E-Health support during tapering off antidepressant medication and for depression relapse prevention: A qualitative study.

Research report - Caroline van Meurs









Research report

Faculty of Medicine

University of Amsterdam/ Academic Medical Centre

Student: Caroline van Meurs

Student number: 5658926

E-mail: c.l.vanmeurs@amc.uva.nl

Location of the internship General practitioners surgery UvA/ The student Docters' Office Oude Turfmarkt 151, 1012 GC Amsterdam

Daily supervisors:

P.Vonk, MD

Tel. number: 020-5254771

E-mail: p.vonk@uva.nl

Dr. C.M. van der Heijde, PhD

Tel.number: 020-5255306

E-mail: c.m.vanderheijde@uva.nl

AMC senior tutor:

Prof. Claudi Bockting, PhD , Licensed Clinical Psychologist, Department of Psychiatry, University of Amsterdam.

Meibergdreef 5 , 1105 AZ Amsterdam

E-mail: c.l.bockting@amc.uva.nl

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1. Abstract

Depressive disorders are the leading cause of disability throughout the world and contribute greatly to overall burden of disease (WHO, 2017). Depression is known to have a recurrence rate up to 85% (Keller & Boland, 1998). Therefore effective treatment for the prevention of relapse of depression is crucial (Beshai, Dobson, Bockting, & Quigley, 2011). However, resources are generally scarce and there exists a limited availability of therapists (Saxena, Thornicroft, Knapp, & Whiteford, 2007. In the last few years internet-based therapies have become increasingly popular. Internet-based programmes might also be a promising alternative not only for the treatment of depression but also for relapse prevention. Thus far little is known about the general and long-term effectiveness of internet-based relapse prevention programs. The first aim of this research is to evaluate how a GP surgery can cope efficiently with preventing relapse of depression within patients who are tapering off antidepressant medication (AD). Recommendations for the development of E-health modules that aid patients during the process of tapering off are developed. A relevant recommendation is that face-to-face PCT should be offered to patients who wish to stop ADs treatment after recovery. The second aim of this research is to review the existing literature on which factors of internet-based relapse prevention programs are effective for the prevention of relapse of depression. Based on these findings recommendations for the development of improved E-health modules are formulated. Additionally a protocol/script is written for the guidance of these E-health modules as literature indicates guidance is a key factor for successful online prevention of depression relapse. This protocol/script was tested with 10 subjects (doctors assistants, general pratice-based nurse specialists specialized in mental health and a focus group of researchers) via semi-structured interviews. This information was used to adapt the protocol/script accordingly. Included in Appendix 6 you can find the result. Future studies should further research the relation of the nature and the amount of guidance with the effectiveness of depression relapse prevention programs. Finally social networking/peer support should be researched more elaborately as this is a relevant tool in the fast paced digital world we are living in today where individualization is lurking.

2. Introduction

Depressive disorders are the leading cause of disease burden worldwide, accounting for 7,5% of all years lived with disability (WHO, 2017). By 2030 it is predicted that major depressive disorder (MDD) will rank second in terms of burden of disease (Bockting, et al., 2018). Depressive disorders include disruptive mood dysregulation disorder, MDD (including major depressive episode), persistent depressive disorder (dysthymia), premenstrual dysphoric disorder, substance/medication-induced depressive disorder, depressive disorder due to another medical condition, other specified depressive disorder, and unspecified depressive disorder (DSM V). (see appendix 1 for detailed description of these disorders)

Most mental disorders are characterized by a high risk of recurrence or chronic courses (Olmsted, et al., 1994; Paykel, et al., 2005; Yonkers, et al., 2003). Depression is known to have a recurrence rate up to 85% (Keller & Boland, 1998). Additionally, the longer patients remain healthy, the lower the risk of relapse (Keller, Shapiro, Lavori, & Wolfe, 1982). Therefore effective treatment strategies for the treatment and the prevention of depression relapse/recurrence are crucial to reduce the burden of depression (Beshai, Dobson, Bockting, & Quigley, 2011). Effective treatment strategies can be pharmaceutical and/or in combination with psychotherapy like cognitive behavioral therapy (CBT) (Bockting, 2017). Guidelines used in clinical practice for MDD treatment recommend long-term monitoring and guidance for patients with recurring episodes and/or residual depressive symptoms (Andrews, 2001). Despite the effectiveness of these face-to-face treatments, resources are generally scarce and there exists a limited availability of therapists (Saxena, Thornicroft, Knapp, & Whiteford, 2007). Consequently waiting times to receive treatment are generally lengthy and it can take months before patients can receive treatment. Also high medical costs of aftercare services further impede its implementation (Adair, et al., 2005). Finally low participation rates are observed even access is to the interventions have little or no costs. It can be concluded that new approaches are needed to ameliorate (preventive) interventions (Zarksi, et al., 2018).

