

Research

Remote mental health services during the COVID-19 pandemic in Finland and the Netherlands: a qualitative study

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Abstract

Background The COVID-19 pandemic has increased worldwide mental health conditions, substantially affecting the demand and provision of mental health services. To continue services and safeguard the health and well-being of mental health service users, service providers have responded to the pandemic with the adoption of remote services. The objective of our study was to identify and compare the promoters and challenges of the adoption of remote mental health services experienced by service users in Finland and the Netherlands during the COVID-19 pandemic with help of the FITTE framework.

Methods The study adopted a qualitative descriptive approach, consisting of in-depth semi-structured interviews with mental health service users in Finland (n = 12) and the Netherlands (n = 13) during the COVID-19 pandemic. Qualitative content analysis with both inductive and deductive approach was utilized, and the extended FITTE framework was applied to identify the factors related to the fit between individual, task, technology, and environment that influenced the adoption of remote services.

Results Overall, the adoption of remote mental health services during the COVID-19 pandemic involved several promoters related to easy access to mental health services, support for mental health and well-being, and benefits of the home environment such as not having to leave outside for services and having less risk of getting the corona virus. Most of the challenges were related to lack of non-verbal communication, difficulties with expressing oneself and interpreting others, technological issues, the organization of remote services, usability and suitability of services, affinity of the health professional with the provision of remote services, and the safety and security of remote services.

Conclusions While remote services are accessible, support our well-being and mental health and protect us against the coronavirus, our findings also show that face-to-face contact was often indispensable when adopting mental health services. Therefore, the design of future mental health services should include both remote and face-to-face delivery. Further research should be done on blended approaches and on ways in which the challenges and development needs which emerged from this study can be tackled to improve remote mental health services.

Keywords Remote mental health services · Service users · COVID-19 · Mental health · FITTE framework

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Abbreviations

TAM	Technology Acceptance Model
TPB	Theory of Planned Behaviour
TFF	Task-Technology-Fit
FITTE	Fit between Individuals, Task, Technology, and Environment
FITT	Fit between Individuals, Task, and Technology
GP	General practitioner
EMDR	Eye movement desensitization and reprocessing

1 Background

The COVID-19 pandemic has increased worldwide mental health conditions [1, 2], substantially affecting the demand and provision of mental health services [3]. Many factors are affecting individuals' mental health including lack of peer contact, grief related symptoms and economic hardship [4–6]. In addition, loneliness, concern about COVID-19, and perceived measures such as curfews and restrictions to public life can fuel negative moods [2]. Besides recent emerging mental health conditions, the detrimental impact of the pandemic on the mental health of individuals who were already in rehabilitation before the pandemic is also likely to be significant [7]. Social distancing measures and travel restrictions that most governments have deployed to contain the coronavirus can have a negative impact on the clinical outcome, with a risk of worsening mental health symptoms or even relapse [6, 7].

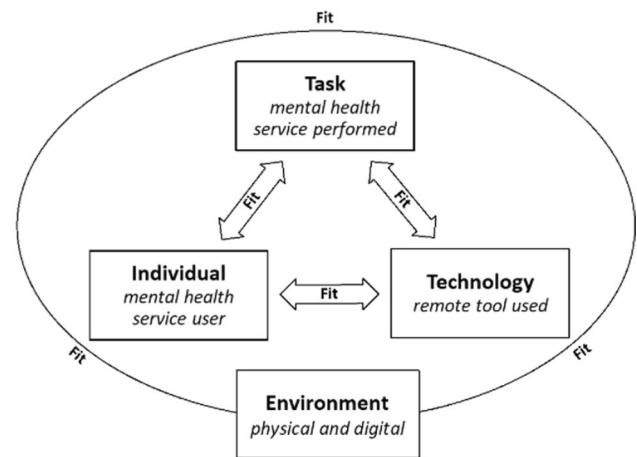
To be able to continue services and safeguard the health and well-being of mental health service users, service providers have responded to the pandemic with the rapid and large-scale innovation and adoption of remote services [8, 9]. In this paper, remote services mainly reflect real-time consultations via phone or video call, but also other electronic transactions related to mental health, such as remote web-based therapies like therapy programs using instant messaging, and self-care modules such as self-help programs, tests, and guidelines.

