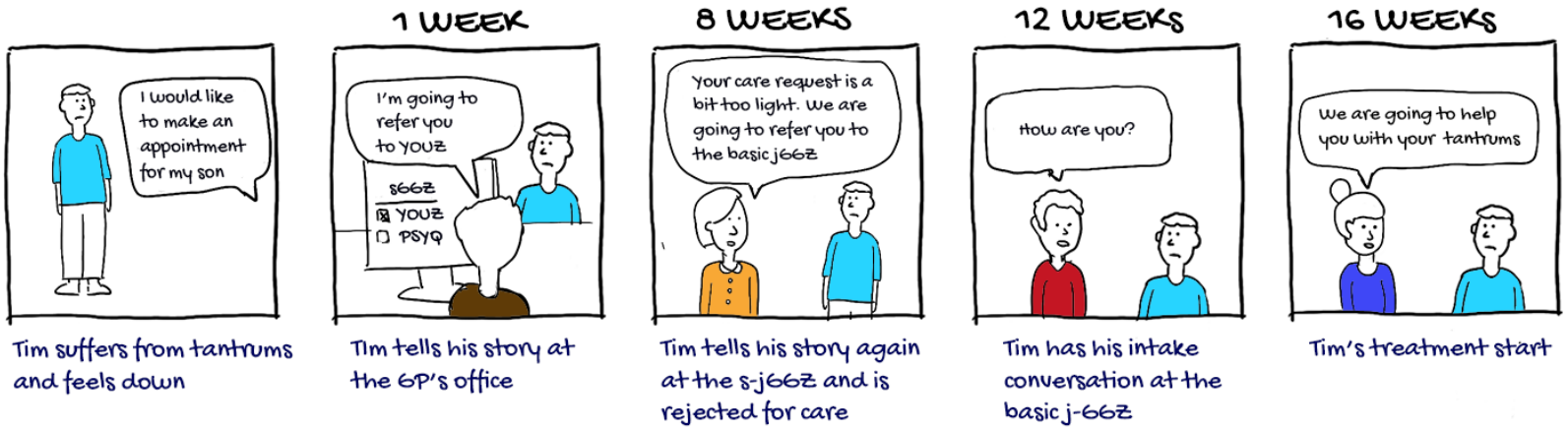


Figure 19: Real case of over-specialization as described in the interviews

2.3.3 Missing communication & tunnelvision

Problems in the structure of getting care

Another reason for ineffective care is missing communicating and feedback:

3. Missing communication and feedback highly increases wrong refferals (over- and under-specialization)
During interviews, a TAW ("Team Aanpak Wachttijden") member claimed that improved communication between parties would still be the biggest contributor to solving waiting times.

> "Parties blame each other for referring wrong and not being reachable. They don't know the other's capabilities and are therefore hesitant to ask for help."
> *Marjolein (35) - TAW*

A sample of the GP in Amersfoort, two therapists and a district member indeed showed that there were hardly any wrong referral once there was an ongoing feedback loop with the referring party.

> It clearly states on the website "We do not do research". Yet we then sometimes get referrals through the municipality that do focus on research. We know the GP very well so he doesn't do this anymore. Less than 5% of referrals are wrong."
> *Danny (35) - j-GGZ practitioner with own practice*

> "At some point, the referrers know pretty well how best to refer. Most wrong referrals we get are from parents themselves who are looking for help for their children, and from referrers who don't know us well or CJG members or the GP.
> *Trudy (62) - j-GGZ practitioner with own practice*

4. Measurements are taken to tackle certain aspect of waiting times, still a structural approach is missing
During the interviews, multiple initiatives came to light. A district member claimed that a flex team was set up that screens waiting lists and looks at which member of which team can pick up a case. Another initiative is a physical recurring consultation with the GP and members of district teams for better referral or other teams with a wide range of expertises that a GP or district team can access for help in referring. However all the initiatives focus on one aspect of waiting times instead of offering a structural approach.

> "There are people who focus very much on consultation. It's sensible to also think about prevention and normalization.
> There is quite a proliferation of initiatives and they are not learning from each other."
> *Marjolein (35) - TAW*

Conclusion

In short, over-specialization is spending too much resources to tackle the request for help, whereas under-specialization means spending to little resources to tackle the request for help.

In practice, under-specialization manifests itself in therapy that mainly tackles superficial symptoms. The actual diagnose and therefore the essence of the mental problems are overlooked. As a result, the actual mental problem is left untreated.

On the other hand, over-specialization is usually the result of youngsters ending up at the s-jGGZ, while regular jGGZ could have been sufficient as well. However this can drastically be reduced by more communication between professionals.

Research activity

Goal
To answer the research question:

- What aspects in the youngster-and-therapist interaction lead to ineffective care?

and corresponding sub-question:

- What characteristics of therapist and youngsters contribute to this interaction?

Method
Semi-structured Interviews have been conducted with four youngsters and three parents about the j-(s)GGZ journeys of 5 different youngsters. Furthermore, three therapists have been interviewed about the therapist perspective of jGGZ. Lastly, two adults have been interviewed that are ambassadors of MIND. This is an independent social organization that also advocates for a psychologically healthier Netherlands and a better mental health-care system. (Over MIND, 2023).
The interview scripts can be found in Appendix A4.

2.4 Interaction analysis - Micro context

The effect of the youngster/therapist interaction on waiting times

The Micro context is analysed in three ways, according to figure 20. First, the aspects of the interaction that contribute to ineffective care are explained (A). Accordingly, the characteristics of therapist (B) and youngsters' characteristics (C) are analysed to see how they contribute to this interaction.

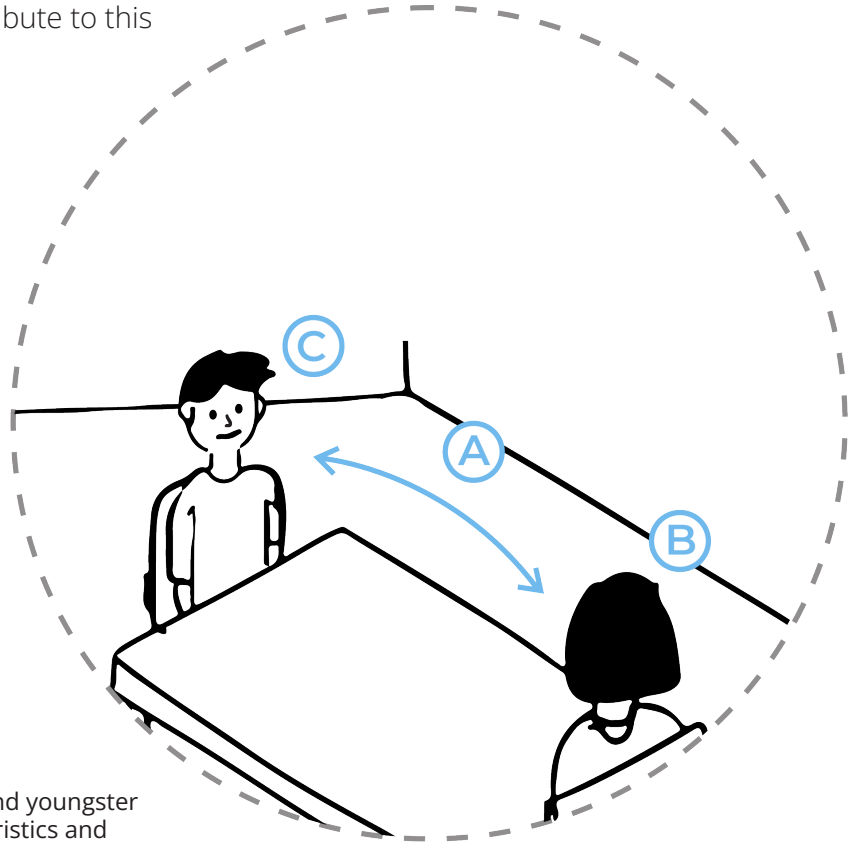


Figure 20: Macro context with therapist and youngster with a) Interaction b) Therapists' characteristics and c) Youngsters' characteristics.

2.4.1 Interaction between therapist & youngster

Problems in the interactions that contribute to ineffective care

The following aspects in the interaction (see figure 21) lead to ineffective care:

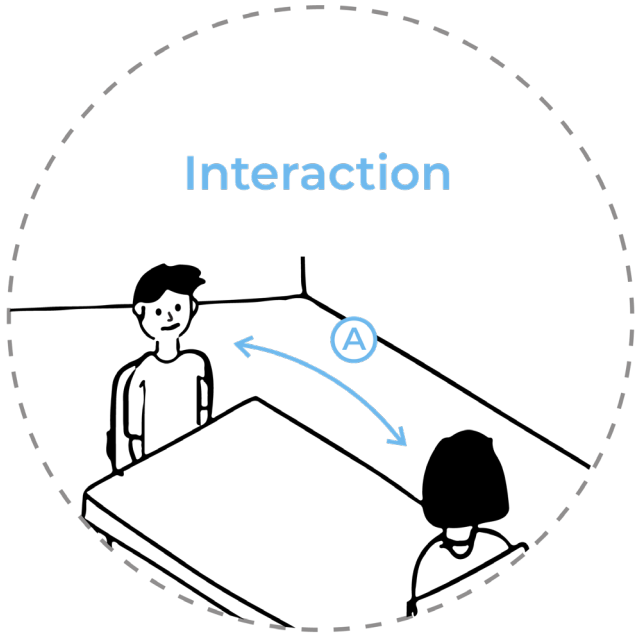


Figure 21: Micro context - A) interaction between therapist and youngster

1. Youngsters' needs are not sufficiently taken into account. Decisions are made for them, not with them

Four out of five youngsters dealt with ineffective treatment methods because they were not sufficiently tailored to the youngster. It appeared that all the help had not resulted in answering the initial question. This was due to the fact that decisions were being made for them instead of with them. Furthermore, they felt they were not being heard.

Already at the POH, four out of five youngsters felt they were not being heard.
This is a rather important moment in the care trajectory as the POH is the first encounter point for speaking about mental problems and getting referred to appropriate care. On top of that, It sets the expectations of further care.

> "The POH said I should eat more chocolate and hug more boys, because it gives me more dopamine, I felt very misunderstood."
> *Babette (21)*

Once the youngsters were referred to the j-(s) GGZ, they also experienced that important treatment decisions were made without sufficiently listening to their needs.
Decisions were being made for them instead of with them. There was not enough attention for asking what they actually needed.

> "I wanted to work on my trauma, but my therapist ended up taking a totally different route than what I came for. My psychologist didn't hear me."
> *Sterre (23)*

A case study by Ketenbreed Leren made the same claims and shows us more about the lack of youngsters' input . Out of the 30 interviewed youngsters, 21 of them indicated that they felt unheard and inadequately included in the choices to be made. They also indicated that decisions were not made with them, but communicated afterwards. Work pressure and a lack of time played a role, according to the professionals.
(Spijk-de Jonge et al., 2022).

2. The right diagnoses lacks, not enough space to go in-depth

Out of a total of 19 trajectories with (s)GGZ or POH professionals that the participants followed, only 6 were reported to be sufficiently helpful. This number isn't as high as the previously described 80% of inefficient care, but still clearly illustrates the problem.
This is partly due to the fact that the right diagnoses or any diagnoses at all are lacking. This was the case for all 5 participants for at least one GGZ trajectory.

One participant even found out after having had at least 8 psychologists that the underlying condition for her mental problems never had been tackled until she got treatment that had a lasting effect.

> "It took 7 years to get the right help. Only now it is apparent that I have general anxiety disorder and low self-esteem."
> Noa (26)

The same case study by Ketenbreed Leren shows that a possible reason for missing the right diagnoses is a focus on symptoms youngsters are currently experiencing instead of focusing on the underlying problems. Out of the 31 care trajectories , 27 of them lacked a shared analysis with youngsters, parents and professionals which explains how complaints arise, interact and how they are interrelated. Symptom treatment leads to temporary improvements, rather than long term - as symptoms keep coming back if the root is not sufficiently tackled. (Spijk-de Jonge et al., 2022)

This explains why the youngsters all experienced some relief after care, but still needed additional help. On average, each participant visited five different therapists.

> "The GP described antidepressants to control her stress, but when she came to me it was immediately clear that this was a result of a post- traumatic stress disorder. She just needed EMDR."
> *Manon (61) - sGGZ practitioner*

3. The connection with the therapist is leading, yet nothing is done to improve it

It was mentioned from both the youngster and therapist perspective that the connection with the therapist is crucial.
However, a therapist is assigned to a youngster based on availability, not on common grounds. When a connection lacks, nothing is done to improve it. Even switching from therapist is not really an option.

> **"It is not really common to switch from therapist. Everyone is already fully occupied, so you would have to re-enroll on the waiting list."**
> Manon (61) - *sGGZ practitioner*

Psyned (an independent care provider with more than 300 psychologists) even claims that the therapeutic relationship is one of the biggest predictors of the success of a therapy. (Kaarsgaren, 2023).

> "The working relationship is the most important thing in therapy. This can sometimes be the reason why you don't share anything for years and with the other person you do instantly, since the other person feels more safe."
> *Annelies (57) j-sGGZ therapist.*

During therapy there is no standardized protocol that aims to check and possibly improve whether the youngster feels at ease with the therapist. As becomes clear, there is room for improvement.

2.4.2 Therapist characteristics

Therapist's characteristics that contribute to the interaction problems

The fact that decisions are made for youngsters (and not with them) is partly due to characteristics of therapists (see figure 22). Specifically, the following characteristics:

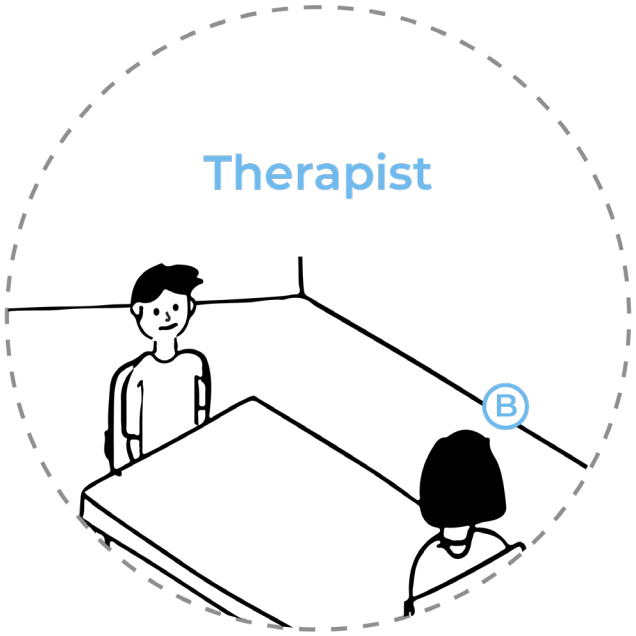


Figure 22: Micro context - B) Therapists' characteristics

1. Therapists think they know what youngsters need

The trait of some psychologists that hinders effective care is the fact that they rely too much on their own vision. Therapists logically know more about what methods work for which disorder work than youngsters do, so It makes sense for a therapist to be in the lead.

> **"Sometimes a client simply wants EMDR, because she saw that it worked for a relative, while the situation is totally different. We studied psychology for years, so of course we know how to treat."**
> Manon (61) - sGGZ practitioner

However, because of their extensive expertise and experience, they sometimes forget to check whether the therapy is aimed at solving the actual request for help.

> "The pitfall is that we want to help. Often you overlook asking the other person "what do you need". That seems very simple, but therefore you have to assume that it is more helpful to tap into the strengths of the person instead of bringing in too much."
> *Anette (62) - j-sGGZ therapist*

All five youngsters claimed that sometimes a therapist relies too much on their own idea of what a youngster needs.