In the last few years, meta-analyses demonstrated that not only face-to-face therapies but also web-based treatment programs that are based on evidence-based psychotherapy principles could lead to depressive symptom reduction (Andersson & Cuijpers, 2009; Karyotaki et al., 2017; Richards and Richardson, 2012). Results even indicate that guided E-health interventions are particularly effective for patients with depressive or anxiety disorders, even being comparable with face-to-face interventions. The reason for this is that the threshold to seek help with internet-based therapy is lower as patients can get treatment from their homes and anonymity can be ensured. Other advantages of over face-to-face therapies include; interventions are more easily accessible at any time and place, greater potential for the integration of obtained skills into daily life due to the active

role of the patient (homework etc) and elimination of travel time and costs for therapist and patient (Zarksi, et al., 2018).

As mentioned earlier not only effective treatment is important but effective prevention of relapse of depression is crucial (Beshai, Dobson, Bockting, & Quigley, 2011). There exist several therapies that aid with the prevention of relapse of depression. After the acute phase of depression cognitive therapy (CT) can reduce the risk of relapse. Additionally, well-being therapy brief psychotherapy, and mindfulness-based CT lower the relapse rates compared to treatment as usual (TAU) (Kok, et al., 2015). Also, preventative cognitive therapy (PCT) has been developed for relapse prevention in depression and is effective in reducing relapse/recurrence 2-10 years (Bockting, et al., 2005)(see Appendix 2 for detailed description).

In the context of depression relapse prevention, internet-based programs might also be a promising alternative. Thus far little is known about the general and long-term effectiveness of internet-based relapse prevention programs. However the few studies that have been conducted report contrasting results. Results regarding the short-term effect of relapse prevention in depression are scarce yet promising. Kok, et al. (2015), used mobile internet-based technologies aimed at relapse prevention in patients remitted for at least 2 months but no longer than 2 years. In this RCT the effect of mobile cognitive therapy (M-CT), (internet-based CT including text messages and therapist support by the telephone), added to TAUon a 3-month course of depressive symptomatology was compared to TAU in remitted recurrently depressed patients. The M-CT consisted of 8 online modules based on PCT. In the M-CT group, participants were recommended to work on 1 module per week, minimal therapist support was administered, yielding a minimum of 2 telephone sessions with a licensed clinical psychologist. TAU could entail multiple types of treatment, like treatment with antidepressants (ADs), maintenance or continuation therapy by a psychiatrist or psychologist or no treatment. The results show that residual depressive symptoms after remission showed a more favorable course over 3 months in the M-CT group compared to the TAU group (Kok, et al., 2015).

Concerning the long term effects of internet-based relapse prevention, Holländare, et al., 2013 shows promising results regarding the effect of a 10-week guided internet-based relapse prevention program for recurrent depression over 24 months in patients with partially remitted depression. The 16 online modules are based cognitive behavioral therapy (CBT) and contained behavioral and cognitive techniques for depression, advice on physical activity and how to handle anxiety. These results of Kok et al., (2015) and Holländare et al., (2013) are in juxtaposition with recent research performed by Klein et al., (2018). The aim of this single-blind 2-arm parallel randomized controlled trial, which is an extension of the trial performed by Kok et al., (2015) was to examine whether

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adding M-CT to TAU is clinically superior to TAU alone over 24 months in remitted recurrently depressed individuals. In this study TAU consisted of no treatment, or (after) care by a general practitioner, or (after) care in a specialized mental health care center. In total 288 individuals were eligible of whom 264 were randomized to M-CT added to TAU or TAU alone. The results of this research indicate that no significant effects were found from adding M-CT to TAU over 24 months in remitted recurrently depressed individuals. This shows that M-CT has no long-term protective effect.

It is hypothesized by Klein et al., (2018) that actively prescribing more social support might have maintained results that were achieved in the short-term as internet based-based interventions have better effect with therapy support (Richards & Richardson, 2012). Most participants in the M-CT used minimal therapist support, hence it was not possible to examine if higher usage of therapist support yields better results.

To date it remains unclear what components of online treatments and therapist guidance are crucial in the prevention of relapse of depression. This research aims to tackle this gap.