The transition to remote services may have empowered mental health service users, promoted their self-efficacy, and enabled them to engage in their services more independently of time and place [8]. Nonetheless, this change demands a high level of adaptability on service users and providers [10]. Concerns are expressed about the use of digital technologies as service users must work with digital means and are expected to play a more competent and active role in caring for their health [11]. Studies show that people with mental health problems have more lack of interest in web-based services compared to other people [12]. Moreover, they are concerned about the safety of remote services and fear that remote services will replace face-to-face encounters [12, 13]. In addition, Mitchell and Gordon's study on computerized cognitive behaviour therapy, showed that most participants preferred computerized therapy to be accompanied by counseling [14].

Therefore, particularly vulnerable mental health service users might lack motivation and trust in remote services and would rather wait until face-to-face practices are back. However, avoiding participation in digital services may lead to a digital divide [8]. According to Greer et al. a perceived lack of knowledge, problems in personal circumstances such as financial barriers, and the barriers presented by mental health difficulties appear to maintain digital exclusion. In turn, one's own motivation and personal support are central to overcoming digital exclusion [15].

The adoption of new health technologies is influenced by many factors. People's intention to introduce new technology and the actual use of the technology has been explained by various theoretical models [16] such as the Technology Acceptance Model (TAM) [17] and the Theory of Planned Behaviour (TPB) [18]. According to the Task-Technology-Fit model (TTF model) [19], characteristics of task and technology together determine task-technology fit and influence technology utilisation. In this report, the Fit between Individuals, Task, Technology, and Environment (FITTE) framework developed by Ammenwerth et al. [20] and Prgomet et al. [21] (Fig. 1), which combines previous theoretical models, was used to identify the factors potentially influencing the success or failure of the adoption of remote mental health services. At the heart of the FITTE framework is the proposition that technology adoption in a healthcare setting depends on the interaction or fit between the attributes of four fit dimensions: the individual service user, the technology needed to accomplish a given task remotely, the task referring to the mental health service performed [20], and the environment [21]. To reach an optimal fit between these dimensions, service users must, for example, be motivated to engage in a mental health service remotely (fit between individual and task), they must have the skills to use remote tools sufficiently (fit between individual and technology), but also the remote tools must support the service with great functionality (fit between technology and task). Moreover, the physical and digital environment must be supportive for the remote

Fig. 1 Modified model based on The FITT framework by Ammenwerth et al. [20] and the FITTE framework by Prgomet et al. [21]



service use (environmental fit). Insufficient fit between the attributes is often the reason for problems encountered during implementation and adoption [20]. Compared to other theories such as TAM and TTF, the FITTE framework differs in its addition of the interaction between user and task and the overarching environmental fit.

Several studies have identified factors that promote or challenge the adoption of remote mental health services. Some studies conducted during the pandemic, have examined the predictors of the use of remote services from the perspective of mental health service users [22, 23]. However, most studies focused on the providers point of view [8, 24–27] or on experiences with remote services before the COVID-pandemic [25, 27–29]. Therefore, the present study provides an in depth-analysis on the adoption of remote mental health services during the COVID-19 pandemic from the service users perspective. This is important because in the future there will likely be more remote services than before the pandemic as many decision-makers consider the response to COVID-19 as an opportunity to transform mental health services [30]. Accordingly, the findings can contribute to the design of new remote services or strengthening already existing ones. Furthermore, insights can be used for future pandemic preparedness and response. In this report Finland and the Netherlands are compared as both countries are equally digitally advanced [31] and because the burden of mental health conditions in both countries is amongst the highest in Europe [32].

