Exploring the Needs and Attitudes Regarding a Digital Mental Health Training Module

with Psychology Students: A Co-design Approach

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January 27, 2023

Abstract

This research explored the needs of master students regarding a training module for Digital Mental Health Intervention (DMHI) platform Minddistrict in order to improve the integration of Minddistrict into their future work field. Through the method of co-design, a group session was conducted with five students, who are currently following the Positive Clinical Psychology & Technology master program at the University of Twente. Additionally, a survey was filled in for the demographic information and to give insights in the attitudes of the participants regarding DMHIs in general and regarding Minddistrict specifically. Next to the exploration of the needs and the attitudes, the opinions about the usability of Minddistrict were explored. Additionally, the participants were asked if and how they would use Minddistrict. The collected data was analysed with a thematic analysis. The results revealed 6 themes which each consist of 3-5 subthemes about needs regarding Minddistrict as a platform, attitudes, usability, and needs concerning a training and its format which are hindering or enabling factors of the integration in the health care system. The results indicated the consideration of a wide range of determinants: among others, the need for evidence, need for an integration protocol, need for knowledge about how to meet clients' needs, need for examples, doubts about client's motivation, the necessity of having a place to ask questions, and the need for contact with others using Minddistrict.

Keywords: Digital Mental Health platform, training module, integration, co-design, e-health

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introduction

The current mental health care system is pressured due to increasing costs, shortage of staff and increasing demand. In the Netherlands, 84.187 people are currently on a waiting list for getting treatment and next to that the shortage in staff is still growing (skipr.nl). Part of a solution for this can be a digital mental health intervention (DMHI). Furthermore, DMHIs could provide information, support, and therapy for mental health conditions through an online medium with the aim of treating, alleviating, or managing symptoms (Lehtimaki et. al., 2021). Since these interventions can be provided online, and therefore are more easily accessible to larger groups of clients, therapists and/or psychologists can support more people with less effort (Hollis et al., 2017). Nowadays, DMHIs are often available in healthcare and have a potential in improving efficiency, clinical effectiveness, and personalisation of the treatment that is given (Hollis et al., 2017). Many different forms of DMHIs are developed, for example wearables, mobile apps, and online platforms used by clients during their therapy (Baños et. al., 2022).

Although DMHIs are proven to be effective, they are not used as efficiently as they could be due to several reasons (Berry et al., 2019). Some studies show that users (clients and psychologists) are not motivated to use DMHIs because of privacy concerns, the feeling that it divides society, and the fear that DMHIs will be used to replace face-to-face options (Berry et al., 2019). In a study from Bucci and his colleagues (2019) about using DMHIs for mental health problems, the authors found that especially professionals experienced barriers in using DMHIs. The professional users felt that client users might be more accepting of DMHIs than the professionals themselves since they are younger, more likely to own smartphones, and feel more comfortable using them (Berry et al., 2019). Besides that, professionals expressed

doubts concerning their own skills, familiarity, knowledge, and confidence in using technology and DMHIs in their work and described low expectations their ability to integrate DMHIs within mental health services due to negative past experiences (Berry et al., 2019).

Since the professional users seem to experience greater barriers than client users, this study will focus on students that follow the master program Positive Clinical Psychology and Technology (PCPT) of the University of Twente. Students in this master program are already working with a DMHI called Minddistrict and the majority of these students are striving to become future clinical psychologists. Minddistrict is a Dutch e-health company that was founded in 2008 and has grown into the position of market leader in e-health in the Netherlands (Yin, 2019). More than 200.000 users use the mental health platform, spread over more than eight countries throughout the world. Minddistrict provides an e-health platform with multiple modules, diaries, and questionnaires that help clients with mental health problems. Furthermore, it provides contact between the clients and their therapists throughout a mobile app and the online platform, so that clients can ask questions and their therapists can provide them with answers. Through this platform, therapists can provide their clients with treatment modules regardless of time and space limits and can have contact with colleagues within and between organizations. Minddistrict was developed with the intention that e-health technology will be used more often since it creates benefits for the clients as well as the professionals and to make mental healthcare more efficient (Yin, 2019). However, there is no organization that uses Minddistrict to its full potential yet because of the experienced barriers of psychologists (Yin, 2019). Previous research showed that barriers experienced by psychologists regarding Minddistrict are similar to the barriers experienced in other DMHIs as found in the study of Van Wingen (2016). However, within the more than 200 modules in Minddistrict, none are meant for training the therapists in usage of

Minddistrict in their treatment/treatment plan which could also be a reason for the lack of usage (Yin, 2019).

A solution for the lack of usage can be to involve the user from the beginning of the design process of a training module, using a co-designing approach, also known as experience-based design or co-production. Co-designing is a method used to improve the experiences of patients, carers, and professionals by making them integral to the design process itself (Boyd et al., 2012). The users are involved in the process through capturing their experiences and then working together to understand and improve them (Boyd et al., 2012). Involving users in the design of the training gives the designer information and understanding about their needs and preferences which is likely to lead to increasement in the user engagement and therefore the effectiveness and efficiency of the training design (Bucci et al., 2019). By the use of co-design in this research, the users will be integral in the beginning of the design process of a training and the designer will have information and understanding about their needs regarding the design of this training. This information and understanding can then be used in order to minimize the gap between the actual needs and the needs the designer thinks there are. Methods of the first phases of the co-design approach were used to explore these needs, the later phases and methods of the co-design are not used in this research since this would have added value in answering the research questions.

Training modules are often used nowadays to increase people's knowledge and skills about certain topics. George and colleagues (2014) conducted a study in which they performed a systematic review of the effectiveness of online training modules and found that 29% of the studies showed significantly higher knowledge gains, and 40% of the studies showed significantly greater skill acquisition in comparison to the control condition groups. Another study found that professional users of an online training program experienced online learning as a rich and effective way of learning by significantly improving their knowledge

(Duque et al., 2013). This indicates that a training module could be a solution for the lack of usage of Minddistrict due to the lack of skill, knowledge, and ability. Furthermore, attitudes could also be changed through a training module, since involving users in online programs could reduce technological anxiety and increase technological self-confidence and technological liking (Magen-Nagar & Shonfeld, 2018).

The aim of this study is to explore the needs and attitudes of master students regarding a training module for digital health platform Minddistrict in order to improve the integration of Minddistrict into their future work field. This aim will be fulfilled by looking at the following research questions:

1. What are the attitudes of master students towards using Minddistrict in their future work field?

2. 2. What are the needs and requirements of master students for a training module for Minddistrict?

   A. What information, if any, would master students like to have to facilitate their future use of Minddistrict, and how would they prefer to receive this?

   B. What skills, if any, would master students like to practice to facilitate their future use of Minddistrict, and how would they prefer to practice these?

Methodology

Research design

The research design that is used is co-design with a focus group of PCPT master students. The master psychology students already have experience with the use of Minddistrict in their master program and their preferences and needs in relation to a training module will be explored to help with the integration of Minddistrict in their future work field. The design had two steps, firstly, the recruited participants filled in a survey where they were asked about their demographics, amount of experience with Minddistrict, and their attitude

towards DMHIs in general. The second step consisted of a group session about the needs and preferences for a future training module. This group session consisted of two phases. During the first phase there was a group discussion to explore the needs and preferences regarding a training module. And during the second phase a lo-fi prototype was co-created to explore how these needs and preferences could be incorporated in a future training module.

