HEALTH PSYCHOLOGY | RESEARCH ARTICLE

A report on the survey. Attitudes of Estonian healthcare professionals to internet-delivered cognitive behavioural therapy

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Abstract: Internet-delivered cognitive behavioral therapy (iCBT) could be useful for early detection of mental disorders. The purpose of the study is to explore the attitudes of healthcare professionals within adults psychiatry towards iCBT in Estonia. A survey study was conducted by 20 healthcare professionals participated in the PREDI-NU and MasterMind projects. A semi-structured questionnaire was used for data collection. All statistical analyses were conducted with IBM SPSS Statistics 22. More than half of healthcare professionals surveyed concluded that patients need to receive iCBT for more rapid recovery. Fifteen respondents deemed iCBT an integral and necessary part of psychiatric care that ought to be available for the population at large. Nevertheless, some physicians saw it as less effective than traditional psychotherapy because of a lack of a direct relationship with the patient and its inability to cope with severe mental disorders. Although iCBT creates the opportunity for remote intervention and increase the liability of physicians, it also increases workload in such a way as to lead to inattention. Limitations of the program often demotivate healthcare professionals to provide service widely.

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Melita Sogomonjan is a Ph.D. student at faculty of Business and Governance, Tallinn University of Technology. She has been responsible for the testing iFightDepression program in Estonia when EU funded research project MasterMIND was piloting. She also had practical experiences in the Health Board and the Ministry of Social Affairs. Her area of research is interdisciplinary and related to the development and regulation of eHealth policy and public health administration.

PUBLIC INTEREST STATEMENT

Depression is a growing problem for the socio-economic environment today. Digital era enables Internet-based programs to alleviate the rising demand for effective and coordinated treatment of common mental health issues. So-called Internet-delivered Cognitive Behavior Therapy programs are aimed at the improvement of mental health care and directed in particular at early intervention and the delivery of psychiatric assessment and care online. Most of the research on prevention measures have focused on clinical effectiveness and cost-effectiveness. However, a little attention has been devoted to the limitations and barriers of the implementation process in the context of experiences and attitudes of healthcare professionals e.g. legalisation in primary care. The current research explored the attitudes of healthcare professionals towards the implementation of “iFightDepression” program to identify the main reasons related to willingness and reluctance of using Internet-delivered Cognitive Behavioural Therapy in general to prepare the healthcare professionals to use the modern technologies.
Nevertheless, on balance, iCBT is probably more helpful rather than less in population terms.

**Subjects:** Medical & Healthcare Law; Psychological Science; Evidence-based Mental Health; Mental Health Research; Mental Health Services & Policy; Mood Disorders in Adults - Depression, Mania, Bi-polar; Ethics & Legal issues in Mental Health; Health and Social Care; Assistive Technology; Mental Health

**Keywords:** Internet-delivered cognitive behavioral therapy; primary care; attitudes; adults; depression

### 1. Introduction

Depression is the leading cause of disability, morbidity, and mortality globally (Ferrari et al., 2013; Marcus et al., 2012, World Health Organization, 2018). World Health Organization emphasizes the importance of integrating mental health into primary care in order to increase access to effective and reliable care (Brown, 2001; WHO, 2013, 2008). Around 10% of primary care patients worldwide have diagnosed with clinical depression (Brown, 2001; Kivi et al., 2015). From the economic perspective treating depression in primary care is feasible, affordable and cost-effective (Araya et al., 2006).