The aim of this study was to identify and compare the promoters and challenges of the adoption of remote mental health services experienced by service users in Finland and the Netherlands during the COVID-19 pandemic. The FITTE Framework was applied to identify the interconnected factors that influenced the perceived promoters and challenges of the adoption of remote services. The following research questions were formulated:

1. What are the promoters and challenges of the adoption of remote mental health services experienced by Finnish and Dutch service users during the COVID-19 pandemic in light of the FITT framework?
2. What differences and similarities are seen between Finnish and Dutch mental health service users' experience with remote mental health services during the COVID-19 pandemic?

2 Methods

2.1 Study design

This study used a qualitative approach and was descriptive in nature. The data was obtained from semi-structured interviews among mental health service users in Finland and the Netherlands.

2.2 Context

In the Netherlands, the national government is responsible for the provision of mental health services [33]. Mental health services are provided through a system of frontline services by general practitioners (GPs). Primary and secondary mental health services are managed by specialized mental health service providers [8]. Mental health services in the Netherlands are reimbursed by funds collected with social health insurance. Everyone in the Netherlands is required to get health

insurance from private insurers and healthcare is primarily financed through premiums, tax revenues, and government grants [33]. The healthcare system in Finland is decentralized and primarily financed by taxes [34]. Municipalities and hospital districts are currently still responsible for organizing mental health services [35], however the health and social services reform will restructure the organization of public services in Finland, and the responsibility for organizing health and social services will be transferred to wellbeing services counties from 2023 [36]. Mental health services can be received from healthcare centers, occupational healthcare, specialised psychiatric care, private clinics, private practitioners, the church, and various organisations [37]. Private sector services are particularly important around psychotherapy in Finland. In the beginning of the COVID-19 pandemic, governmental regulations in both countries urged mental health service providers to switch to remote delivery to prevent the spread of coronavirus [8, 38].

2.3 Recruitment

Participants were eligible if they (a) were aged 18 years or older, (b) had any kind of mental health condition before or during the pandemic, and (c) had experiences with remote mental health services during the pandemic. Finnish participants were recruited by forwarding an invitation letter to third sector organizations ($n = 6$) in different areas in Finland that provided support for mental health conditions or other challenges in life and had switched to remote services. Employees of the organizations also approached potential participants directly in live meetings, either face-to-face or remotely. One researcher (LV) as well promoted the study in one organization's web-based meeting to reach potential participants. Those interested were asked to contact the researcher by email. Dutch participants were reached by sharing an invitation letter on different social media channels. Participants willing to participate contacted the researcher (SKC) by sending a message on social media. Additionally, participants who already agreed to participate were encouraged to share the research call among their acquaintances in both countries. A small thank-you gift was offered for participants.

A total of 25 individuals participated in the interviews. Participants were mental health service users from Finland ($n = 12$) and the Netherlands ($n = 13$). None of the participants dropped-out. Majority of them were women ($n = 19$). The Finnish participants had, on average, completed 16.7 years of full-time education (range 12–21 years), with half of them being either students or employed ($n = 6$), while the remaining half were unemployed or on leave during the pandemic ($n = 6$). Most of the Dutch participants were currently studying or had completed their studies at a university ($n = 7$) or university of applied sciences ($n = 4$). The Finnish participants (median age was 28.5 years) were somewhat older than the Dutch participants (median 23).

In terms of the type of remote services used, both groups mentioned using web-based therapies (e.g., chat or email conversations), and real-time services (e.g., consultations via phone or video call). However, Finnish participants did not mention self-care services, whereas a few Dutch participants did (e.g., online modules with assignments).

2.4 Data collection

The data collection utilized a semi-structured interview guide developed by the research team. The questions addressed (1) availability, use and experience of remote services during the COVID-19 pandemic and (2) challenges and development needs related to remote services. The interview guide was piloted in Finland with three participants who described the questions as relevant. No changes were required so the pilot interviews were included in the study with participants' consent. Two researchers (SKC and LV) conducted the individual interviews in participants' national language. Both researchers were woman. At the time of the study SKC was a student at Maastricht University and LV a research assistant at the Finnish Institute for Health and Welfare. The Finnish participants were interviewed via a phone call from the researcher's workplace between November 2020 and February 2021. The Dutch participants were interviewed via a secure video call from the researchers' home or face-to-face in a private room at Maastricht University between April and May 2021. The researchers did not know the participants directly. No repeated interviews were carried out. All interviews lasted from 20 to 60 min, were audio-recorded and transcribed.