As mentioned earlier depression can not only be prevented and treated with psychotherapy, but ADs are commonly used as well. After complete remission of depressive symptoms, relapse prevention becomes priority. Continuation of ADs is known to reduce the risk of symptom return odds ratios (ORs) ranging from 0.30 to 0.48 vs switching to placebo after treatment with ADs (Bockting et al, 2018). Hence for a long time, when patients were in remission of depression it was decided to continue with antidepressants for at least a few months to prevent relapse (Maund, et al., 2019). It has become common practice to continue indefinitely with ADS in high-risk patients with a history of multiple previous episodes of depression. However 30-50% of long-term users have no evidence-based indication to continue with their ADs (Maund, et al., 2019). Additionally, as became apparent from clinical practice, 70-80% of at risk patients prematurely stop taking ADs as they are not willing to continue (Bockting, et al., 2018). Patients indicate that they prefer a psychological intervention from a pharmaceutical one. Adverse effects such as sexual problems (71.8%), weight gain (65.3%), feelings of emotional numbness (64.5%) are common (Cartwright, Gibson, Read, Cowan, & Dehar, 2016) and might play a role in this process. In the elderly, AD use is associated with increased risk of strokes, falls, fractures, hyponatremia and death (Coupland, Dhiman, Morriss, Arthur, Barton, & Hippisley-Cox, 2011). Furthermore there are indications that some individuals might become resistant to the prophylactic properties of ADs with increasing duration of exposure (Bockting, et al., 2018). To date there exists scientific controversy on how to taper off ADs effectively whilst also preventing relapse of depression. Therefore clinicians remain

unsure on what is the appropriate approach (Locke et al., 2018). Additionally uncertainty exists on what therapy is best to aid patients during the process of tapering off. PCT has shown promising results while tapering off ADs as an alternative strategy to long-term continuation of ADs. The value of MBCT whilst tapering off ADs has demonstrated contradictory results.

Finally if and how internet-based programs could aid during the this process of tapering off ADs whilst also preventing relapse of depression is unknown. To date no evidence based information on this specific topic is available. In this research we aim to get more insight on this research gap.

The first aim of this research is to evaluate how a GP surgery can cope efficiently with the tapering off antidepressant medication (AD) and the relapse of depression within these patients. The existing literature on how internet-based relapse prevention programs can support patients who are discontinuing their AD will be researched.

→ Recommendations for the development of E-health modules that aid patients during the process of tapering off and prevent relapse of depression will be formulated.

The second aim of this research is to review the existing literature on which factors of internetbased relapse prevention programs are effective for the prevention of relapse of depression.

- ➔ Based on findings recommendations for the development of improved E-health modules will be formulated.
- ➔ Based on findings protocol/script will be written for the guidance of these E-health modules as literature indicates guidance is a key factor for successful online prevention of depression relapse.

3. Methods

- 1. A literature review was conducted to asses recent literature on E-health modules for successfully tapering off AD whilst preventing relapse of depression <u>and</u> the prevention of relapse of depression in general.
- 2. Secondly a protocol/script is written for the personal guidance of these E-health modules for the prevention of relapse of depression. This protocol/script is tested with 10 subjects via semi-structured interviews.

2.1. Literature review

2.1.1. Research design of literature review

This literature review offers the opportunity to gain insight into the current knowledge is on internet-based relapse prevention programs. Additionally, based on this review recommendations are formulated for the content of future E-health modules.

2.1.2. Study selection of literature review

In- and exclusion criteria were developed for the selection of eligible studies. In order to select relevant literature for the review study a PICOS approach (Patient, Intervention, Comparison, Outcome Study design) was used to perform the search. A PICOS approach is a method commonly used in evidence-based medicine. The method is notorious for its effective way to search for relevant articles. It was decided to include several patient groups for this research. Elaboration on the motivation for the selection of the patient groups can be found under chapter 3.1.1. study selection.

P: Adults (18 year and older) with a history of MDD with or without residual symptoms, adults who are suffering from subthreshold depression and adults who are having symptoms of depressive rumination.

I: An online intervention delivered over the Internet targeting the prevention of depression

C: Adults who are assigned to a non-online treatment as usual condition (OR no comparison.)

O: Pre-and post-measures regarding to depressive symptoms in general, recurrence/relapse of MDD and residuals symptoms.

As the research topic is relatively new and not much data on this subject was available it was decided to include different types of studies; RCTs, qualitative researches, secondary analyses of RCTs and a quasi-experimental comparison.