Studies on Internet-delivered cognitive behavioral therapy (iCBT) have been demonstrated to be an effective and efficient method of mental health care delivery under strictly controlled conditions where patients were allowed to take additional medication (Berger et al., 2017; Newby et al., 2013; Bergstrom et al., 2010; Nordgren et al., 2014; Perini et al., 2009; Ruwaard et al., 2009; Andersson et al., 2005; Berger et al., 2011; Johansson et al., 2012; Kay-Lambkin et al., 2011; Proudfoot et al., 2004; Salomonsson et al., 2017; Kivi et al., 2015; Høifødt et al., 2013; Rollman et al., 2017; de Graaf et al., 2009, 2011; Kessler et al., 2009; Gilbody et al., 2015; Roy-Byrne et al., 2010). These studies have been mainly focused on treatment outcomes, acceptability and research participants’ satisfaction where data have been collected mainly from patients’ self-reported questionnaires. Our recent systematic review and analysis of the effectiveness and efficiency in primary care setting found that iCBT cannot be offered for each patient and therefore replace either outperform the traditional treatment method in real-world practice under routine conditions mainly due to the absence of structured monitoring and motivational support (Sogomonjan et al., 2018) The current availability fails to reflect current needs for the effective mental health treatment. All this anticipate that iCBT implementation in the primary care setting can be complicated.

The attitudes and practices of clinicians towards iCBT interventions vary tremendously worldwide. Stallard et al. (2010), Whitfield and Williams (2004) and Vigerland et al. (2014) found clinicians’ positive attitude towards Internet-delivered psychological interventions in the United Kingdom and Sweden even though only a few clinicians used such interventions in their routine clinical practice. Wangberg et al. (2007) found that the attitudes of the Norwegian psychologists towards e-therapy were neutral, even though 3% of the psychologists felt using e-therapy with patients is unacceptable. A negative experience, however, has been appeared among North American psychotherapists as the main barrier to uptake new psychological treatments due to concerns around the efficiency of the new method introduced, lack of interest and clinician’s beliefs (Cook et al., 2009). Psychologists and psychotherapists concluded that iCBT could be suggested only for some primary care patients in conjunction with face to face therapy (Kivi et al., 2014). Lack of knowledge about Internet-delivered psychotherapies is existing yet in primary care and set a barrier to expanding the use of iCBT by general physicians (Kivi et al., 2015). Kivi et al., (2015) reported that iCBT has been seen by general physicians as relatively new care model that is not yet integrated into the primary care.
The present study focuses on experiences and attitudes of Estonian healthcare professionals participated in the PREDI-NU (Preventing depression and improving awareness through networking in the EU (http://www.predi-nu.eu/)) and MasterMind (Management of mental health disorders through advanced technology and services—telehealth for the mind (http://mastermind-project.eu/)) projects aimed at the implementation of iCBT in the primary care. Researchers are interested to explore:

(1) Limitations and barriers for iCBT implementation in primary care in Estonia;
(2) Experience and attitudes of healthcare professionals to iCBT and its legalization.

2. Methods

2.1. Study design
This study was an explorative survey study. Participants were fully informed about the purposes of the study and completed the questionnaire voluntary. In the period of preparing a semi-structured questionnaire in February-March 2017, authors consulted with six experienced general physicians from different Estonian primary care settings to adjust the methodology according to their empirical experience.

A semi-structured questionnaire was developed on the basis of A Model for Assessment of Telemedicine applications (MAST) (Kidholm et al., 2012) and systematic literature review, and modified according to the specific Internet-delivered Cognitive Behavior Therapy program (iFigtDepression).

2.2. Data collection and analysis
Data were collected from the semi-structured questionnaire and additional discussions with healthcare professionals. Collected data were analyzed using a combination of qualitative and quantitative analyses. Results were separated according to four main themes. All statistical analyses were conducted with IBM SPSS Statistics 22. Multiple response analysis was used to interpret healthcare professionals’ responses.

The semi-structured questionnaire consisted of 41 questions: 24 open-ended and 7 multiple-choice questions. The survey covered three thematic areas. The first part was directed at identifying the need of iCBT at the primary care level. The second part focused on limitations and barriers impeding iCBT integration within a primary care setting. The third part was aimed to explore healthcare professionals’ attitude towards legalization of iCBT. The semi-structured questionnaire is presented in Table 1. The questionnaire was sent in April 2017 to healthcare professionals and was followed by two reminders in May 2017. Data were analysed in June 2017. Additional consultations with participants to specify the terminology matters and narrow down the answers to open-ended questions were performed during the data analysis via emails and telephone calls.