2.4.3 Youngster characteristics

Youngster's characteristics that contribute to the interaction problems

However youngsters also have characteristics (see figure 23) that contributes to the fact that decisions are often made for them, that the right diagnosis often lacks and that their is nothing done to improve the connection with the therapist:

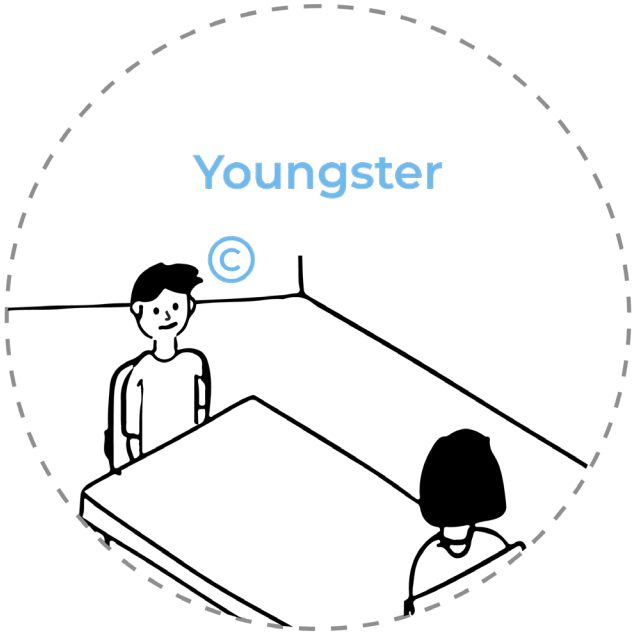


Figure 23: Micro context - C) Youngsters' characteristics

1. Youngsters can be passive

A trait of youngsters that hinders getting effective care is the fact that they can be passive when it comes to giving feedback as well as motivation towards recovery.

> "Youngsters experience that something is not working out for them and are motivated in the therapy room. But once they are out, they're already occupied with other things"
> *Anette (62) - j-sGGZ therapist in Amsterdam*

When decisions are made that turn out not to be helpful for the participants, they find it hard to communicate this to their therapist.

> "It is hard for youngsters to indicate something on their own because their autonomy is not yet sufficient when they start with therapy"
> *Annelies (57) j-sGGZ practitioner*

All four participants that experienced ineffective therapy at some point didn't give feedback about this. Reasons for this varied from high trust in the therapist as well as not daring to say so, even though not every participant made this explicit.

> "I always thought therapists knew what they were doing. In the end I myself knew much better what I wanted to pay attention to, and I wasn't often encouraged to let that be heard"
> *Rosa (23)*

One participant rather indicated that she didn't need care anymore instead of communicating that her needs weren't met.

> "My therapist called me during the summer, but I didn't respond. I didn't see how she could help me. I might have been good however."
> Sterre (23)

2. Youngsters don't always know what they want and/or are not capable of communicating this

What makes it harder for the therapist to listen to the needs of the youngster, is the fact that youngsters most of the time don't know what they need themselves.
All of the participants found it sometimes hard to know what was needed to help them and/or to communicate this to their therapist.

> "Sometimes it is difficult to put into words exactly what is bothering you. You feel that something is not right, but just try to communicate that in the right way to your therapist."
> *Noa (26)*

Two participants claimed they lacked the self-knowledge to know what they needed.

> "I couldn't indicate what I needed, young people can't do that. The psychologist should ask that."
> *Babette (21)*

Furthermore, a therapist stated that a good diagnosis and assessment of the right care indeed requires input from both youngsters and parents. However, youngster's input can even lead to ineffective care if youngsters aren't self-sufficient aware of their need.

> You can connect well with the needs of young people by taking good time. You want to properly speak with parents and youngster, both individually and together. At the same time, therein lies the complexity. Often youngsters have requests for help that are primarily symptom-oriented.
> *Anette (62) - j-sGGZ therapist*

Conclusion

The biggest contributors to ineffective care in the Micro context are:

1. Missing the right diagnoses (symptom treatment)
2. Decisions being made for youngsters, instead of with them
3. Lack of a protocol that focuses on maintaining a good therapist/ youngster relationship

Missing the right diagnoses is due to decisions made by the municipality to not hire sufficiently specialized therapist and GGZ therapist not looking enough into background factors.

Decisions being made by youngsters is due to therapist relying to much on their own vision and the fact that youngsters can be passive and find it hard to communicate their needs.

A lack of a protocol that focuses on the therapist youngster relationship is due to decisions made by the care providers.

Extra focus should be laid on improving these factors to make care more effective.

2.4.4 The Decision Making Matrix

The four scenarios regarding youngster's involvement in decision making

An analysis regarding the different scenarios of decision making by youngsters (or therapist) has been conducted to understand desired and undesired situations. All situations were described according to the interviews.

Figure 24 describes just how youngsters' input or lack of input in therapy determines the effectiveness of care. Four situations have been found during the interviews regarding decision making in therapy. On the X-axis, the division of direction from youngsters and therapist is plotted. On the Y-axis, the amount of awareness about wants and needs it plotted.

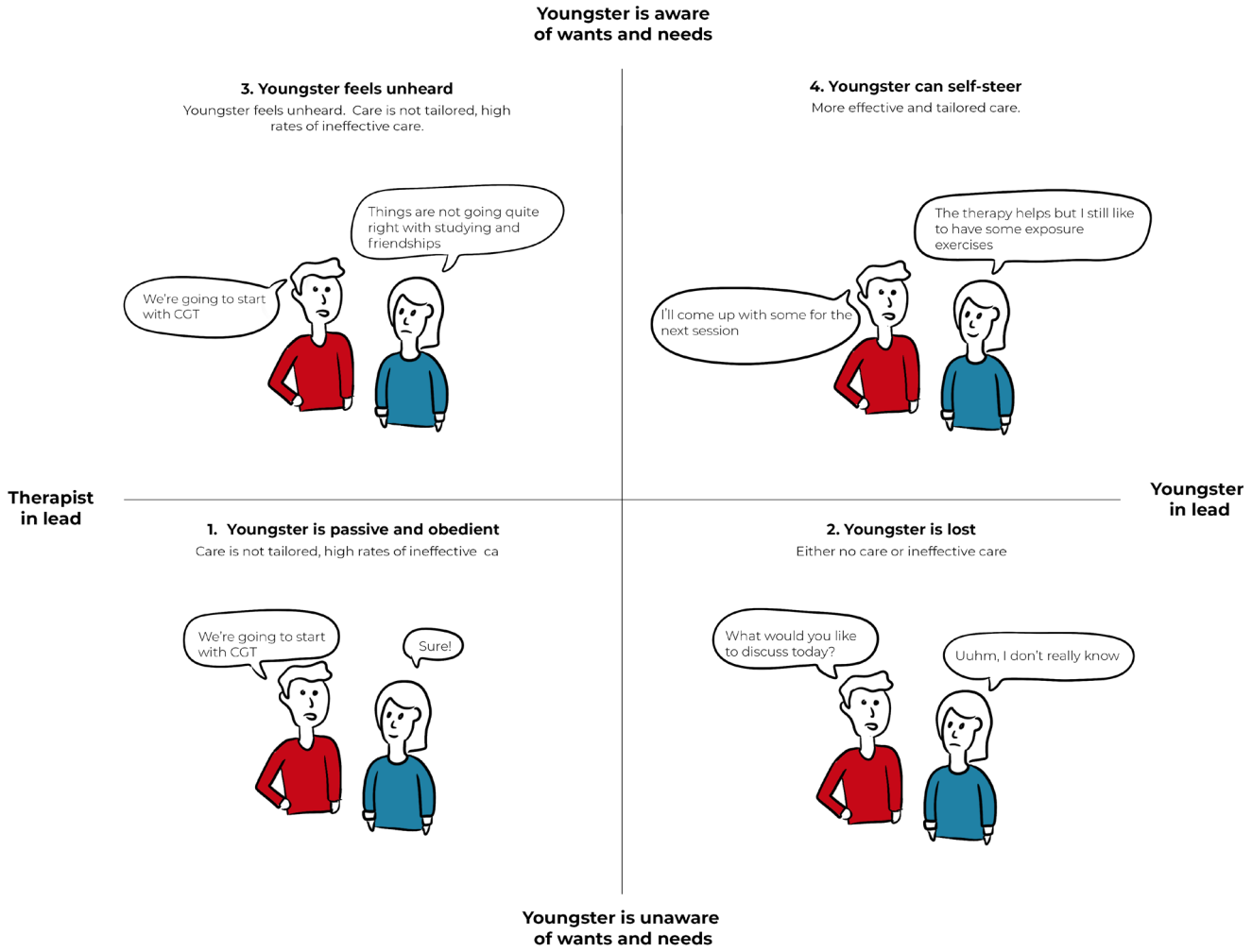


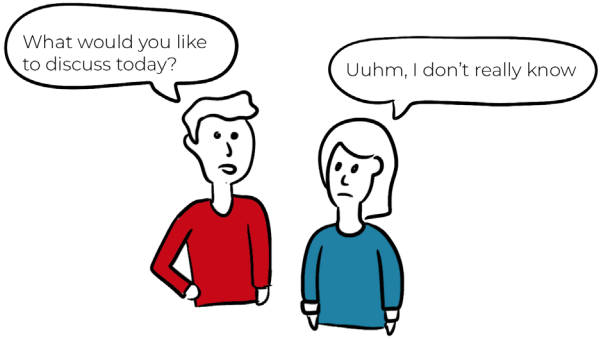
Figure 24: Youngsters' decision making matrix

1. Youngster is passive and obedient

Care is not tailored, high rates of ineffective care

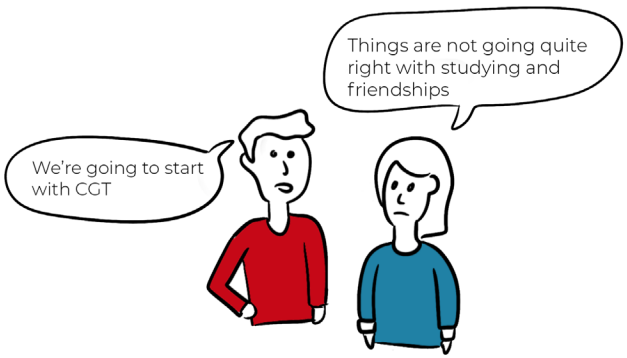
2. Youngster is lost

Either no care or ineffective care



3. Youngster feels unheard

Youngster feels unheard. Care is not tailored, high rates of ineffective care.



Field 1: Youngster is passive and obedient

As previous insights shows, Field one describes the classical situation in which the therapist takes the lead. In this case, the youngster is passive and obedient and follows the therapy method that the therapist recites.

> "My first therapist said we're doing CGT and then I thought well okay if you think that's necessary then we'll do that...." Now that I finally have the right help it is apparent that I have general anxiety disorder and low self-esteem".
> *Noa (26)*

Only when mental problems won't decline after the therapy has ended or come back after a while, does the youngster notice that more care is needed.

Thus, the youngster lacks awareness about needs and wants regarding therapy.
Care is not tailored and rates in ineffective care are high as has been stated before.

Field 2: Youngster is lost

Field two describes the other extreme; youngsters are put fully in the lead, but feel lost and most likely stressed out. They aren't sufficiently aware of their wants and needs and/ or indicate this accordingly.

> "I had to indicate what I wanted to talk about and how to solve it. This gave me a lot of stress, panic and reluctance to go. I had to lead the conversation, which I can't. If I don't know what is going to happen, I'd rather not go. I indicated that I could not and did not like this, but was told that I should take control of my own life."
> *Isa (25)*

As a consequence, there is either no care given or care is ineffective as it doesn't match the youngsters wants or needs.

> "More self-direction for 16-year-olds sometimes also means that they want nothing or don't know what they want."
> *Annelies (57) j-sGGZ therapist.*

Field 3: Youngster feels unheard

Field three describes the situation in which the youngsters are aware of their wants and needs and communicate this to their therapist. However, the therapist still takes up the classical role of being in the lead. As a result, the youngsters feel unheard. In contrast to field 2, the youngster notices a problem during therapy. The outcome is still the same as youngsters usually find it hard to give feedback to their therapist and therapists don't always sufficiently incorporate their feedback .

> "We've done 9 CGT sessions. My therapist decided that beforehand. I had to focus a lot on my thoughts, while I just suffered from pent up emotions. I felt really bad about the CGT trajectory and it was really not what I needed".
> *Babette (21)*

Again, therapy is not tailored and rates of ineffective care are high.

Field 4: Youngster can self-steer
Field four describes a situation in which the youngsters have sufficient self-direction and awareness about wants and needs and therapists put them in the lead. They are able to self-steer in order to receive more effective and tailored care.

> "At first, I had some doubt whether the therapy could help me. However she told me that I could just try and at any time indicate it if it didn't work out for me. In the end it helped a lot, but I thought I needed some additional exposure exercises which she provided me."
> *Ruben (25)*

Therapy is more tailored towards youngsters' needs and wants and therefore more effective. However, guidance from an experienced therapist may still be necessary to prevent symptom treatment as youngsters tend to focus on symptoms instead of underlying problems.

2.4.5 Existing solution analysis - tools to incorporate youngsters need

The Session- and Outcome Rating Scale to measure to what extent Youngsters' needs are met

An analysis of existing solutions has been done for the problems found in the Micro context for design inspiration.

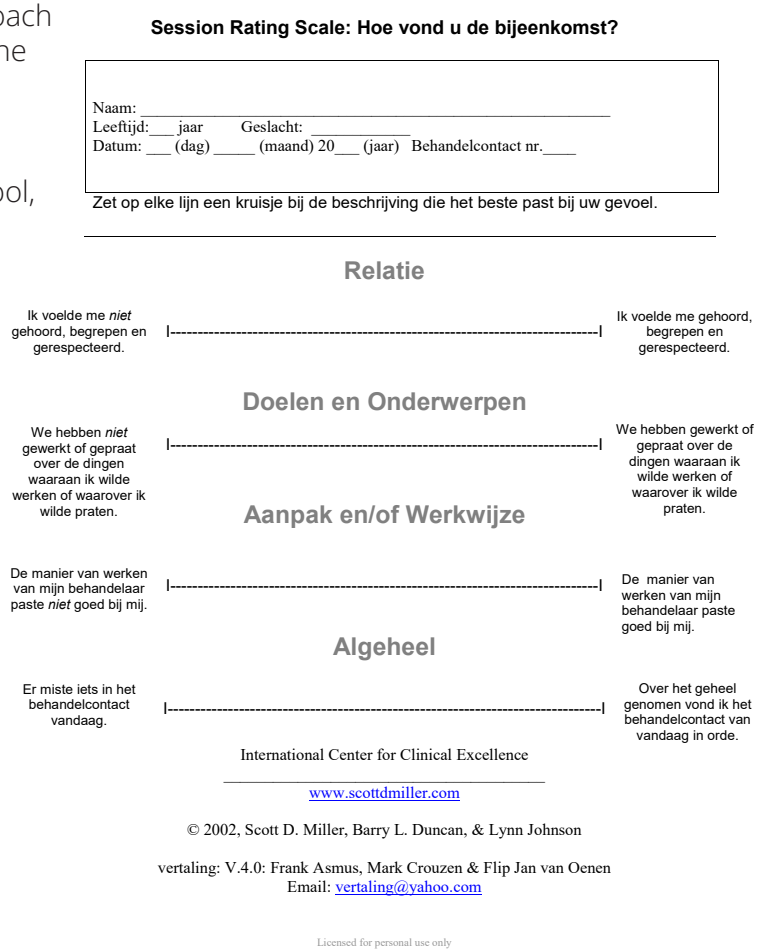
The interviews of three therapists showed that current attempts to incorporate the needs for youngsters are done by the Session and outcome rating scale.