2.1.3. Data collection of literature review

The review was conducted in the database PubMed. This database is most commonly used for psychological or medical topics (Bramer, Rethlefsen, Kleijnen, & Franco, 2017). The articles that could not be accessed via PubMed were retrieved via Google scholar.

The initial phase of the research entailed performing an exploratory search in Google scholar to get familiarized with the topic. Next based on these findings a search strategy was developed based on searches in similar studies and systematic reviews. The search was performed at 15th of February 2019. The search covers three main concepts; (prevention relapse depression) AND (e-health OR internet OR internet-delivered OR internet-based OR web OR web-based OR online OR computer OR digital) AND (tapering off antidepressants OR tapering off antidepressant medication OR discontinuation antidepressants OR discontinuation antidepressant medication OR going off antidepressant medication). Studies that were not written in Dutch or English were excluded. The eATROS trial for example could have been an addition to this research however was written in German. In order to ensure no articles were missed, backwards snowball sampling was used by scanning literature lists of the articles included in this research, this to ensure maximum coverage. The specific research syntax in showed below.

PubMed: (prevention relapse depression OR prevention relapse major depressive disorder OR prevention MDD) AND (e-health OR internet OR internet-delivered OR internet-based OR web OR web-based OR online OR computer OR digital) AND (tapering off antidepressants OR tapering off antidepressant medication OR discontinuation antidepressants OR discontinuation antidepressant medication)

2.1.4. Data extraction and analyses of literature review

The first phase of the search entailed screening articles based on the developed inclusion and exclusion criteria in the abstracts. In the secondary stage of the study selection the remaining articles were screened by analyzing the full text. Finally, the articles that remained were read a final time and articles thought be relevant were included. This final selection of articles is presented in Table 1 where data about study characteristics was represented such as; study design, intervention type, duration of intervention, amount of guidance, aim of the study and results.

A "structured synthesis" was performed on the articles included. No statistical methods are used to summarize the results, as the heterogeneity between studies was too large, preventing analyses of any average effects. Additionally the studies included varied in populations, interventions comparisons and methods, this would make the average effects across studies meaningless.

2.2. Protocol/script test

2.2.1. Research design of protocol/script

The protocol/script is written based information found in literature and on information provided by Therapieland and Minddistrict. (Therapieland and Minddistrict are companies that develop and deliver internet-based treatments for a broad variety of pathologies and problems. The surgery at the Oude Turfmarkt collaborates with Therapieland.) The information from Therapieland and Minddistrict is derived from team meeting with specialists, researchers and other employees working at these companies. All this data was combined and used to develop a protocol/script for the guidance of E-health modules for the prevention of relapse of depression. Subsequently the protocol/script is reviewed by several doctors' assistants, POH GGZs (this is a Dutch abbreviation for a general practice-based nurse specialized in mental health) and a focus group from Therapieland via semi-structured interviews. The focus group consisted of three employees of Therapieland. Two of whom are researcher developers and one psychologist. Interviews will be performed until data saturation is reached. It was estimated that 10 interviews would suffice to reach this point.

2.2.2. Subjects for protocol/script test

The formulated protocols will be tested with 10 individuals. It was decided to interview 6 doctor's assistants as they could possibly guide patients in the future who are utilizing these internet-based interventions. Also 3 POH GGZs were interviewed, as they are familiar with internet-based interventions and psychological pathology. Finally the focus group was interviewed as they have great knowledge on how internet-based interventions work and how they can be implemented. This variety of interviewees provides a broad view on the protocol/script that is tested. Interviews will be conducted until data saturation in reached. This could mean a deviation in the estimated amount of 10 interviews to reach this point.

2.2.3. Measurement Instruments of protocol test

For assessing the draft version of the protocol/script, semi-structured in-depth interviews are performed with the subjects. The "draft" protocol/script was used as the base of the semi-structured interview,(to be found in Appendix 7). Every chapter of the script/protocol reviewed via the "read out loud" method and subsequently feedback on the content was noted.

3. Results

3.1. Literature review

3.1.1. Study selection

The study selection method is described in Figure 1. In total the search identified 120 articles in the database PubMed. 121 Articles were screened according to the developed inclusion and exclusion criteria for title and abstract. After the first screening 32 articles were fully read. Articles where prevention of relapse depression was researched in patients who are currently (partially) remitted from recurrent depression were included. Additionally articles that target subthreshold depression (Get-on Mood trial), residual depressive symptoms (RDS) (MMB trial) and depressive rumination (MindReSolve trial) were included.