2.5 Data analysis

A qualitative data analysis technique was used [39]. The same two-stage coding process was carried out for both Finnish and Dutch data to ensure data comparability. In the first stage, two researchers (SKC and LV) analyzed the data independently using inductive descriptive coding utilizing different qualitative data analysis software programs, namely Atlas.ti and Nvivo. Here, the transcripts were read multiple times and relevant information in the text which could potentially

answer the research question was selected and assigned a single code which summarized it in a short phrase [40]. The descriptive coding was conducted in English for both Finnish and Dutch data, resulting in 103 and 122 codes, respectively. After conducting the country-based data analysis we extracted the coding from the programs into a Word document. In the second stage, a deductive approach was used to categorize the data. SKC grouped the codes separately for Finnish and Dutch data in the Word document, under the FITTE framework dimensions: *Fit between* (1) *individual and task*, (2) *individual and technology*, and (3) *task and technology* [20], and (4) *Environmental fit* [21]. Codes under the four dimensions were then grouped into descriptive subcategories (n = 17 for Finnish data, n = 16 for Dutch data) based on the similarity of their content (Table 1). The subcategories for both countries were then separated into a promoter or a challenge that determined each fit, and the frequencies of the associated codes were calculated to identify country-specific differences in the data (Table 2). Three researchers (SKC, LV, and A-MK) discussed about the categorization which was iteratively refined to reach consensus. Data saturation was achieved as responses in the interviews showed recurrence. The results are presented with direct quotations from the interviews translated into English with the participant's country code (FI for Finland, NL for the Netherlands) and identification number.

3 Results

Table 2 summarizes the promoters and challenges of service users' adoption of remote mental health services in Finland and the Netherlands during the COVID-19 pandemic. We identified 17 subcategories that may influence the adoption of remote services. The results are summarized by presenting and comparing the promoters and challenges identified from both countries that determined each fit.

3.1 Fit between individual and task

In both countries, remote services were perceived easily accessible due to flexibilities in time and place. Several participants described the advantage of not having to travel from one place to another. However, Dutch participants also described easy access as a challenge as easy planning and "quick" delivery of sessions was perceived to reduce involvement in the treatment.

"I would go from online meeting to online meeting, and then I also planned the session with the psychologist in between my classes from school ... I could really be bothered by that as I could not think about the conversation afterwards, I continued immediately" [NL13]

Furthermore, many Finnish and Dutch participants were happy with the use of remote services as it made the continuation of mental health services possible when there was no other option. They reported that the services relieved mental health conditions, such as depression, anxiety, and loneliness. In contrast, several Dutch participants felt the remote service was unhelpful for their mental health problems, they believed, for example, that it did not give the needed support and delayed their progress. The support for mental health was clearly more emphasized among the Finnish participants. Some expressed a willingness to continue using remote services after the pandemic.

"I hope that digital services would not disappear completely, that this will provide the kind of know-how that services via video call could be provided even after the pandemic." [FI12]

Participants in both countries mentioned challenges with non-verbal communication in remote services. They found it difficult to pick up important non-verbal cues such as gestures, posture, and body language, and the feeling of warmth was missing. Consequently, they felt less supported by their mental health professional or peers in group sessions.

"What you are missing is seeing each other in person, you need to see non-verbal communication [...] that she gives a tissue when you are crying [...], this simply cannot be done by the computer." [NL6]

In contrast to Finnish participants, Dutch participants also highlighted that the lack of non-verbal communication hampered the development of a personal therapeutic relationship.