Session- and outcome rating scale

The three therapists have also been interviewed to find out how their care providers currently incorporate the needs of youngsters into therapy. Two out of three care providers make use of the 'Session Rating Scale' (SRS) and the 'Outcome Rating Scale (ORS). Specifically, they are used to incorporate (youngsters) feedback in the sessions and to monitor the effectiveness of the therapy respectively.

The OSR unfortunately doesn't account for symptom treatment as the outcomes are only measured shortly after the session has ended. To rule out that symptoms have not been addressed, an evaluation should also be done after several months. As previous insights revealed, lasting results are almost never achieved when merely symptoms are tackled.

Both the SRS and the OSR have an adult and child version (age between 6 and 12). Figure 25 shows the adult SRS version. Feedback is divided in four categories: an assessment about the relationship with the therapist, the extent to which the discussed subjects are relevant and contribute to the overall goal, the extent to which the approach fits the individual, and an assessment about the overall session.
The OSR on the other hand, measures via a likewise scale the individual-, interpersonal- (family, close relationships), social- (work, school, friendships) and overall sense of well-being (Campbell et al., 2009).



Session Rating Scale: Hoe vond u de bijeenkomst?

Naam: _____
Leeftijd:___ jaar Geslacht: _____
Datum: ___ (dag) _____ (maand) 20___ (jaar) Behandelcontact nr.____

Zet op elke lijn een kruisje bij de beschrijving die het beste past bij uw gevoel.

Relatie

Ik voelde me *niet* gehoord, begrepen en gerespecteerd. — Ik voelde me gehoord, begrepen en gerespecteerd.

Doelen en Onderwerpen

We hebben *niet* gewerkt of gepraat over de dingen waaraan ik wilde werken of waarover ik wilde praten. — We hebben gewerkt of gepraat over de dingen waaraan ik wilde werken of waarover ik wilde praten.

Aanpak en/of Werkwijze

De manier van werken van mijn behandelaar paste *niet* goed bij mij. — De manier van werken van mijn behandelaar paste goed bij mij.

Algeheel

Er miste iets in het behandelcontact vandaag. — Over het geheel genomen vond ik het behandelcontact van vandaag in orde.

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vertaling: V.4.0: Frank Asmus, Mark Crouzen & Flip Jan van Oenen
Email: vertaling@yahoo.com

Figure 25: Adult Session Rating Scale (SRS) as used therapy

2.4.6 Existing solution analysis - Existing tools for better diagnoses

The 'verklarende gedeelde analyse' to learn more about the youngsters background

Verklarende gedeelde analyse
As explained in the therapist/youngster interaction analysis (Micro context), a 'gedeelde verklarende analyse' helps to look more into the youngsters background. This is supposed to tackle waiting times. However, the case by Ketenbreed Leren revealed that a 'gedeelde verklarende analyse' was only used in four out of 31 trajectories. (Spijk-de Jonge et al., 2022).

Figure 26 shows such a 'gedeelde verklarende analyse' (Kenniswerkplaats Jeugd Friesland & Bureau Peers, 2020). This document is 'shared' because it should be made with youth and their parents as they are experts of their own life, needs, and wants. The seven factors to be determined and filled in are :

- Step one: Reason of application, symptoms, desired situation
- Step two: Expectations
- Step three: Capabilities
- Step four: Stressors
- Step five: Vulnerabilities
- Step six: Strengths
- Step seven: Support

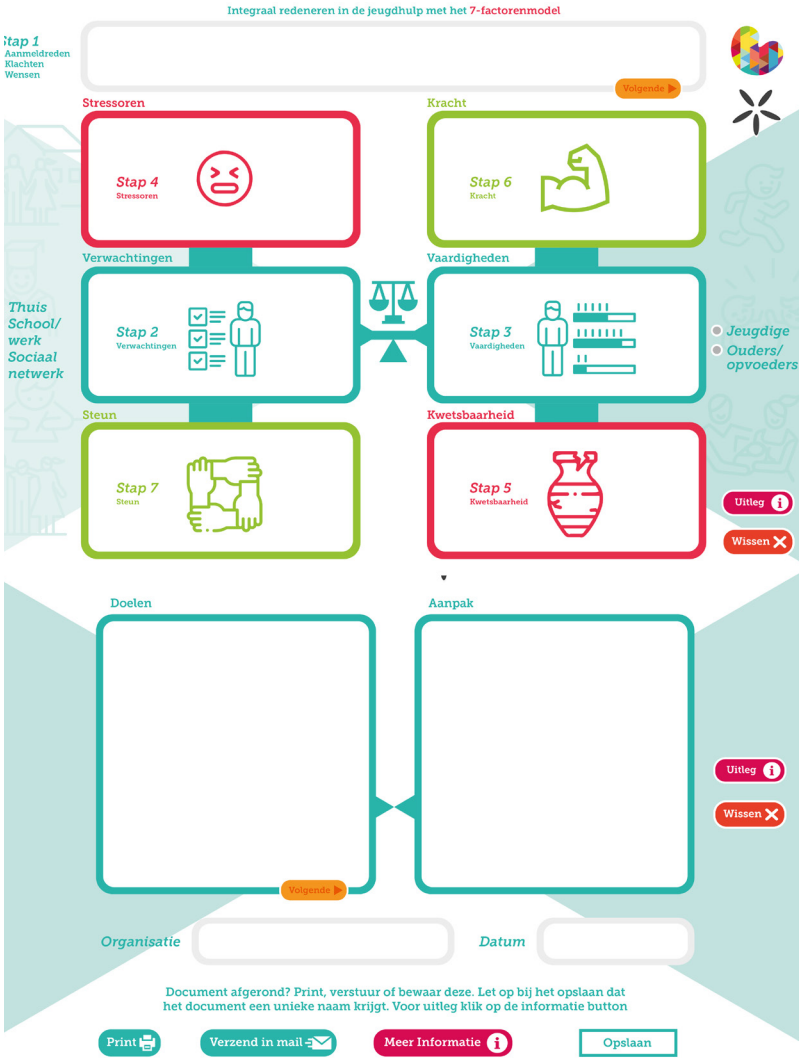


Figure 26: Verklarende analyse according to the 7 factor model

Derivates of the 'gedeelde verklarende analyse' that these therapist use to incorporate youngsters background factors are:

1. The network model
One therapist claimed that her health-care provider 'Psyned' as well as hospital 'UMC Utrecht' have been making use of 'the network model'. In this model, youngsters can discuss themes and the effect (either positive or negative) it has on them. Accordingly, to do's are discussed to improve the negative impact of themes as can be seen in figure 27 (Scheepers, 2020). The goal of the network model is just as the shared explanatory analysis to see the mental problem(s) more holistically and from different perspectives.

2. Custom workbook
Another psychologist made use of a custom workbook or map in the first two or three sessions in which youngsters can write or draw topics that are important to them.
This workbook contains the following pages to draw or write down:

- The youngsters' problem.
- The youngsters' strengths or things that make them happy.
- The youngster's desired situation for the future.

According to her, drawing helps when youngsters don't have a clear image of what they need.

Furthermore, room for extra pages allows the youngster to bring in subjects of the youngster's liking.

3. Whiteboard intake
Lastly, a whiteboard was used during the intake session in which relevant matters, like the youth's social context are visualized.

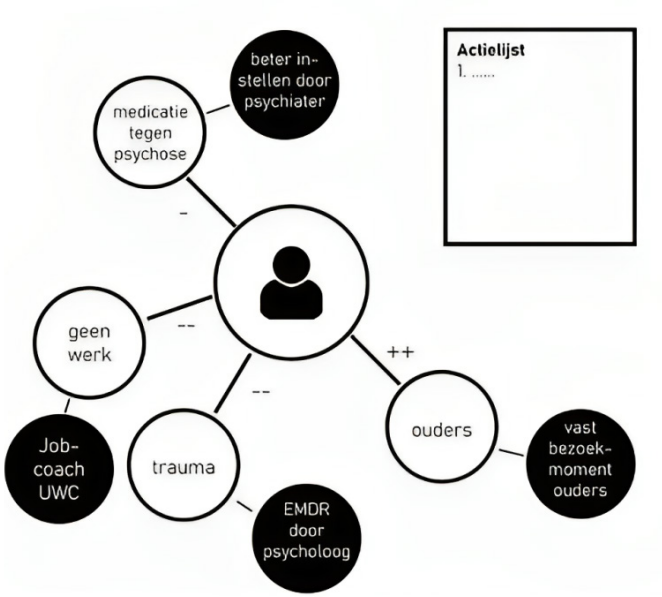


Figure 27: The network model

Conclusion

The matrix showed that succesfull therapy requires a thoruough understanding (by both parties) of the youngsters wants and needs and sufficient input from the youngster (matrix 4)

Furthermore, the SRS is currently used to incorporate the needs of youngsters into therapy. However this is not enough as youngsters still claim that they feel not being heard. Additional research not to be done in evaluating to make care more effective.

Lastly. the 'gedeelde verklarende analyse' can help to reduce symptom orientation. This works by extensive looking at background factors and making a analysis together with parents and youngsters. However, the 3 interviewed therapist only look at some background factors solely at the intake converstion. More can be done to fix symptom orientation.

2.5 Key takeaways

Youngster analysis

1) The proposed design should be as time efficient as possible.
Youngsters are used to instant access to knowledge, services and products (see figure 28). They have low tolerance for slow-working websites or apps.

2) The proposed design fits the youngsters mental model as much as possible.
Most youngsters are used to digital products and solutions (see figure 28). Consideration of the right design form is needed to make sure youngsters want to make use of the design.

3) The proposed design should fit with the youngsters values as much as possible.
Youngsters have a hight need for inclusiveness, sustainability and transparency (see figure 28). They can easily boycott companies or products that are not in line with these values.

4) The proposed design should not feel like another way of having to perform.
A lot of youngsters are prone to burnouts because they feel that they have to perform all the time (see figure 28). Therapy logically shouldn't be an additional stressors that could contribute to mental problems.

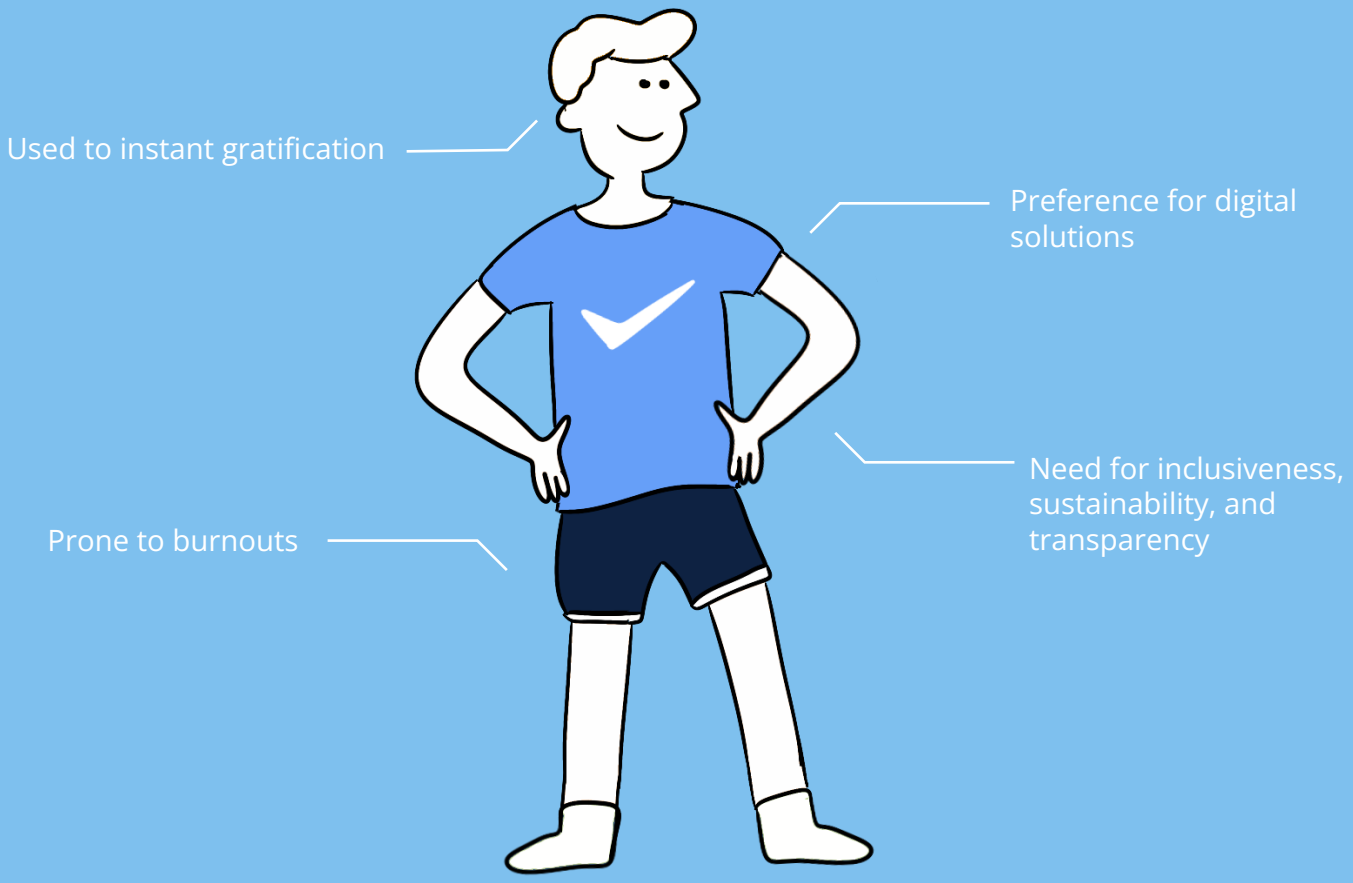


Figure 28: Youngster analysis takeaways

Interaction analysis

5) The proposed design should help youngsters end up in field 4 of the decision making matrix.
In practice, youngsters and therapist both have characteristics that contribute to decisions being made by the therapist instead of youngsters. Youngsters don't always know what they want and can be passive. On the other hand, the therapist often rely too much on pre-assumptions and their vision on what the youngsters need. Both contribute to symptom treatment.

A thorough understanding of the youngsters wants and needs (by both parties) is required for youngsters to actually make more decisions themselves. Furthermore, the therapist should incorporate and encourage input/feedback from the youngsters. This situation is displayed in field 4 of the matrix (see figure 29).

Figure 29: Field 4 of decision making matrix

6) The proposed design should focus on a better diagnosis to reducing symptoms/ under-specialization by looking more at background factors.
Both therapist and youngsters tend to focus on reducing symptoms, instead of underlying problems of youngsters. This was shown by the fact that drafted requests for help by youngsters are based on symptoms. This makes sense, as youngsters logically suffer from symptoms and not from their more implicit underlying causes.

A 'gedeelde verklarende analyse' could help prevent symptom orientation by looking more at the youngsters' background. However, a sample of 3 therapists showed that therapists in reality look only superficially at a few background factors. Furthermore,

7) The proposed design should motivate youngsters to keep putting in the necessary work and take responsibility over their care trajectory.
Youngsters currently don't always take enough responsibility to take ownership over their therapy.

Furthermore, they can be passive. Youngsters can lack motivation to do their exercises and sometimes rather go out of therapy then to confront their therapist about their true needs and wants.

8) The proposed design should focus on improving the therapist and youngster relation.
There is a clear discrepancy between the importance of a good youngster and therapist relationship and the actual priority that is given to this relationship in therapy.