The articles that target RDS were included as there is good evidence that patients with RDS are at increasing risk of relapse of major depression and the current practice is to continue treatment for longer in those patients (Practice Guideline for the Treatment of Patients with MDD, 2010). The Get-on Mood trial targets subthreshold depression, meaning that the depressive symptoms do not meet full criteria for a depressive/major depressive episode. An increased risk for future major depression is also the case for subthreshold depression (Practice Guideline for the Treatment of Patients with MDD, 2010). Additionally subthreshold depressive symptoms cause considerable morbidity and economic costs and are common in those with a history of major depression. As both with RDS and subthreshold depression there exists a substantial elevated risk to the development of major depression. Therefore it was decided to also include these articles in this research. These target groups are similar with regard to the risk of development of depression compared to patients who are currently in (partial) remission and had a MDD is their medical history.

Within the MindReSolve trial rumination is targeted. It was decided to include this article, as there is considerable evidence that rumination plays a causal role in the onset and duration of MDE (Cook, Mostazir, & Watkins, 2019). Additionally rumination interacts with other risk factors to both maintain depression and predict the onset of depressive symptoms (Cook, Mostazir, & Watkins, 2019). Reductions in worry and rumination were found to mediate the effects of the interventions on prevalence (Topper, Emmelkamp, Watkins, & Ehring, 2017). Again this target group is similar with regards to the risk of development of depression compared to individuals who are in (partial) remission of depression; therefore it was thought to be relevant to include this article. In total 12 studies, published between 2013 and 2019, evaluating online modules to prevent depression were included, presented in table 1.



Figure 1. Inclusion flow chart

	Aim study	Population	Intervention type	Aim intervention	Study design	Duration intervention	Guidance	Primary outcome	Results	Follow up
Cook et al, 2019	Test if Guided Web- based RFCBT prevents incidence of major depression relative to usual care, also test feasibility of unguided i-RFCBT	UK university students 18-24 years With elevated RNT	MindReSolve: Guided Web-based RFCBT (Rumination-focused Cognitive Behavioural Therapy)	Target depressive rumination	RCT (N=235)	+/- 9 weeks, 6 modules One session (60 min)	By mail by clinicians (who received training in RFCBT). Written feedback after each module, reminder emails.	MDE (major depressive episodes)	Guided i-RFCBT reduces prevents onset of MDEs in high-risk students. (Similar results for unguided i- RFCBT)	3, 6 and 15 months
Rice et al, 2018	Evaluation of online social therapy intervention	15-25 years Partial remission of MDD or minimal symptoms MDD	The REBOUND intervention	Depression relapse prevention	Single group pilot study	12 weeks, 11 modules One session (20 min)	Peer and clinical moderation through daily monitoring.	/	REBOUND is engaging, safe, feasible and usable. The social networking aspect used most frequently. Relapse rates at 12 weeks were low, 14,3% whereas 60-70% relapsed in other controlled studies of youth MDD.	12 weeks
Zarski et al, 2018	Investigate factors that predict adherence	18+ years Subthreshold depression	GET ON MOOD enhancer	Depression prevention Intervention	Secondary analyses of RCT (N=111)	3-6 weeks, 6 modules + 1 booster session (30-60 min)	Adherence monitoring and feedback on demand by an electronical coach (trained psychologists)	/	"Planning" is a significant Predictor of treatment adherence. (<i>P</i> =0.04)	7 weeks
Klein et al, 2018	Examine if adding an Internet-based prevention program is clinically superior to TAU over 24 months	18-65 years Remission/rec overy form recurrent MDD	PCT (preventative cognitive therapy)	PCT: Identifying underlying dysfunctional beliefs and hereby prevent relapse depression	Single blind 2-arm parallel RCT (N=264)	8 modules, 1 module per week, 20 minutes per module	Minimal therapist support, max 4 telephone calls. Text message or e-mails after absence. Email could be initiated unrestrictedly. Mean therapist time of 17.3min.	Time until relapse/recu rrence in experimenta l group relative to control group	No significant effects on outcomes over 24 months. M-CT has no long- term protective effect	24 months
Biesheuve I-Leliefeld et al, 2017	Prevention Recurrent depression	18+ years Full or partial remission of recurrent MDD	S-PCT (preventative cognitive therapy + self-help book to read at home)	PCT: Identifying underlying dysfunctional beliefs Book: changing beliefs by identification of positive attitudes	RCT (N=248)	8 weeks, 8 modules	Weekly telephone guidance by counsellor, maximum 15 min	The incidence Of relapse/ recurrence	35.5% S-PCT group 50.0% TAU group	12 months
Santesteb an-Echarri et al, 2017	Reporting user experience on REBOUND program	15-25 years Partial remission of MDD or minimal symptoms MDD	The REBOUND intervention	Depression relapse prevention	Qualitative study (N=38)	12 weeks, 11 modules One session (20 min)	Peer and clinical moderation through daily monitoring.	/	"Talk it out" most helpful, a hybrid of social networking and therapy tool.	12 weeks
Kordy et al, 2016	Examination of 2 internet delivered augmentation strategy	18-65 years Recurrent MDD	SUMMIT, SUMMIT person	Prolong symptom free intervals	Multi centre RCT (N=232)	12 months	SUMMIT: e-mail and text messages after treatment SUMMIT PERSON: Monthly consultation group chats and one-on-one consultations with both with a clinical expert.	Well weeks	SUMMIT reduced the unwell status time. SUMMIT PERSON was not superior to SUMMUT or TAU. The efficacy of SUMMIT was strongest 8 months	24 months