"You do not build the bond as you would do when you see each other in real life. It's just very different." [NL12]

Table 1 Examples of codes, sub-categories, and dimensions

Example code	Sub-category	Dimension
Because it was digital, it was easily accessible as you do not have to travel and can be anywhere at that time	Access to mental health services	Fit between individual and task
The mental health service on video calls supported wellbeing and social anxiety	Getting support for mental health and well-being	
Missing in person contact, non-verbal communication (e.g., nodding) via phone call and video call	Non-verbal communication in remote services	
Prefers physical services as easier to read expressions and gestures	Expressing oneself and interpreting others remotely	
Discussing in remote services feels easier because is an introvert	Personality influencing the suitability for remote services	
Service user thinks he or she has enough skills to have web-based treatment	Digital skills	Fit between individual and technology
Bad Wi-Fi connection which caused conversations to go less fluid and this disrupted the conversation	Technological functioning and required devices	
Difficult to find where to hand in assignment because of the different platforms that the service user had to use	Usability of remote services	
Feeling annoyed and have feelings of anxiety when something technically does not work	Emotions rising with the use of remote services	
The phone consultations have been challenging due to imprecisely scheduled appointments	Organization of remote services	Fit between task and technology
The mental health service does not work via video call as the treatment involves hypnosis	Suitability of services for remote implementation	
The video call was horrible because the psychotherapist had poor digital skills and unclear sound quality where the service user's voice echoed	Fit between mental health professional and technology	
Digital services are safe as you are protected against the corona virus	Less risk of getting COVID-19	Environmental fit
Beneficial to call to mental health emergency centre now and then to avoid the departure for services	No need to leave outside to the services	
With digital treatment you can get distracted easily from the conversation (e.g., due to message on phone, things in the environment)	Environmental distractions in the use of remote services	
Remote mental health services are a threat to privacy and safety when not alone at home	Safety in the physical environment during remote service use	
A pity to discuss personal matters on a social networking platform with insufficient data security	Security of remote services	

Table 2 Promoters and challenges for adoption of remote mental health services in Finland and The Netherlands

Dimension and sub-categories	Codes (n) by country			
	Promoter		Challenge	
	FIN	NL	FIN	NL
Fit between individual and task				
Access to mental health services	(10)	(9)	–	(4)
Getting support for mental health and well-being	(23)	(9)	–	(9)
Non-verbal communication in remote services	(1)	(1)	(4)	(8)
Expressing oneself and interpreting others remotely	(4)	(2)	(9)	(12)
Personality influencing the suitability for remote services	(3)	–	–	(2)
Fit between individual and technology				
Digital skills	(2)	(3)	(2)	(1)
Technological functioning and required devices	–	(1)	(3)	(4)
Usability of remote services	(2)	–	(4)	(9)
Emotions rising with the use of remote services	–	–	(2)	(10)
Fit between task and technology				
Organization of remote services	–	–	(4)	(5)
Suitability of services for remote implementation	(5)	–	(2)	(4)
Fit between mental health professional and technology	–	–	(2)	(7)
Environmental fit				
Less risk of getting COVID-19	(3)	(2)	–	–
No need to leave outside to the services	(6)	(1)	(2)	(5)
Environmental distractions in the use of remote services	–	–	(3)	(3)
Safety in the physical environment during remote service use	–	(1)	(2)	(3)
Security of remote services	–	–	(6)	–

The codes describe the frequency of mentions of the sub-categories in the interviews by country FIN: Finland; NL: The Netherlands

Moreover, expressing oneself and interpreting others remotely were reported by both groups as substantial challenges. Difficulties were caused by the lack of non-verbal communication along with technical issues and lack of privacy. Due to communicational challenges, some service users felt that they had been misunderstood.

“You really notice with the phone service that with someone’s response, you do not know how to interpret that and what I was telling did not really come across to the psychiatrist.” [FIN10]

However, video call services were considered a better option than a phone or chat service as facial expressions could be seen.

Finally, in Finland, personality appeared more as a promoter, whereas in the Netherlands, it was a challenge. This could be explained as some Finnish participants described that their preference for remote services was due to introvert personality. In contrast, some Dutch service users described themselves as more extrovert.