Participants

Participants were purposively recruited, which means that they were recruited based on the experience they already obtained using Minddistrict and their future work careers. This resulted in a focus group of five students. These students already worked with Minddistrict during an assignment in their master program in which they got familiar with the usage and modules in Minddistrict. They got familiar with Minddistrict during the master program through two assignment. First, they did a heuristic evaluation in order to assess potential usability problems. Second, they did a role play with fellow students in which they introduced and used Minddistrict. In this roleplay the students had to give therapy via Minddistrict to a fellow student over a period of five weeks. The age of the participants ranged from 22 to 33 (M= 26,2). The majority of the participants were female (N=4; 80%) and one (20%) of the participants was male. All participants indicated they are Positive Clinical Psychology & Technology master students at The University of Twente. The largest represented nationality was German (N=3; 60%). All participants indicated that they had experience with Minddistrict ranging from 2-8 hours (M=4,6) and all participants indicated that they think they will work as a therapist/psychologist in the future, which indicates that they are all likely to be providing some form of treatment or therapy to clients in the future.

Materials

The survey that was used during the first phase of the data collection was made available by the online survey platform Qualtrics. Before filling in the survey the participants

signed an informed consent (see Appendix A). The survey (see Appendix A) included demographic questions (e.g., nationality, age, and gender), their expected future job, and questions explore their attitude towards DMHIs and Minddistrict. An example of the questions about their attitude is "I think Minddistrict or digital mental health interventions in general can be helpful in treating clients". "I think Minddistrict or digital mental health interventions in general are a worthwhile addition in treating clients" is another example of a question for testing the attitude. The survey contained eleven questions and took approximately 5-10 minutes to complete. The group session that was conducted afterward, was recorded with an audio recording system so that it later could be transcribed in the research using Amber script. The participants used post-it notes and pencils that were provided by the DesignLab of The University of Twente. During the group session multiple questions which are stated in the group session guidelines (see Appendix B) were asked to lead the discussion, for example: "Imagine you are a psychologist working with a client. Would you use Minddistrict in the treatment of this client?" (see Appendix B). Some questions in the guidelines were purposely closed questions so the participants were triggered to make a decision instead of giving an unclear answer. In the second phase the participants wrote down their opinions and ideas on post-its and discussed these with the participant sitting next to them. After this, they explained what they wrote down in the group and sticked there post-its on the table. Lastly, the whole group and the researcher ordered and clustered the different post-its. This form of brainstorming and lo-fi prototyping energizes the participants and therefore can create a great number of ideas (Designkit.org) After the group session, the audio recording was transcribed after the group session using Amber script software.

Procedure

First, a survey was sent to the students participating in the study a few days before the group session. Second, the participants were invited to the group session which was held in a room of the Designlab of The University of Twente. This group session took 50 minutes and was audio recorded. In the first phase the moderator, which is the researcher in this study, guided the group through a group discussion, about the preferences and needs regarding a training module for using Minddistrict in their future work. This group discussion aimed to create insights and understanding about what the participant's still need in order to feel comfortable using Minddistrict. Next to that, the participants were asked to discuss in what form they would like to learn this, for example through videos. In the second phase there was a creative session with the participants. They were asked to take the perspective of a designer of a training module which could be used to help professionals in the integration of Minddistrict in their work. They were also asked what they would like and want to see in this training module regarding the content and looks. In this second phase the participants wrote down their ideas on post-its and discussed their ideas with fellow participants. After this the participants put their post-it's on the big whiteboard while explaining their ideas to the researcher and the rest of the participants. The gathered post-its can be seen in Figure 1. Collection and clustering of post-its

Figure 1

Collection of Post-Its

Data analysis

To further process the collected data a thematic analysis was conducted. Thematic analysis is a method that can be used for identifying, analysing, and reporting patterns/themes within data (Braun & Clarke, 2006). Firstly, the audio recording was transcribed. After transcribing, codes were generated that later were used to search for themes in the data. The themes can be broader than the codes and therefore relationships between codes/themes and different levels within themes were analysed. Next, the themes were reviewed on if they are clear enough, consist of enough data, and if there are themes that should be split into separate themes. Next, the themes that were found were defined and named. Lastly the report was produced, and the themes were used to interpret the data and discover patterns that can be used for drawing conclusions and answering the research questions.

<h1 align="center">Results</h1>

Survey

In the survey, participants' attitudes towards the usage of Minddistrict or a similar DMHI were collected. Table 1 provides an overview of the results of the survey. Participants 1, 2, and 3 answered that they were somewhat likely or extremely likely to use a DMHI or Minddistrict in their future work, which indicates a positive attitude. Participant 4 answered that they were somewhat unlikely or neither likely nor unlikely to use these, which indicates a negative/neutral attitude. Participant 5 answered that they were somewhat likely or neither likely nor unlikely to use these, which indicates a positive/neutral attitude. All the participants answered that they are currently student in the PCPT master program. Additionally, all participants answered that they expect to work as a therapist/psychologist in the future.

Table 1

Overview of Survey Results

Participant	Gender	Age	Nationality	Amount of usage Minddistrict (in hours)	Attitude
1	Female	22	German	6-8	Positive
2	Female	23	Dutch	8	Positive
3	Female	22	German	2	Positive
4	Female	33	Asian	2	Negative/neutral
5	Male	31	German	4	Positive/neutral

Thematic analysis

During the thematic analysis six themes with several subthemes were found, which are displayed in Table 2. Overview of themes with subthemes and definition, frequency of quotes, and percentage of participants mentioning the theme. The *n* indicates the number of quotes that are found in the specific theme and the % indicates the percentage of participants who talked about this theme.

Table 2

Overview of Themes with Subthemes and Definition, Number of Quotes, and Percentage of Participants mentioning the Theme

Theme	Theme definition	Subthemes	n	%
Usability Minddistrict	This theme includes statements about the degree to which the participants find	- Usability Minddistrict considering looks - Usability Minddistrict in treatment	12	100

	Minddistrict able or fit to be used in treatment.	- Usability Minddistrict considering content - Skills for using Minddistrict		
Barriers to use	This Theme includes reasons why the participants would not use Minddistrict in their future work.	- Client's motivation - Uncomfortable using Minddistrict - Time consuming to use Minddistrict	10	100
Requirement/need for use	This theme includes the requirements and needs the participants expressed to use Minddistrict in their future work field.	- Need for evidence - Need for an integration protocol - Client's health	18	100
Attitude	This theme addresses the attitude of the participants in regard of Minddistrict in general and a possible future training/training module.	- Positive attitude - Negative attitude - Attitude towards training	7	60

Preference for training format	This theme is about the preference the participants expressed considering the format of a future training for Minddistrict	- Need for in person meeting - Need for a place to find written information - Need for opportunity to ask questions - Need for contact with others using Minddistrict - Need for contact with experts	13	100
Requirement for training	This theme includes the statements of the participants in regard of their requirements for a future training for Minddistrict	- Need for evidence - Need for knowledge about integration - Need for examples - Need for knowledge about how to meet clients' needs	17	100

Usability Minddistrict

The theme *Usability Minddistrict* addresses the expressions participants had considering the degree to which they find Minddistrict able or fit to be used in treatment.

Usability Minddistrict considering looks. The subtheme *Usability Minddistrict considering looks* includes the participant's opinions about the looks of Minddistrict. The opinions of the participants in this subtheme had a wide variety. As found in the transcript this subtheme can influence the usage of Minddistrict. The participants explained during the

group session that due to the looks of Minddistrict they would not use it, therefore this is a

barrier in the usage.

> *"I don't think I would use it, but that's because I don't like how the platform*
>
> *looks like" [participant 2]*

Usability Minddistrict in treatment. The subtheme *Usability Minddistrict in*

treatment considers how easy it is to use Minddistrict in a treatment. Next to that, it also

includes the needs the participants still have considering the usability of the design of

Minddistrict, which means how well the participants can use Minddistrict and its design to

achieve the goals they have for the treatment. All participants agreed that it would be better to

have a more advanced form of Minddistrict that takes the usability of it in treatment by a

psychologist more into account.