Holländar e et al, 2016	Identify common online therapist behaviours in iCBT and the relation to adherence	Partially remitted depression	iCBT (Internet Cognitive behavioural therapy) + physical activity +management anxiety	Prevention for partially remitted depression	RCT (N=42) Therapists (N=5)	9 modules, and optional 7 modules	Emails with personal therapist via encrypted emails that. Mean therapist time 150 min. Mean number of emails: 15,3.	Relapse rates	Adherence was highly correlated with affirming, encouraging and guiding. Lower correlations with self-disclosure of therapist, emphasizing patient's responsibility and clarifying framework. No correlation with urging, confronting or informing about modules.	/
Buntrock et al, 2016	Evaluate effectiveness of web-based guided self-help intervention for the prevention of depression	18+ years Subthreshold depression	GET-ON mood enhancer	Focus rests on daily positive activity Scheduling + tackling problems and planning future goals	Pragmatic RCT (N=406)	3-6 weeks. 6 modules.	Online support by trainer feedback after each session. Max 2 hours per participant.	Onset of MDD in intervention group	27% in the intervention group experienced MDD compared with 41% in the control group.	Baseline, 6 weeks, 6 and 12 months
Kok et al, 2015	The effect of M-CT added to TAU on depressive symptomatology compared to TAU	18-65 years Remission/rec overy from recurrent MDD	PCT (preventative cognitive therapy)	PCT: Identifying underlying dysfunctional beliefs and hereby prevent relapse depression	RCT (N=239)	8weeks, 8 modules, 1 module (20 min) per week	Minimal therapist support, max 4 telephone calls. Text message or e-mails after absence. Email could be initiated unrestrictedly. Mean therapist time: 18 min per patient.	Residual depressive symptoms	Residual depressive symptoms showed a statistically significant decrease in the mobile CT group relative to the TAU group.	3 months
Boggs et al, 2014	Obtain subjective experiences of the intervention and gain suggestions for improvement	18+ years Residual depressive symptoms	MMB (Mindful Mood Balance) Web-based intervention in mindfulness meditation.	Reduction of residual depressive symptoms and relapse prophylaxes	A qualitative research of user experience (N=38)	8 modules (60- 90 min)	Ask questions, answer within one week. Access to support person via phone or email. During absence patients where contacted and support was offered.	/	Advantages to web-based delivery; flexibility, reduced cost, time commitment. Adding increased support was suggested.	/
Dimidjian et al, 2014	Examination of MMB	18+ years Residual depressive symptoms	MMB (Mindful Mood Balance) Web-based intervention in mindfulness meditation	Reduction of residual depressive symptoms and relapse prophylaxes	Open trial/quasi- experimental comparison (N=100)	8 modules, 1-4: mindfulness. 5- 8: CBT	Ask questions, answer within one week. Access to support person (phone/ email). During absence patients where contacted and support was offered.	/	Significant greater depressive symptom severity reduction in MMB group compared to UDC(usual depression care).	6 months
Holländar e et al, 2013	Measure long term effects of internet- based relapse prevention	Partially remitted depression	iCBT (Internet Cognitive behavioural therapy) + physical activity +management anxiety	Prevention for partially remitted depression	RCT (N=84)	9 modules, and optional 7 modules	Emails with personal therapist via encrypted emails that. Mean therapist time 150 min.	Relapse rates	Guided iCBT reduces the risk of relapse with partially remitted depression with protective effect (24months). After 24 months iCBT: relapse rate 13.7%, control group: 60.9%	6,12 and 24 months

3.1.2. Recommendations concerning E-health whilst tapering off ADs

The search conducted to evaluate the current knowledge on how internet-based relapse prevention programs can support patients who are tapering off their ADs showed that there is no available evidence-based data on this topic. This is a research topic that is yet to be explored in the future. Based on the findings in literature on how to taper off ADs effectively in clinical practice and how relapse of depression can be prevented during this process, recommendations will be formulated to suggest potential content for future e-health modules.