Interviews and literature research both show that the youngster/therapist connection is the most important predictor of successful therapy. However, therapists are usually assigned to youngsters based on availability and not on their fit. When a fit is lacking, switching is not an option as that means youngsters have to re-enrol on the waiting list. More can be done to promote this relationship and increase care effectiveness.

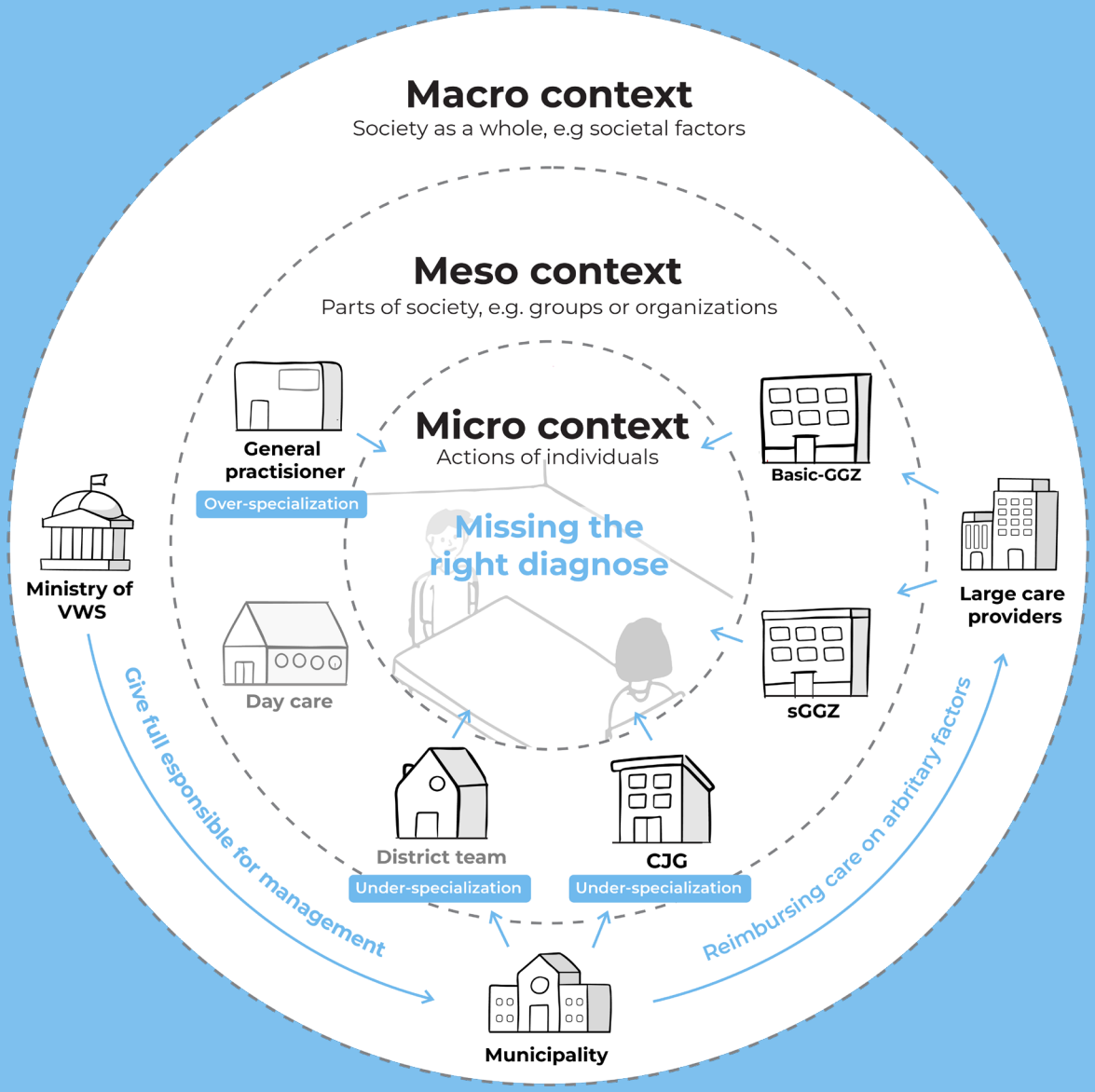
Society and system analysis

9) The proposed design should improve communication between professionals (for better referrals and treatment).
Missing communication between referrers and therapists contribute to a lot of wrong referrals. Practitioners are not aware of each other's capabilities and blame each other for not being reachable. However, the youngsters are the connecting element (in communication) between all therapists and referrers as they speak to them all.

10) The proposed design should be aimed at GGZ therapists.
Missing the right diagnosis is the only contributor that is a clear consequence of decisions by the Meso and Macro context as can be seen in figure 30.

GGZ therapists are the most fitting target audience as they have potential to improve their care's effectiveness. They are capable of making the right diagnosis. Still, it is often wrong due to overlooking background factors and too much relying on their vision of what a youngsters needs.

On the other hand, members of the CJG and district teams are less suitable because they are not sufficiently specialized to correctly diagnose mental problems in the first place. This is due to decisions by the municipality.



- **Not employing (enough) suffcienctly specialized therapist**
- **Instruct to treat internally as much as possible**

Figure 30: Complete Macro,Meso and Micro context map

Chapter 3

Define

The most relevant problems in- and between the Macro Meso and Micro context have been identified.

This chapter sets the stage for the design phase. Insights are translated to a more refined and coherent problem statement. Then the design goal and design criteria are mentioned.

RESEARCH SYNTHESIS PHASE

3.1 Problem definition

Defining the problem space

A problem definition is drafted to define a clear problem space.

A metaphor of a tree best explains the problem youngsters face regarding ineffective therapy. Figure 31 shows a tree with the roots being the underlying problems, they are located under the surface and therefore not directly visible (implicit). The branches and leaves are the symptoms/ the way the under-lying problems express themselves and are directly visible.

Most youngsters continue to get in and out of ineffective care, because therapists usually tackle the visible symptoms and not the core of their problems as previously stated. The branches and leaves are cut for a while, but continue to grow as long as the roots are not tackled.

The biggest contributors to symptom treatment are:

- Youngsters suffer from symptoms they face and want them gone. The underlying cause often remains unnoticed as this requires extensive self-knowledge.
- Youngsters can find it hard to communicate their wants and needs and sometimes lack motivation to actively participate in therapy and discover/tackle underlying problems.
- Therapists don't always dig deep enough to find the underlying cause. They hardly look at background factors of youngsters and tend to fill in too quickly what youngsters need.

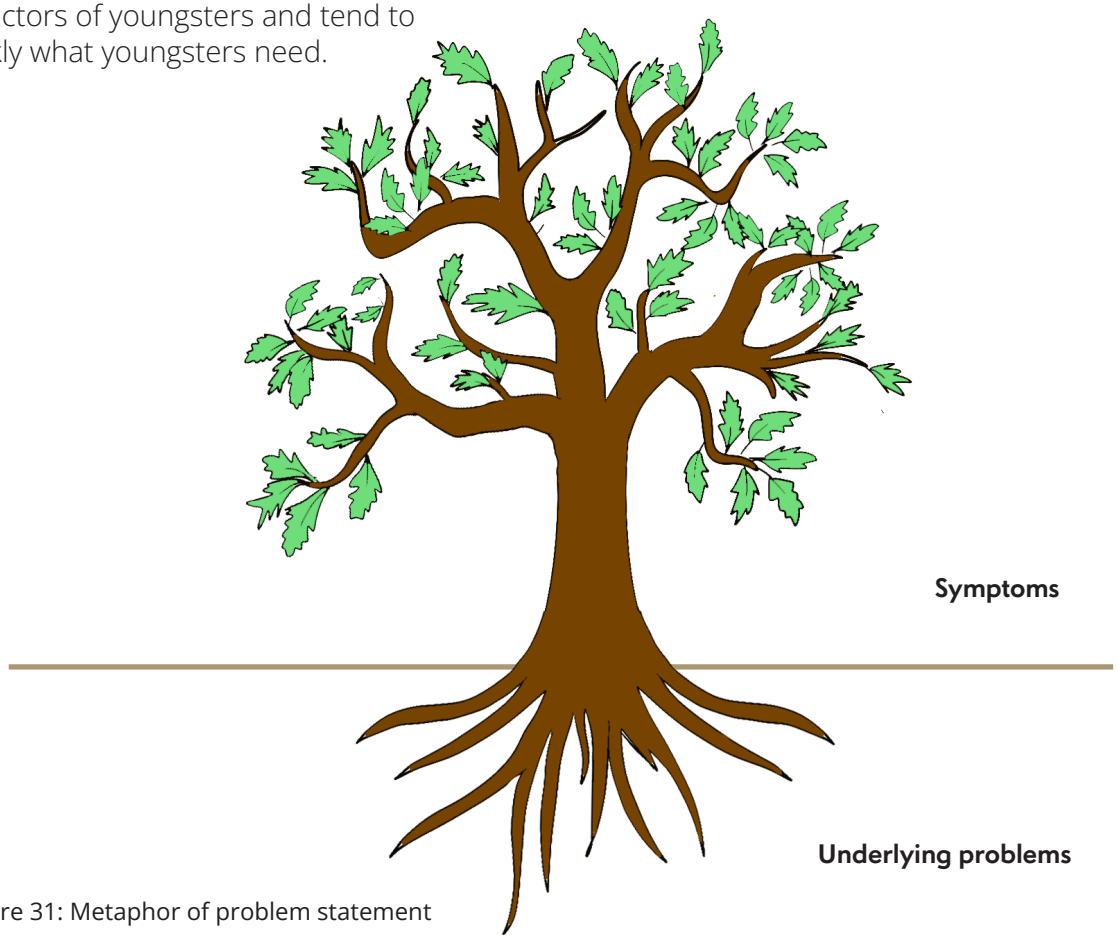


Figure 31: Metaphor of problem statement

3.2 Design goal

Setting the stage for the design phase

A design goal has been drafted to define a fruitful solution space.

A design goal makes explicit and measurable what impact should be made.
The following design goal is proposed to solve the main problem:

Who What

To **empower youngsters from 16 till 23 in decision making during (j-)GGZ therapy**

When

Who: Youngsters from 16 till 23
The age of 16 has been chosen as a threshold, since that age allows the youngsters to improve their self-direction without being possibly held back by parents.

Three different groups can be distinguished in the framework of youth Mental Healthcare and decision making.

Youngsters under the age of 12 have no right of information about care decisions and no say about the care that they receive. All decisions are made by the parents.

Between 12 years and 16 years, parents as well as the youngsters have to agree with each other before they have a say in decision making in their treatment.

From the age of 16 and onwards, youngsters don't need permission from their parents in order to make decisions about their treatment. On top of that, parents are entitled to information only if the youngster agrees. (Evaluatie Jeugdwet, 2016)

As explained in the 'definitions', the age of 23 has been set as an upper limit. This is the maximum age at which youngsters can apply for youth care.

What: Empower in decision making
To reduce symptom treatment/under-specialization, it is important for youngsters to have more saying as stated previously. Specifically, youngsters have to be empowered to have more say in decision making to end up in matrix field 4 (see figure 25). In this way, youngsters take ownership over their care trajectory.

Where: During (j-)GGZ therapy
For the main context j-GGZ or GGZ therapy has been chosen (the target audience covers both). This is due to the fact that GP's, district teams and CJG members don't always have sufficient skills or time to avoid symptom treatment when youngsters get to share power in decision making.

The final design should enable youngsters to share power and responsibility during the whole treatment.

3.3 Design criteria

Requirements & wishes

Requirements are set up based on previous analysis with the goal to make a desirable, feasible and viable design. Therefore, they also serve as a metric or performance indicator in the evaluation of the final design.

Requirements are both measurable and essential for the approval of the design. They are numbered according to the insight in the discover phase. However some requirements are split up.

Conversely, wishes can be more subjective. They are not crucial for design success, but are rather seen as mere enhancers of desirability, feasibility and/or viability.

Requirements
The design has to:

5. Give youngsters more say in decision making as well as making them aware of their wants and needs. In this way, the youngsters end up in field four of the decision making matrix.

6a. Contribute to the therapist looking more at background factors.

6b Reduce symptom treatment and wrong diagnoses.

7. Contribute to youngsters doing their exercises.

Wishes
The design should:

7b. Motivate youngsters to take responsibility over their care.

8. Improve the therapist and youngster relationship.

9. Improve communication between professionals for better referrals and treatment

1. Be as time efficient as possible for both youngsters and therapists.

2. Fit with the youngsters' and therapists' mental model as much as possible (offline vs. online).

3. Fit with the youngsters' values as much as possible: inclusive, sustainable and transparent.

4. Not feel like another way of having to 'perform' for youngsters.

Chapter 4

Develop

The design goal and criteria have been clearly defined.

This chapter aims to explain the design activities that led to final design. First, an interaction vision is presented to determine appropriate qualities for the design. Then, the design activities are described that led to the final design form and reflection method. Lastly, design metrics are formulated. They serve as the foundation for the evaluation of the final design.

DESIGN PHASE

4.1 Ideation activities

Exploring relevant design qualities

An interaction vision has been chosen to give the design certain qualities. These qualities are based on an interaction in which the design goal is naturally met. By distilling the design qualities of this interaction, the final design is more likely to actually meet the design goal.

Interaction vision

In the interaction vision, different interactions are explored in which youngsters do have a sense of power and responsibility in decision making with a professional. Accordingly, the unique qualities these interactions have in order to reach the described design goal are distilled. Brainstorming and multiple iteration have been used to pick the most fruitful interaction and qualities. Once a list of qualities was derived, it was described what these qualities afford. As an illustration, the interaction quality 'forgiving' may afford a youngster 'to feel more at ease to discover and possibly make mistakes'.

The interaction should feel like choosing a job with career guidance support (see figure 32)

Figure 32: Choosing a job with career guidance support

The corresponding interaction qualities and accordances then are:

Quality	Accordances
Considerate	To make a tailored choice
Suggestive	To feel guided
Straightforward	To make the decision yourself
Flexible	To not be steered to much by the other person

An in-depth description of the interactions qualities and affordances can be found in appendix B1.

Key takeaways

11) The design should have the qualities: Considerate, Suggestive, Straightforward and Flexible

To make the design more tailored to therapists and youngsters, two group creative sessions took place. Furthermore, individual creative sessions took place to co-design (design together with therapists and youngsters) the concepts to refine the specific contents of the concepts.

Individual brainstorming

Two individual brainstorm sessions took place in which ideas were generated. Accordingly, ideas were clustered to come up with concept directions and refine the design goal.
The ideas and clusters can be found in Appendix B2.

Generative sessions

The goal of the first creative session was to check to what extent the design goal, the first concept and its user journey resonates with youngsters and therapists alike.
Four youngsters and one j-sGGZ therapist participated in the online session that took an hour. The participants were asked to give feedback and have a group discussion. Accordingly they were asked to alter and/or refine the idea of a booklet to their liking. Four youngsters and one j-sGGZ therapist participated in the online session that took an hour. A snapshot of the board can be seen in figure 33.

The second creative session took place in a closed institution with four youngsters and three therapists

The session lasted about 30 minutes. First, the participants were asked to fill in six HKJ's about problems that the current design aimed to tackle (e.g How can youngsters connect with the design). The HKJ's and the full miro board can be found in appendix B3.

Then, a concept was shown and evaluated with the (sub)solutions that the participants came up with themselves when filling in the HKJ"s.

Semi-structured interviews

Semi-structured interviews took place with two therapists and one youngster via zoom. The youngsters were first asked about their previous experience regarding therapy and self-direction. The therapists were asked the same about the self-direction of youngsters they treat. In the second part of the interview, both were actively involved in altering the first concept to their liking. This included the background elements, the writing style and the evaluation part. The interviews scripts can be found in Appendix D1.