> *'For me I think it depends on the type of client, what is the disorder they have*
>
> *and how severe the situation is, because some exercises are quite good, but a*
>
> *little bit overwhelming because of the design. It is very difficult for you to filter*
>
> *the assignment you want' [participant 4]*

The participants in the group session explained that they still have certain needs that will

improve the usability of Minddistrict in their treatment and therefore they will be more likely

to use it in their future work. One thing that all participants agreed on was that they want to

have an option in Minddistrict that helps them filter the exercises to the specific client they

are treating.

> *'At least that they have to have some kind test to filter the client's problem,*
>
> *like an interactive game. So, you have an answer on which exercises are good*
>
> *for this client, so that I can let them do a suitable exercise.' [participant 4]*

Usability Minddistrict considering content. The subtheme *Usability Minddistrict*

considering content is about the content of Minddistrict. Most of the participants agreed that

the feedback opportunity in Minddistrict for the psychologist is not sufficient, which is a reason they would not use it.

> *'Then you are allowed to give feedback with Minddistrict, but only one textbox on like the whole module that a client does. And I feel like that's not enough. So, I probably, if I have the choice, I wouldn't use it.' [participant 2]*

From this it can be deduced that for most of the participants there is a need for a more advanced way to give feedback to the client.

> *'I feel like the feedback opportunity isn't good enough.' [participant 2]*

Skills for using Minddistrict. The subtheme *Skills for using Minddistrict* is about the skills participants want to acquire in regards of the usage of Minddistrict. All of the participants expressed that in regards of the usage of the platform they do not need additional skills. One participant also expressed they think they don't need any more skills because they are used to using online platforms and that maybe older generations do need more skills.

> 'Yeah. I think the platform itself isn't that too complicated to understand. It's quite clear.' *[participant 5]*

> "I wanted to say that I think since we are quite the digital generation, it's not really hard for us to use. It's not too complicated or something that we don't know how to use it. I think that's more of a different generational problem." *[participant 5]*

Barriers to use

The Theme *Reason not to use* consists of subthemes which address reasons why the participants would not use Minddistrict in their future work.

Clients' motivation. The subtheme *Clients' motivation* considers the doubts the participants expressed during the group session about the motivation of the client to use

Minddistrict. The majority of the participants expressed these doubts and explained that they think Minddistrict is not suitable for every client because of age or diagnosis and that this influences the client's motivation to use Minddistrict.

> *'Because I also can imagine it's just not suitable for every client. Like if you have someone who's very old and not digital and they are also very depressed, I don't see it likely that they're going to use the platform efficiently, like they're just not going to.' [participant 2]*

It seems that the participants have a need for some more knowledge about this since they said 'I can imagine' which implies that they do not know this for sure.

Uncomfortable using Minddistrict. This subtheme considers the comfortability the participants experience or think they will experience while using Minddistrict. Most of the participants explained that they would feel comfortable using Minddistrict when asked directly, however, during the data analysis it was also found that two of the five participants do not want to use Minddistrict because they are not feeling comfortable enough to do so.

> *'I am not comfortable when I use it. So, if I don't feel comfortable and I will not let other people do it until I find out if it is useful and then I will introduce to other people.' [participant 4]*

When the researcher asked the participant where these feelings originate the participant did not give a reason for it.

Time consuming to use Minddistrict. The subtheme *time consuming to use Minddistrict* considers the expressed doubts and opinions of the participant about the time they think the usage of Minddistrict will take. All participants expressed that this could be a reason they would not use Minddistrict in their future work.

> *'I think also one factor is like how time consuming it is for you as the therapist. If it's taking too much time that you could spend otherwise with*

> *other treatment forms that you actually need to do. Yeah, it might be a burden*
>
> *if it's too time consuming.' [participant 5]*

However, the participants expressed this concerns they did not work with Minddistrict in a treatment with a client yet so this is only what they expect. The participants expressed this concerns but they did not actually use Minddistrict in a treatment with a client yet so this is only an expectation.

Requirement/need for use

The Theme *Requirement/need for use* includes the subthemes regarding the requirements and needs the participants expressed. These requirements and needs are necessary for the participants to use Minddistrict in their future career.

Need for evidence. This subtheme consist of the needs the participants have considering evidence. All the participants expressed that for them to use Minddistrict in treatment in their future work, they first want to have evidence. Evidence either on general effectiveness or client group specific.

> *'I mean, if it's proven that the module that I'm using in Minddistrict is really*
>
> *helping and is adding something to the therapy, I would probably try it.'*
>
> *[participant 5]*

This indicates that they do not trust Minddistrict yet, but that they are also open for changing their attitude when evidence is provided.

Need for an integration protocol. This subtheme addresses the needs the participants have considering rules and regulation while using Minddistrict. In this subtheme it can be seen that the participants are still unsure about how to really use Minddistrict in treatment and they mention a need for a treatment protocol about the integration. They express this by explaining their needs for rules and structure which could be provided by a treatment protocol. This subtheme also covers the expressed need for knowledge about the integration.

'It's just that indeed, like if you use it in therapy, how do you use it, when, how do you implement it? Like, because I feel like that's quite free as of now. Like you can just choose what you want to do, basically. And I think if you really want to make sure a lot of people use it, then make it a structured thing that's very clear on how to implement it actually.' [participant 2]

'But if you have information on like what specific client group indeed. And like who can use it and in what way, then yeah, that's useful.' [participant 2]

Most of the participants explained that because of this lack in structure and rules, which is not provided because of the lack of a protocol, they are very unsure which makes it less likely for them to use it. This subtheme came back throughout all the stages of the group session and all the participants stressed that this is lacking right now and one of the most important reasons for not using Minddistrict.

Clients' health. This subtheme shows that for the participants it is a requirement/need that Minddistrict is not bad for the client's well-being to use. Two out of the five participants talked about this and stressed that it should not be a burden to clients in any way to use Minddistrict. They expressed that they don't want to exacerbate the mental health problems of the clients by the usage of Minddistrict in their treatment. Thus, they expressed a fear of causing harm of damage on the client's well-being by the usage of Minddistrict.

'For me, it's more about the client's well-being. If, I mean, it should be easy for the client and not, like, a burden for the client to do.' [participant 5]

Attitude

The theme *Attitude* includes the subthemes *Positive attitude, Negative attitude,* and *Attitude towards training.* This theme addresses the attitude of the participants in regard of Minddistrict in general and a possible future training/training module.

Positive attitude. The subtheme *Positive attitude* consist of the positive attitudes the participants had towards the usage of Minddistrict or DHI's in general during the group session. The majority of the participants had a positive attitude.

> *'Yeah. I think the idea of it is a great idea. Addition.' [participant 1]*

In this quotes the participants replied to the question 'Do you think Minddistrict is a good addition for treatment?.' Although the majority of the participants verbally expressed a positive attitude, there were some non-verbal ques that suggested a less positive attitude. While talking about Minddistrict in a positive way some participants avoided eye contact and had a more closed body posture because they crossed their arms. Further, some participants showed a quick shoulder shrug while saying that Minddistrict could be a good addition, which may indicate that they do not really know this.

Negative attitude. The subtheme *Negative attitude* consist of the negative attitudes that could be interpreted from the opinions expressed by the participants during the group session. A minority, 2 of the 5 participants, expressed negative attitudes verbally.

> *'That's something you can do in CBT like regularly as well. So why would you need a platform for it?' [participant 2]*

> *'So, then there is no real additional feature unless maybe you can give them some additional homework under the week. But you could also still do that via email.' [participant 3]*

As seen in the quotes the participants think Minddistrict is not necessary or an addition. However, these participants also expressed their needs for evidence and a protocol about the integration. Fulfilling these needs may change their attitude especially when they see evidence which shows that Minddistrict is making treatment more effective and efficient.