Research in context

Evidence before this study

We searched Embase, PubMed, PsycINFO, Web of Science, Scopus, and the Cochrane library without language restrictions up to July 3, 2017, using the search terms (preventive cognitive therapy OR PCT OR cognitive therapy OR cognitive behavior therapy OR mindfulness-based cognitive therapy OR MBCT) AND (depress*) AND (antidepressants OR antidepressant medication) AND (recurrence OR recurrent OR relapse OR relapse prevention). We screened abstracts to retrieve full-text articles. We also checked reference lists of relevant studies and reviews for potentially relevant studies. We did not find a three-group, relapse prevention trial in individuals with major depressive disorder comparing the effectiveness of continuation of antidepressants after remission versus cognitive-based therapy, or comparing the effectiveness of adding cognitive-based therapy to antidepressants versus antidepressants alone. We identifed three published trials comparing two groups, in particular the effectiveness of mindfulness-based cognitive therapy (MBCT) after remission, with support to taper or discontinue antidepressants, versus maintenance antidepressants. The relative risk ratio of MBCT versus maintenance antidepressant treatment was 0.76 (95% CI 0.59-0.98), a risk reduction of 24% over 60 weeks. Additionally, we identified one published trial

comparing MBCT added to maintenance antidepressant treatment after remission versus maintenance antidepressant treatment alone, with a hazard ratio of 0-87 (95% Cl 0-40–1-90) over 15 months for this comparison.

Added value of this study

This study is the first three-group, randomised controlled trial in individuals in remission or recovery at high risk of recurrence to examine whether maintenance antidepressant treatment reduces recurrence risk more than does tapering off antidepressants while adding PCT, and whether adding PCT enhances the preventive efficacy of maintenance antidepressant treatment compared with antidepressants alone. We found no evidence that maintenance antidepressant treatment was superior to discontinuation of antidepressants while receiving PCT over 24 months. We found benefits for the combination of PCT and antidepressants over antidepressants alone in terms of reduced risk of recurrence and secondary outcomes (number and duration of recurrences) over 24 months.

Implications of all the available evidence

PCT might be an alternative to maintenance antidepressant treatment in individuals with recurrent depression who wish to discontinue medication after recovery or who intend to continue on antidepressants.

Text box 1. This text box is retrieved from the DRD study that researched the effectiveness of PCT while tapering ADs vs maintenance ADs vs their combination in prevention of depressive relapse or recurrence (Bockting, et al., 2018).

Therapy during tapering off

PCT (preventive cognitive therapy)

As previously mentioned in the introduction PCT is an adapted type of CT specifically developed to prevent relapse in recurrent depression. Recent research has indicated that receiving PCT whilst tapering off ADs might be an effective alternative to long-term continuation of ADs (Bockting, et al., 2018). Additionally adding PCT to AD treatment after remission of depression provided substantial protective effects compared to AD treatment alone (reduced recurrence risk by 41%). Therefore PCT should be offered to individuals who are discontinuing their AD and also to patients suffering from recurrent depression who are on maintenance AD treatment (Bockting, et al., 2018), see Text box1.

As previously pointed out in the introduction PCT is also translated into an internet-based version to prevent relapse of depression. Results indicated that online PCT shows positive results over a course of 3 months when added to TAU compared to TAU alone (Kok, et al., 2015). Long-term effects (over 24 months) however show no statistically significant outcomes, which indicates that PCT has no long-term protective effect (Klein, et al., 2018). Actively prescribing more therapy support might have maintained the short-term results (Klein, et al., 2018).

PCT might also be effective if translated to an internet-based treatment for the purpose of aiding patients who have recovered from depression and want to taper off their AD medication whilst preventing relapse of depression. Nonetheless for this to succeed, a prerequisite would be that adequate and sufficient therapist support is provided. However no data is available yet on this topic, this subject is yet to be researched in the future.

