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Faculty of Business Economics

Master of Management

Master's thesis

The impact of digital innovations on therapists.

Tessa Dany Debruyne

Thesis presented in fulfillment of the requirements for the degree of Master of Management, specialization Strategy and Innovation Management

SUPERVISOR :
Prof. dr. Koen VAN LAER

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www.uhasselt.be
Universiteit Hasselt
Campus Hasselt:
Martelarenlaan 42 | 3500 Hasselt
Campus Diepenbeek:
Agoralaan Gebouw D | 3590 Diepenbeek

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This master thesis was written during the COVID-19 crisis in 2020-2021. This global health crisis has had an impact on the (writing) process, the research activities and the research results that are at the basis of this thesis. There was an impact on the literature study and the data collection.

Impact of the Digital Innovations in Therapy

Student: Tessa Debruyne

Supervisor: Prof. dr. Koen VAN LAER

Hasselt University

August 20, 2021

Summary

Research purpose and methods

In the world of psychology and well-being, there has been a rise of online alternatives. Online methods have connected clients to their personal data and their service providers in new ways and mobile innovations have improved the client's access to therapy and medication adherence. (Mental Health Foundation, 2019) Many of these innovations are less expensive than their face-to-face variants but tend to get the backlash that they are less effective. (Leibert et al., 2006) Some studies claim that online psychological support can become the next normal and that more therapists should hop on this trend. (Knaevelsrud et al., 2006)

This research aims to fill a gap in the existing literature that focuses on the impact of online therapy and digital innovations in the wellbeing industry; namely how professional therapists and counselors handle the change to a digital workplace and how they feel about the various online alternatives that are currently available. Existing research focuses on clients and generally a younger generation, while the therapists are often overlooked.

The central aim of my research is to answer the following question:

What is the impact of the digital innovations in psychotherapy on therapists' methods?

To answer this question, qualitative research methods were applied by conducting interviews with counselors and therapists. The interviews focused on their own experiences utilizing this technology, as well as their motivation to use digital innovations in the future.

Findings

After the qualitative research was gathered, it felt aligned with the previous findings in the literature surrounding therapy and digitalization. Comparing to the previous literature on increased productivity due to digital innovations by Maiti et al. (2020) and Wallin et al. (2020), the respondents share the main viewpoint of the study. They stated they were more flexible in time and place, and were able to see more clients in a shorter amount of time, as well as reach more clients that otherwise wouldn't come to therapy. Balsmeier et al. (2019) discussed the difficulties with new learnings that employees might experience and for therapists this was the same. They were not all open to working with the upcoming tools.

Most did agree that overall, it made their lives easier during uncertain times and that they were interested in learning more about it. They mentioned a lot of the points that came up in Stoll et al. (2020) their research like the increased accessibility and less time restrictions for both clients and therapists. Some skeptics were now completely aware of the possibilities and felt like they had to offer it to all their clients in the future, no matter the circumstances.

A stunning discovery was the way that no therapist felt in competition with anyone or anything, even when they were told that artificial intelligence was well on its way of replacing them. This contradicts the research into other digitalizing employments by Harteis (2017),

Balsmeier et al. (2019) and Chui et al. (2015), who found that most employees in different industries feel threatened by quick automation, especially at lower-level jobs. Most therapists openly stated they were happy that more awareness was being brought to the topic of mental health and that they already referred clients to competitors (see: colleagues) and were already doing, or planning on doing, the same with the tools we discussed in the interviews.

The previous research by Pfefferbaum (2020) on the government's involvement in mental health care aligned with the respondents' perspectives. They explained their own issues with having an 'unlicensed' job and explained their fear for people wanting to get help: they will either start therapy with anyone who refers to themselves as a therapist, or they would go to a licensed psychologist where they hope to get 'better' after they finish the sessions their insurance covers. While they hope the government would stop perpetuating this idea of a 'quick fix' and start investing in the mental health industry, they also hope the upcoming technologies do not encourage this idea of being able to always help yourself. Some therapists feared the 'quick fix' culture would only be encouraged by these innovations. Others saw it in a positive light, hoping that it brings the mental health industry in the new era of preventing instead of curing. Hopefully in the future, more research will investigate the impact of the governmental instances on digitalization of therapy, in Belgium and beyond.

Critical considerations

Literature proved the impacts of innovations everywhere but failed to provide a clear case for the professional perspectives of those in the mental health industry. While therapists are not yet dealing with the complete automation of their jobs, it does not seem like a farfetched idea or many, and the therapists are aware of the changes going on.

In the ever-evolving digital climate, it is uncertain what happens next in the well-tech industry, but the study did establish that therapists are ready to embrace these changes. While they remain skeptical of the idea that a human can be replaced by a non-human in a job like this, the other innovations do not seem to startle them. A beautiful quote by one of the therapists, who was quite open to using digital technologies, described the sentiment the best: 'Trauma is created by people, but it is also healed by people.'

The impact of governmental instances are also not to be underestimated, whether it relates to the number of people aware of mental health facilities provided or the technology allowances by different governments. It would be interesting to research the affects on the therapists' businesses and personal mental health, when they are forced to use different digital innovations instead of real-life therapy in the traditional sense. One could also study their adaptation progress on a larger scale, interpreting their technology adaptation to other innovations in the well-tech industry.

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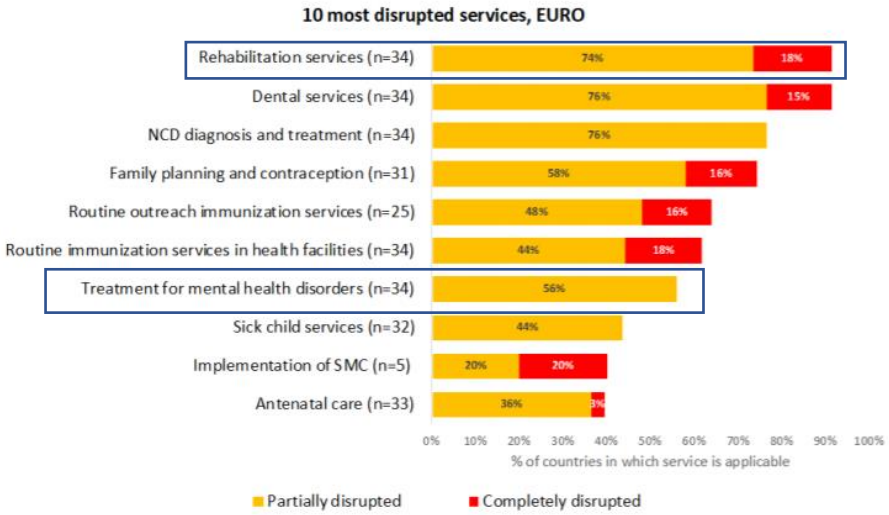
I. Introduction & purpose

The numbers don't lie: depression is one of the leading causes of disability globally, estimated to affect 264 million people worldwide. In the USA, 129 people take their own life yearly and another 130 die due to opioid overdose. (Rudd & Beidas, 2020) There has been a global mental health crisis long before the 2020 pandemic hit and magnified an uncomfortable truth: not enough people get the care they need and when they do, they are underserved. (Pfefferbaum et al., 2020)

People who are already experiencing mental health conditions are more likely to get severely sick because of the COVID-19 virus. (Ornell, Schuch, Sordi, & Kessler, 2020) Dr Tedros Adhanom Ghebreyesus, Director-General of the World Health Organization states that *"World leaders must move fast and decisively to invest more in life-saving mental health programs – during the pandemic and beyond."* A 2020 study by the World Health Organization revealed that COVID-19 disrupted the mental health industry and increased the already large demand for mental health services. The WHO survey states that mental health is one of the most underfunded sections worldwide, but the pandemic hijacked the chronically low supply even more. (WHO, 2020)

Graph 1: Results of the WHO survey on disrupted services in the European Union post-pandemic



Source: Pulse survey on continuity of essential health services during the COVID-19 pandemic: interim report, August 2020, WHO.

Governments around the world were not prepared to deal with the mental health effects of the pandemic, but they were already struggling to keep up with the pre-existing demand of people. Whether insurance systems are not proportionally updated, or there is a lack of public services, mental health should be taken under the loop. (Pfefferbaum et al., 2020)

In the world of psychology and well-being, there has been a rise of online alternatives. Online methods have connected clients to their personal data and their service providers in new ways and mobile innovations have improved the client's access to therapy and medication adherence. (Mental Health Foundation, 2019) Many of these innovations are less expensive than their face-to-face variants but tend to get the backlash that they are less effective.

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This research aims to fill a gap in the existing literature that focuses on the impact of online therapy and digital innovations in the wellbeing industry; namely how professional therapists and counselors handle the change to a digital workplace and how they feel about the various online alternatives that are currently available. Existing research focuses on clients and generally a younger generation, while the experts – the therapists – are often overlooked. To fully understand the impact of these innovations on the industry, it is important to gain the experts' insights and experiences.

The central aim of my research is to answer the following question:

What is the impact of the digital innovations in therapy on therapists' methods?

To answer this question, qualitative research methods were applied by conducting interviews with counselors and therapists. The interviews focused on their own experiences utilizing this technology, as well as their motivation to use digital innovations in the future. The counselors and therapists I interviewed are all situated in Flanders and are actively using psychotherapy and supporting methods to aid their clients. They have various areas of expertise, ranging from relationship counseling, life coaching and career coaching to psychotherapy, autism counseling and addiction therapy.

This research consists of 7 parts. The first showed the purpose of the study and its relevance in today's climate.

Part 2 and 3 are a deep dive into the existing literature that establishes the surrounding areas of my study: the innovations of jobs and industries in general (2) and digital innovations affecting psychotherapy (3). These entail the benefits and challenges at the forefront that have been found in existing literature. In these parts, the objective is for literary research to determine which digital innovations impact therapy. It also identifies the main reasons for people to utilize digital therapy services.