Attitude towards training. The last subtheme of the theme *Attitude* is *Attitude towards training.* This is the attitude the participants expressed towards the training/training module. The majority, 4 out of the 5 participants, expressed a positive attitude towards the training/training module. However, one of the participants had a negative attitude toward the training/training module

> *'And those things are probably really nice because then you also willing to invest. More because the website gives you more. But for now, the website doesn't give me enough to want to put in that much effort to actually attend those sessions.' [participant 3]*

In this quote the participants expresses, next to the negative attitude toward the training/training module, a need for a more advanced form of Minddistrict in order to use it.

Preference for training format

This theme consist of multiple subthemes about the preference the participants expressed considering the format of a possible future training in which they can learn about Minddistrict and how to implement this. The format is how the training should look like, in which form the participants would like to learn and which possibilities the training should give them.

Need for in person meeting. The subtheme *Need for in person meeting* addresses the needs the participants expressed considering the preference for format of a possible future training. All participants suggest having a in person meeting as a training form.

> *'Like if you work at a clinic, for example, if you have like an in-person meeting with colleagues and they all want to learn about this and like person who teaches you how to implement this efficiently and responsibly.' [participant 5]*

The participants expressed that this is their preference over any other form of online training. They explained that they would like in person meetings so they can do it together with colleagues and can discuss this and ask questions.

Need for a place to find written information. The subtheme *Need for a place to find written information* includes the needs the participants expressed considering their preferences for the way they want to have the information for the training. They all agreed that they mostly would like to have the information of the training, if it must be in an online form, in written form on a website or in a booklet.

> *'a tab or something where there are some explanations because I think videos, at least I personally always skip those. Um, so if there's just something that you in theory always can click on as in help button where just the main point is explained and stuff like that, that would probably be nice.' [participant 2]*

Need for opportunity to ask questions. The subtheme *Need for opportunity to ask questions* covers the need the participants have considering the opportunity to ask questions in a training module for Minddistrict. All the participants expressed that they would like to have this opportunity and that therefore this is one of their preferences considering a training format.

> *'Definitely there needs to be a place to ask questions. So, if it's a chat bot or a forum or something like that, I think there should be also someone who answers these questions, maybe also from Minddistrict. That would be the best.' [participant 1]*

An indication of why they want this is because using Minddistrict in treatment can be different for every client and psychologist and some form of assurance, by asking questions, will make them more comfortable in using it.

Need for contact with others using Minddistrict. Need for contact with others using Minddistrict is the subtheme that addresses the need the participants expressed considering the contact option they have in a training. The majority of the participants expressed this need as a preference of the training format, but also some participants said that they did not find this necessary in a possible future training.

> *'But if someone has already used it, he might also just have some pitfalls or whatever it is. Um, and then maybe even some evidence that it works so that he experienced that or she experienced that have worked with a client'*
>
> *[participant 3]*

This is in line with the subtheme *Need for opportunity to ask questions* and indicates that the participants need reassurance to make them feel more comfortable in using Minddistrict in their treatment.

Need for contact with experts. This subtheme addresses the need expressed by the participants about contact with experts. All the participants stressed that they want to have the opportunity during a training to have contact with experts and they think this should be considered while designing the training. This can be experts of Minddistrict itself or someone who already is an experts in the usage of Minddistrict.

> *'I only have two points that are really important to me that you have the ability to chat or speak to an expert on Minddistrict.' [participant 5]*

Requirement for training

The theme *Requirement for training* combines the subthemes about the requirement the participants described for the training. This covers the needs they have in regard of a training and to actually follow the training.

Need for evidence. The subtheme need for evidence addresses the needs for evidence the participants have as a requirement for the training. All the participants expressed this need

multiple times and therefore this can be interpreted as one of the most important requirement for the training.

> *'I would be very interested in the evidence also, like for which kind of clients does it work and maybe is it also dependent on how severe their symptoms are or things like that.' [participant 1]*

This indicates also that the participants do not yet have trust in Minddistrict but that evidence of its effectiveness and efficiency is a possible solution to solve this distrust. By solving this, through providing evidence in a training, the participants will be more likely to actually use Minddistrict.

Need for knowledge about the integration. Next to the need for evidence, the need for knowledge about the integration is also one of the most important requirements for the training. All the participants expressed that this is the most important reason why they for now would not use Minddistrict. They feel like they lack knowledge about how to use Minddistrict in treatment and therefore lack knowledge about the integration.

> *'I mean, how you can efficiently implement it, I guess. Like if they have a clear schedule, and they teach you how to use it.' [participant 2]*

This quote particularly is in line with the subtheme *Need for an integration protocol* in the theme *Requirement/need to use*. With '…like if they have a clear schedule…' the participant expresses a need for more structure and rules which can be provided through a protocol and addressed in the training/training module.

Need for examples. Need for examples is another need some participants expressed considering the requirements of the training. A part of the participants expressed that they would like to have examples so that they can learn from this and see how others used Minddistrict in their treatment.

'I would also maybe like if they had like an example, like how maybe one or

two psychologists actually implement it, but that's just, you know.'

[participant 1]

This subtheme furthermore shows the underlying insecurity the participants have in using

Minddistrict. They express that they need examples on how to use and implement it which

indicates that now they are still unsure about this.

Need for knowledge about how to meet clients' needs. The subtheme *Need for*

knowledge about how to meet clients' needs arises because multiple participants expressed

their concerns about the client in usage of Minddistrict in treatment. They mention this as a

requirement for the training because before using Minddistrict they want to have more

knowledge about the needs of the client and client group specific information on how to use

Minddistrict.

'So, I'm wondering if there are ways and how to personalize it more to the

needs of the client.' [participant 5]

This subtheme also addresses the need of the participants for more clarity on how to motivate

clients to use Minddistrict.

'And I think what's also important to know for me is how to motivate clients to

use it. Like, what do we tell them? Why is it good to use it? What's the added

benefit?' [participant 1]

Discussion

Digital mental health interventions have a great potential in supporting clinical

practice of psychologists (Hollis et al., 2017). However, DMHIs such as Minddistrict are

currently underused in clinical practice because of the barriers experienced by psychologist

and therapists (Berry et al., 2019). Up to now the needs, attitudes, and barriers of

psychologist and therapist were only explored regarding DMHIs in general. Therefore, there

was no answer yet to questions about what the needs of psychologists are regarding Minddistrict. Next to that, there is not yet any training module for psychologists and therapists on how to use Minddistrict. Additionally, in the research of Van Wingen (2016) it is explained that when the needs of the psychologist and therapists are taken into consideration, the adoption and acceptance of Minddistrict is likely to be higher. Thus, the exploration of the needs of psychologists, or future psychologists, regarding a training module on the usage of DMHIs is important since this could help overcome the current barriers for using DMHIs such as Minddistrict and can increase their adoption, and therefore the integration of Minddistrict.

To arrive at these insights, this study explored the needs and attitudes of future psychologist using a co-design approach and a thematic analysis. The results show multiple needs considering the usage of Minddistrict and considering a potential future training. Several themes were considering the usage of Minddistrict, the need for improvement of the usability of Minddistrict, barriers for using Minddistrict, and requirements to use Minddistrict. Regarding a training for Minddistrict, we found themes on the preferences for the training format, and the requirements for the training. Furthermore, the attitude of the participants is also considered since this can influence their usage of Minddistrict.