2.3. Participants
Altogether, 41 family doctors, 3 psychiatrists, and 11 psychologists participated in the PREDI-NU and MasterMind projects (the period of PREDI-NU project was 2011–2014 and the period of MasterMind project was 2014–2017) were asked to complete the survey. Participants were selected for the following main inclusion criteria: (1) participation in the MasterMind and PREDI-NU projects and familiarity with iFightDepression programme, (2) healthcare professionals’ education level and professional skills in providing iCBT, (3) healthcare professionals who have recruited patients into the study; and (4) digital literacy. The survey was completed during 7 weeks by 20 participants: 18 family physicians (from them 2 general physicians had specialization in other medical disciplines), 1 psychologist and 1 psychiatrist.

2.4. iFightDepression—an internet-delivered cognitive behavioural therapy tool for prevention of depression
The iFightDepression tool is a guided, Internet-delivered Cognitive Behavior Therapy program for individuals experiencing mild to moderate depression (Final Trial Report 2nd Wave (cCBT), 2017).
Table 1. The semi-structured questionnaire

| Questions:                                                                 | Answers:                  |
|---------------------------------------------------------------------------|---------------------------|
| **Theme 1. Identifying the need of iCBT in the primary care in Estonia.**  |                           |
| 1. Do you think patients need Internet-based cognitive-behavioral therapy (iCBT)? | 1. Yes 2. No              |
| 2. In the case of a positive answer, please specify how many patients need iCBT? | 1. Quite a lot 2. A lot 3. Few |
| 3. Should iCBT be available for anyone to access?                         | 1. Yes 2. No              |
| 4. Should iCBT allow you to track the patients treatment results?         | 1. Yes 2. No              |
| 5. Please explain your answer briefly.                                    |                           |
| 6. What are the positive aspects of iCBT?                                 |                           |
| 7. What are the negative aspects of iCBT?                                 |                           |
| 8. What are the positive aspects of iCBT from patients perspectives?      |                           |
| 9. What are the negative aspects of iCBT from patients perspectives?      |                           |
| 10. What resources do you need to implement iCBT in your daily practice?  |                           |
| 11. How often did you recommend iCBT to your patients (how many patients within one month)? | 1. Yes 2. No |
| 12. Did you continue to recommend iCBT to your patients?                 | 1. Yes 2. No              |
| 13. How many patients refused to use iCBT?                               | 1. Quite a lot 2. A lot 3. Few 4. No one |
| **Theme 2. Limitations and barriers for iCBT implementation in primary care in Estonia.** |                           |
| 1. Why patients refused to use iCBT?                                      |                           |
| 2. How many patients did not complete iCBT?                               | 1. Quite a lot 2. A lot 3. Few 4. No one |
| 3. Why patients did not complete iCBT as intended?                        |                           |
| 4. What motivates you to use iCBT in your daily practice?                 |                           |
| 5. What prevents you from using iCBT?                                     |                           |
| 6. How satisfied are you with the opportunity to provide iCBT?            |                           |
| 7. Have you explored patients satisfaction with the use of iCBT?          | 1. Yes, during the appointment 2. Yes, by e-mail/telephone 3. Yes, I used the client satisfaction questionnaire 4. No |
| 8. Would you like to add more?                                            |                           |
| **Theme 3. The attitudes of Estonian healthcare professionals to iCBT legalisation.** |                           |
| 1. In your opinion, must the clinical psychologist be registered in the State Register of health professionals? | 1. Yes 2. No |
| 2. In your opinion, is iCBT a health care service?                       | 1. Yes 2. No              |
| 3. Please explain your answers briefly.                                   |                           |
| 4. In your opinion, is iCBT a part of psychiatric help?                  | 1. Yes 2. No              |
The iFightDepression program supports online learning and increases the awareness of suicidal behavior and depression (Anifowoshe, 2017). The tool is intended to help individuals to self-manage their symptoms of depression and to promote recovery, with support from a trained GP or mental health professional (Final Trial Report 2nd Wave (cCBT), 2017). The tool is based on the principles of CBT: it consists of six core modules and three additional modules that can be performed by patients, according to their clinical needs (Final Trial Report 2nd Wave (cCBT), 2017). More precisely, the iFightDepression program consists of informative modules that focus on increasing daily activity, identifying and challenging unhelpful thought patterns, monitoring mood, adopting healthy sleeping patterns, and maintaining a healthy lifestyle (Final Trial Report 2nd Wave (cCBT), 2017). Associated worksheets and exercises encourage users of the tool to practice and consolidate new skills and to promote self-monitoring (Final Trial Report 2nd Wave (cCBT), 2017).