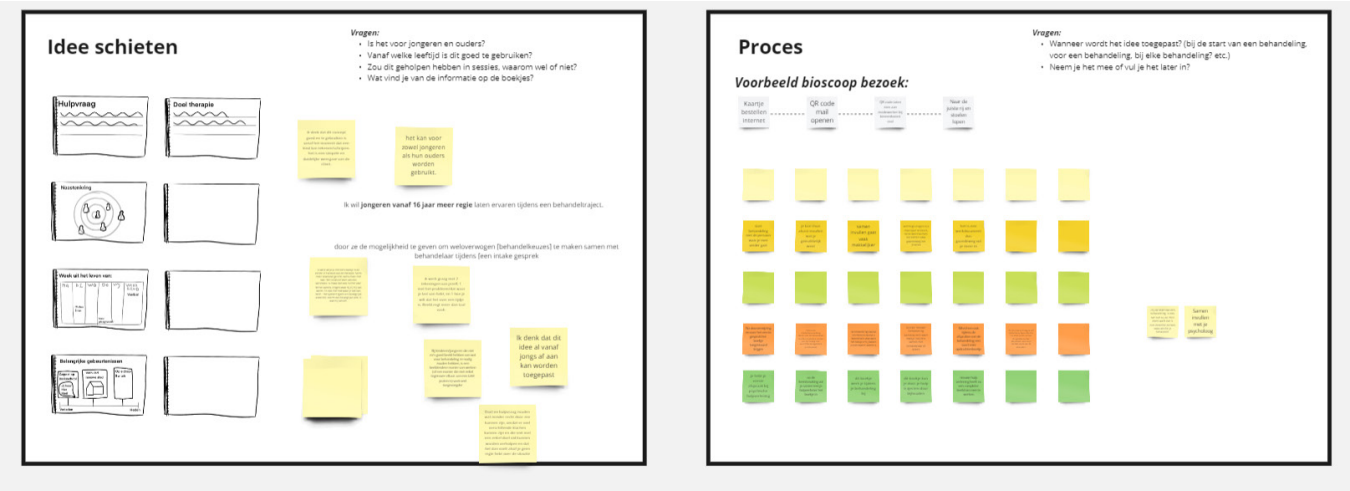


Figure 33: Miro board used in the first generative session

4.2 Exploring the right medium

Physical and digital design

Because the proposed design should match with the youngsters values as much as possible (key takeaway 2), extra consideration is given into a form that fits with youngsters. Both a physical and a digital form have been explored and conceptualized in great detail to find what form resonates most with youngsters.

´Mijn Zorgpad´ booklet

This concept (see figure 34) is based on a combination of existing solutions found in the discover phase.

The booklet consists of 3 parts. To begin with, the youngsters are asked to fill in information about their social circle, their typical week, life events and their family situation. Part 2 is about the youngster's problem ,strength and desired situation. Lastly, the youngster is asked to occasionally fill in feedback about their therapy. The full booklet can be found in Appendix C1.

´Mijn Zorgpad´ app

This concept (see figure 35) represents a digital version of the first concept. The content is the same, with some additionalities. A timeline has been added as can be seen on the top left screen. This timeline shows the steps the youngsters have to take (e.g Filling in background information, intake, treatment and filling in the evaluation)
Furthermore, introduction screens are shown before filling in each step. The steps have been

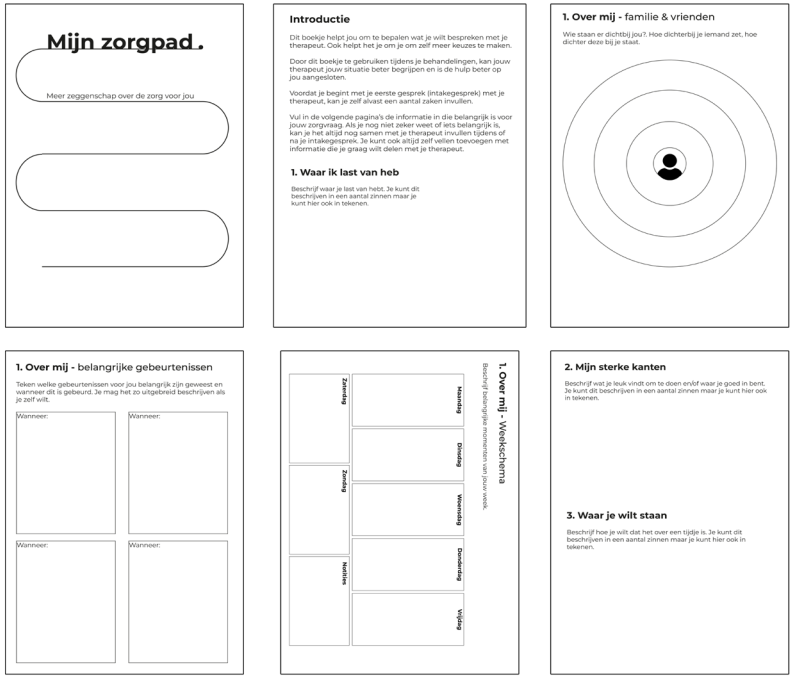


Figure 34: Mijn Zorgpad booklet concept

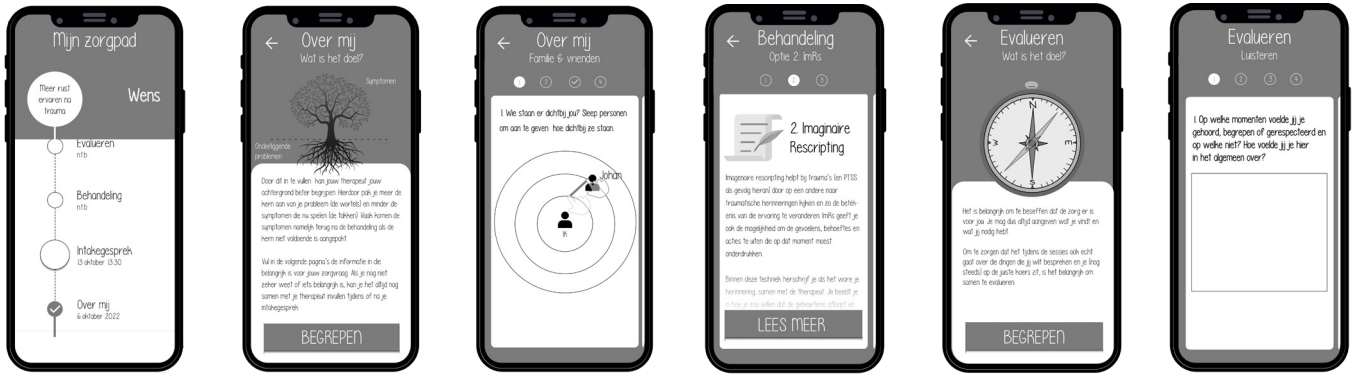


Figure 35: Mijn Zorgpad app concept

Research activity

4.2.1 Concept evaluation

By means of street interviews

Goal
To answer the research question:

- which concept direction resonates most with youngsters and why?

Method
Nine youngsters were approached on the street and interviewed for a maximum of five minutes.

First, a short storyboard was shown that described the user journey of the version to explain the idea. Accordingly, a physical prototype of the paper prototype was shown to ask them what version they preferred and why. The full test plan can be found in appendix D1

Results
Five out of nine youngsters preferred an app while the other four preferred a booklet.

The main reasons for choosing an app are:

- It's truly private, it can't be read when it's left on your desk like a booklet.
- Typing is easier and faster than writing things down.
- It's always there with you and can't be as easily lost. On top of that, it cannot be so easily forgotten to bring along during treatment as a booklet.
- In an app it's possible to get reminders to do certain exercises unlike a booklet.
- In an app it's possible for the therapist to be updated about progress in-between sessions.

The main reasons for choosing an booklet are:

- A booklet allows one to draw certain ideas or emotions which makes it easier to properly reflect.
- A booklet is more tangible than an app, which makes it feel closer to you.
- A booklet allows for more tailored content, which makes it feel more personal.
- Healthcare apps can have low app adherence. The Parnassia group is the biggest health-care provider in the Netherlands that treats more than 180.000 clients annually (Parnassia Groep, n.d.). The 3 most popular apps they made have only 5000, 500 and 150 downloads ever since.

Key takeaways

12) The design should be an app that incorporates writing on paper (hybrid version).

Both an app and a booklet provide unique benefits.

There is not an obvious clear winner. Therefore, an app that incorporates writing on papers fulfillls most of the youngsters' needs.

4.3 Shared reflection strategies

Open questions, multiple choice and a Likert scale

Reflecting is key for making the youngsters wants and needs more explicit. Furthermore, reflecting helps in tailoring therapy to these specific needs of youngsters. This decreases symptom orientation and makes care more effective. Therefore, extra consideration is given into a strategy that actually works. Three evaluation methods have been explored and conceptualized in great detail: Multiple choice questions, a Likert scale or open questions (see figure 36).

The questions are based on the OSR and SRS as described in the explore context and are divided into the three categories 'Afgelegde weg' (journey until now), 'blik op de horizon' (view on the horizon) and 'nieuwe koers' (new direction) according to figure 37.

Figure 37: Category questions

Accordingly, semi-structured interviews have been conducted with five youngsters and two therapists to find out the most fitting evaluation method and most fitting questions to ask.

Multiple choice
Option 1

Likert scale
Option 2

Open questions
Option 3

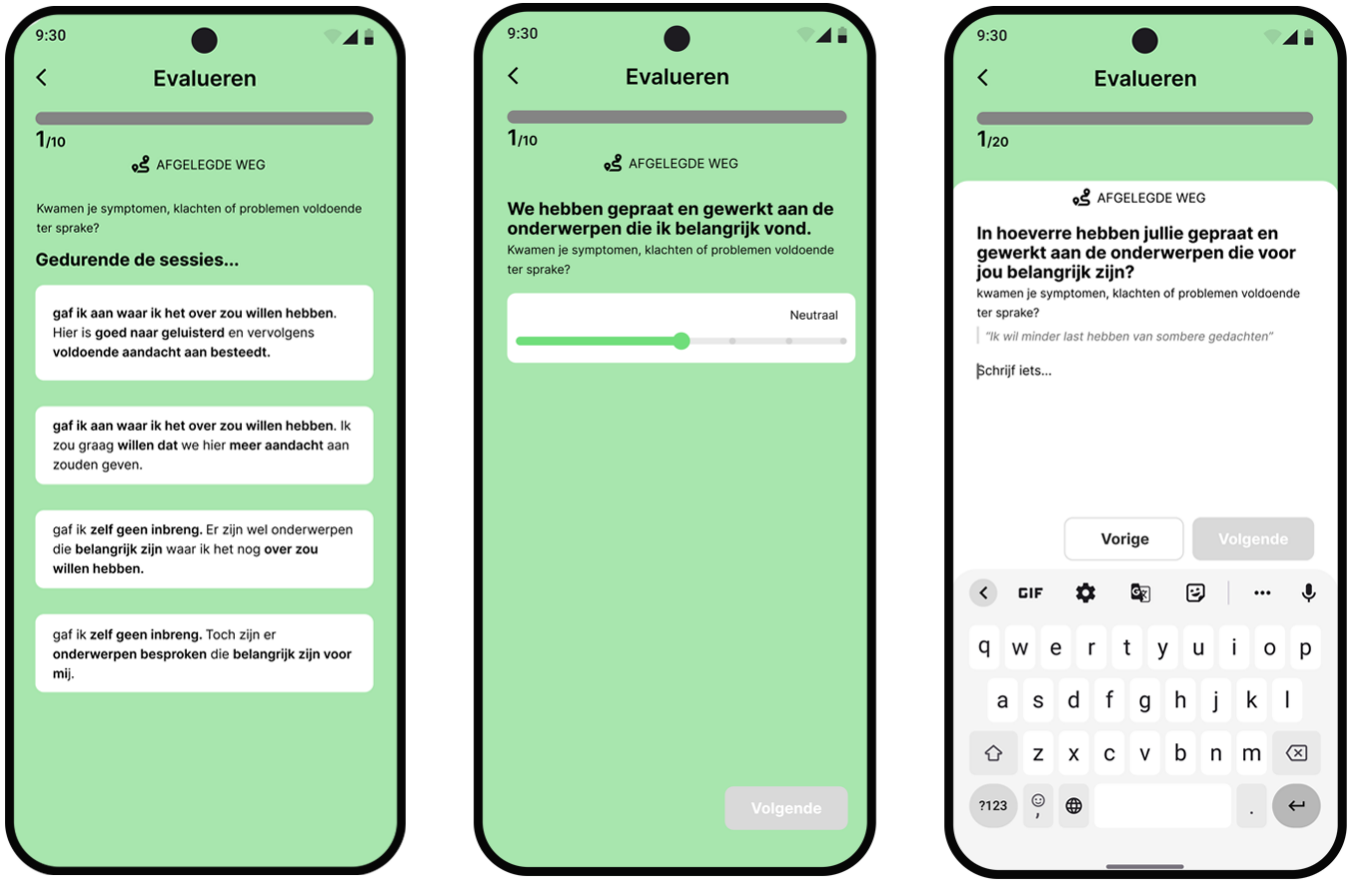


Figure 36: Thee Reflection methods: multiple choice, a Likert scale, and open questions

Research activity

4.3.1 Shared reflection evaluation

By means of semi-structured interviews

Goal
The concept evaluation consisted of two parts. The first part aimed to answer the research questions:

- Which reflection methods lowers the threshold the most for youngsters to give honest yet critical feedback?

Which reflection methods allow therapists to gain sufficient insight to properly assess the treatment success in the least amount of time?

The second part aimed to answer the research question:

- What do therapists and youngsters think of the evaluation questions and categories?

Method
Semi-structured interviews have been conducted with five youngsters and two therapists via Zoom. The interviews consisted of two parts and lasted about 30 minutes. The full test plan can be found in appendix D2

Results youngsters
The results of the evaluation have been rather mixed. Two youngsters preferred multiple choice for giving critical constructive feedback. Two youngsters preferred multiple choice and one youngsters preferred a Likert scale.

When looking into the needs that lead to this preference, there are commonalities.
Each youngster faces a tension between two needs: Being able to give personal/tailored answers and the need for safety. Each screen has a different ratio of these conflicting needs (see figure 38)

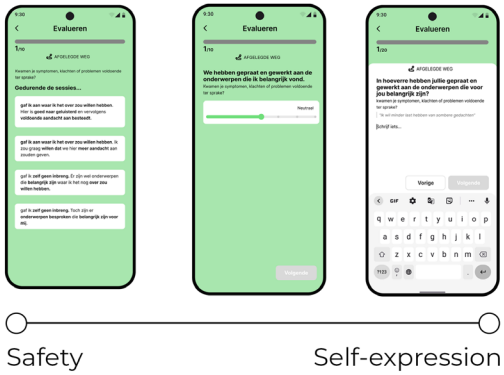


Figure 38: Tension between the two design needs

The youngsters that preferred multiple choice found it too confronting to give critical feedback in their own words. However, the need for more tailored answers still exists.

> "With multiple choice questions, I don't have to type feedback myself. In that way, it doesn't feel like I'm being rude. it's an already indicated option, so it's a valid response."
> *Marloes (23)*

The youngsters that preferred the open questions, didn't feel this tension. They felt more safe expressing their opinion towards the therapist. However, four out of five youngsters found it too time consuming to answer all questions in open form.

Censoring the youngsters' answers was not an option, even though this could solve the conflicting needs. All youngsters wanted the therapist to read their feedback at least sometimes and all therapists have a need to be able to read the youngster's feedback. This helps therapists to know what topics need attention in the evaluation session.