The aim of this study was to explore the needs of master students regarding a training module for Digital health platform Minddistrict in order to improve the integration of Minddistrict into their future work field. For this aim, we had several research questions. First, *what are the attitudes of master students towards using Minddistrict in their future work field?* When looking at the results of the survey and the attitudes during the group session some participants showed inconsistency in their attitude. This inconsistency could be explained by the fact that the participants during the survey were not as stimulated to think about the actual usage of Minddistrict in their future work field as they were in the group

session. Next to that, the Functional Attitude theory explains that attitudes also serve a social

purpose (Carpenter et. al., 2013). According to the theory, attitudes could serve as a social-

adjustive function, facilitating the ability to interact with desirable social group members or

to impress others (Carpenter et. al., 2013). Since the participants were sitting next to each

other and discussing their opinions together, this could also be a reason why they altered their

attitude. The other participants (participant 1 and 5) had a positive attitude towards DMHIs in

general and Minddistrict specifically. Their attitudes stayed consistent during the group

session. To return to the question what the attitudes of master students about using

Minddistrict in their future work field are, it was found that the attitudes were mostly positive

or instable/changing. Additionally, previous research shows that cognitive dissonance can

occur in employees during change in an organization (Lilly & Durr, 2012). As explained by

Lilly and colleagues (2012), Cognitive Dissonance theory suggest that individuals seek

consistency among their cognitions, beliefs, attitudes and opinions and inconsistency in these

will result in cognitive dissonance. The Cognitive Dissonance theory can also occur during

technological changes at work such as the integration of Minddistrict (Lilly & Durr, 2012).

Lilly and colleagues (2012) explained that therefore people with a positive attitude seek this

consistency and will thus be more accepting to such technological changes. Based on the

Cognitive Dissonance theory, it can be expected that participants with a positive attitude

towards Minddistrict are more likely to accept and adapt to the changes in their workplace

cause by Minddistrict. Therefore, it is important to take their attitudes into consideration

while designing a training module for Minddistrict. In a study of Casey and colleagues (2013)

it was researched what the relationship between knowledge of e-mental health services and

attitudes toward e-mental health services is. It was found that a brief text intervention can

significantly improve participants attitudes and likelihood of future usage of e-mental health

services (Casey et. al., 2013). When a training module is designed this could be taken into

account to improve the psychologists and therapists' attitudes towards Minddistrict in order to increase their usage of Minddistrict in their treatment.

The second research question was *what are the needs and requirements of master students for a training module for Minddistrict.* This question is divided in two sub questions. The first one is *A. What information, if any, would master students like to have to facilitate their future use of Minddistrict, and how would they prefer to receive this?*. The main needs the participants expressed regarding information is the need for evidence, the need for an integration protocol, and the need for information about the clients health regarding the usage of Minddistrict. These expressed needs are in line with the found barriers experienced in regard of Minddistrict. Doubt about the client's motivation was expressed as a barrier to use Minddistrict and this is related to the founded need for information about the clients health. In the group session the researcher asked follow up questions regarding this need and the participants pointed out that this information should also provide them with knowledge about how to motivate the clients to use Minddistrict. The lack in comfortability with Minddistrict is formed through the described discomfort the participants still expect to have if they would be using Minddistrict in a treatment. This is also related to the unfulfilled needs and the lack of information about how use Minddistrict. This discomfort could also be explained by the subtheme *Need for an integration protocol* the participants expressed, since they stressed that the discomfort is caused by unsureness on how to use this and integrate it in their treatment, and the lack of clarity, rules, and structure regarding this. In the research of Heine and his colleagues (2022), it was found that goal clarity decreases uncertainty of employees during organizational change (like adapting to Minddistrict). Providing clarity and structure is especially important during change (Heine et al., 2022). Lastly, the belief that it will be time consuming to use Minddistrict was also found in previous research on boundaries of the usage of Minddistrict with psychologists. However, when looking at the evidence of the

effectiveness and efficiency of using DMHIs such as Minddistrict, it is found that it actually increases the efficiency and effectiveness of treatments. Thus, it can be expected that in the long term it will cost less time to treat clients when a DMHI is used. This indicates that there is a knowledge gap in the expectations of the participants about the possibilities Minddistrict enables for treatments. This knowledge gap was also found in the subtheme *Need for possibility to ask questions*. In this subtheme the participants expressed their need for a place to find answers to frequently asked questions or a possibility to ask questions. However, Minddistrict already has a frequently asked questions page on their platform which again shows this gap in knowledge about the possibilities that Minddistrict enables. Therefore, this knowledge gap should be taken into account in a future training module, since this will tackle the perception of the time consuming aspect Minddistrict, and the need for a possibility to ask questions participants expressed.

The second sub question is *B. What skills, if any, would master students like to practice to facilitate their future use of Minddistrict, and how would they prefer to practice these.* We found that the participants did not have particular skills that they still wanted to practice. The participants addressed that they think this is due to their experience and growing up with technology. They stressed that this could be different for people who are not so experienced and confident in the usage of technology, also known as digital inequality (Seifert et. al., 2019). Seifert and colleagues explain that older adults are at risk of being excluded from DMHIs due to lack of experience and skills, which is in line with the expectations of the participants of this study. Urick (2017) conducted research about this generational difference in regard of an online training for employees. It was found that in younger employees a greater level of comfort was experienced during the online training than in older employees. Urick (2017) recommended that this is taken into account when a training module is designed and that there should be a degree of freedom of choice of learning style. Additionally,

insufficient training is one of the most important barriers faced by older adults in using digital interventions, which supports the need for a training module for the improvement of integration of Minddistrict and to tackle generational differences (Seifert et. al., 2019). Since the participants in this study did not express they need any more skills to facilitate their usage of Minddistrict in their future work it was not discussed how they would prefer to practise any skills.

Regarding the second part of this question, which is about preferences regarding the form of learning, it was found during the group session that all participant stressed a preference for in-person meetings as a training format over online training. This could be explained by the lack of structure and therefore discomfort the participants indicated. When individuals experience this they want to be able to adjust to group norms since they tell them what is expected of them, what is acceptable, and it allows members to anticipate to the behaviour of their fellow group members or colleagues in this case (Smith & Louis, 2009). This need for in person meetings could change when participants are more comfortable using such DMHIs and therefore have higher self-efficacy. They then likely want to 'hide' less in the identity of the group and remain more in their individual identity (Smith & Louis, 2009). Smith and Louis (2009) also explain that according to the social identity theory uncertainty can be decreased when one identifies more with a group. Thus, the participants preference for the in-person meetings could also be caused by their need for an integration protocol, which implies they are experiencing uncertainty. It was also became apparent that the participants want to have a place to find written information, opportunities to ask questions, contact with others using Minddistrict (for example through a forum), and contact with experts. What is remarkable about these findings is that these needs can already be fulfilled since there already is an online webpage for this (support.minddistrict.com/nl/support/home). The participants

apparently are not aware of the webpage which implies that there is actually a lack of knowledge about this.

Coming back to the aim of this study, exploring the needs and attitudes of master students regarding a training module for Digital health platform Minddistrict to improve the integration of Minddistrict into their future work field, a couple of recommendations can be formed. First, according to the Cognitive Dissonance theory it is important that psychologist/therapists have a positive attitude towards Minddistrict so that they are more likely to accept and adapt to this new technology (Lilly & Durr, 2012). Additionally, when a positive attitude is established for the majority of the psychologist/therapists they will more easily accept and adapt to this new technology according to the Functional Attitude theory (Carpenter et. al., 2013). This positive attitude could be established during a training by a brief informational text (Casey et. al., 2013). Additionally, generational differences should be taking into account. Therefore, it is recommended to design a training that can be altered to the individual preferences and takes into account the discomfort that could possibly be experienced by older professionals following the training. It is also recommended that the training provides knowledge about where to find information that is already provided on the Minddistrict platform, since it was found that the participants were not aware of some possibilities that are already existing in Minddistrict. Lastly, it is recommended to create an integration protocol since this would cover the most important needs that are found in this research and will simultaneously tackle the found barriers. Through an integration protocol the professional users will experience more comfort and certainty while using Minddistrict in their treatment. Moreover, the integration protocol will also provide information to the professional users on how to integrate Minddistrict into their treatment. An explanation of this integration protocol should also be included in the training with additional information about differences in client groups and types of mental health problems.