“I am a very communicative person and extrovert, so for me the physical connection is really important.” [NL1]

3.2 Fit between individual and technology

Most participants reported to be comfortable with the technology as they felt to have enough digital skills to use remote services, although further guidance would have been appreciated. For example, Finnish service users hoped for a chat service where one could ask support on IT problems. Both groups reported technology-related issues as a challenge. They mentioned that signal problems and equipment of varying quality interfered directly with the service quality.

“The sound quality on the device was quite unclear. It made me feel so bad to listen to it.” [FI12]

Participants in both countries, although Dutch participants more frequently, mentioned usability problems such as functionality issues of the remote platform. For example, overlapping pieces of text in web-based modules and use of many different platforms for the same service were perceived as barriers.

"Then I had to go to another website via another link and [...] it just very annoying to go back and forth between platforms." [NL7]

Negative emotions were also raised while using remote services, this was expressed mainly by Dutch participants. They described feeling annoyed, awkward, nervous, worried, and lost motivation over usability issues they encountered.

"Everything went through a special portal, and I thought it was done very strangely [...] I just quickly get discouraged; this doesn't work." [NL1]

3.3 Fit between task and technology

Challenges to the adoption for both Finnish and Dutch service users concerned the organization of remote services. Several Finnish participants, for example, were dissatisfied about the long queuing in remote services. Moreover, both groups experienced appointment times that were imprecisely scheduled, altered, or not followed through leading to uncertainty and frustration.

"So, they said they would call sometime that week. Then they called on Wednesday, just when I was sleeping in the morning [...] I got a new appointment but was postponed by weeks." [F17]

Finnish service users were more optimistic about the suitability of remote delivery, such as video call platforms, to mental health services. However, Dutch participants recognized several suitability issues. Eye Movement Desensitization and Reprocessing (EMDR), for example, was considered nearly impossible to perform remotely by several Dutch service users. Another example:

"It has not moved to digital, because a very important part of haptonomy therapy is the feeling... and so it just could not be digital." [NL7]

Further, both groups reported the professionals' lack of digital skills and poor equipment as a challenge. Dutch participants emphasized the low affinity that professionals had for providing remote services, this made it more difficult for service users to adapt to remote services.

3.4 Environmental fit

One major promoter in both countries was a feeling to be protected against the coronavirus as remote services had reduced physical contacts. In addition, several Finnish service users noted that due to their mental health status it was sometimes difficult for them to go to location and staying home felt good as they would not have to prepare for departure. However, not physically moving to the location when using remote services was also seen as a disadvantage as it did not give incentive to go outdoors.

"If the service is physically, then there is some reason to go out, get some air, leave the house, so that does really good for mental health." [F15]

Moreover, many Dutch participants preferred the physical setting as they found it beneficial that they could let the conversation sink, find closure, and feel calm and at ease when they physically left the therapeutic room and travelled home.

"Then you walk out of the building, and you really have the idea of 'sigh'... then you can really leave it behind." [FIN7]

A challenge recognized by both groups was environmental distractions, for example, seeing messages on the phone during an ongoing session in the service. In addition, both groups encountered a challenge with privacy of the physical environment. Therapeutic sessions at home, made some participants feel that their privacy was invaded:

"When my partner was at home, there was no such similar privacy, it didn't feel like being able to safely let out emotions." [F15]

Only Finnish participants reported being concerned about the security of the remote services used and they did not feel secure to discuss personal matters in group meetings.

"It can happen in many ways, that someone is hacking those written conversations." [F15]

4 Discussion

We identified and compared the promoters and challenges of the adoption of remote mental health services experienced by Finnish and Dutch service users during the COVID-19 pandemic. Our findings during this exceptional era give valuable information on how to support transformation to increasingly remote delivery of mental care and preparedness to future public health crises. The main promoters expressed by both Finnish and Dutch participants consist of the easy access and flexibility of remote services, the support for mental health and well-being, and feeling protected against the coronavirus. Challenges that were reported by both groups are related to lack of non-verbal communication, expressing oneself and interpreting others, technical problems, remote organization, environmental distractions- and lack of privacy during remote services at home. Differences in experience were found concerning the access, suitability, usability and security of services, and participant's needs and feelings around the practice of remote services.