Part 4 explains the methodology used to obtain the results in the following parts. It also gives a clear overview of the respondents used in the qualitative research. It contains an analysis of the interviews. It constructs a clear overview of the determined benefits and challenges of digital therapy for therapists, as well as competitive pressures. This part also entails a coherent presentation of the findings and how to read the results presented in part 5.

The final part (6) concludes the research with hopes for the future, as well as acknowledging the limitations of the research.

2. The Digital Innovations in Professions

From the start of the 21st century, an exceptional technological progress has happened around the world. Baregheh et al. (2009) describe innovation as the multi-stage process by which organizations can transform ideas into realities: products, services, or processes. (Baregheh et al., 2009) Innovations are adaptations of what already exists. This means that technologies used in specific industries can be moved to and adapted to different industries for other purposes. Organizations innovate to compete and differentiate themselves successfully in a particular industry. (Rampersad, 2020)

Digitalization alters an individual's professional life in a lot of areas. (Wallin et al., 2020) Digitalization refers to the use of technology to translate information into 'binary language', which is the language understood by computers. (Nambisan et al., 2017) It is not the same as automation, which refers to all kinds of ways technology reduces human tasks. (Groover, 2014) Combining these two definitions (digitalization and innovation), a new term is created: Digital innovations refer to the adaptations of existing processes by translating information into binary language. (Nambisan et al., 2017)

With this, a new world of 'connected users', who globally share information with each other, becomes the new mainstream. The development of more new technologies or advancements where the user shares their personal experiences is expected in all kinds of industries throughout the world. (Baregheh et al., 2009) So what caused the sudden emergence of these digital innovations? The tech industry is one of the fastest growing sectors worldwide. The global technology market was expected to surpass a value of around 5.2 trillion dollars, but due to the pandemic this estimate was not reached. The industry will most likely reach this number before the end of 2021. (Vardhman, 2021)

2.1. Impacts of Digital Innovations

The disruptions made by big 'tech companies' are mainly relating to digitalization and automation of processes. These innovations affect the users and community in several ways. (Accenture, 2020)

Impacts on users

Digitalization inspires all industries to try new innovations in hopes of great results. Research shows positive outcomes when an organization adapts to the rhythm that the technology market is putting out. Technological advancement creates a faster and more efficient flow of knowledge, increases synchronicity, mobility, independence and boosts co-creation. (Wallin et al., 2020) Other positive impacts on employees by digital innovations are:

- An increase in productivity;
- A new employment opportunity;
- Digital working possibilities.

An increase in productivity is a common consequence when enabling digital innovations in the workplace. Exposure to these helpful technologies can save time and revert communicational barriers while eliminating misinformation. Microstudies also reveal that exposure to digital goods during working hours will eventually increase the feeling of happiness. Digital innovations implemented by the organization also allows the employee to learn more on the job, outside of their regular occupational activities. (Maiti et al., 2020; Wallin et al., 2020)

According to Ciraci et al., organizations who invest more in innovative technologies do create more employment opportunities than their less innovation-interested competitors. (Ciriaci et al., 2015) Employees in all industries are becoming more aware of the possibilities that technology and innovation brings. While most employees know of the prospect of technology taking over their current job, 78% of employees states they are keen to learn to stay ahead. It portrays the loyalty to their employer, but also the wish to keep learning. In contrast to this, only 38% claims to have enough time to complete the necessary training to reach those skills. It is a lost opportunity for those that do not feel the need to prepare for the new jobs that the technology creates. (Vardhman, 2021)

The opportunity of digital labor cannot be forgotten, since it allows people to work from around the world, whenever they deem appropriate. Digital labor is often referred to when speaking of production of value outside of the traditional workplace. (E.g.: working from home or a co-working café.) It stresses the importance of the internet for a modern company since it allows for employees to create a workplace wherever they need with the use of applications to keep in touch with colleagues and stakeholders such as customers. Popular workplace applications include programs like *Zoom* and *Slack*, where online communication is encouraged. (Frayssé et al., 2015) Digital labor has been needed more than ever, with the current pandemic rushing organizations to digitize completely. (Noticias Financieras, 2020) This digital strategy can only be implemented if organizations allow their employees to access online tasks no matter where they are by using digital tools. This is considered an opportunity since the efficient work mobility will permit employees to spend more time on their emotional state and be prepared for a changing workplace. (Freudenberg, 2020)

The following consequences can be considered a negative for the employees of the innovating company:

- New learnings;
- Difficult to disconnect;
- Fear of competition and potential unemployment in the future.

Balsmeier et al. (2019) state in their research that the human issue combined with innovation should not be forgotten, since it includes upskilling the employees to work with the innovations and in new jobs cause by the innovations. A series of qualitative interviews by Wallin et al. indicated that workers perceive digitalization as both an enhancement of their job, as well as an extra stress-factor. They reacted positively to the opportunity to learn more and have more time for other tasks but reacted poorly to the idea that technology would make their daily activities less challenging and the realization of how difficult

digitalization makes the disconnection from work at the end of the day. This 'double-edged sword' caused the respondents to be unsure about their acceptance of different technologies. (Wallin et al., 2020)

Professionals used to feel in a competition with their coworkers, but now the competition of robots and artificial intelligence is just as relevant. (Harteis, 2017) Many seem to fear that the race against the machines will eventually lead to mass unemployment. While there are jobs that could be easily automated, many tasks cannot be fully substituted with any kind of innovation. (Balsmeier et al., 2019) A study by Chui et al. argued that 45 % of work tasks could be automated already, with an additional 13 % soon. (Chui et al., 2015) By 2022, about half of companies are expecting automation and AI to lead to a reduction in their existing workforce. This means some jobs would become completely obsolete. (Maiti et al., 2020) Jobs at risk for full automation are lower-level jobs that require a lot of repetitive activities and less human opinions. (Maiti et al., 2020)

Aiding with the changes

It remains important that professionals in all industries learn how to adapt to innovation and work with different upcoming technologies, since their various skills in problem solving, communication, teamwork and critical thinking is a much-needed aspect of many jobs. (Balsmeier et al., 2019) Below are several points that require attention to help users overcome their doubts and successfully adapt to the new ways of working:

- Training of global thinking skills;
- Government's encouragement;
- Creation of trusted environment.

Harteis (2017) notes that to be able to work in an innovative environment, certain skills should be trained, like adaptation and toleration of instability. An open-minded attitude with an eagerness to learn and change professions during their careers should help employees with the challenges of today's workplace. If one is not able to adjust, qualifications rarely matter, since global thinking skills are deemed more necessary in the digital age. (Harteis, 2017)

Something that also has an impact on people's adjustment to technology is the local government's support and aid for these initiatives. Digital division is a palpable problem in countries like India, who are on the verge of an economic breakthrough. Individuals who are struggling to get out of the poverty, will most likely remain in that exact position while being disconnected from important digital services. Access to technology and digital services can potentially improve the information-sharing for educational purposes (Maiti et al., 2020) Many state-led initiatives focus on creating access to technology, but developing economies have more infrastructural, social, economic, and institutional barriers to overcome before they can fully thrive with the implementation of these new technologies. (DiMaggio et al. 2001; Kvasny 2002) The creation of a trusted environment is key, and several digital technologies can help the government gain that trust. The access to those services however,

also for those who cannot afford ICT and literacy, needs to be easier in every way. (Helliwell, 2006) As an example, the Indian government launched the 'Digital India' program in the hopes of creating a knowledge economy. The program provides citizens with high-speed internet connections. 'Digital India' increases overall transparency of services. (Maiti et al., 2020)

3. Innovations in Psychotherapy

The terms counseling and (psycho)therapy can be used interchangeably, but there are differences between the two. It is relevant to see both terms as relevant to this study, since the daily users of these mental health services rarely see the difference between the two and counseling in particular is used by all experts in the field. The American Counseling Association defines counseling as 'the professional guidance of a certain individual by utilization of psychological methods by collecting the individual's history.' It focuses on a specific issue for a short-term series of sessions. It is often more rooted in the coaching of a client towards a particular goal, which means it is more actionable and is seen as 'problem solving'. (Saling, 2010 ; Schimelpfening, 2020) Career counseling, relationship coaching and dietary counseling all focus on different aspects of an individual's life and use this information to help them with the reasons they are seeking help (American Counseling Association 2020). Psychotherapy is usually a long-term series of sessions where the professional will try to understand the client's thinking patterns and behaviors to help them feel better about themselves and their personal goals, but also about how they control their emotions and relationships. The broader terms 'therapy' or 'treatment' are safe options when referring to either psychotherapy or counseling. (Saling, 2010; Schimelpfening, 2020)

It must be noted that therapists and psychotherapists are not the same as psychologists. Depending on the legislation per country, most anyone can refer to themselves as a therapist or counselor. Psychologists are those with a degree in psychology, the study of the mind and behaviors. Psychologists are licensed to perform counseling and psychotherapy, but they also provide their client with tests and can select non-medical treatments for mental disorders. They are not doctors, but usually work closely with medical professionals to give a client the right combination in the treatment process or, when necessary, lifelong. (Saling, 2010; Schimelpfening, 2020)

Every sort of occupation experience changes due to globalization, digitalization, and automation. The adoption of new technologies can alter work practices and traditional processes, but also allow the professional to learn more on the job, outside of their regular occupational activities. (Wallin et al., 2020)

An article by Wilensky in 1964 already raised the question on what would happen when an increasing number of people receive a 'professional status'. A profession is not static, but dynamic. This means that the profession or job has undergone the different professionalization steps. The author describes the following criteria:

- Proof of knowledge surrounding the professional area;
- A way to be of service to others because of these skills;
- A continuous training progress in the form of experimental curiosity;
- Proof of credentials by an established organizations that handle a strict curriculum and fair score-system before handing the credentials. (Wilensky, 1964)