### 3. Results

Healthcare professionals had both positive and negative experiences with the using of iCBT during PREDI-NU and MasterMind projects. Results reflected several of the problems involved with introducing and potential implementation of new technology in primary care settings. Challenges during the pilot study included lack of time for face to face consultations, patients’ eligibility including the presence of co-morbidities, language, age, the lack of digital skills, technical problems with the access to the program, the quality and the proof of the program. From the positive aspects, iCBT has been seen by most of the participating healthcare professionals as a good alternative for young and economically vulnerable patients giving the opportunity to self-monitor records.

### Questions:

| Questions                                                                 | Answers |
|--------------------------------------------------------------------------|---------|
| 5. Should the concept of „psychological help“ be set out separately in the Health Services Organisation Act and Mental Health Act? | 1. Yes  
2. No |
| 6. Will iCBT improve the availability of psychotherapy in the treatment of depression, if financed from the State budget? | 1. Yes  
2. No |
| 7. Please explain your answers briefly.                                  |         |
| 8. In your opinion, is the doctor or the clinical psychologist responsible for iCBT mistakes while he/she is offering it to a patient? | 1. Yes  
2. No |
| 9. Who is responsible for complications encountered while providing iCBT? |         |
| 10. Please explain your answers briefly.                                 |         |
| 11. What kind of key legal aspects must be taken into account at all for the future development and implementation of Internet-based psychotherapies in Estonia? |         |
| 12. How the use of iCBT may affect on the development of Estonian health care system? |         |
| 13. What are the most significant obstacles (legal/ethical) that interfere with the implementation of all Internet-based psychotherapies in providing medical care? |         |
| 14. In your opinion, are Internet-based psychotherapies sufficiently secure environment for processing patients special categories of data for therapeutic purposes? | 1. Yes  
2. No  
3. Hard to say |
| 15. Do you have any other suggestions?                                   |         |
3.1. Theme one— the need of iCBT in primary care

The awareness of iCBT interventions in primary care in Estonia has been increased with the piloting PREDI-NU and MasterMind projects. Although, most health care professionals are enthusiastic and open about receiving new tool results reflected that professionals need to be trained with iCBT treatment delivery further.

A specialist who prescribes the treatment method should be well-informed about the treatment outcome and the effect of that. (GP18)

Three-quarters of the respondents concluded that the iCBT had to be made as accessible as appropriate for patients with depression and anxiety, inasmuch as the number of patients in need is growing. Additionally, iCBT has the potential to empower patients with knowledge about their diseases. Patients who have difficulties seeing their physician or clinical psychologist during normal appointment hours are able to use online services at their convenience without additional payment for the service.

Psychotherapy is not available for many patients due to economic reasons and it would be good if in some way it could be afforded to people. (GP8)

Internet-delivered psychotherapies are available to anyone. No need to pay for the service. Therapy fund has limited resources and does not end up for all patients who need treatment. Patients can have a couple of cognitive behavioral therapy sessions and then must continue to pay for that, which is why face to face service often remains incomplete due to financial insufficiency. (GP9)

Forty-four percent (n = 8) of general physicians emphasized that availability, accessibility, and flexibility of the program are the most common iCBT positive aspects. Five general physicians reported that iCBT allows for patients to monitor their own treatment outcomes (records), four concluded that iCBT is cheap and one emphasized that iCBT saves healthcare professionals’ time. Overall, 75% (n = 15) of healthcare professionals concluded that patients need iCBT and 65% (n = 13) have suggested iCBT for patients. Fifty percent (n = 10) of healthcare professionals have suggested less than 10 patients per month. Almost 85% (n = 17) reported that iCBT should be available for everyone to access and 80% (n = 16) emphasized the importance of follow-up patients records. Twenty-eight percent (n = 5) of general physicians concluded that iCBT is needed for a lot of patients and 28% (n = 5) reported that iCBT is required by many patients, 22% (n = 4) of GPs indicated that only a few patients may need iCBT. Data from four general physicians, 1 psychiatrist, and 1 psychologist have not been provided.