<u>Questions and categories</u>
Three youngsters understood what was meant with the categories and two youngsters needed further explanation to understand the categories. Especially the difference between 'nieuwe koers' and 'blik op de horizon' was unclear. Furthermore, one youngster stated that 'nieuwe

koers' is suggestive. After all, the course could also stay the same. Another youngster found the word to be a bit outdated.

Four youngsters found the amount of questions (10) to be comprehensive enough, yet doable within a reasonable amount of time. One youngster found that the questions were asked in an overly formal and dry manner. Further, he found that there were too many questions and that some of them were too difficult to answer correctly.

> "If the main goal is: 'did the sessions have a negative, positive or no impact', then you only need a maximum of three or four questions for that."
> *Bart (24)*

Results therapist
Both therapists preferred the Likert scale. It allows for quick evaluation of topics that need additional attention. They state that further discussion about the exact topic can then take place during the physical evaluation session.

> "A Likert scale allows you to quickly see whether someone is satisfied or not. You can use that as a basis for the evaluation conversation. Otherwise you have to read through all those options and you often don't have time for that at all."
> *Manon (61)*

> "In my experience, if people have to quickly answer for reflection, it's most often also a good answer."
> *Anette (63)*

<u>Questions and categories</u>
One therapist found the questions to be very comprehensive.

> "Evaluating is a way for youngsters to get to talk. So it's better for the questions to be a bit too elaborate than to miss something. You shouldn't as a practitioner start looking strict like 'it strikes me that you don't really have much to say on question 5'".
> *Manon (61)*

However, she found the categories ('afgelegde weg', 'blik op de horizon' and 'nieuwe koers') a bit unclear. She would change it to 'terugkijken' (looking back), 'waar staan we nu' (where we are now'), and 'vooruitkijken' (looking forward) respectively .

Another therapist found that some questions were so obvious that they could be left out. Other questions were altered according to fit the youngsters mental model better. However, she liked the names of the categories.

> "'Blik op de horizon', you understand that right away. Connecting through language is a way to make contact with a youngster as well."
> *Anette (63)*

Key takeaways

13) The reflection method should incorporate different elements to account for both the need of safety and self-expression.

Different option attracts a different kind of youngsters as some prefer a need for safety over self-expression and vice versa. Again, a combination can be a solution. However, limited time by therapist should be kept in mind.

Furthermore, the questions need to be refined to fit the language of youngsters more and be more essentialized.

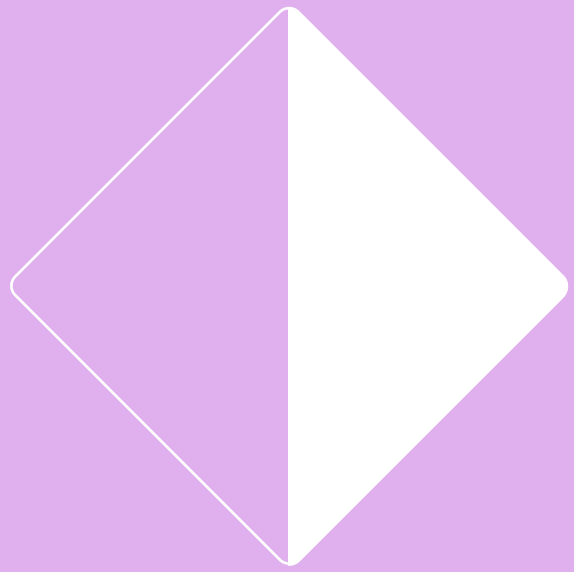
Lastly, the categories are not exactly in line with the mental model of all participants and should therefore be made more straightforward. However, they shouldn't lose their metaphorical aspect.

Chapter 5

Deliver

All design activities have been explained and design metrics have been formulated.

This chapter presents the final prototype, the evaluation of the final prototype, last design iterations, and a plan for successful implementation of the design in the real world. The performance indicator of the design is the extent to which the design metrics are met.



RESEARCH PHASE

5.1 Final prototype: Mijn Hulplijn

Prototype of the 'Mijn Hulplijn' app

The final design is the 'Mijn Hulplijn' App that incorporates all the design criteria. The old name 'Mijn Zorgpad' has been changed because it's sounds too medical. On top of that, 'Mijn Hulplijn' offers a better representation of the meaning of the app: Offering guidance (a figurative 'helpline') and showing the steps of help (a literal 'helpline').

Key elements of the app are explained by showing the most important screens. The full prototype can be found in appendix E1.

Key elements

The 'Mijn Hulplijn app' gives youngsters more self-direction and makes care more effective in the following ways:

Home screen

The homescreen (see figure 39) guides youngsters throughout their care journey. The upcoming meeting is displayed in more detail to provide the youngster with all the relevant information about the meeting.

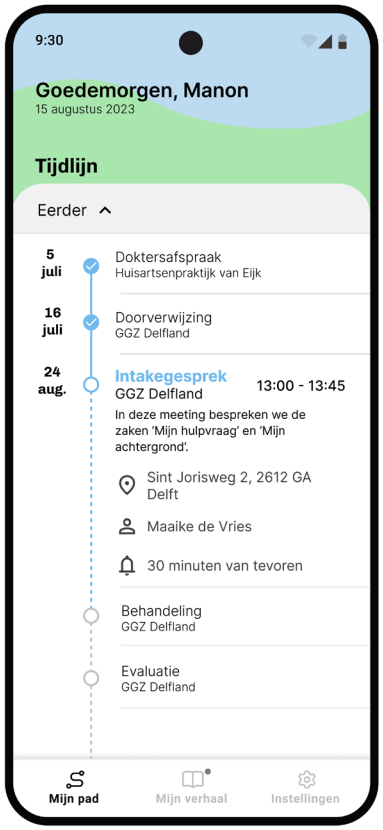


Figure 39: Home sceen

'Mijn Hulpvraag' (my request for help) screens

The 'Mijn Hulpvraag' module (see figure 40) helps youngsters to formulate their request for help, build on their strengths, and clearly envisions their desired situation.

Figure 40: 'Mijn Hulpvraag' module screen

‘Mijn Achtergrond’ (my background) screens
The ‘Mijn Achtergrond’ module (see figure 41) helps therapists to learn more about the youngsters background to find out the link with mental problems. It contains the youngsters social circle, week schedule, key events and family setup.

Figure 41: ‘Mijn Achtergrond’ module screen

‘Mijn Therapieën’ (my therapies) screens
The ‘Mijn Therapieën’ module (see figure 42) gives youngsters tailored suggestions for therapies and shows the therapies the youngsters has (had). This helps the youngster to reflect on their needs and wants.

Figure 42: ‘Mijn Therapieën’ module screen

‘Mijn Evaluatie’ (my evaluation) screens
The ‘Mijn Evaluatie’ module (see figure 43) helps youngsters to give the feedback they currently find so hard to communicate. The evaluation consists of eight questions with a Likert scale and a text input to fulfill both the need for safety and self-expression.

Figure 43: ‘Mijn Evaluatie’ module screen

The interaction qualities are translated into the design in the following way:

Considerate - to make a tailored choice
The design quality 'considerate' is taken into account in the following ways:

The modules 'Mijn Achtergrond' and 'Mijn Hulpvraag' take the youngsters' perspective and history into consideration before a treatment plan is made (see figure 44). The module 'Mijn Evaluatie' takes the youngsters feedback into consideration when further treatment decisions are being made.

Suggestive - to feel guided
The design quality 'suggestive' is taken into account in the following ways:

The module 'Mijn Therapieën' gives suggestions about therapies and shows alternatives (see figure 45) to guide youngsters in their therapy. Furthermore, each question contains a sub-question and an example to guide youngsters.

Figure 44: 'Considerate' is reflected by taking the youngsters perspective into account

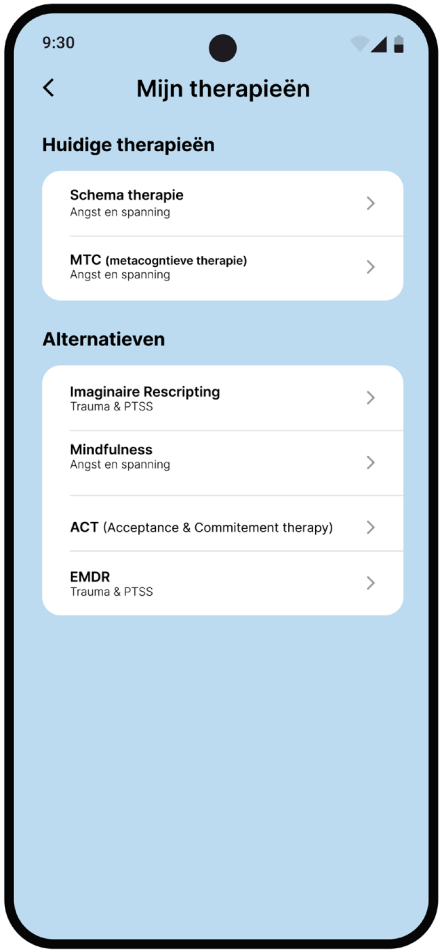


Figure 45: 'Suggestive is reflected by suggestions about alternative therapies

Straightforward - To make decisions yourself
The in-app notifications (see figure 46) and push-notifications make it straightforward that input by the youngsters is required and that their input matters. The care path on the homepage makes the steps in therapy straightforward and what will be discussed. Lastly, the evaluation makes it straightforward that the youngsters feedback is included in the therapy.

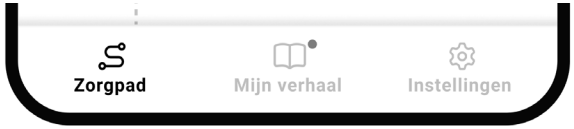


Figure 46: 'Straightforward' is reflected by an in-app notification of new required tasks

Flexible - To not be steered too much by the therapist.
The module 'Mijn Evaluatie" shows that the youngsters' feedback is integrated into therapy during the therapy. Furthermore, the module 'Mijn Therapieën' shows multiple suggestions of alternative therapies.

Both modules show that the therapy is flexible and will be adjusted to the youngsters' need.

Language
All information and questions for that matter are written in language level B1. This level is understandable for most citizens of the Netherlands and is even the preferable level of professionals and higher educated people as it reads easier and faster, especially on (smartphone) screens. (Ministerie van Algemene Zaken, 2023)

Furthermore, the use of language has been adapted to fit with youngsters as much as possible. Old-fashioned or clinic language has been changed to more contemporary and accessible language.

Design Criteria
How the design takes the design criteria into account is discussed in chapter 5.2 Design evaluation.

5.1.1 Navigation Flow

Navigation flow of the most important screens

Figure 47 shows a navigation flow of the app. Not all screens are included in the app, because of its comprehensiveness. All screens can be found in appendix E1.

Drawing all the connections of the 'Zorgpad'-, 'Mijn verhaal'- and 'Settings screen' adds a lot of clutter to the figure. Also, the navigation by means of a navigation bar is rather obvious. Therefore, the connections between these screens are not included in the figure.

The module Sub-step screens (see figure 47) exists to give the youngsters a small sense of accomplishment, makes it feel less overwhelming to answer all the questions, and reduces cognitive load as is aligned with the cognitive load theory: presenting information in smaller, digestible chunks, helps users better process and retain information. (Paas & Sweller, 2014)

The module Review screen helps with giving an overview of the answered questions for last minute changes and makes up for slips (unconscious errors caused by inattention) according to Nielsen's (2005) globally recognized general principles for interaction design.

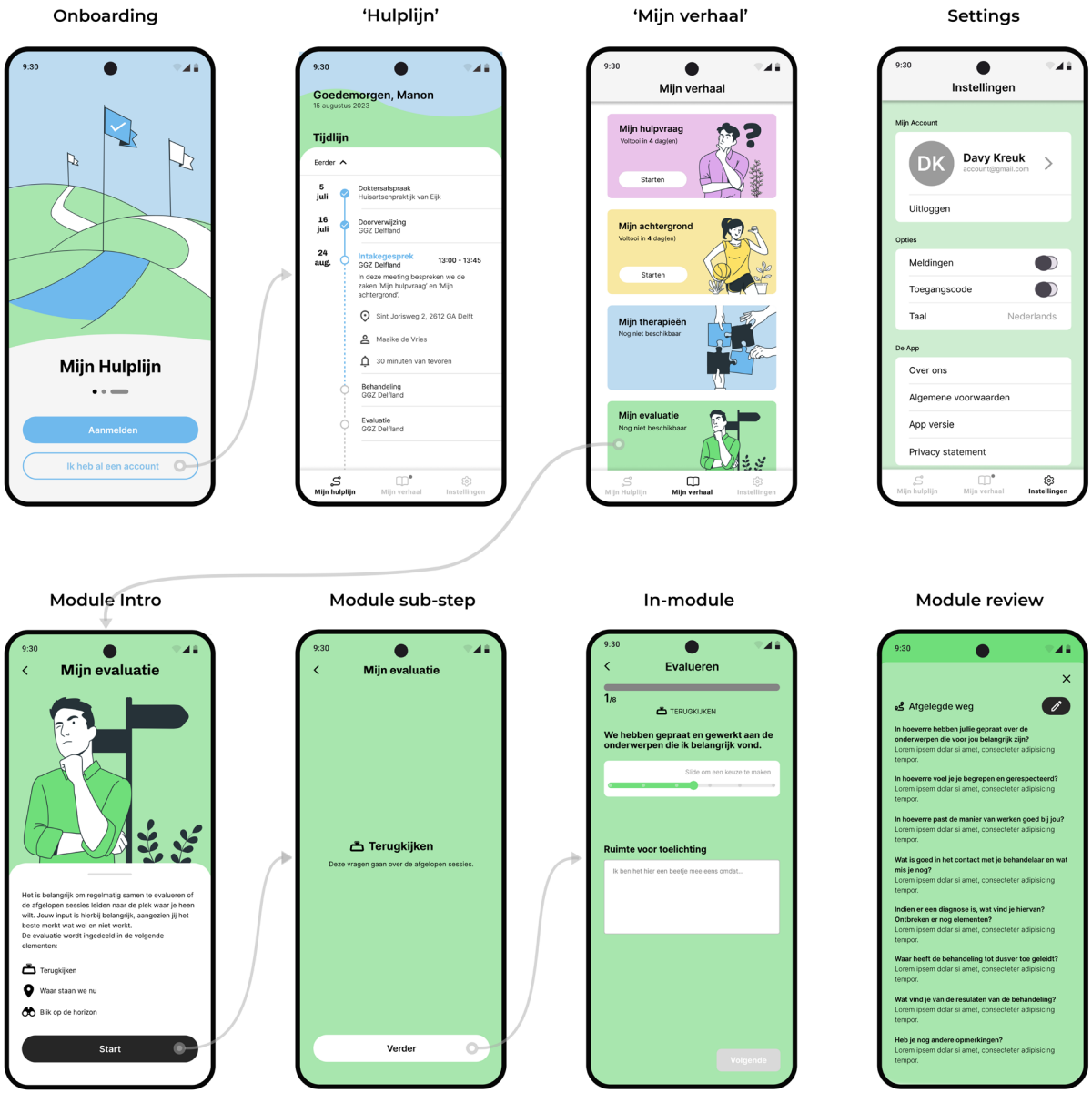
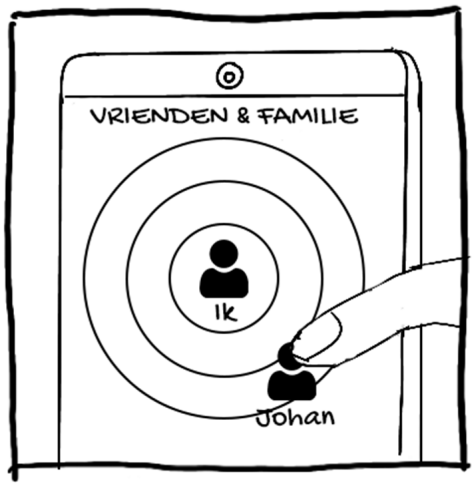


Figure 47: Navigation flow of the 'Mijn Hulplijn' app

5.1.2 Using the 'Mijn Hulplijn' app in therapy

User journey

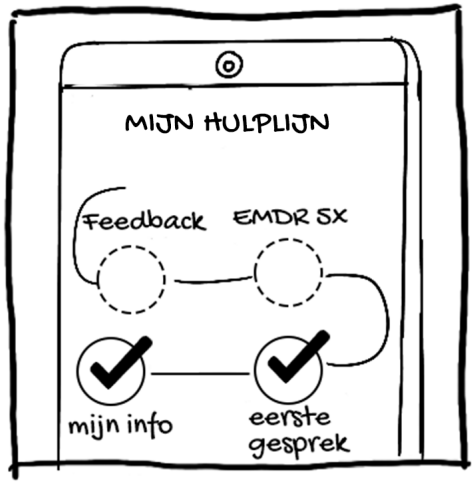
Tim is sent a code from his healthcare provider to log into his care app



He fills out some info about himself at home before he begins

Tim then discusses his completed information and request for help with his psychologist and they make a plan

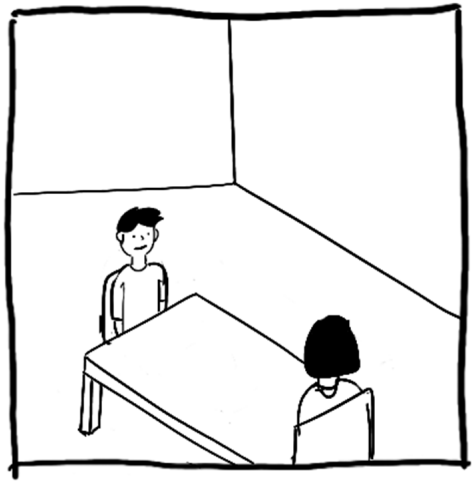
The methods suggested by his psychologist appear in the app.