Considering these criteria, many counselors cannot be seen as professionals. Counselors and therapists that are not graduated with a psychologist's degree usually have no real proof of

knowledge or credentials in their field. They can still offer their services, since no legislation limits them to. (Abendersten et al., 2017) In the *International Encyclopedia of the Social & behavioral Sciences*, professionalization is still considered a process in which occupations become recognized as professions. Here, it is made easier to gain professional status. The authors state only two criteria to consider an occupation a profession, no longer acknowledging Wilensky's perceived importance of a thorough education by an established organization:

- The improvement of status or ranking;
- The improvement of the quality of service. (Smelser et al., 2001)

These two improvements are more easily obtainable by the therapists themselves, without hoping an organization would prove their legitimacy. Since governments worldwide do not invest in mental health facilities or real education for therapists besides psychologist degrees; professional development has become the responsibility of the individual, rather than that of an education system or a training department. (Abendersten et al., 2017) This self-directed learning comes on the wave of an increasingly individualistic society, where the individual is responsible for their own tasks, rather than a group or supervisor. We see this with many therapists, who follow different courses and educate themselves without the real support of a government-trusted organization. (Wallin et al., 2020)

Given there are so many different professions surrounding persons' mental health and well-being, the experts also have a wide array of methods to offer. Different methods and styles can be implemented when going to therapy and most of these methods will be used interchangeably or simultaneously for the best results. An introduction to these different styles is necessary to understand the impacts that digital tools have on traditional ways of working. The most used method is *talking therapy*, where the client shares their thoughts with the therapist, who asks questions and gives feedback. The therapist analyzes the conversation and helps the client uncovering a breakthrough. Almost all therapists and other mental health professionals use this method by itself or in combination with other techniques. (Abendersten et al., 2017 ; Nydegger, 2019)

One of those other techniques focuses on movement of the body. With *physical therapy*, the therapist teaches the client how to listen to their own body by movement techniques and breathing exercises. This way, the mental barriers that have come out physically are easier to overthrow. Some professionals prefer to use artistry as a way of healing. Creativity allows individuals to express their thoughts in a different way when traditional communication techniques seem to fail. *Creative therapy* can be in the shape of music production, painting, clay work or anything else that gives the client a deep experience combined with new insights. It gives the emotions that are not used a new purpose. (Nydegger, 2019)

The varieties in types of therapy and the methods applied have grown exponentially in recent years. *Energetic therapy* has grown in importance in recent years for many people. Meditation techniques, visualization and realization of energy levels can all contribute to the

client's treatment. It is often used to uncover unprocessed emotions and trauma. Newer therapies are most times used aligned with talking therapy. (Lazuras & Dokou 2016 ; Nydegger, 2019)

3.1. Digital Innovations in Therapy

Just like therapists' applied methods are becoming more diverse, so are technological innovations within the mental health industry. Innovative approaches took over the traditional way of face-to-face counseling and an increasing number of counselors deem it a necessity to be available on digital tools to aid their clients. (Bhavnani et al., 2016)

The industry is quickly adjusting to attend to the users' needs. Wellness and healthcare industries are exponentially growing and merging into a new trillion-dollar market system, which is known now as the booming well-tech - standing for 'wellbeing technology' – industry. The well-tech industry offers a multitude of innovations to support mental health initiatives for every demographic. While well-tech is still an umbrella term for all kinds of technologies aiding people in the pursuit of a healthier lifestyle, it is often related to low-budget and user-friendly digital technologies. (Pasqualani, 2020) The importance of the well-tech market can be substantiated by a 2019 Google trends report that showed a 242% increase in searches for virtual fitness solutions. Next to that, it also presented a 285% increase in searches for breathing- and meditation tools, as well as an increase of 220% in searches for dietary guidance. (Arora et al., 2019)

Graph 2: Mental health funding from 2017 to 2020

Ojha et al. (2020) stress the importance of these digital innovations in the healthcare system in their research. The research shows that while most technologies are not sufficiently accessible for a vulnerable part of the population, it gives an extra option to an already lacking mental healthcare system across the globe. Well-tech could lift some barriers, as it has already initiated a whole new movement. (Ojha et al., 2020) Countries such as the United Arab Emirates have already been heavily investing in technology that promotes mental wellbeing and attempts to monitor the country's overall happiness levels with their new Minister of Happiness, who states it is the best indicator of health. Finland made the news claiming to switch to a working week of 4 days, eliminating the 5th day. This news was untrue,

but encouraged the conversation surrounding burnouts and people's overall position on the current balance. Officials agreed that the economy of wellbeing should be strongly promoted across the country, which includes the technology. (Pasqualani, 2020)

According to an extensive research by Fischer & Luiselli (2016), well-being technology is usually categorized per the objective of the tool, which can be assisting, intervening, or analyzing. (Fischer et al., 2016)

Assistive tools are a way of aiding a person with what they are trying to achieve in simple ways. (Fischer et al., 2016) An example of a digital innovation is the mobile application 'Headspace', which helps the user meditate with beginner-friendly guides and soothing sounds. (Headspace, n.d.)

Interventional tools are, as the word gives away, intervening with a certain decision a person wants to make. It is about creating an extra barrier or reminder for that person to think twice about their decision. (Fischer et al., 2016) As an example, iMedA is a project that aims to remind users to take their prescription medication by means of a digital tool. This means it helps with medication adherence. (Etimani et al., 2020)

Analytical tools collect data and analyze them for the user's benefit. (Fischer et al., 2016) A popular example is Sleep Cycle, which is another mobile application that tracks your sleeping patterns by means of sound analysis. (Sleep Cycle, 2020)

As the different objectives of technology helping in the mental health industry have been determined, the different platforms on where this well-tech can be found will be specified in the following pages.

Applications

(Mobile) Applications are computer programs specifically designed to run on mobile devices, like smartphones or tablets. They are often referred to as 'apps'. Applications can be downloaded on a smartphone for free or against a fee. (Bhavnani et al., 2016)

A study by Siqueria do Prado et al. revealed that one in five mobile phone users had downloaded a health-related mobile app on their phones in 2012. In 2015, this was over 50% of the population that owned a phone. (Siqueria do Prado et al., 2019)

Smartphone 'apps' can be quite simplistic by providing information (eg: meditation applications such as Headspace) but can also help those who seek guidance related to more severe conditions (eg: Betterhelp). It is important that mental health providers recommend applications that they know, or those that suit the patient best. (Bhavnani et al., 2016 ; Pfefferbaum, 2020) Some applications are more advanced and also offer online therapy sessions by means of AI or an actual person on the other side. While the AI-therapy is mostly in the form of chatting or text-based online counseling, the therapy sessions with an actual person can also be done in the form of a (video)call. (Pfefferbaum, 2020)

Looking at the current trend, applications targeted towards mindfulness are expected to be on nearly every phone in the next few years. Examples like *Calm* and *Headspace* have raised

a total of 116 million dollars in funding each and are expected to grow their presence throughout the years, with *Headspace* even collaborating on a Netflix Original series. (Hunt, 2021) Intelligent Assistance Therapy startups are currently valued at 500 million dollars. Examples are *Talkspace* and *Wysa*. These counseling applications focus on providing cheap online therapy using artificial intelligence. (Pasqualani, 2020) AI contributes to the creation of computers able to perform tasks without human intelligence. Many perceive artificial intelligence as human intelligence in a computer, with the ability to learn the tasks and rules to implement these in algorithms, just like humans. (Jakhar et al., 2020) The use of artificial intelligence (AI) is not yet optimized to support every user as well as a human counsellor. Research by Barnett et al. (2020) argued that users of these Intelligent Assistant Therapy tools experienced a lack of empathy from the 'robot therapists'. It also showed that, depending on the context and personal experiences of the users, the mixture of AI-therapy and real human guidance could lead to a more effective treatment. (Barnett et al., 2020)

Text-based online counseling

When a client decides to text messages to their therapist about the treatment, or decides to start chatting with their therapist, this is what is referred to as TBOC or text-based online counseling. (Li & Leung, 2020)

Texts are an easy way for people that are struggling to communicate, without putting too much energy into it and with the safety of anonymity. TBOC can be used with each individual client and has proven effective when used in 'group chats'. Text-messaging platforms can be used for 'mass texting' to have an improved effect on the health promotion of the group. (Pfefferbaum, 2020)

Recently, TBOC or *text-based online counseling* has gained immense popularity with students during the 2020 pandemic. Students reported to feel safer and more at ease when corresponding through their phones. Especially students that already had experiences with traditional counseling, determined that this was an effective approach. (Li & Leung, 2020)

Teleconferencing:

Teleconferencing relates to using a device with camera, like a computer or a phone, to videocall the client. Studies show that teleconferencing can be just as effective as in-person sessions with the therapist. The studies took several cases on like depression, PTSD as well as anxiety disorders. (Pfefferbaum, 2020)

A study by Byaruhanga et al. (2020) showed that video-counselling is more accepted than telephone counselling by clients. The latter is different from teleconferencing because it does not involve a camera, which means the client and the therapist cannot see each other, only hear each other through the phone. (Byaruhanga et al., 2020)

Computer-based instruction (CBI):

Computer-based instruction (CBI) is where the client uses the computer as an independent learning tool to go further into the counseling process. While this might seem less innovative than the other examples, it is one of the key elements to create a more independent counseling process. CBI-programs are rarely intervening but can be assisting or analytical. The clients participate in simulations, do tasks to assess their issues or write down their own thoughts in a program that the counselor can review later. (Fischer et al., 2016)

The ageing population may benefit from CBI and videocalls when it comes to physical and mental health. The technology can help boost their general and functional health, but also literacy skills. Research into a group of seniors showed that computer use could increase their feelings of social interactivity and perceived an increase of feeling supported by their surroundings. They also reported feeling empowered by their own computer usage. Senior adults' interests in CBI are often portrayed as non-existing, but they responded positively when it proved to bring them benefits. This increased their personal desire to learn technology-related skills. (Forsman et al., 2018)

Sensory- and Wearable Technologies:

Sensory- and wearable technologies is every technological device a person can wear or hold, that can be used to give more information about a person's lifestyle and behaviors. They are usually linked to a smartphone or a computer. These sensory, wearable, or sometimes ingestible, technologies can be used for tracking hypertension, sleeping patterns, diabetes, heart failure and much more. (Fischer et al., 2016) Wearables are deemed to have the most potential to help with autonomic assessments, since they often increase a person's awareness and autonomy on wellbeing. Recently developed wearable technologies track heart rate, blood pressure, skin temperature and conductance. (Van Uem et al., 2016) Popular tech companies like Fitbit are investigating whether they can add to the Well-Tech industry by adjusting their existing smartwatches to measure bodily functions like blood pressure (hypertension). (Balakumar et al., 2021)

A 2020 survey revealed that most of the people diagnosed with hypertension should be measuring their blood pressure twice a day, but only a little over 30% claims to do this. In this specific example, a wearable would lower the effort and continuously measures changes in the blood pressure, thus picking up on dangerous changes. (Balakumar et al., 2021) Recent technological developments bring the self-monitoring of life-threatening disorders and mental health problems to the forefront of the well-tech industry. Complex innovations with multiple sensors and applications accurately measuring statistical behaviors, seems to be in a faraway future. The development of these would create a new reality for people suffering from chronic conditions and for the professionals supporting them. (Van Uem et al., 2016)

Most wearables can accurately measure physical activity while being worn for weeks. They provide insights you would otherwise not get outside of a doctor's office. Since this field is

expanding so rapidly, the devices are used in therapy sessions, focusing on the mental health discoveries that these measurements bring. (Van Uem et al., 2016) Depending on what the reasoning behind the counseling sessions are, the counselor can use the data from these tools to decide on the approach for the therapy session. (Fischer et al., 2016)

A broad term that includes all different electronic devices, technologies and applications which aim to support health-related services for clients is eHealth. eHealth or 'electronic health' is often seen as the newest field in medicine with no strict boundaries, since it comprises of both technologies used by medical professionals, as well as the clients themselves – which is then relating to self-help or self-assessment tools. (Duettmann et al., 2021)

mHealth relates to all the different uses a mobile phone or smartphone can have relating to your health. (Navarro et al., 2019) It includes the monitoring, sharing, and researching (mental) health information through mobile technology. This can include online mobile-based counseling services and other apps that can help an individual through their progress. (Phaneuf, 2019) mHealth has proven to work as an easily accessible low-cost intervention when it came to people struggling with medication adherence, quitting to smoke, and monitoring stress levels. The technological evolution has also shown that it can be used for more complex physiological parameters. mHealth is expected to create an opportunity for the patients to start actively participating in self-monitoring and self-care. (Bhavnani et al., 2016) Mobile phones bring a lot of opportunities because of the reach they have. In 2020, over 90% of US citizens had a mobile phone, 80% of those were smartphones. (Pfefferbaum, 2020)

Digitization only works if the professional in question accepts the technology and deems it beneficial for their work. Counselors have several reasons to be hesitant towards the use of technologies that alter their traditional way of working. Some reported to fear the stigma surrounding online counselling, others were more worried about the training it would take to use the different new technologies, some were simply worried it would switch up their schedule too much and they would lose too much time. (Lazuras et al., 2016) Of course all these reasons not to switch into the digital age disappear when the client decides that they prefer online methods over the traditional counseling methods. In order to maintain their clients, counselors are being forced to be open to digital methods. (Fischer et al., 2016)

3.2. Impacts of Digitalization in Therapy

The consequences of technology in the mental health industry are divided. There has been an increasing need for mental health support and services, and many believe that technology could potentially fill up gaps that are often overlooked.

Impacts on users:

Digital approaches took over the traditional way of face-to-face counseling and an increasing number of counselors deem it a necessity to be available on digital tools. However, some

counselors ask themselves whether all these innovations are necessary or just redundant. (Bhavnani et al., 2016) There are several positive consequences for people interested in self-help when using technology:

- Greater self-awareness;
- Increased accessibility to resources;
- Creative solutions;
- Increased flexibility in scheduling;
- More cost efficient;
- Feeling of anonymity.

It is up to the client to make the counseling or psychotherapy a success by reducing behavioral risks and maintaining a self-care routine, put together with the therapists. This active engagement is referred to as 'patient empowerment': it increases the self-awareness and teaches patients how and when to take certain actions or when to reach out to their counselor or therapist for help. (Siqueria do Prado et al., 2019)

Research by Stoll et al. (2020) found several positive aspects for clients to prefer digital counselling methods. An important argument for digital alternatives is the increased accessibility to services that comes with it. Online therapy in all forms can also ensure more frequent contact between the client and the counselor, sometimes in more creative ways. Additional online materials can be shared, and data recording is facilitated for both sides, which makes the counseling progress easier. It offers greater flexibility in finding the right time, as well as the right place.

Online counseling techniques have also proven to be more cost efficient for clients. It gives the possibility for the patient to reduce their own healthcare budget. This can be of great advantage to low- and middle-income patients who do not always have the resources for the traditional counseling services. (Stoll et al., 2020)

The feeling of anonymity that comes with multiple online innovations (E.g.: TBOC) can increase the patient's sense of privacy. (Stoll et al., 2020) Some clients fear the stigma when it comes to seeking help of a counselor or therapist, especially when it is about a sensitive and personal topic. In some communities counseling is still seen as a taboo subject, especially when it is for mental health reasons. People from all walks of life prefer online counseling in the form of videocalls, texting, or applications over the traditional face-to-face method. A lot of people feel more at ease expressing their feelings through a digital medium instead of directly to their counselor. (Li & Leung, 2020)

In contrast, there are multiple negative affects caused by technological innovation in the mental health industry:

- Not every technology suits every patient;
- Low retention rate of results;
- Questionable data security;
- No or barely regulatory supervision.

To increase the number of clients who participate in self-management, the usability and the design simplicity are key factors to determine which technologies would be most effective. One cannot assume that every technology suits every patient and can rely on education, age, means, etc: the motivation to self-monitor and the understanding of the technology are important elements to the patient selection process. Digital clients also need to be aware of the limitations and nuances of the technology they use. (Bhavnani et al., 2016)

Throughout a trial of 1 year, Bhavnani et al. (2016) studied how participants used mHealth for weight loss and logging their physical activity. 75% stated a positive experience with using mHealth in the first 3 months, but this number quickly declined. Only 30% was still seeing benefits while using mHealth after 6 months, which shows a low retention rate and a rapid decline in usage. (Bhavnani et al., 2016)

Digital mental health solutions have proven to be appropriate for a large range of individuals but must be monitored by governmental functions to remain safe, accessible, and affordable for those who need it the most. (Pfefferbaum et al., 2020) There have been concerns about the privacy, confidentiality, security, and safety of online counseling alternatives. Data security that is not very strong can potentially be hacked, which could lead to a breach of confidentiality that is beyond the counselor's control. (Stoll et al., 2020) While digital health technologies can be an asset for the future of healthcare, one should remain wary of the increasing amount of information that goes into these eHealth innovations. There is a global responsibility of both clients and counselors to create evidence-based research that assess the impact of the technologies that are used to streamline their personal counseling process. This includes checking up on the regulatory factors to create the trust between patients and counselors alike. (Bhavnani et al., 2016)

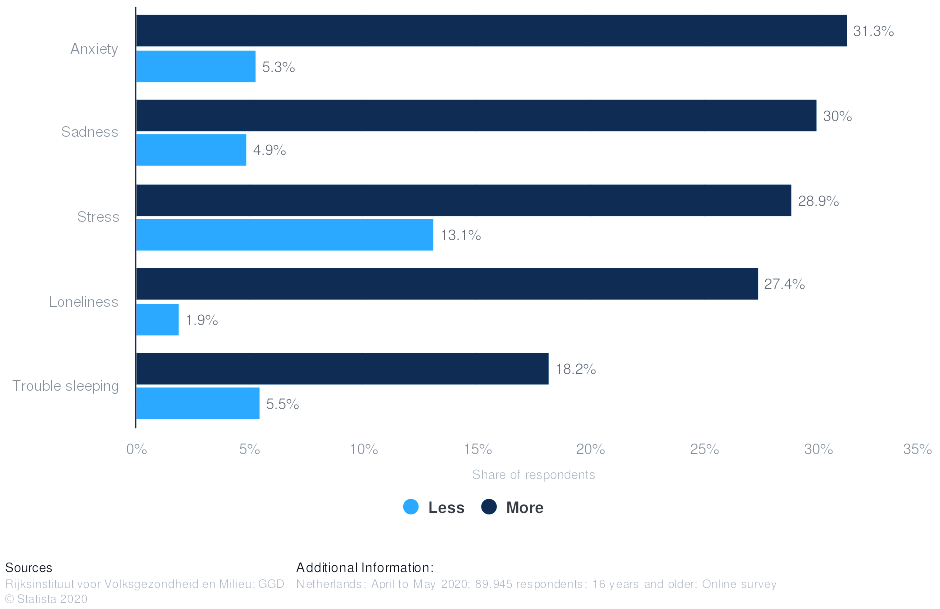
Aiding with the changes:

With regards to any kind of online counseling, there are no regulatory guidelines or standards. Worldwide, whether there is a national healthcare system or a fee-per-service system, governmental institutions seem to support the concept of innovation in the overall healthcare industry, including counseling services. They acknowledge that it can serve the demands of a population under increasing healthcare costs. The eHealth Action Plan 2012-2020 aims to determine the present challenges for eHealth across several domains. This includes research and development, international cooperation, interoperability and creating safety regulations. (European Commission., n.d.) Payments, reimbursements and billing for online counseling efforts are examples of where the legislation is lacking. It is unclear how insurance companies stand on online counseling. A commonly feared phenomenon is fraud or deception. Phony counselors (aka: frauds) pretend to have the appropriate training background. Not a lot is done against this because of the poor regulation regarding online cross-border counseling. (Stoll et al., 2020)