In terms of the *fit between individual and task*, previous studies [8, 23, 41] also found that continuation of- and easy access to mental health services were appreciated and motivated the adoption of remote services. However, not found in earlier research, several Dutch participants believed that easy access to remote services could also pose a challenge. Participants, for example, planned their remote mental health sessions in between other remote meetings. Yet, this is particularly of concern during the pandemic and might change in the post covid-19 time. Further, the support for their mental health conditions was especially emphasized by Finnish service users. Dutch participants had mixed feelings and reported that remote services were not always helpful for their specific needs. Similarly, Liberati et al. [23] found that service users perceived remote consultations not as helpful or meaningful compared to physical ones [23]. Furthermore, some major challenges of the adoption of remote services, also reported in earlier studies [23, 25, 26, 28, 41], was to pick up important non-verbal cues, to have genuine emphatic contact, feel connected, and to understand each other fully. Accordingly, participants felt the necessity to see the professional physically. In contrast to earlier work reporting that mental health service users tend to be more open in their home environment [8], our study found that openly expressing emotions and feelings remotely was rather challenging. Granholm [42] also found that young people favour talking to someone in person about difficult personal issues. Moreover, new to earlier literature, participants sometimes described their preference for remote or traditional services based on their personality.

In analysing the *fit between individual and technology*, similar from previous studies [23, 41, 43], poor technological functioning and poor working of devices was elucidated as a bad influential factor for the success of the adoption of remote services. Furthermore, Dutch participants were more likely to be concerned about the systems usability and encountered negative emotions with specific concerns about functionality issues of the remote platform. Since mental health services were often substituted by phone services in Finland and they did not mention to use any self-help modules, it is understandable that Finnish service users see less challenge in usability of platforms.

Regarding the *fit between task and technology*, Finnish service users were optimistic about the suitability of remote services, whereas Dutch service users highlight that the services are not suitable for all types of treatments, such as EMDR treatment. Earlier research also show that a tailored approach was wished for by service users [8, 23]. Furthermore, especially Dutch service users reported the lack of competence in providing digital services among mental health professionals. Skilled professionals may discover that without further training, their effectiveness is not the same in a digital environment [44]. Another challenge, in agreement with earlier research [23], emerged from both groups, namely the organization of remote services, for example, challenges with appointment times that were imprecisely scheduled.

The *environmental fit* is particularly important since additional environmental factors, such as the physical surrounding of the service user, influence participants' view on adoption of remote services. Both groups agreed that the physical environment in therapeutic sessions at home can create distractions and privacy is not granted. Interestingly, only Finnish service users made special note about their concern regarding network security in the digital environment. Finnish people recently became victim of a hacking crime where highly sensitive data was stolen from a psychotherapy center [45]. It is therefore understandable that they are careful. Yet, it is remarkable that it did not appear in the Dutch data from our study as concerns about the safety of web-based mental health services have been identified in several previous studies [8, 12, 13].

In addition, another disadvantage related to the *environmental fit*, not much highlighted in previous research [23] pertains to the loss of traveling from the physical services to their home as this was perceived as important for processing the content of the sessions among Dutch participants. For Finnish participants, not having to travel to the location allowed for better fulfilment of their needs as due to their mental health status it was burdensome to travel. Earlier research found that besides cases of illness it was beneficial to hold services remotely because of other reasons such as pregnancy, disability and being abroad [25, 26].

We found important promoters of the adoption of remote services; however, improvement in all four fit dimensions of the FITTE framework is needed to mitigate the challenges of remote service use. An important step would be for national governments in the Netherlands and wellbeing services counties in Finland to improve remote mental health services with insights from this study. The design of future remote mental health services should consider a suitable environment with sufficient privacy and a safe and adequate network connection for service users, skill enhancement in remote services for as well mental healthcare professionals as service users; moreover, better organizational conditions, user-friendly platforms and understanding of the preferences and specific needs of the service users is essential. Nonetheless, the findings also shed light on the necessity of face-to-face encounters. Based on our findings the design of future mental health services should include both remote and face-to-face delivery. Remote services could be given as an extended choice to the service user or as an alternative option in discussion with the care provider. A blended or hybrid approach have been wished for in multiple other studies as well [14, 42].