His care path is updated, after he made a decision with his psychologist.

After the agreed number of sessions, Tim receives a reminder to provide feedback via the app.

Before the actual session takes place, the therapist quickly scans trough the topics that need attention.



They then discuss the feedback and make adjustments as needed.

Figure 48: User journey of the 'Mijn Hulplijn' app

5.1.3 Visual Identity

Visual Asset style of the 'Mijn Hulplijn' app

The Visual identity of the app is designed to speak to youngsters (see figure 49). Keywords are fresh, minimalistic, friendly and transparent.

The background colors have sufficient contrast with black letters, but are still saturated enough to be interpreted as fresh instead of dull.

Open
The illustration style is open to attract to the youngsters' value 'transparent' and to encourage youngsters to be open as well.

Friendly
Shapes are rounded and colors are saturated and fresh to come across as friendly and attract youngsters to use to app

Minimalistic
The content and illustration style of the app is minimalistic to reduce the mental load of youngsters when using the app. This is done by leaving out details and (own) shadows in the illustrations,

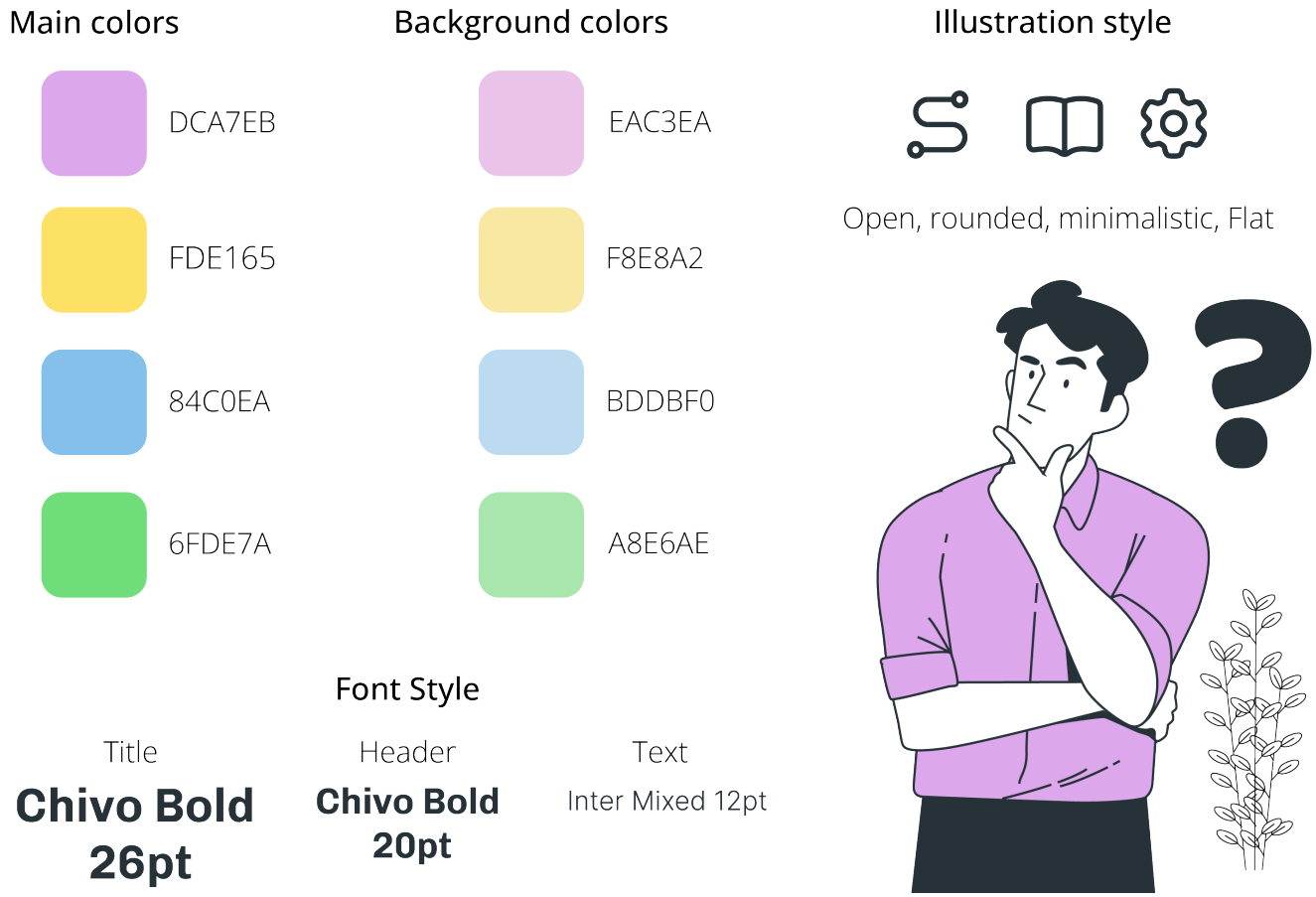


Figure 49: Visual identity of the 'Mijn Hulplijn' app

Color Psychology
According to conventional color psychology (Lischer n.d):

EAC3EA

Figure 50: Purple background color used in the 'Mijn Hulpvraag' module.

Purple (see figure 48) stands for wisdom, spirituality, and sophistication. This color is used at the 'Mijn Hulpvraag' modules and stimulates making a sophisticated request for help.

F8E8A2

Figure 51: Yellow background color used in the 'Mijn Achtergrond' module.

Yellow (see figure 49) stands for creativity, warmth, and optimism. This color is used at the 'Mijn Achtergrond' module and stimulates the use of drawing and other creative forms of self-expression about oneself.

BDDBF0

Figure 52: Blue background color used in the 'Mijn Therapieën' module.

Blue (see figure 50) stands for trust, loyalty, and logic. The color is used at the 'Mijn Therapieën' to make youngsters trust the suggestions the app gives for therapy alternatives more.

A8E6AE

Figure 53: Turquiose background color used in the 'Mijn Evaluatie' module.

Green/turquoise (see figure 51) stands for communication, clarity and calmness. This color is used at the 'Mijn evalutie" module to stimulate youngsters to reflect and give honest feedback.

Research activity

5.2 Design evaluation

Testing the design's desirability, feasibility and viability

Goal
To answer the reason question:

- To what extent is the design feasible, viable and desirable?
- To what extent is the user able to complete tasks in the app? (usability)

Method
Desk research has been performed to estimate development costs of the apps by looking at functionality and similar apps. Furthermore an app cost calculator has been used.

Semi-structured interviews with five youngsters and three therapists have been conducted to find out more about desirability of the design. First the problem statement was given to the participants, then the participants were shown the app prototype and role-playing was performed to complete all the steps in the user-journey as either a therapist or a youngster. Lastly, the participants were asked to elaborate to what extent the design would meet each individual design criteria. The full evaluation plan can be found in Appendix F.

Figure 54 shows the three criteria that the design needs to fulfilll. The design has to be wanted by therapists, youngsters and other stakeholders (Desirable), makable within the available resources (Feasible), and preferably generate money or at least break even (Viable).

Feasibility & viability
The healthcare app costs are dependent on its functionalities. The main functionalities of the healthcare app are a well-secured user-authentication (probably two step authentication). According to Makhov (n.d), the development costs of such an app are between €35.000 and €70.000. A price calculator of the specific functionalities of the app estimates the app to cost €44.420 (Gratis prijs calculator, n.d). Note that this are the costs for the full app, not of the minimum viable product (MVP). the costs of the MVP will be between €8.000 and €17.000 (Makhov, n.d). Both costs are obviously insignificant to the millions of euros the Ministry of VWS grants for Dutch youth care. Furthermore, the development costs are disproportionate to the costs that can be saved when therapy is shorter for only a fraction of the annual 450.000 youngsters that make use of youth care (Centraal Bureau voor de Statistiek, 2023)

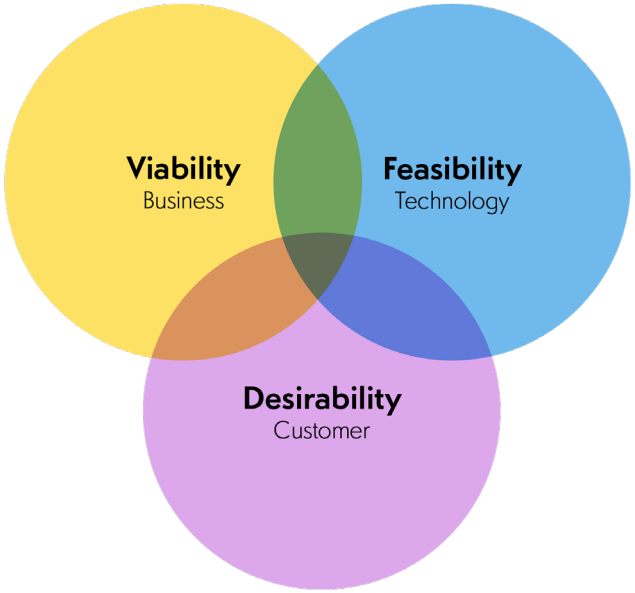


Figure 54: Viability, feasibility and desirability diagram

Desirability
Deploying the app in actual therapy can best reveal to what extent youngsters are empowered to have more say in decision making and symptom-treatment is tackled. In this evaluation, the actual context has been simulated by means of role-play by therapists and youngsters that have thorough experience with therapy.

5.2.1 Desirability evaluation

Testing the design's desirability

The desirability evaluation is based on the following design metrics. The scores are:

Requirements

- ✓ Give youngsters more say in decision making as well as making them aware of their wants and needs. In this way, the youngsters end up in field four of the decision making matrix.
- ✓ Contribute to the therapist looking more at background factors.
- ✓ Reduce symptom treatment and wrong diagnoses.
- ✗ Contribute to youngsters doing their exercises.

Wishes

- ✓ Motivate youngsters to take responsibility over their care.
- ✓ Improve the therapist and youngster relationship.
- ☐ Improve communication between professionals for better referrals and treatment.
- ✓ Be as time efficient as possible for both youngsters and therapists.
- ✓ Fit with the youngsters' and therapists mental model as much as possible (offline vs. online).
- ✓ Fit with the youngsters values as much as possible: inclusive, sustainable and transparent.
- ☐ Do not feel like another way of having to 'perform' for youngsters.

Legenda

- ✓ Convincingly met
- ✓ Possibly met
- ✗ not sufficiently met
- ☐ Out of scope of evaluation

Results
The app contributes most to better reflecting on the youngsters background, needs and wants and actually giving feedback to the therapist. This makes them more active in solving their own problems and being better prepared at meetings. This was mentioned by five out of six youngsters and both therapists.

> "It makes youngsters very active in their own issues. The youngster formulates his own request for help and starts coming up with things himself. Then you have the therapist as a know-how."
> *Bob (64)*

The same participants also mentioned that this goes hand in hand with the fact that the app improves the connection with the therapist and youngster. However, three youngsters also mentioned that the role of the therapist is still leading in the connection. After all, the connection is still dependent on the reaction of the therapist to the youngsters input. For one youngster, the app wouldn't work as she found it too difficult to give honest answers and lacked guidance to fill in her request for help (among others) on her own.

Furthermore, it was mentioned by both therapists that the app would not have a direct effect on symptom-treatment as youngsters tend to focus on symptoms themselves. Finding underlying problems takes time and requires a good connection with youngsters. In other words, symptom treatment might be indirectly tackled as the app does improve the connection and stimulates giving feedback.

> "It is not a diagnostic tool, but the good thing is that you increase the contact between the therapist and the patient. Youngsters can feel more involved"
> *Bob (64)*

Three youngsters and one therapist claimed that filling in the app (and taking responsibility) requires intrinsic motivation that some youngsters lack. The importance of filling in the app is not that clear from the start. However, the therapist claimed that the app would also be a good indicator of the youngsters motivation. In this way, she could confront youngsters with their actual motivation when the exercises in the app are not made.

> "I wonder if people are really going to fill in that background information. I don't immediately see how this would help my therapist"
> *Casper (22)*

Lastly, two youngsters claimed that an overview of their healthcare journey and having all information and exercise in one place is the biggest added value of the app.

Conclusion

According to the evaluation, the app is able to empower youngsters to better reflect on their needs and wants regarding therapy. Furthermore, the app allows youngsters to actually give feedback to their therapist by lowering the threshold. Both phenomenons empower youngsters in decision making and therefore taking self-direction.

However, the app is currently prone to not being completed as the goal is not clear enough for all youngsters. This is especially the case when youngsters lack intrinsic motivation towards therapy and when youngsters need a lot of guidance from their therapist to uncover their wants and needs.

The app is also not a tool to tackle symptom-treatment as finding underlying problems is an long process that requires extensive experience from therapists and a good relationship with the youngsters. The strength of the app does lie in improving the youngsters and therapist. In short, therapies effectiveness is still significantly improved as the therapist/ youngster fit is key in therapy success.

5.2.2 Usability Evaluation

Testing the design's usability

Results
The following usability problems were found in the tasks that the participants needed to perform:

1) Finding the modules to be prepared for the upcoming intake conversation.
Four out of six youngsters immediately went to the 'Mijn verhaal' page because of the in-app notification icon. However, one youngster stated that the link with this icon was not clear enough about the fact that modules needed to be done for the upcoming intake conversation. Another participant even claimed that in another healthcare app, she did not do the exercises, because she was not aware of them in the first place. Furthermore, the word 'Intake gesprek' was not understood by one participant.