3.1.1. Theme two— limitations and barriers to iCBT implementation in primary care

Eighty percent (n = 16) of healthcare professionals found that iCBT implementation into primary care unit and its further dissemination among patients require additional training, time, technical support and integration within a software used by general physicians at their daily work.

It should be integrated with our software. In my case, there was a lack of time: I have a tremendous amount of work, I have to think about a lot at the same time and know a lot about. If I direct a patient to iCBT, then I would not want to be the one who registers the patient, learns about another new web environment. It was precisely behind this that I was passing my patients. The patients were interested, but I did not have the strength and time to start registering them. I guess I even registered it, but patients probably did not start using it. If patients registration is automatic or integrated into our software we use every day, for example, I should target 1–2 clicks, then all patients will be forwarded. (GP7)

Healthcare professionals concluded that iCBT has to be easy, user-friendly, interactive and should allow monitoring patients records.
iFightDepression had not been user-friendly. Many patients refused to continue treatment due to lack of personalization. (GP4)

iCBT should be easy to use. The program I suggested for patients—iFightDepression—was complicated. I had no opportunity to see patients’ records and monitor his/her health outcomes. (GP12, GP16, GP17)

Even though iCBT provides easy access to the treatment, healthcare professionals found that the direct face to face contact with a patient is crucial in continuing treatment effectively. Sixty percent (n = 12) of participated healthcare professionals concluded that iCBT requires motivation, concentration, digital literacy, interpersonal contact, and direct feedback. For these reasons, patients drop-out has been high and many patients have refused from using iCBT. Twenty-two percent (n = 4) of general physicians reported that quite a lot of patients refused to use iCBT, 45% (n = 9) answered that only a few patients refused to continue with iCBT and 25% (n = 5) of physicians reported that they have not referred patients to iCBT at al. Although, 85% (n = 17) of healthcare professionals found significant limitations in iCBT, 15% (n = 3) reported that iCBT has no negative aspects.

The Internet-delivered program might be cumbersome to sign in and requires very good commitment and self-control skills. People are not used to treating themselves using for that purposes of digital therapies, especially older people. A depressed patient often is demotivated and has difficulties with his/her daily routine. Additional tasks might seem to be as an excessive burden and an additional stressor too. (GP9, GP10, GP11, GP15)

Therapy could be performed only through eye contact. It is the same issue to educate children through the Internet which is impossible. The relation treats, the relationship is what we need. No relation—no treatment. (GP7)

iCBT treatment effect is based on personal human relationships. I do not see currently this kind of treatment (Internet-delivered psychotherapy) relevant to patients. (GP20)

Psychotherapy is based on face to face personal interaction. Psychotherapy could not be delivered remotely. (GP3)

Overall, 80% felt iCBT should be allowed assuming patients responded even though the implementation of it results in extra clinical work for healthcare professionals and an additional burden with respect to documentation.

3.1.2. Theme three—the attitude of healthcare professionals towards legalization of iCBT

Healthcare professionals explained their concerns very differently. Eighty-five percent (n = 17) of participants considered iCBT as a healthcare service. Twenty-five percent were opposed to registering a clinical psychologist in the national register of healthcare professionals, even though, in point of fact, clinical psychologists participate actively in the treatment process as they treat patients with psychological and cognitive behavioral problems, and also participate in prevention.