A study by WHO indicated that close to 1 trillion dollars in economic productivity is lost yearly caused by burnouts, depression, and anxiety at the workplace. The same study stated that

for every dollar invested into the mental health industry would return 5 dollars. The pandemic has disrupted the weakest mental health services in 93% of the world in an already tense industry. Several studies from different countries revealed that workplace and school mental health services were disrupted severely (75%). 60% of countries reported disruptions of mental health services for vulnerable people and 67% reported disruptions of counselling and psychotherapy services in general. (WHO, 2020)

Graph 3: Changes in mental health due to COVID-19 in the Netherlands by category



Approximately 70% of countries want to overcome these problems by investing in digital tools and technology to support the vulnerable population. While 89% of countries partaking in the survey claimed that mental health support was a part of their pandemic response plan, only 17% actually had funding to cover these activities. (WHO, 2020) Social distancing was applied globally and whether the isolation from working from home or the anxiety from the COVID-19 daily news was the reality, it had an impact on everyone. Countries like China provided their citizens with online counseling and endorsed self-help techniques. The government also used popular social media platforms, like *Tik Tok*, to enable truthful education about the virus and combat fake news spreading. (Pfefferbaum, 2020) A study by Li et al. showed how students in Hong Kong deemed online counseling techniques satisfactory to what they needed at that time, but it is not known how these students react to online counseling outside of the pandemic. (Li et al., 2020) UK's National Health Service started working with the bigger platforms - like Google, Instagram, and Twitter – to spread factual information about the virus and decrease the use of not trustworthy sources to get news of the pandemic. (Pfefferbaum, 2020) The WHO calls for an increased funding to national and international mental health programs. It calls the mental health industry one that has 'suffered chronic underfunding' and deems governments need to do their part and review their budget allocations. (WHO, 2020)

Therapists cannot simply be put in the broad category of 'employees affected by digital innovations'. A more detailed study is needed to understand the actual impact on a profession that deals with health-related issues on a daily basis, with little help from government functions. A research by Lazuras et al. (2016) suggested therapists have several reasons to be hesitant towards the use of technologies that alter their traditional way of working. Some reported to fear the stigma surrounding online counselling, others were more worried about the training it would take to use the different new technologies, some were simply worried it would switch up their schedule too much and they would lose too much time. (Lazuras et al., 2016) Of course all these reasons not to switch into the digital age should disappear when the client decides that they prefer online methods over the traditional counseling methods. To maintain their clients, counselors are being forced to be open to digital methods. (Fischer et al., 2016)

Digitalization only works if the professional in question accepts the technology and deems it beneficial for their work. The technology acceptance model (TAM) is used to assess the facilitation in the acceptance and utilization of innovative online systems and software, as well as defining the factors that play a role in this acceptance process. The TAM insists on a set of core beliefs towards the technology in question: the perceived ease of use, performance expectancies, and usefulness. (Lazuras et al., 2016) In the following table, the different factors are given and explained.

Table 1: The technology acceptance model (Scherer et al., 2019)

TAM variables	**Conceptualization**
Perceived ease of use	The degree to which an individual believes that using a particular system is easy (Davis, 1989)
Perceived usefulness	The degree to which an individual believes that using a particular technology would enhance their job performance (Davis, 1989)
Attitude towards technology	An individual's evaluation of technology or their behavior associated with the technology (Zhang et al. , 2008)
Behavioral intention	An individual's willingness to use technology (Choi & Park, 2020)
Use of technology	An individual's actual use of technology (Choi & Park, 2020)
Subjective norm	The belief about whether people approve or disapprove of the technology use (Ajzen, 2020)
Computer self-efficacy	An individual's capability to use a computer (Compeau & Higgins, 1995)
Facilitating conditions	The degree to which an individual believes that the existing infrastructure can support their technology use (Venkatesh et al. , 2008)

This research wants to go deeper into the reasoning for using or avoiding technology during therapy in the next parts by answering the question: '*What is the impact of the digital innovations in therapy on experts' methods?* '

4. Methodology

The research question '*What is the impact of the digital innovations in therapy on experts' methods?*' entails a more practical problem, so a qualitative research seemed more suitable to uncover details and to gain more in-depth insight into the digital changes that experts in counseling and psychotherapy face. A qualitative study allowed the 'why' and 'how' questions to be asked, as well as allowing the respondents to clarify their answers.

The qualitative method selected were interviews with various experts that use talking therapy during their own psychotherapy or counseling sessions. These respondents had to meet several criteria, namely that they had been using talking therapy in their main occupation for the past 2 years or more. This was to avoid therapists who had no experience with face-to-face sessions because of the impact of the COVID-19 pandemic. Besides the deemed experience level, the respondents also had to have obtained certificates submitted by a legitimate organization or society. This was a difficult aspect to research, since therapists are rarely licensed unless they are psychologists, even when they go through years of education. Thorough research into their mentioned organizations was necessary because of this since it's difficult to distinguish a passionate therapist from a fraud.

The respondents were found through Belgian websites where counselors and therapists are registered. After this initial phase, the respondents' own official websites clarified whether they suited the research. They were selected when their credentials, experience level and willingness was appropriate to the study. Experiences with digital tools were not a necessary checkmark for this study. A total of ten Belgian respondents was selected.

Table 2.: The respondents

A.	> 2 years active as life coach & career counselor
B.	> 5 years active as life coach & career counselor
C.	> 2 years active as autism counselor & 8 years active as team leader in mental health facility
D.	> 3 years active as relationship counselor, career counselor & life coach
E.	> 15 years active as life coach & career counselor
F.	> 6 years active as career counselor
G.	< 10 years active as body-oriented psychotherapist
H.	> 15 years active as psychologist; > 5 years active as contextual therapist
I.	> 28 years active as psychologist
J.	> 8 years active as psychotherapist

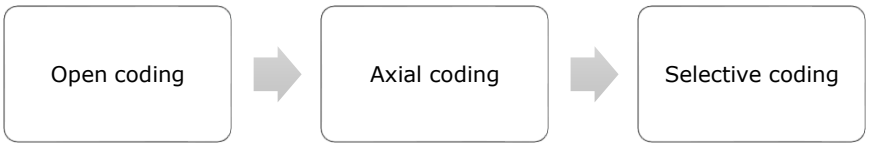
The interviews lasted approximately 60 minutes and were semi-structured. This gave the method a clear overview but allowed the interviewees to share more in-depth examples about their professional outlook.

The interviews started off with the respondents introducing themselves, their expertise, and educational backgrounds. It then went deeper into the different innovations in psychotherapy, allowing the respondents to share their own experiences but also their personal opinions on digital innovations such as TBOC, CBI, wearables, and teleconferencing. In this part, questions were based on the technology acceptance model.

The respondents were asked to shed light on the changes they implemented with the pandemic and its lockdown, making real life meetings with clients impossible for a while.

The final part of the interview contained questions surrounding their own experiences with the power of digital technologies such as AI to completely take over their job. They were also asked how their clients would perceive these changes and who could benefit from them. The interview ended with the respondents adding something they deem valuable for the research but that was not brought up yet.

The interviews took place online due to the uncertainty of restrictions in 2020. Programs like Google Meet, Zoom and Whereby were used for this. With the respondents' permission, a recording was made on the program of choice, as well as a back-up voice recording with the use of a smart phone.



Each of the interviews was carefully transcribed. The written versions of the interviews were then separated into different themes by means of open coding, where each part of the interview gets a 'code' that describes what that part entails. After this, links were made between different parts and codenames were added, merged, or eliminated; this is called axial coding. By means of selective coding, the relevant parts were picked out and parts that were not relevant to the research were dismissed. These final kept parts were then analyzed to find the most relevant information.

For the analysis of the respondents' digital experiences, the experiences were put into a negative and positive side. The motivation of the therapists to work with digital tools was put into main keywords. Quotes regarding technology completely taking over their job as they know it were also added to a clear brick-structure.

After these analyses were made, the findings were linked to the literary research done before the interviews. The main ideas of the research were put in the conclusion, as well as a visualization of the key concepts. The limitations and hopes of the professionals for the research were also added to this conclusion.

After the qualitative interviews, numerous patterns appeared, as well as some surprising extra information. A listing of the respondents' backgrounds provided more clarity into what their experiences and opinions are on the topic of digital innovations. Their personal stories created a list of positives and negatives per innovation discussed. When the questioning became more future-oriented, the therapists shared their reasons to want to work online or not, but also gave insightful comments on the competition of technology in their field.

5. Presentation of the findings

Digital experiences

When discussing the therapists' personal experiences with digital methods, it allowed a structure to be created of positives and negatives per digital innovation. Positives are on the left of every table, while the negatives are on the right of every table. They are listed according to importance, with top being most important, meaning that sometimes a few or all therapists shared the same positive factors or negative factors.

Table 3.

Teleconferencing experiences	
+ Less annulations; Guarantees continuity of sessions. **+** More flexible: easier to plan & cheaper. + Still non-verbal communication. **+** Less timewasters**;** Less distractions + Healthy emotional distance + Environmentally-friendly	- Less non-verbal communication - Difficulties with technology - Less connection to clients - Difficult to do exercises; Less efficient sessions.

Video calling or teleconferencing as a therapy method was the most used. The main reason for usage was to reach more clients and the guaranteed continuity of the process that comes with it. As J. put it: '*I have already noticed that people who live further away can also contact me now, but people simply find it easier – even those who live closer – because they avoid long travel times and traffic jams. It is less stressful to get here. People can also cancel an appointment sometimes if something came up, but if you meet online that is less likely.'* (J.)

Many therapists also claimed that the planning of different sessions became more flexible when they started doing it online, as well as cheaper: '*It's a bit more flexible, because if I rent a room for an hour and I have to see someone at another hour too, I have to pay extra. It is easier to do it virtually. Also, when that client has a busy day, it's resolved when you meet online.'* (A.)