Limitations

The current study has some limitations. Firstly, a possible limitation could be that the target group is not consisting of real psychologist/therapists that are actually already working with clients. However, the results show the same needs/barriers as found in previous research of Van Wingen (2016) with working psychologists/therapists . However, even though this shows that the results are likely to hold true for a larger population, there may be subtle differences between master psychology students and working professionals. Secondly, the participants are studying at a technological university. Therefore, their attitude towards technology could be influenced since they are dealing with new technology and innovations, such as Minddistrict, daily throughout their studies. This limitation could have been avoided when the sample did not only consist of students from the same University. Additionally, some of the students that participated in this research were old fellow students of the researcher which may have had an influence on the group session. Previous research has shown that conducting research on people that are known to the researcher can include making assumptions about the meaning of statements, skipping topics due to prior knowledge and neglecting details (Unluer, 2012).

Future Recommendations

Based on the current study, multiple future recommendations can be made. Firstly, in future research, individual interviews could be conducted in order to tackle group norm biases which could be influencing opinions and statements of the participant during group sessions. This was not done in this research because of the co-design approach which is a more interactive and creative way to explore needs. A group session is a suitable way for individuals to interact among themselves to get different opinions. This dynamic cannot be established in a personal interview. Also, in this research a group session was also chosen because it is more time efficient when the goal is to get different opinions/needs/preferences.

Next to that, it could be recommended to use multiple focus groups from different universities all over the country and to create focus groups of real psychologists/therapists on different levels and age groups who are already working in the field. This way, the sample groups can be compared and errors in the representativeness can be found.

Conclusion

The current mental health care system is pressured due to increasing costs, shortage of staff and increasing demand which can be reduced by increasing the usage of digital mental health intervention Minddistrict. To increase this usage, professionals need to accept and actually use it in their treatment, which is not the case in the current situation. This research explored the needs of master students regarding a possible training module for Minddistrict to improve the integration and therefore this current 'gap'. This research shows the needs, which are not yet fulfilled, in order to use Minddistrict in the future and the needs regarding a potential training and its format. Additionally, opinions about the usability are established, which are worthwhile to increase the usage of Minddistrict. Lastly, barriers experienced by the participants in the current usage of Minddistrict and its integration give valuable insight into the aspects Minddistrict is currently lacking in. These findings form a good basis for the start of the design process of a training module for students or professionals who will use Minddistrict. Furthermore, the results of this research are also valuable for individuals working in mental health care systems who want to motivate professionals to use Minddistrict. Thus, this research adds to the future usage and integration of Minddistrict in the mental health care system which can lead to the decreasing of the current pressure on the system.

References

Baños, R. M., Herrero, R., & Vara, M. D. (2022). What is the Current and Future Status of

  Digital Mental Health Interventions?. *The Spanish Journal of Psychology*, *25*.

Berry, N., Lobban, F., & Bucci, S. (2019). A qualitative exploration of service user views

  about using digital health interventions for self-management in severe mental health

  problems. *BMC psychiatry*, *19*(1), 1-13.

Boyd, H., McKernon, S., Mullin, B., & Old, A. (2012). Improving healthcare through the use

  of co-design. *NZ Med J*, *125*(1357), 76-87.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research

  in psychology*, *3*(2), 77-101.

Bucci, S., Berry, N., Morris, R., Berry, K., Haddock, G., Lewis, S., & Edge, D. (2019). "They

  Are Not Hard-to-Reach Clients. We Have Just Got Hard-to-Reach Services." Staff

  Views of Digital Health Tools in Specialist Mental Health Services. *Frontiers in

  Psychiatry*, *10*, 344.

Carpenter, C., Boster, F. J., & Andrews, K. R. (2013). Functional attitude theory. *The SAGE

  handbook of persuasion: Developments in theory and practice*, 104-119.

Casey, Leanne M., Angela Joy, and Bonnie A. Clough. "The impact of information on

  attitudes toward e-mental health services." *Cyberpsychology, Behavior, and Social

  Networking* 16, no. 8 (2013): 593-598.

Duque G, Demontiero O, Whereat S, Gunawardene P, Leung O, Webster P, Sardinha L,

  Boersma D, Sharma A. Evaluation of a blended learning model in geriatric medicine:

  a successful learning experience for medical students. Australas J Ageing. 2013

  Jun;32(2):103-9. doi: 10.1111/j.1741-6612.2012.00620.x. Epub 2012 Oct 17. PMID:

  23773249.

George, P. P., Papachristou, N., Belisario, J. M., Wang, W., Wark, P. A., Cotic, Z., ... & Car, J. (2014). Online eLearning for undergraduates in health professions: a systematic review of the impact on knowledge, skills, attitudes and satisfaction. *Journal of global health*, *4*(1).

Heine, E. C., Stouten, J., & Liden, R. C. (2022). Providing Service During a Merger: The Role of Organizational Goal Clarity and Servant Leadership. *Journal of Business Ethics*, 1-21.

Hollis, C., Falconer, C. J., Martin, J. L., Whittington, C., Stockton, S., Glazebrook, C., & Davies, E. B. (2017). Annual Research Review: Digital health interventions for children and young people with mental health problems–a systematic and meta-review. *Journal of Child Psychology and Psychiatry*, *58*(4), 474-503.

Lehtimaki, S., Martic, J., Wahl, B., Foster, K. T., & Schwalbe, N. (2021). Evidence on digital mental health interventions for adolescents and young people: systematic overview. *JMIR mental health*, *8*(4), e25847.

Lilly, J. D., & Durr, D. W. (2012). Technology changes at work and employee reactions: The role of leader behavior. *Human Systems Management*, *31*(3-4), 193-201.

Magen-Nagar, N., & Shonfeld, M. (2018). The impact of an online collaborative learning program on students' attitude towards technology. *Interactive Learning Environments*, *26*(5), 621-637.

Unluer, S. (2012). Being an insider researcher while conducting case study research. Qualitative Report, 17, 58.

Urick, Michael. "Adapting training to meet the preferred learning styles of different generations." *International Journal of Training and Development* 21, no. 1 (2017): 53-59.

Seifert, A., Reinwand, D. A., & Schlomann, A. (2019). Designing and using digital mental

health interventions for older adults: being aware of digital inequality. *Frontiers in

Psychiatry*, *10*, 568.

Smith, J. R., & Louis, W. R. (2009). Group norms and the attitude-behaviour relationship.

Social and personality psychology compass, 3(1), 19-35.

van Wingen, J. S. (2016) *Stimulating adoption of the MindDistrict platform by GGzE mental

healthcare professionals.* [Master's thesis, Eindhoven University of Technology].

https://research.tue.nl

Yin, Y. (2019). *Redesign the Minddistrict platform to increase therapists' engagement.*

[Master's thesis, Delft University of Technology]. https://respository.tudelft.nl

Appendix A

Survey

Survey

Q3 Hello, you are invited to participate in this survey for the research "Exploring the needs regarding a training module for "minddistrict" with Master psychology students: A co-design approach".

This survey takes approximately 5 minutes to complete. click the next button to get started!

Q4 **Consent Form Exploring the needs regarding a training module for "minddistrict" with Master psychology students: A co-design approach**

Taking part in the study
I have read and understood the study information I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason.
I understand that taking part in the study involves answering questions in this online portal and participating in a group session

Use of the information in the study
I understand that information I provide will be used for the exploration of needs regarding a training module for "minddistrict".
I understand that personal information collected about me that can identify me, such as [e.g. my name or where I live], will not be shared beyond the study team.

Future use and reuse of the information by others
I give permission for the information collected in this survey that I provide to be archived in a survey database so it can be used for future research and learning.
Personal information will not be shared and if needed anonymised so that I cannot be identified. Names and places will not be shared at all.

By continuing with the survey, I agree to the terms mentioned above and agree to the form of consent.