Psychotherapists and clinical psychologists are different specialists. The clinical psychologist is a part of the psychiatric team. Therapy cannot be performed web-based. It is an uncontrollable activity. (GP7)

National register of healthcare professionals does not need to include all the people with whom the patient is exposed to their health troubles. Internet-delivered psychotherapy is not sufficiently effective and is not reliable to count it as a health service. (GP10)

iCBT must be developed in accordance with evidence-based guidelines and could be overseen by the Health Insurance Fund’s Board of Directors inasmuch as the issue of reimbursement of e-Mental health services need to be solved. (GP11)
Eighty percent (n = 16) of healthcare professionals concluded that the term “psychological help” should be separately defined in the Health Services Organisation and Mental Health Acts and the educational standards for psychologists are needed to be improved.

A clinical psychologist is a specialist with pedagogical education. Even though a clinical psychologist needs to be registered then it is supposed to have a longer educational program that will include the basic medical subjects such as anatomy, physiology, chemistry. Otherwise no need to be registered as a health care professional. (GP14, GP17)

Healthcare professionals have also mentioned the apparent weakness and deficiency of the existing healthcare system that increases the workload of primary care physicians.

It is important to send a bill for a clinical psychologist. This could be well-performed through a health information system. For this person, a clinical psychologist needs to have access to the health information system as far as a general practitioner needs feedback about what has been done with a patient. Currently, all such things are encrypted and sent by emails. This is not the right way of information delivery between colleagues and moreover creates additional work. (GP12)

Clinical psychologists are working with diagnosed patients and have to have an opportunity to send the patients summary to the health information system and maybe to be informed with the medication that is prescribed for a patient. (GP20)

Healthcare professionals drew the attention to the patient identification, protection of patients’ personal data, confidentiality, medical prescription writing, and the safety of patients’ medical records as the main legal and ethical prerequisites for the legalization of telepsychiatry in Estonia. For instance, iCBT sessions could be easily implemented by third parties inasmuch as the only requirement for signing remains the availability of login credentials. No guarantee exists that sessions involved by the right patient. Thus, individual patient identification is key.

Forty-five percent (n = 9) of healthcare professionals considered patient safety, confidentiality and data protection as important legal aspects for the further implementation in primary care. Twenty percent of healthcare providers (n = 4) deemed that iCBT is a sufficiently secure environment for purposes of special categories of personal data according to the standards for the transfer of personal data.

Data, concerning patients health are not enough protected. (GP8)

All data must be protected and delivered in an encrypted way. (GP12)

All this is directly related to the liability issues. According to the survey, 70% (n = 14) of healthcare professionals emphasized that the healthcare service provider should be held responsible for treatment outcomes and possible complications.

4. Discussion

The present study investigated limitations and barriers for iCBT implementation in primary care in Estonia and attitudes of healthcare professionals to iCBT and its legalization. Results revealed that the majority of healthcare professionals were in favor to provide iCBT for a younger population with mild depression mainly for two reasons: as additional therapy iCBT allows patients to monitor their behavior patterns at any time patients are able to complete and it does not require additional costs for patients. Most healthcare professionals believed that iCBT implementation in primary care will improve the accessibility to receive mental health care and increase therapy efficiency and sustainability resulting in treatment outcomes. All this leads to the improvement of the quality of life insofar as people with mental disorders become more independent and recover self-esteem. However, healthcare professionals mentioned that iCBT
development should be in accordance with evidence-based guidelines and cannot be delivered freely online without technical and professional support for each patient. They agreed, that iCBT cannot replace face-to-face therapy and direct communication with depressed patients is crucial for proceeding with better treatment outcomes. Unlike in Vigerland et al. (2014) in our study healthcare professionals reported “lack of direct communication and feedback with patient” as leading disadvantages of the iCBT intervention. The program, a complex of sessions directed at self-analysis, proved inadequate for depressed individuals with concentration and motivation problems. Healthcare professionals reported that iFightDepression was not user-friendly. Moreover, they emphasized that iCBT is not suitable for everyone, but iCBT should be available for everyone. Healthcare professionals concluded that implementation of iCBT in Estonia has the potential to reduce the rate of depression in the population and prevent it from the forthcoming emergence and evolution. In view of the ratio of the regional average of the population suffering depression in Estonia is 5% (Kleinberg, 2014). Considering the number of patients who need inpatient care in proportion to the average number of hospital beds in a whole country, researchers are inclined to conclude that access to direct care should be ensured as well. iCBT has the potential to improve access to mental health care, but can never guarantee the quality and is complicated to measure the outcome of the treatment. Patients treated with iCBT need to be informed about its clinical value. All the important information that could be retrieved from the patient facial expression, eye contact, voice tone, gestures, and body positioning during the psychotherapy may make it difficult for the healthcare professional to arrive at the right diagnosis. The therapeutic relationship affects both the quality of the treatment and general well-being too. In addition, technical malfunctions may cause difficulties in the clinical examination and increase suicide risk because of reduced effectiveness.