Some therapists shared that they felt like their clients are more comfortable while doing a videocall, stating '*Sometimes clients do not want to be seen, there is a bit of shame about it. They are happy to be able to crawl behind a computer at home.'* (D.) Others felt that the communication was 'of lower quality', because of the decrease of non-verbal communication and the formal feeling. '*I felt like I was missing a lot. It also seemed more formal, but no better for that. Sometimes you can really feel that you are in a flow, that a client also claims*

to have had new insights. I do not have that through zoom or teams. So, it is a tool if you must, but it is not an improvement.' (C.) Interestingly, one respondent claimed that the online video sessions are just as good as in real life because there is still non-verbal communication.

Other positive aspects of teleconferencing were less timewasters and less distractions because of it. As therapist G. put it: *'I think the greatest positive aspect is that you no longer lose time on the road. I still work in a group practice, I also follow a supervisor course in the Netherlands, so now several classes of that are also online. That saves me a lot of time. I do notice that working online is more tiring, but it has many advantages. I also give a lot of lineups online, which is interesting to see how much is possible.* ' (G.)

A negative for some respondents was the difficulty of working with the different tools, but also the feeling of being less connected to their clients in comparison to real life. *'I know a lot of people work with* zoom*. I had* skype*, so I worked with that. I also noticed that when I used* zoom *myself, that I occasionally did not get into the meeting. It was difficult with that password, that id, then you do not need it and then you do... I was allowed to attend a doctoral presentation once and did not make it because of this. I thought "if my clients have this problem..." I am not that good at IT, so I just want it to work. You can often reach those services via chat or online and I just want to be able to call someone and tell me what to click on. So, I'm not very good at it.'* (J.) *'It creates different conversations because you only see a part of the people. People are also in their homes, and you are in those people's homes. As a result, some also fail to share what they would in my practice room, knowing that their spouse or children can overhear something. The safe cocoon of the practice room is really different, and people experience that, so they say to me. When they are done here (the practice room), they still have the drive home to think about the session. Now, when they exit after a session, they are right back in their family, making it completely different. The conversations are different in content.* ' (I.)

More negative experiences with not knowing how to do certain exercises online, resulted in working in a less efficient manner: *'I also do online therapy, but my preference is for the real thing, because I work with the body. If I can see someone completely, I have much more insight into that body language. There are a number of techniques that I use less due to covid and working online; I will now use less techniques related to touch, but when I want to apply them, I let the client do it themselves. It is not always that powerful, but at the moment we cannot do it differently. Breathing exercises are also not possible due to the limitations now.'* (G.)

The respondent also stated to have an easier time maintaining a healthy emotional distance from their clients: *'I also think that there is less room for transference and countertransference. (...) There is a lot of information coming out of transference and countertransference, but you will get less 'emotional loads', those are loads from each other's history that you assign to someone else. In this case it would be me, the therapist.'* (I.)

Another positive aspect were the environmentally friendly affects: *'The great thing about working online is people do not have to stand in a traffic jam, do not have to get into their car, it has less of an environmental impact, (…) I see a lot of benefits.'* (D.)

Table 4.

Computes based instruction (CBI) experiences	
+ Encourages independence in clients. + Cheaper & less time-consuming option. + Accessible everywhere.	- No human guidance

After teleconferencing, CBI was a popular tool that many therapists interpreted in their way of working. Many respondents were happy that it stimulated the independence of clients, describing it as 'the ultimate goal'. They also said it was good for the clients to work at their own pace, also adding to the idea that it is less time-consuming for the therapists. *'You can put what you do in technology. A few years ago, I was asked to participate in a platform about mental resilience. I have been amazed at how that worked. You can register and see how you want to promote mental resilience; in your work, in your relationship, for yourself, in sports. Then depending on which area, you choose, they set out a certain route. A psychologist writes those exercises, and you get them sequentially as you finish them. At first, I thought it could not work, because as a coach you jump into the things that are present at that moment, such a program can never do that. I was amazed at how that program could achieve good results on the basis of listening-, writing- and thinking exercises. (...) I think the results will be slower and maybe less accurate. But the advantages are that you can do it at your own pace, that it may also be more complete.'* (E.)

Some admitted that a process of different exercises was a cheaper option to create, than to help the clients individually. *'I do believe that other ways of working are possible that make the most out of your time. To give an example: I have 26 workbooks, they (the clients) usually do not need me, but there are specific workbooks where I notice that I am almost always needed. I do believe we can use technology to maximize our time.'* (H.)

An interesting remark was that CBI was more effective and efficient for clients in vulnerable situations, like those dealing with trauma. According to a few respondents, these clients preferred the anonymity guaranteed by following a program. *'I also used to work at addiction centers, like* alcohol.be*. These were the very first websites where you could work completely online, without real conversations. I personally believe that it makes sense for 99% of the population if you translate it individually.'* (H.)

One therapist combatted all the positives by stating it felt like an 'easy way out', since there was no real human guidance for the clients included in most of these online programs. As E. puts it: *'Counseling in my opinion - 70 percent of communication is through the body and*

not the language. As humans, we can do much more through proximity. A lot is filtered out in a camera image, so that is not a humanistic way of working for me. It is a means of doing things, but I do not think it works for coaching itself. Many of my colleagues contradict me. (…) It's an emergency solution for me, it is an instant solution that brings us closer to a virtual world.' (E.)

Table 5.

Text-based online counseling (TBOC) experiences	
+ Accessible everywhere. + To check up on clients in between sessions. + Groups can be created for extra support.	- Time-consuming. - Encourages dependence of client. - Misses nuances, intonation, and connection ➔ Unclear in what state the client is. ➔ Unclear how client will take the message. - Encourages "hiding".

Just like CBI was effective to reach vulnerable clients, for text-based counseling this was the most mentioned positive aspect. Therapists stated again that clients in these situations prefer the cover of texting, without having to physically show themselves. *'I agree to do TBOC with certain people, not everyone. I do that for people with autism. If something happens and they do not know how to respond, they quickly explain it to me via text message.'* (C.) *'I once signed up for the suicide line and I could sit on the email there too. It is also a way of guiding people, and it can help those in difficult situations.'* (D.) One therapist disagreed to see this as a positive aspect however, and explained that it 'encourages hiding', while that is the opposite of what they want to achieve in therapy. *'No, I cannot support that. I always try to stay without prejudice, but it is not always easy. Coaching by texting, the quality of communication is so poor. People can hide so easily, and it is precisely what we want to avoid during counseling, to not hide anymore. When we encourage doing counseling via text message, we encourage clients to stay behind their rock, figuratively speaking.'* (B.)

Other positives were the ability to quickly check up on clients in between sessions and the way a client can get fast help when faced with a certain dilemma or finds themselves in need of quick assistance*. 'I also have clients who occasionally send me something in between sessions, because they run into something or because they want to share something. That is fine for me, but it does not replace regular therapy. It is follow-up. (...) Chatting may be a more legitimate alternative, but not texting. With chat you have a much faster answer. I am not much in favor of it myself.'* (G.) This links up with the most common negative aspects mentioned, namely that it is time-consuming for the therapist and that it encourages dependence of the client on said therapist. *'It is actually not the goal, because it is difficult for me to determine how much free time you will put into it. Or what prices do you put on that? I find it very difficult. For me this is now part of the service, but I currently coach 25 people with different intensities. That is quite a bit, so you can't offer it to everyone.'* (C.) E.

adds about the dependence factor: *'Quick fix! Then you have a problem, and you send a message to your therapist to ask whether you should 'go left or right. I assume, also as a father, that I coach towards independence.'* (E.)

This tool is seen as accessible for clients everywhere and is threshold-lowering for those wanting to seek help, but do not know where to start. H. says *'that's the same as the chat box on my website. For some target groups, that chat would work to lower that threshold, but my goal remains to really get them into a conversation or a program. Not just for me, but I believe that is best for them. So, I see it as a stepping stone or a temporary thing.'* (H.) One of the therapists mentioned that it is fruitful to create chatgroups so the clients can learn from each other. *'I never get a response back, but they did read it. What I also use is* WhatsApp*, very often, because you can see whether the person has read your message or not. At my other work I put people together, then you can make a group. It has more to do with communication with others, rather than therapeutic conversations.'* (C.)

A couple of negative aspects were the lack of nuance and intonation in the messaging tools, as well as the lack of non-verbal communication. F explained her thoughts: *'I think that it is used very minimally, because the nuance with texting is so difficult. It also depends on what efficiency you want, what depth you want to go. (…) I am not really against certain things - but you miss some nuance and connection.'* (F.) Therapists stated that with TBOC, it is unclear in what state the client is, so what they are experiencing at that moment. They also expressed difficulties with establishing a real connection and the uncertainty of how the client will take the messages. This leads back to the intonation or lack thereof in messaging tools. *'I think I would feel less connected to my client. You also do not know who is on the other end of the line. I also work on trauma, so maybe it would make people feel safer knowing that they can talk to someone anonymously. But if you do not know what condition that person is in on the other end of the line, then what are you doing? I think that is a bit of a rarity. That is of course my feeling. Maybe other therapists think differently. It feels like working blind to me.'* (J.)

Table 6.

Experiences with applications	
+ Helpful for simple tasks & follow-up exercises. + Always available. + Threshold-lowering.	- Missing human guidance & interactions. - No opportunities to individualize treatment.

When asked about the experiences with applications, most respondents agreed that this could help for simple supporting and follow-up exercises. A. put his use of apps this way: *'It does happen that I recommend something, that I tell clients about apps to plan your daily schedule, an app for better sleeping habits, mindfulness applications... I would recommend*

that, but not that I actively use it, not yet. (...) It can help some people, but not everyone is helped with the same.' (A.) The respondents stated how the way it is always available to clients everywhere can help the process. It is also immensely threshold-lowering because no matter where, no matter what time, the client can get help through an application, making the first step to getting help from the therapist. *'I believe that those apps are also necessary to get it spread even more widely, that personal and professional development. That threshold is lower, and I do see things (new applications) appear here and there, those interactive apps that are coming. I find it very fascinating.'* (F.)