2) Filling in the modules
Three out of six participants mentioned that there was a lot of text on the introduction page.

When filling in the modules, four participants mentioned that the examples help.

> "The examples help with the expected fidelity in which to answer. Otherwise, I would have no idea in what time span the life events should be and how extensively I should describe them."
> *Marloes (23)*

However, one therapist stated that the request for help question is not specified enough. He mentioned that his colleagues often make requests for help SMART (Specific, measurable, acceptable, realistic, time-based).

Furthermore, two participants found the question: "Hoe je wilt dat het over een tijdje is" to abstract. They lacked guidance to fill in this exercise.

3) Finding and filling in the 'evaluation' exercise
Because the participants had already seen the 'evaluation' exercise in the first task, they were all able to locate it.

Because the evaluation method had already been refined and extensively tested, not a lot of usability problems could be found.

However, two participants stated that they found the question "Ik heb nog steeds dezelfde blik op de horizon" too vague. One participant suggested to then also show the previous desired situation.

Conclusion

Overall, the youngsters were able to perform the tasks quite well. This is probably due to the fact that they are familiar with digital solutions and especially apps on their phone.

However, more can be done to make clear what exercises need to be performed and when. Furthermore, most participants didn't like to read the long text in introduction. That means that youngsters would miss the goal of filling in the module, which is problematic for their motivation.

Furthermore, some questions in the modules can be altered to be more clear and better match the language used by youngsters.

Key Takeaways

Desirability evaluation

13) A more clear call-to-action should be included in the app to make youngsters do their exercises
The added benefit of the exercises “Mijn Hulpvraag” and “Mijn Achtergrond” are not clear enough for youngsters from the start. The app describes that filling doing the exercise is important and why, but this is currently not sufficient.

Usability evaluation

14) It should be more obvious which modules should be done and when
The in-app notification icon is not clear enough of a use-que to start the modules before the intake conversation.

15) Each module contains some questions that should be more specified
For the request for help to be more workable for the therapist, it should be more specified.
This is also true for the desired situation question in the ‘Mijn Hulpvraag module’, the ‘life events’ in the ‘Mijn Achtergrond’ module and the ‘Blik op de horizon’ in ‘Mijn Evaluatie’ Module.

5.3 Iterated design

Design Iterations based on user testing

The insights have led to the following design changes. The fully updated design can be found in appendix E2.

Home page

The new design of the home page (see figure 55), has the word “Kennismakingsgesprek” instead of “intakegesprek. Also, the required exercises are included in the timeline page by means of buttons. The deadline for filling in these exercises is included on the left side of the timeline (see figure 55). This function should serve as a clear call to action for youngsters to complete the modules.

Intro pages

Furthermore, the goal of each module has been made more explicit and given more attention in the intro page of each module as can be seen in figure 56.

Figure 55: Revised home screen with required exercises incorporated into the timeline.

Figure 56: Revised intro pages with clearer hierarchy.

In-module pages
Lastly, unclear questions have been made more explicit and given more context, the button of the camera has been made bigger, and the buttons ‘vorige’ and ‘volgende’ have been placed on the bottom of the screen to fit better with the user flow (see figure 57).

Figure 57: Revised in-module screens with an improved user flow and bigger buttons.

5.4 Implementation plan

Strategy for successful implementation

	Horizon 1 Local Development 2023 - 2024		Horizon 2 Regional Implementation 2024 - 2026		Horizon 3 Impact creation 2026+
Main goals	Learn & Iterate Create Engagement		Launch & Execute Validate findings		Growth
Target segement	One therapist Multiple cases	One care provider Multiple therapists	Multiple Care providers	Multiple Municipalities	Nationwide
Actions	Start pilot with 3 cases from one therapist Create ambassador	Extent pilot with 3 therapists Start collaboration	Implementation with care providers Release app on store	Implementation with municipaltities Iterate on user feedback	Involve Ministery VWS Set up region managers
Measurement	Scores of desirability & usability test		Number of care providers & municipalties reached Current treatment time vs. old treatment time App rating & number of downloads on store		Current treatment time vs. old treatment time
Key components	MVP App Healthcare path Four Modules AVG approved	MVP Therapist Portal Data youngsters Appointments	Fully functional App & Portal Improved UX Chat functionality Exercise implementation		App & Portal Updates Bug fixes

Figure 58: Implementation plan

The implementation plan outlines what steps need to be taken in order to actually make impact and monitor (in-between) progress (see figure 58).

At the basis of the implementation plan is Shoshin's key principle of iterative working. (Shoshin, n.d). This means learning from each step and making design iterations. Figure 58 shows that the plan contains 3 horizons with specific goals, target segments, actions, measurements and key components of the app.

Use a new design if it's recommended by their colleagues. (Shoshin, n.d)

Once an initial pilot has been performed, data about desirability and usability can be collected to iterate on the minimum viable product (MVP) of the app. An MVP contains the minimum functionalities to add value to its users. (Kleczewski, n.d.)

Horizon 1
Horizon 1 focuses on the further local development of the app and the therapist portal.

Specifically, horizon 1 is about performing qualitative research in the form of a pilot. This research aims to iterate the design until it's sufficiently desirable for the stakeholders involved.

Since the pilot is qualitative, impact can not yet be measured well.

The location for a pilot test is based on pre-conditions that Shoshin currently has, rather than arbitrarily selecting a location. The conditions for a suited care organisation/therapist are:

1) Being open to innovation, which could be classified as an early adopter. In this way, they understand that the product is in development and therefore doesn't have the fidelity of a finished product.

2) Understanding of the principles of human-centred design. In this way, they can better reflect to what extent the design fits with therapist, youngsters, and possibly other stakeholders.

3) Willingness to become an ambassador of the product. This means to engage other therapists to start actively using the app and involve them in the development.

These conditions are required to learn and iterate on the app. According to Shoshin, therapists are more likely to actually use a new design if it's recommended by their colleagues. (Shoshin, n.d). This is in line with the system design principle of 'Strengthening human relations to enable creativity and learning.

The initial pilot begins with a single therapist that starts using the design with a couple of clients (see target segments) . Evaluation moments then provide insights about the current desirability and how the desirability can be improved. These improvements are then used to make design iterations. In this way, the pilot is able to continuously provide insights.

Another function of the pilot is to create ambassadors of the product. These ambassadors have ownership over the product and are able to initiate collaboration of the MVP among colleagues and increase engagement.

Once the initial pilot has been performed, data about desirability and usability can be collected to iterate on the minimum viable product (MVP) of the app and create engagement. An MVP contains the minimum functionalities to add value to its users. (team, n.d).

The MVP of the app is iterated until it works well for the therapists and youngsters in the pilots' environment. Then, the pilot can be extended to multiple therapists to make an MVP of the user portal and gain more insights. A concept of the therapist portal can be found in appendix C2.

Horizon 2
Once a functional MVP and therapist portal are created, the next phase is regional implementation. In this horizon, both MVP's are transformed to a fully functional app and therapist portal. This is done by more iteration loops that are the result of implementation of different care providers and municipalities. Once enough therapists and organisations start using the app, it is possible to statistically measure the app's effect on treatment time. This is the first impact output that is measured, which is part of level 3 of the impact measurement (Impact Centre Erasmus,2021). Then, the app can be released at the app store for personal usage of youngsters nationwide. Other measurements are the number of care providers and municipalities that currently make use of the app, and the number of downloads on the app store. In the meanwhile, the user experience is also continuously improved by insights of user tests and ratings and reviews on the app store,.

Horizon 3
This phase is about actual impact creation and measurement. When the app continues to grow, a partner can be found with the help of the VWS that takes over further responsibility as a project manager. In this way, Shoshin can focus on creating and implementing more much-needed innovations to improve youth Mental Healthcare. to further exert control and lower Shoshin's involvement. Their function is to make sure that multiple instances of the same care providers in a region achieve their goals. (Nationale Beroepengids, 2021). Once the app has been spread among a substantial amount of care providers in different regions and municipalities, the actual effects can be measured. Impact is best measured by looking at shorter treatment due to the fact that youngsters feel more heard, can better communicate their wants and needs, have a better connection with their therapist etc.

Although the goal is to decrease waiting times, it is not possible to directly see whether the change in waiting times is due to the design. After all, waiting times are a consequence of many factors in the healthcare system. As an illustration: The design may decrease waiting times by 3 weeks, but a new law increases national waiting times by 5 weeks. The design works perfectly, but overall waiting times have still increased with 2 weeks.

Conclusion

This graduation report aim has been to come up with a design that helps youngsters get more appropriate Mental Healthcare.

Interviews were conducted with GP's, (s) j-GGZ therapists and district team members to find out how the process of getting into care (Meso context) and the decisions by the municipality (Macro context) contribute to ineffective care.

This quantitative study showed that the biggest problems in the youth Mental Healthcare system are under- and over-specialization. In short, over-specialization is spending too much resources to tackle the request for help, whereas under-specialization means spending too little resources to tackle the request for help.

In practice, under-specialization occurs mostly at the CJG, where the therapy mainly tackles superficial symptoms and the diagnosis is either missing or wrong. As a result, youngsters continue to go in and out of care while the actual mental problem is left untreated. Ultimately, this is due to the municipalities' decision of not employing sufficiently specialized therapists.

On the other hand, the same study showed that over-specialization is usually the result of youngsters ending up at the s-jGGZ, while regular jGGZ could have been sufficient as well. However, this can drastically be reduced by more communication between professionals.

Interviews were conducted with youngsters and psychologist to find out more about the interactions in therapy that lead to inappropriate care. This study showed that:

1) Youngsters' needs are often not enough taken into account and youngsters feel unheard.

This is due to the fact that youngsters can be passive when it comes to giving feedback to the therapist and are often unaware of their wants and needs in the first place. On the other hand, therapists rely too much on their own vision of what a youngster needs.

2) Not much is being done to promote the therapist-youngster interaction, even though this is the most important predictor of therapy success.

3) Therapists often misdiagnose.

A study by Ketenbreed Leren showed that a 'gedeelde verklarende analyse' could help with reducing symptom treatment by looking more at the youngsters' background together with their parents. (Spijk-de Jonge et al., 2022).

Accordingly, interviews were conducted with three therapists about looking at youngster's background factors in practice. The qualitative study showed that they only incorporated a couple of elements of this 'gedeelde verklarende analyse' and that they only superficially looked at background factors.

The interviews also showed that reflection is a standard procedure in therapy. Apparently, the current form of reflection does not result in youngsters feeling heard.

The analyses of the different contexts and stakeholders led to a 'Mijn Hulplijn app' that empowers youngsters in decision making during j-GGZ therapy. CJG therapists have been excluded because of the insight that they lack the required knowledge to treat youngsters with more complex mental problems in the first place.

An extensive analysis of the youngsters' needs and the most suited reflection method for both parties was performed. The design has been optimized with the help of a desirability and usability test with youngsters and therapists.

In this way, the app and feedback method has been tailored towards the youngsters and therapists needs. Unlike existing solutions, the app actually promotes giving feedback and more active participation.

The app contains an overview of the youngsters healthcare journey and other relevant information. This includes the youngsters' background factors, treatment methods, care requests and therapy experiences among others.

Lastly, a plan was made that gives Shoshin the tools to implement the 'Mijn Hulplijn' app and measure its actual impact in the meantime.

Discussion

The purpose of this project was to create a design that improves care effectiveness on an individual level and to make an impact on waiting times on a societal level.

A lot of research- and design activities have been performed to ensure the design desirability and effectiveness on an individual level. The study lays a foundation to create impact on the societal level, but a better understanding of the specific problem and opportunities in each region and municipality is vital for actual system change.

More empathy with the system could be created (according to systemic design principle 2) by interviewing a bigger diversity of stakeholders. Specifically, different municipalities and CJG's. The sketched scenario is based on observations of other parties. This has the benefit of uncovering the blind spots of the municipalities and the CJG themselves. On the other hand, the actual situation regarding contracts is probably a bit more nuanced than described in this report. However, the unique problems and opportunities per municipality could not be mapped within the timespan of the graduation project. Still, the frequency and impact of these problems in different municipalities in the Netherlands would have revealed many insights.

A challenge in the project was the huge scope. An extensive analysis has been required to cover enough variety, without losing depth. An overview of the interrelatedness of problems in the complex youth Mental Healthcare system is easily lost.

Furthermore, a limitation of the design is the fact that sensitive data on the app require approval of privacy. The law regarding privacy (AVG) states that personal information can only be incorporated if it can be demonstrated that this is absolutely necessary. (Ministerie van Algemene Zaken, n.d.)

Another weak spot of the design is the youngster's motivation for doing the exercises and taking more self-direction. The pilot will tell to what extent the latest design stimulate youngsters to make the exercises and be pro-active in therapy.

Recommendations

1. Involve municipalities and other policy officers for more engagement.
Verify insights and co-create with municipalities and policy officers to better understand decision making regarding the healthcare system and gain more engagement with regards to implementation of the design. This classical top-down approach could help in speeding up the implementation process as policy making parties exert a large influence on the treating parties (asana, n.d.)

2. Perform research to get AVG approved regarding privacy.
More research needs to be done on the requirements, costs, and effort to get AVG approved. Possibly, some design changes need to be made in order to qualify.

3. Involve and connect referrers and treating parties to get the most out of the design.
An overview of the youngsters' healthcare journey and earlier treatment (methods) has the potential to improve the communication for better referrals and treatment decisions. Involving referrers and treating parties and giving them ownership in further design decisions can help to create more engagement with using the design and a better product fit. This can be classified as the bottom- up approach (asana, n.d.).

Personal reflection

This graduation report has not been a typical one. The subject of youth Mental Healthcare is quite complex and covers elements of a classical design project as well as change science. It has been hard enough already to keep an overview.

However, having had Post-Concussion Syndrome made the task even more complex. This was because of having to quit for an extensive period, not being able to work long enough each day to dive into relevant subjects, and reduced brain capacity and focus.

This is not to say that this is a release from any responsibility. The Micro and Meso analysis was extensive; both in width (covering enough of the problem) and depth (having meaningful and fruitful insights). However, the Macro analysis has been quite superficial. Preferably some policy making parties would have been interviewed as well or even more participants than a single view.

Furthermore, way too much time has been spent on writing the thesis. Lots of visuals have been made and text has been rewritten for several times that had to be removed in the end. This was because of an illogical structure of the report. Because I naturally struggle with keeping an overview, it would have been wise to start with the structure of the report sooner. Specifically, I would recommend to spend as much time on the structure of the report as on the planning of the project. After all, the order in which the research and design activities are performed during the thesis are totally different from the actual structure of the report. I personally think that working on the planning of the graduation project and the structure of the report simultaneously enhances both.

Another learning experience with regards to keeping an overview is taking notes and communication/stakeholder management. Sometimes I lost important information because I did not note this immediately. I think it would have helped me to keep all my notes in a single place; preferably digital as this can not be as easily lost or forgotten as a physical notebook.

With regards to communication/stakeholder management, I could have dived deeper into all the activities that have been performed to include my chair and mentor more in the process. This has also been true for the company bosses. I was lucky to find out that Shoshins' founder liked the design process and outcomes during a presentation late in the process. Otherwise, I would have had a problem. It would have been better to update them more often.

I also think that the fidelity and quality of the design would have improved tremendously if the "Mijn Hulplijn" app would have been tested in the actual context. Currently, the design is too conceptual to be sure about its meaningfulness. While the desirability could be indeed be tested during implementation, I still find it unfortunate that I was not able to perform a (really small) pilot during this graduation assignment.

Overall, I'm still proud of the all the meaningful insights that I have been able to gather despite my limitations. I'm also happy with the relative ease with which I was able to translate insights into fruitful design directions and fitting solutions.

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