Despite on limitations existing in the legal framework of mental health policy in Estonia, many healthcare professionals believed that iCBT is a healthcare service and is a part of psychiatric care. Most of them found that healthcare professional is responsible for iCBT mistakes and complications, although iCBT has been considered as an alternative way of psychotherapy delivery. Even though a healthcare professional cannot be held liable either for the direct patient impact of treatment, treatment protocol or prescribed medicine, he/she is liable for the selection of the right treatment method. Evidence-based treatment is the basis for most of the treatment guidelines and might cause a variety of complications and even the risk of mortality among vulnerable patients. Therefore, the treatment process has to be personalized with regard to the selection of the right personalized treatment process and the liability of healthcare professionals must be addressed in this context.

Healthcare professionals noted that personal data protection and secure access to Internet-delivered therapies is important to avoid potential misuse of patients’ sensitive data as well as to ensure their confidentiality. So far, access to the iFightDepression has involved login credentials such as using e-mail addresses and passwords to enter the system. Wang et al., (2014) stated that encoding and decoding the audio and video conversation or providing other e-Mental health services via a virtual private network (VPN) decreases the risks of security breaches. Insofar as patients’ identification is not based on the authorization of the biometric data such as fingerprint, eye-based authentication, voice and face recognition, the identification will remain unsafe despite potential lapses in the system. The marginal benefits of multimodal authentication systems, i.e. fingerprint and face recognition, voice and eye recognition, fingerprint and eye recognition or voice and face recognition remain to be quantified.

Authors found iCBT negative aspects as very important factors hindering the sustainable use of the program. Researchers agree that it is important to deal with leading obstacles insofar as the lack of mental healthcare professionals is apparent. To our knowledge, this study is first exploring limitations and barriers for iCBT implementation in primary care in Estonia and attitudes of healthcare professionals to iCBT and its legalization.
5. Limitations
This study lacks deep research on legal aspects around psychiatry in Estonia. Further research is needed to explore why Estonia should consider telepsychiatry and what legal infrastructure is required.

6. Conclusions
The present study assessed the views of healthcare professionals. The emerging picture reflected both positive and negative attitudes. The positive attitude was mainly associated with access to the service, prevention, and treatment of mild depression among young population. The negative attitude was related with lack of legal framework around e-Mental health services, time and technical resources, including program content, lack of evidence of the specific program and inability to provide iCBT for a wider population with severe symptoms of depression. In summary, the results of the present study suggest that iCBT is probably more helpful rather than less in population terms.