4.1 Limitations

The findings of this study must be considered in relation to several limitations. First, as our study was voluntary in nature, and as our sample included mostly young, highly educated women, this may have caused participants to represent a rather homogeneous group. Young people with higher levels of education are, for example, more likely to be technically skilled. As a result, this group might have different motivations to adopt remote services than the general population.

Additionally, our participants' experiences with remote services might not be representative of other populations as we examined two digitally advanced countries. Past research shows that low- and middle-income countries are less digitally developed encountering challenges such as insufficient human resources and poor technical infrastructure [46]. Moreover, due to the small number of participants, cross-country comparisons are only indicative, and based on the data, no generalizations can be made about the differences between Finnish and Dutch mental health service users. Finnish participants were recruited from third sector organizations. Consequently, the participants do not fully represent all Finnish users of mental health services.

Moreover, the recruitment of participants and the way the interviews were conducted varied in Finland and the Netherlands potentially biasing the data collected across the two countries. The use of different interview formats could impact the richness of the data. Nuances, such as non-verbal cues present in face-to-face, or video call interviews could be missed in phone call interviews. Additionally, it might have influenced the openness of the participants to share sensitive information.

Our interviews were conducted during the COVID-19 pandemic, which gave an unprecedented boost to remote mental health services in many countries including Finland and the Netherlands [8, 9, 38]. This might decrease the generalizability of our findings to the times after the pandemic. However, the volume of remote services has remained high after the pandemic and our findings give valuable information for current mental health care and broader adoption of remote mental health services. Moreover, our findings give relevant evidence in case of future public health crises.

Furthermore, this research regarded all kinds of mental health problems and did not focus on one specifically. Further research is needed to look at specific services and its suitability to be provided remotely. Furthermore, Finnish interviews had a broader focus on health and social services, not only mental health, whereas in this research only data about mental health services was used. Therefore, Finnish participants may have expressed more challenges in remote health services and other social services than considering only remote mental health services. Accordingly, the perception of Finnish service users towards remote mental health care may have appeared more positive.

5 Conclusions

Remote mental health services increased notably during the COVID-19 pandemic and have remained an important modality for delivering ongoing care from then on. While remote services are accessible, support our well-being and mental health and protect us against the coronavirus, they are not ideal. Our findings imply that face-to-face contact are

often indispensable when adopting mental health services. The lack of physical contact between the service user and the professional caused challenges related to the feeling of being understood, supported, safe, connected and expressing oneself. Other problems were related to technological issues, suitability, and usability of services. Additionally, our findings suggest that there can be substantial differences between countries in how service users perceive remote services, even though both countries we studied can be considered advanced in their level of digitalization. Potential approaches for further research comprise the investigation of ways in which the challenges and development needs which emerged from this study can be handled. More research is needed on blended approaches and explore how to gain the advantages from both face-to-face and remote methods, the cost-effectiveness of remote services and identify which services suit remote forms and for whom, taking the specific needs of service users into account.

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Availability of data and materials The datasets generated and analysed during the current study are not publicly available for the protection of the anonymity of the participants but are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate The study procedure was approved by the Ethics Committee of the Finnish Institute for Health and Welfare (THL/4657/6.02.01/2020) and the FHML Research Ethical Committee of Maastricht University (FHML-REC/2021/055). The study was performed in accordance with all relevant guidelines and regulations. Participants were given information about their rights, study aims, and the confidential and anonymous use and preservation of data. Participation was voluntary and each participant provided written informed consent. The data were collected and stored confidentially, and the results were reported in a way that an individual participant is not identifiable.

Consent for publication Not applicable.

Competing interests The authors declare no competing interests.

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