If there are any questions regarding the study, feel free to contact Karlijn Heuver (k.a.heuver@student.utwente.nl)

Contact Information for Questions about Your Rights as a Research Participant
If you have questions about your rights as a research participant, or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researcher(s), please contact the Secretary of the Ethics Committee of the Faculty

of Behavioural, Management and Social Sciences at the University of Twente by ethicscommittee-bms@utwente.nl

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Q32 Participant number

_____

- -

Q33 Are you currently doing the Positive Clinical Psychology & Technology master?

◯ Yes

◯ No

- -

Q5 Gender

◯ Male

◯ Female

◯ Other

- -

Q16 Age

_____

- -

Q17 Nationality

◯ Dutch

◯ German

◯ Other, … _____

Q19 Are you familiar with the Digital Health Intervention "Minddistrict"?

○ Yes

○ No

Q20 Have you worked with Minddistrict in your master programme?

○ Yes, please indicate approximately how many hours ...

_____

○ No

Q22 What do you think your future job will be? (You can also indicate that you don't know yet)

_____

Q26 How likely are you to use minddistrict, or a similar digital health intervention platform, in your future work as an addition to your treatment?

○ Extremely unlikely

○ Somewhat unlikely

○ Neither likely nor unlikely

○ Somewhat likely

○ Extremely likely

Q30 I think Minddistrict or Digital health interventions in general can be helpful in treating clients

○ Strongly disagree

○ Somewhat disagree

○ Neither agree nor disagree

○ Somewhat agree

○ Strongly agree

Q31 I think Minddistrict or Digital health interventions in general are a worthwhile addition in treating clients

○ strongly disagree

○ Somewhat disagree

○ Neither agree nor disagree

○ Somewhat agree

○ Strongly agree

Q18 Thank you for participating in this survey!

 Click on the next button and the survey will be submitted.

Appendix B

Guidelines researcher – group session

Welcome: Hi everybody, first of all thank you for participating in my study. You already have filled in the survey I have send you online and today we will have the group session. This group session consists of 2 phases; first we will have a group discussion and secondly we will make a lo-fi prototype together as a group. First, I would like you to read the informed consent (add audio recording and pictures) I have printed out for you, if you have any questions you can ask me. Please take some time to read it and if you are still willing to participate in this study you can sign the informed consent.

Phase 1: Exploring the needs and preferences regarding a training module.

Everybody has signed the informed consent so we can continue to the first phase of this group session, the group discussion. The focus of this group discussion will be on the preferences and needs you have regarding the usage of mind district. More specific we will focus on the needs and preferences you have regarding learning about mind district and how to use and integrate it in your future work field.

Questions:

Aspect: content

- Imagine you're a psychologist working with a client. Would you use mind district in the treatment of this client?

  o Why not?

  o What do you still want to learn before you do this?

  o (If they do want to use it) Are there any things regarding mind district where you are still unsure about or where you want to learn more about?

- How would you use it in your future work?

     o If not, why not? Are there things that you would change which would make

        you use it?

- How capable do you feel in using minddistrict in the treatment of a client?

     o If not, how would you feel more capable? What do you still want to

        learn/know in order to make you feel capable?

- Do you feel like mind district is a good addition in treating a client?

     o Why or why not?

     o Do you think it will help a client?

     o Do you think it will make your work more efficient and …

     o What do you think about minddistrict in regard of compassion?

- What do you still need in order to use mind district in your future work field?

     o Examples if they don't know: more time, more skills, more knowledge

Aspect: form of training module

- What do you still want to learn regarding the usage of Minddistrict?

     o More knowledge?

     o More skills?

     o More experiences of others?

- How would you like to learn more about mind district and how possibly integrate it in

    your future work?

- In what form would you like to learn more about this?

     o Training module

     o Videos

     o Etc.

Phase 2: How can these needs and preferences be satisfied in a future training module,

making a lo-fi prototype.

We will now continue with the second phase of this group session, the co-creation of a lo-fi prototype. I will ask you again some questions in order to help you create ideas.

Aspect:

content

- How would you like to learn these things? (For example; through videos, text, together with colleagues or alone etc.)

- Did you experience any problems while using mind district in your Master?

    o Did you solve these problems? And if yes, how?

- Imagine you would design something in which you could learn all the things we just talked about; how would you design this considering the content? You don't have to answer this, please take your pencil and put your different ideas on the post-its I handed to you (https://www.designkit.org/methods/1)

    o (After 5 minutes) Talk to your neighbour about what you wrote down. Would you together add some other things? If so, please add this to the post-its

    o (After 5 minutes) You can come forward and put your post-it's on the left side whiteboard, while doing so please explain to the group what you wrote down and why

        ▪ Okay we have added all things, are there still things missing regarding the content that any of you want to add?

    o I will now arrange your post-it's in different clusters (let them help)

- What do you think of this? Are there any things missing you would like to add?

Aspect: looks

- How would you want the design you made to look? Please write or draw your ideas on the post-its (5 minutes)

        ▪ Messaging other psychologists?

- - - Interactive videos?

    - Etc.

  - o Again, discuss your ideas with your neighbour and add things that are still missing (5 minutes)

  - o You can again come forward and put your ideas on the right side of the whiteboard, while doing so please explain your ideas to the group and explain why you want this in the design

  - o I will now arrange your ideas by clustering them, (Let them help me)

- - What do you think of this? Are there any things still missing that you would like to add?

General

- - How likely or unlikely would you be to use this training module once it is finished?

  - o Why?

<div align="center">Notes to self</div>

- **Know everybody's name**

- **Are there some people quieter? Ask them questions directly like, do you agree with … or would you add something to … suggestion**

- **Ask why a lot to get the deeper meaning**

- **Keep the focus, and keep an eye on the time**

Appendix C

Overview of themes, subthemes, codes, quotes with participant number, number of

quotes, and percentage of participants mentioning theme

Quotes	Code	Subtheme	theme	N	%
'but that's because I don't like how the platform looks like with for me' p2 'The view or the website is way better designed than for the therapist, to be honest.' P1	Looks of minddistrict	Usability minddistrict considering looks	**Usability minddistrict**	12	100
'I think it can also be used for homework assignments, but I think it's a bit difficult to really use it in the treatment itself. Like besides homework' p3 'I think I would mainly use it as a homework thing. So just explain to the client how the website works. Let them practice a bit and then assign them modules as homework.' P2 'So next to the in-person sessions maybe to do like to give homework or something because I did like that for the client' p1	Homework assignments as addition	Usability minddistrict in treatment	**Usability minddistrict**		
'I feel like the feedback	Giving feedback	Usability minddistrict	**Usability minddistrict**		

opportunity isn't good enough.' p2 'then you are allowed to give feedback with Minddistrict, but only one textbox on like the whole module that a client does. And I feel like that is not enough. So I probably, if I have the choice, I wouldn't use it.' p2	through platform	considering content			
'So then I would also have to include it in my face to face sessions and count extra time basically to do that' p2 'But I think I would add then more sessions with the client to actually talk about what they did there as well.' p2 'because I would still have to count more time to actually talk to them about it, explain everything, make sure they get feedback for everything that they did. So in the end, it will cost me more time to do it' p2	Time consuming to include in treatment sessions	Time consuming to use minddistrict	**Reason not to use**	10	100%
'I mean, if it's proven that the module that I'm using in Minddistrict is really helping is adding something to the	Evidence/prove that minddistrict is effective in order to use it	Need for knowledge and evidence	**Requirement/need for use**	18	100

therapy, I would probably try it.' p5					
'But also, I think it depends on. The regulations, like the organizations where you're working, if or like also like like legal status. Are you allowed to bring this in the therapy, like all the regulations around that' p5	Rules for using minddistrict in treatment	Need for an integration protocol	**Requirement/need for use**		
'It's just that indeed, like if you use it in therapy, how do you use it when, how do you implement it? Like, because I feel like that's quite free as of now. Like you can just choose what you want to do, basically. And I think if you really want to make sure a lot of people use it, then make it a structured thing that's very clear on how to implement it actually.' p2	Its unclear how to implement	Need for an integration protocol	**Requirement/need for use**		
'for me I think it depends on the type of client, what is disorder they have and how severity the situation is, because some exercise is quite good, but a little bit overwhelming because the design is very difficult for you to filter the the	No option to filter the exercises to the needs of the client	Usability minddistrict in treatment	**Usability minddistrict**		

assignment you want' p4 'At least they have to have some kind test to filter the client problem, like, oh, these are the interactive game. So you have to answer so that I can let you do your suitable exercise.' p4 ' Individual approach, rather than just give them something very similar to everyone.' p4					
'I think like a lot of things you have to fill in in case you have like depressive disorder or something. You have no mood to do this kind of thing.' p4 'I know that this kind of exercise will make people feel less motivated, less motivation at the beginning, and then to ask somebody to do something on the app.' p4 'Because I also can imagine it's just not suitable for every client. Like if you have someone who's very old and not digital and they are also very depressed,	Doubting if clients are motivated to use minddistrict	Clients motivation	**Reason not to use**		