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References
Andersson, G., Bergrström, J., Holländare, F., Carlbring, P., Kaldo, V., & Ekserius, L. (2005). Internet-based self-help for depression: Randomised controlled trial. The British Journal of Psychiatry, 187, 456–461. doi:10.1192/bjp.187.5.456
Anifowoshe, S. O. (2017). Facilitators and barriers of internet-delivered cognitive behavioural therapy (iCBT) implementation in Estonia (Master thesis). Tallinn University of Technology.
Araya, R., Flynn, T., Rojas, G., Simmonds, A., Tool, F., Deeley, Q., ... Murphy, D. G. M. (2006). Cost-effectiveness of a primary care treatment program for depression in low-income women in Santiago, Chile. American Journal of Psychiatry, 163, 1379–1387. doi:10.1176/appi.ajp.163.12.2189
Berger, T., Hammerli, K., Gubser, N., Andersson, G., & Caspar, F. (2011). Internet-based treatment of depression: A randomized controlled trial comparing guided withunguided self-help. Cognitive Behaviour Therapy, 40(4), 251–266. doi:10.1080/16506073.2011.616531
Berger, T., Urech, A., Krieger, T., Stolz, T., Schulz, A., Vincent, A., ... Meyer, B. (2017). Effects of a transdiagnostic unguided Internet intervention (‘velibra’) for anxiety disorders in primary care: Results of a randomized controlled trial. Psychological Medicine, 47(1), 67–80. doi:10.1017/S0033291716002270
Bergstrom, J., Andersson, G., Ljotsson, B., Rück, C., Andréewitch, S., Karlsson, A., ... Lindefors, N. (2010). Internet-versus group-administered cognitive behaviour therapy for panic disorder in a psychiatric setting: A randomised trial. BMC Psychiatry, 10(54). doi:10.1186/1471-244X-10-54
Brown, P. (2001). Effective treatments for mental illness not being used. WHO Says. British Medical Journal, 323, 769. doi:10.1136/bmj.323.7316.769
Cook, J. M., Blyanova, T., & Coyne, J. C. (2009). Barriers to adoption of new treatments: An internet study of practicing community psychotherapists. Administration and Policy in Mental Health and Mental Health Services Research, 36(2), 83–90. doi:10.1007/s10488-008-0198-3
de Graaf, L. E., Gerhards, S. A., Amtz, A., Ripper, H., Metsmakkers, J. F. M., Evers, S. M. A., ... Huibers, M. J. H. (2009). Clinical effectiveness of online computerised cognitive-behavioural therapy without support for depression in primary care: Randomised trial. The British Journal of Psychiatry, 195(1), 73–80. doi:10.1192/bjp.bp.108.054629
de Graaf, L. E., Gerhards, S. A., Amtz, A., Ripper, H., Metsmakkers, J. F. M., Evers, S. M. A., ... Huibers, M. J. H. (2011). One-year follow-up results of unsupported online computerized cognitive behaviour therapy for depression in primary care: A randomized trial. Journal of Behavior Therapy Experimental Psychiatry, 42(1), 8995. doi:10.1016/j.jbtep.2010.07.003
Ferrari, A. J., Charlson, F. J., Norman, R. E., Patten, S. B., Freedman, G., Murray, C. J. L., ... Hay, P. J. (2013). Burden of depressive disorders by country, sex, age, and year: Findings from the global burden of disease study 2010. PLoS Medicine, 10(11), e1001547. doi:10.1371/journal.pmed.1001547
Final Trial Report 2nd Wave (cCBT). (2017). Retrieved from http://mastermind-project.eu/wp-content/uploads/2018/02/MasterMind-D6-S-v2.0-Final-Trial-Report_2nd-Wave.pdf
Gilbody, S., Littlewood, E., Hewitt, C., Brierley, G., Thapar, A., Nathan, P., Araya, R., ... & Kessler, D. (2015). Computerised Cognitive Behaviour Therapy (cCBT) as treatment for depression in primary care (REEACT Trial): Large scale pragmatic randomised controlled trial. British Medical Journal, 11(351), h5627. on behalf of the REEACT Team.
Whitfield, G., & Williams, C. (2004). If the evidence is so good – Why doesn’t anyone use them? A national survey of the use of computerized cognitive behaviour therapy. *Behavioural and Cognitive Psychotherapy, 32*, 57–65. doi:10.1017/S1352465804001031

World Health Organisation. (2013). Mental Health Action Plan 2011-2020. Retrieved from http://apps.who.int/iris/bitstream/handle/10665/89966/9789241506021_eng.pdf;jsessionid=B9087AD6787261675A64C40F0F4BD9E5?sequence=1

World Health Organization. (2008). Integrating mental health into primary care: A global perspective. Retrieved from http://www.who.int/mental_health/resources/mentalhealth_PHC_2008.pdf

World Health Organization. (2018). Retrieved from http://www.who.int/news-room/fact-sheets/detail/depression