Some therapists truthfully stated that they do not add this to their way of working because of the lack of human guidance and interactions with the clients. *'It depends on whether those people want the human connection, people often want to feel seen in their story and feel heard in their story. Then the human relationship is the way to do that. It is a very important part of therapy that you listen to people and that people are taken seriously. Can we achieve that with a robot?'* (J.) They also said the applications they know need improvements in the way it is put up now, but also because they miss individualizing the process for some clients. *'I think that a good balance is the most important. I sometimes see applications where you cannot put anything of your own into, and then I notice that it does not really work for me or my clients. Offline is not the same as online, but there are so many more opportunities.'* (H.) Lastly, one therapist noted how clients with certain issues, like compulsive disorders, could experience more stress from working with these applications. They stated that it could have a backwards effect on the process. *'I immediately think of people with compulsion (disorder). People with compulsion problems would be constantly measuring that themselves. Measuring can therefore become a compulsion, so I would not suggest that too quickly.* ' (I.)

Table 7.

Experiences with sensory - & wearable devices	
+ More knowledge; Immediate feedback on exercises. + Extra guidance for client; decreases stress. + Brings awareness to clients when therapists are not around; Increases independence.	- Translating data takes time & is expensive. - Errors in technology. - Less attention for client.

When asked about the usage of sensory and wearable devices, the respondents stated that it did give them more knowledge about what is going on with the client. Depending on what device would be used, it could also translate into immediate feedback during sessions, which means again that the therapist can adjust the sessions to that new information. E. states the following: *'I think they can be of added value if they are managed by the client and not by the company or therapist. The client receives feedback and services. (…) It is about the*

individual person and their moments of stress. With that wearable you see that their heart rate is good at work all day, but at home it goes up, then you know that the stress is there (at home). Or if people say that they sleep enough, but then you can see from their sleep pattern that they only go to sleep at 2 a.m. and get up early. It is to make those things factual; those wearables are very good for that.' (E.) An important negative aspect that matches these positives, is that all of that data translating takes time away from the therapists when they could be doing something else: '*On one hand, it is an extra, but then you also have to make that translation into the technology. Some things are not so obvious. It depends on what depth you are working to. Technology cannot always succeed or start measuring clients' consciousness. That is possible with brain frequencies, but all those things... An example: a man I coach wants to be able to convert all of this with AI. It is 1 thing to have that consciousness development on those different levels, which is therapy, and then also that technological development. How are you going to translate that? That is something I am looking forward to, but with simpler tools, such as measuring stress or something. Those are much more accessible to convert. It's not how I work now.'* (F.)

While some therapists stated that their clients would benefit from the extra guidance and it would have a positive effect on their stress levels, particular clients would feel more stressed by having the constant information. G. mentions his own experience with wearables: *'I recently found out about* Moonbird*. That is a Belgian company, I think from Brussels. They have developed a device that you hold in your hand, and it helps to deepen your breathing. So that expands and that shrinks a bit, because of that tactile you go along with your breathing. That is very interesting, I have already ordered a second one myself because my first one has been lent to a client. She does notice good results. That tactile element and the app then guide you through that entire process. (…) To see if the heartbeat and breathing are coherent.'* (G.) *'(…) but that feedback is back on an app and then you have to work with that mobile phone again. For people who are experiencing trauma, it leads to more stress if you must hold on to such a device all the time.* ' (H.)

When the therapist is not around and clients use these devices by themselves, it could bring awareness to different patterns and triggers. As H. puts it: '*Something not digital but that you can feel physically will also give other stimuli in the brain, so that you can relax more. I think those are really, really good things.'* (H.)

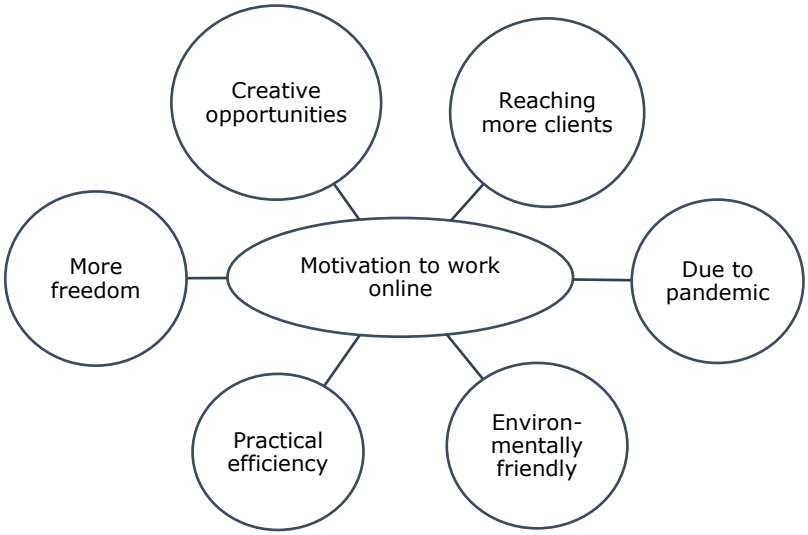
Depending on the tool, it can make mistakes as well, which leads to less trust in the technology. *'The disadvantage is that it often crashes, you have to start over. It works with Bluetooth, so if your phone is a bit further away, it will fail. I notice that - because of those disadvantages - I use it less, but it is an expensive device so I should use it daily. It has limitations, so it does pose a barrier.'* (G.) One therapist stated that the use of tools would take away the attention from the client, since the therapist would need to focus on what the data is saying instead of listening to the client: *'This may sound arrogant, but a good coach should actually be able to perceive these emotions visually himself. Something changes in your client's appearance. Of course, if there is a screen that can confirm it - but then you are*

working with that screen again and not with the client. The real attention with the person is the most qualitative.' (B.)

A respondent expressed their fear for the data in general. They were unsure if all the larger corporations were keeping the data private for just the client's usage. As E. puts it: *'(…) only if that data may remain managed by the client. Not by the insurance company or the government, not by big pharma or other vultures. (...) Otherwise I don't think it's right, but okay, that's where we are.'* (E.)

Future of therapy

Respondents have different perspectives when it comes to using digital tools in the future. While some made it very clear that they would not consider switching to an alternative after the pandemic has ended, others felt like it could be an opportunity for a new start. The visual below shows some key motivators for clients to use more digital tools in their sessions.



Most therapists agreed that when a client prefers a digital or online session, they should be able to offer it, no matter the reasoning. B. shares the following: *'I am not so optimistic about the well-being of the people in our society. I fear that it will deteriorate so that people who can provide quality support will have more demand for it. Young people rather prefer indirect communication.'* (B.) C. followed up with *'The contact does not stop after work, afterwards it is still there. That is interesting. With covid, the shift happened more quickly. There is a real demand for this (video counseling) from the customer. It was very difficult for me because it made me a bit insecure at the beginning. A month later I had an intake interview with a woman with autism and that did not work. Then I distanced myself from the technology in my own practice, I thought that it could not work. But like with everything that is new, you have to give it a shot. At some point you just get used to it. I see a positive evolution in this.'* (C.)

The respondents were positive about the way technology has helped them reach more clients and hope to continue using the technology to work on this aspect of their job. '*I always try to find out what is on the market. I hope to work more internationally. I now mainly work in the Netherlands and Belgium. I would also like to give more workshops, but that is now on hold.* ' (G.) A positive aspect of a lot of digital tools is that it seems to be threshold-lowering for potential clients, which is interesting to the therapists who work with clients uncomfortable coming to the working place or those in vulnerable situations. A. adds: '*I know that psychology and coaching is constantly evolving, regardless of technical innovations. I do hope that it will become more accessible, that people will get to know it better and that people will also look at those forms in a good way and seek help more quickly.'* (A.)

Many therapists started using digital tools due to the pandemic and saw this as a reason to keep offering it, even when lockdown had been lifted and they could see people in their working place. This is for a multitude of reasons, but mainly safety of both themselves and their clients. '*You could say that working online feels safer to me. There is no risk of contamination. Now I always leave fifteen minutes between appointments to ventilate the room, to disinfect everything... If you work online, you do not have those extra tasks and you should not be concerned about infections, or that you must ask people all the time for them to respect measures, to put on a mouth mask.'* (J.) '*This has really gained momentum in 2020. I noticed during the first lockdown that there was some reluctance among my clients (against coming to the practice). We were not really allowed to work, so went online. A lot of people thought it was only going to take 3 months, then we would get back to normal. Now I notice that it is much less of a barrier, it is becoming a kind of habit. An automatism. (...) I now put the live sessions on hold again, because the (corona) figures are rising again. It varies.* ' (G.) This mindset also guarantees continuity of the different sessions when something comes up which makes an in real life meeting more difficult.

The environmental aspect of doing more sessions online was a motivation for a few therapists. They also believed it would be easier to plan for both them and their clients, eliminating the driving and waiting times. '*Our clients are now accustomed to doing sessions online. So, when the pandemic is over, we will all have become more in the habit of doing it that way. Saving costs, improving the environment. Our behavior is 5 percent conscious and 95 percent unconscious. Those 95 percent are behavioral patterns, so this behavior will remain.'* (D.) Seeing their client less in real life and still following up with them from a distance, would increase the client's independence during the process. This means it is less time-consuming for the therapist. It also results in more freedom to do what they prefer, to pick the clients to work closely with or to start working on new programs for example: '*I have already automated a lot myself. I do that myself with algorithms that respond to online "homework". If there are certain words in it, you will get a certain text. I think it would go at a certain height, but I notice with clients that if I am not behind it, they let it go more easily. For me it remains an addition. For me personally my goal is to create as much freedom as possible for myself. I hope that I can help a lot of people, but that it will not all be at the expense of my time. I want to do more in a group in order to reach more people in a short*

time. This means that I myself invest my time in apps and stuff, so I hope that some things will be so automated within 5 years that I no longer have to do any practical administrative things and that I can actually work with clients or make new programs. That is also what I prefer to do.' (H.)