I don't see it likely that they're going to use the platform efficiently, like they're just not going to.' p2					
'I am not comfortable when I use it. So if I don't feel comfortable and I will not let other people do it until I find out if I useful and I will introduce to other people.' P4	Will not use minddistrict with a client because they are not comfortable using it themselves	Uncomfortable using minddistrict	**Reason not to use**		
'I think also one factor is like how time consuming it is for you as the therapist. If it's taking too much time that you could spend otherwise with other treatment forms that you actually need to do. Yeah, it might be a burden if it's too time consuming.' P5 'Yeah, it is definitely a good point, I think, because if it takes more time than that, it brings benefits. Then why would you even use it? Of course.' P1	It will be a burden because it takes more time next to normal treatment	Time consuming using minddistrict	**Reason not to use**		
'Yeah. I think the idea of it is a great idea. Addition.' P1	Positive attitude towards minddistrict	Positive attitude	**Attitude**	7	60
'that's something you can do in CBT like regularly as well. So why would you	Negative attitude towards minddistrict	Negative attitude	**Attitude**		

need a platform for it?' p2 'So then there is no real additional feature unless maybe you can give them some additional homework under the week. But you could also still do that via email.' P3					
'And those things are probably really nice because then you also willing to invest. More because the website gives you more. But for now, the website doesn't give me enough to want to put in that much effort to actually attend those sessions. ' p3	Attitude towards training	Attitude towards training	**attitude**		
'And then you also take over the part which the therapist usually would need to do, which is finding the right exercise, because for now we would have to do that. And it's not really easy either, because you really have to filter it out yourself.' P3 'But if you have information on like what specific client group indeed. And	How do you filter exercises fitting for the client	Need for knowledge integration	**Requirement/need to use**		

like who can use it and in what way, then yeah, that's useful.' P2					
'for me, it's more about the client's well-being. If, I mean, it should be easy for the client and not, like, a burden for the client to do.' P5 'Because similarly to him, I don't really want to mess anything up or yeah, do more worse than good with that platform.' P1	Concern about the clients well-being if using mindditrict	Clients health	**Need/requirement to use**		
'I would be very interested in the evidence also, like for which kind of clients does it work and maybe is it also dependent on how severe their symptoms are or things like that?' p1	Evidence about effectiveness which is client group specific	Need for evidence	**requirement for training**		
'Like if you work at a clinic, for example, if you have like an in-person meeting with colleagues and they all want to learn about this and like person who teaches you how to implement this efficiently and responsibly.' P5 'I would like to have, like, face to face conversations with colleagues' p3	A training with other colleagues in person about minddistrict	Need for in person meeting, training	**Preference for training format**	13	100

'So I also have like what client groups, uh, does it work for? Like evidence based?' p1	Client group specific information and evidence in training online	Need for knowledge about integration client needs training	**Requirement for training**	17	100
'Like at what specific time during the treatment and yeah' p5	Knowledge about when to implement minddistrict in a treatment	Need for knowledge about integration	**Requirement for training**		
'a tap or something where there are some explanations because I think videos at least I personally always skip those. Um, so if there's just something that you can in theory, you always click as in help where just the main point of this that especially also with the target group and stuff like that, that would probably be nice.' P3 'and maybe some advice on the website itself or some information on the website itself' p1	a tab on the website to learn more about minddistrict and the integration	Need for a place to find written information, training	**Preference for training format**		
'some kind of booklet or something with some references where we can read about the evidence' p1	Evidence – training online	Need for evidence, training	**Requirement for training**		
'So if they just have one clear tab or Yeah, in the training module, just explain the things we talked	Need for written Information about how to implement it in	Need for a place to find written information, training	**Preference for training format**		

about. So like what client group, how to implement it, when to implement it.' P2	training module				
'maybe what need you, uh, to be cautious of when implementing it. Like if they present all that information clearly in one overview in text, then for me that would be enough.' P2

'Yeah, just maybe some tips and tricks as well.' P3 | Need for written information about what to take in consideration when implementing – training module | Need for a place to find written information, training | **Preference for training format** | | |
'I would also maybe like if they have like an example, like how maybe one or two psychologists actually implement it, but that's just, you know.' P1	Need for examples on how to implement it - training module	Need for examples, training	**Requirement for training**		
'definitely there needs to be a place to ask questions. So if it's a chat bot or a forum or something like that, I think there should be also someone who answers these questions, maybe also from Minddistrict. That would be the best.' P1	Opportunity to ask questions/FAQ – training online	Need for opportunity to ask questions, training	**Preference for training format**		
'but if someone has already used it, he might also just have	Need to have information about past	Need for contact with other using	**Preference for training format**		

some pitfalls or whatever it is. Um, and then maybe even some evidence that it works so that he experienced that or she experienced that have worked with a client' p3	experiences of others a face to face training	minddistrict, training			
'And I think what's also important to know for me is how to motivate clients to use it. Like, what do we tell them? Why is it good to use it? What's the added benefit?' p1	Need for information on how to motivate the client in using minddistrict	Need for knowledge about how to meet clients needs, training	**Requirement for training format**		
'a forum or on a psychologist or therapist who are using a platform to share this views on that. And, and also they can receive the feedback from like maybe some error or something on the forum as well' p4	Need for a forum to share views and have contact with other therapists who use minddistrict	Need for contact with other using minddistrict, training	**Preference for training format**		
'So I'm wondering if there are ways and how to personalize it more to the needs of the client.' P5	Need for information about how to personalize minddistrict to client needs – training module	Need for knowledge about how to meet client's needs, training	**Preference for training format**		
'And also a monthly update in case they have new tools or intervention on the website that we are not aware of' p4	Need for monthly update when using minddistrict – training module	Need for continuing training form	**Preference for training format**		
'I also thought Zoom sessions or livestreams or	Need for zoom session to learn	Need for zoom sessions, training	**Preference for training format**		

something might be nice' p1	about minddistrict				
'And you can already say minddistrict is compassionate in a way that it can help you with the therapy that is compassionate already, you know' p1 ' in theory, I think if you just look at compassion, then it's something about alleviating the symptoms and, like, uh, seeing their symptoms and then alleviating the suffering. Exactly. And I think that's something technology in general can always do. So, yeah, sure.' P3	Positive about minddistrict compassion	Positive about compassion	**Compassion of minddstrict**	4	80
'the ability to chat or speak to an expert on Minddistrict.' P5	Need to speak or chat to experts in a training	Need for expert contact, training	**Preference for training format**		
'Yeah. I think the platform itself isn't that too complicated to understand. It's quite clear.' P5 'I wanted to say that I think since we are quite the digital generation, it's not really hard for us to use. It's not too complicated or something that we don't know how to	No need for skills in usage of Minddistrict	Skills for using Minddistrict	**Usability Minddistrict**		

use it. I think that's more of a different generational problem. 'P1				