A few therapists were happy with the newfound creativity they found during the online sessions, resulting in new programs, exercises or thought processes that could potentially help their clients. '*I do online sessions more often than I used to and use it for other things as well. I have followed online courses. Also in the States, because that is now more accessible, I think that is great. You can download courses and view them yourself. Then you have videos and text magazines, which is certainly an advantage now. I think my way of working has become more creative. I used to draw it out and sketched on a piece of paper, now I can share a screen with the client. You also become more creative in your working methods. For example, I have all those dolls at home to do visual therapy. With another client I did that with spice jars on a cutting board. That worked.* ' (J.)

Something that most therapists agreed on was that technology, mainly in the form of artificial intelligence or anything else, would not be able to take over their job. The overwhelming certainty of the 'robot not taking my job' came from the way humans connect to other humans, assuming whatever technology is developed, it will not be able to connect to the client like a therapist can.

'People need people. Someone in social deprivation is going to decline. We are already seeing how many young people, but also the elderly, must deal with depressive tendencies due to the loss of the social network. You cannot solve that virtually or with social media. Social media brings a lot of good, but also enormous dangers. You can make it what you want, show what you want, but when you see someone, you know immediately whether it is correct or not. You need someone who sees reality in you. Technology will not be able to bypass that, but that is my conviction.' was a reaction when therapist B. was questioned about who could potentially benefit from AI-innovations that are currently on the move to replace therapy as we know it. '*There will always be people who need a personal approach. There will always be people who want to leave the home situation, so I think this is more of an addition*. ' (D.) There was an embrace for the extra help too: *'I really see it as added value, not as a competitor. But I do not see colleagues as competitors either. There are of course many therapists, but that is good because there is also a need. You see more and more therapists work with a waiting list. then it is only an added value to offer it online.'* (G.) E. added: '*This is not going to work in terms of authenticity, but it remains interesting to watch. AI is about money, the business, and that is not my ultimate motivation. I want people to be freer and work together, not just one person pulling the strings.'* (E.)

While most therapists had a similar opinion regarding technology taking over the job of therapist in the future, some were unsure and expressed their doubts. '*I hope that those applications that are to come will remain human. It is interesting because if you have AI, you can almost scrap doctor training. Because if you invest in it and that AI knows all the*

information from all generations and cannot make mistakes, plus it gets to know your personality, it can give the most negative message in the most appropriate way. That would be interesting. Part of that has to do with privacy, whether that technology can make a decision for you.' (C.) *'At some point when people become more aware and feed the AI and so make that more aware, then you can (use AI for therapy). But it is not that obvious. There are so many context factors and experience factors. Everyone makes millions of different connections, and you cannot get that technologically right at that depth. That is what it is about for me. Technology, to what extent can that reach a deeper layer of consciousness?'* (F.)

H. says about alternatives working with AI: *'I believe it can make sense to some extent, because sometimes people just need someone to say, "well done." I cannot imagine that if that is a robot, I would think I'm doing a good job. I still need it from a person. If you are on a website or something, and you know that it is a robot that answers, you already look at it differently and you get frustrated when it does not understand what you mean. AI can do a lot, but it is not a person, it will never be. Even if a robot gives the same answers, are you really going to take that? That click must be there too, so that could be a super good therapist saying something to you, but if I do not have a feeling with that person, I am not going to accept it. You can read a lot of books, but books do not have that connection either. A robot will never be able to motivate you the way a human can.'* (H.) Therapist C. added to that sentiment: *'For me it is about ethics. Ethics can only be invented by people, so we may no longer be needed, but a group of philosophers or something to see if that AI works properly. That might be an option, like with those driving cars that choose how you crash. They are now more researching how your brain algorithms are, which you can translate to the computer. If they really could, then we are useless, and the computer can handle it much better than humans. I'm curious what's to come.' (C.)*

'It's going to depend on person to person. I think for people who are a bit hesitant to seek help, this can help. That barrier is less, and they are behind a screen, there is no one who sees them or can judge them, so to speak. I think the preference of the person seeking help plays an important role. If someone really has the idea that, what a coach does AI can do, that person will be helped more by trying online alternatives with AI, because he has no faith in real therapy. But people who think about what that robot will do; "I'd rather go with a person", I can really help that person. I think a person's belief also plays an important role. And that also applies to the forms of therapy, someone who does not believe in cognitive behavioral therapy, that is going to be difficult to help them with cognitive behavioral therapy. Regrettable as it is.' (A.) J. supported that statement: *'As with many things in therapy, you must have a match with the client. Your style does not match everyone, that also applies to robot therapy. I would still believe in the living therapist, but the world is evolving. Who says that this will still exist within a hundred years?'* (J.)

The respondents seemed to really believe in the future of technology, as they did not lack the creativity to come up with ways for AI to create a new world. *'A bit of science fiction. Who knows, someday something could be designed to allow people to change their*

consciousness. As a result, they are able to solve any problem themselves. I am honestly not that into it. ' (B.) J. showed their dedication to an innovative futuristic scenario: *'I do hear that people still prefer the live version. I am going to say something really crazy now, but what if you were able to do hologram therapy? Then you could really feel like you have your therapist in front of you. Perhaps that is not going too far. That seems cooler to me than a video call.'* (J.)

'I think online working is going to increase even more, shifting the balance.' (D.) one therapist concludes. Another thinks about that future: *'I really hope we don't evolve towards something like that. That feels so distant and cold. (...) I really do not think that would be a good evolution. It gives me a bit of heartache to think we would go to such a world. Perhaps it (online alternatives) could help if people choose something of self-care to stimulate or motivate them. I think there is a possibility for that, within a certain margin.'* (I.)

6. Conclusion

After the qualitative research was gathered, it felt aligned with the previous findings in the literature surrounding therapy and digitalization, but it clearly filled a gap. The perspectives and personal experiences of the therapists in this research added to the existing reports on digital tools helping clients.

Comparing to the previous literature on increased productivity due to digital innovations by Maiti et al. (2020) and Wallin et al. (2020), the respondents share the main viewpoint of the study. They stated they were more flexible in time and place, and were able to see more clients in a shorter amount of time, as well as reach more clients that otherwise wouldn't come to therapy. Balsmeier et al. (2019) discussed the difficulties with new learnings that employees might experience and for therapists this was the same. They were not all open to working with the upcoming tools. They are convinced that, while these tools can help some people, their own clients would always prefer their own therapy sessions in real life, without technology complicating things.

Therapists over the age of 45 seemed less openminded about the utilization of technological tools, which lines up with the studies on their clients, who also are not keen to try the digital tools after reaching a particular age according to Bhavnani et al. (2016).

Most did agree that overall, it made their lives easier during uncertain times and that they were interested in learning more about it. They mentioned a lot of the points that came up in Stoll et al. (2020) their research like the increased accessibility and less time restrictions for both clients and therapists. Some skeptics were now completely aware of the possibilities and felt like they had to offer it to all their clients in the future, no matter the circumstances.

A stunning discovery was the way that no therapist felt in competition with anyone or anything, even when they were told that artificial intelligence was well on its way of replacing them. This contradicts the research into other digitalizing employments by Harteis (2017), Balsmeier et al. (2019) and Chui et al. (2015), who found that most employees in different industries feel threatened by quick automation, especially at lower-level jobs. Most therapists openly stated they were happy that more awareness was being brought to the topic of mental health and that they already referred clients to competitors (see: colleagues) and were already doing, or planning on doing, the same with the tools we discussed in the interviews.

The previous research by Pfefferbaum (2020) on the government's involvement in mental health care aligned with the respondents' perspectives. They explained their own issues with having an 'unlicensed' job and explained their fear for people wanting to get help: they will either start therapy with anyone who refers to themselves as a therapist, or they would go to a licensed psychologist where they hope to get 'better' after they finish the sessions their insurance covers. While they hope the government would stop perpetuating this idea of a 'quick fix' and start investing in the mental health industry, they also hope the upcoming technologies do not encourage this idea of being able to always help yourself. Some therapists feared the 'quick fix' culture would only be encouraged by these innovations.

Others saw it in a positive light, hoping that it brings the mental health industry in the new era of preventing instead of curing. Hopefully in the future, more research will investigate the impact of the governmental instances on digitalization of therapy, in Belgium and beyond.

The question was: *What is the impact of the digital innovations in therapy on therapists' methods?,* so we can conclude that the experts cautiously implement these tools in their daily life, but most prefer to leave these innovations out of their therapy sessions, because it is quite different. They do support the use of them in general but have questions about the technology completely taking over their job.

Limitations and future research

This research was initiated because of personal interests in the mental health industry and the sudden rise in the usage and development of wellbeing technologies. The gap in the literature guided the report into investigating the real perspectives of those at the core of the well-tech industry, the therapists.

Literature proved the impacts of innovations everywhere but failed to provide a clear case for the professional perspectives of those in the mental health industry. While therapists are not yet dealing with the complete automation of their jobs, it does not seem like a farfetched idea or many, and the therapists are aware of the changes going on.

In the ever-evolving digital climate, it is uncertain what happens next in the well-tech industry, but the study did establish that therapists are ready to embrace these changes. While they remain skeptical of the idea that a human can be replaced by a non-human in a job like this, the other innovations do not seem to startle them. A beautiful quote by one of the therapists, who was quite open to using digital technologies, described the sentiment the best: 'Trauma is created by people, but it is also healed by people.'

The impact of governmental instances are also not to be underestimated, whether it relates to the number of people aware of mental health facilities or the technology allowances by different governments. It would be interesting to research the affects on the therapists' businesses and personal mental health, when they are forced to use different digital innovations instead of real-life therapy in the traditional sense. One could also study their adaptation progress on a larger scale, interpreting their technology adaptation to other innovations in the well-tech industry.

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