MBCT

Contradictory results have been reported on the effectiveness of MBCT during tapering off ADs when compared to maintenance of ADs in the prevention of depressive relapse or recurrence. MBCT was more effective than maintenance ADs in reducing residual depressive symptoms and psychiatric comorbidity (Kuyken et al., 2008). The study of Zindel et al (2010) MBCT has shown to offer protection against relapse/recurrence on a par with that of maintenance of ADs. Similar findings were seen in the study of Kuyken et al (2015) where both treatments; MBCT with support to taper AD treatment (MBCT-TS) and maintenance of AD for the prevention of depressive relapse render positive outcomes in terms of relapse or recurrence. (The three above mentioned articles are referred to in Text box 1.)

However no effect was seen when adding MBCT to maintenance ADs after remission versus maintenance of ADs alone regarding the reduction of risk for relapse/recurrence of RDS. These contrasting results indicate that more research should be done on this topic.

➔ In conclusion we advise when patients are tapering of ADs this to be accompanied by faceto-face PCT to prevent relapse of depression.

Guidance during tapering off

Expert opinions state that the success rate of discontinuation of ADs partly depends on the guidance of the therapist/doctor during the discontinuation process. Several factors are crucial in the communication with the patient.

Firstly adequate explanation on possible antidepressant discontinuation syndrome (ADS) symptoms must be provided. This is complex physiological and neuropsychiatric syndrome that can arise during the interruption or abrupt cessation of ADs. The symptoms of ADS include dizziness, nausea, lethargy, tremor, headaches and sleep disturbances (Multidisciplinary document "Tapering off SSRI's and SNRI's, 2018). Also it is important that the differentiation between ADS and relapse of depression is made and clearly explained to the patient. The symptoms of ADS occur within days after tapering off or cessation of AD. For symptoms to occur after one week after cessation or tapering off is unusual. Usually the symptoms completely disappear within 24 hours after restarting the AD (Haddad, 2007). If symptoms of depression take longer than one week after tapering off AD, it is a possibility that a relapse of depression is occurring (Warner, 2006).

Secondly, clear steps must be formulated on how to discontinue with the medication. Thirdly, availability of the practitioner for questions of the patient and frequent contact, may it be face to face, via the telephone or otherwise is of great importance (Multidisciplinary document "reduction SSRI's and SNRI's, 2018).

Last but not least, how and when it is decided to taper off must be based on a joint decision between caretaker and patient. And hereby the wishes and needs of the patient should be taken into account, "shared-decision making" (Lok, 2018).

When to start tapering off

In the current guideline of the GGZ of depressive disorders is stated that patients who have experienced 1 depressive episode in their medical history treatment must be continued for 6 months after full remission of depressive symptoms. In the case of a relapse, AD should be continued for at least one year (Lok, 2018).

Optimal duration of tapering off

For the optimal duration of the tapering off process, a balance must be achieved between over and under treatment. Under treatment translating into a tapering off schedule that is too short versus overtreatment meaning a schedule that is too long. Based on findings in observational research the mean optimal duration of tapering off is between 8 and 9 weeks. Naturally the duration of tapering off can be adjusted based on shared decision-making and the patient can decide to fasten or slower this process (Groot, 2018). Consequently online modules that guide patients during the tapering off AD should take 8 to 9 weeks but should also be adjustable to fit personal preferences of patients and shared decision making.

Taper phase regimen

All guidelines state the same; tapering off should be done gradually (Lok, 2018). Gradual tapering is of great importance as abrupt cessation of antidepressants can lead to ADS. The way of tapering off

antidepressants depends on the risk factors of developing ADS and on the severity of the possible presentation of this syndrome during the process of tapering off.

Risk factors of the occurrence of ADS are the usage of higher than minimal effective dosage of AD medication during treatment (Haddad 2007, Harvey 2014, Ogle 2013, Hosenbocus 2011), if symptoms of withdrawal were experienced during a missed dosage, therapy infidelity or a drug holiday and previously failed attempts to quit AD (Multidisciplinary document "Tapering off SSRI'sand SNRI's, 2018). Mainly ADs with a short half-life like venlafaxine and paroxetine have a greater risk for developing ADS. Whereas with fluoxetine the risk is much lower as this medication has a longer half-life.

Generally the pace of tapering off is executed at a speed of 1 descent/ step per week or per two weeks (if adequately substantiated). The dosages of tapering off per step approach a descent of 10% in the serotonergic transporter utilization rate (Bockting, 2018). For the specific tapering off schedules depending on risk factors and severity of ADS, we would like to refer you to the Multidisciplinary document "Tapering off SSRI's and SNRI's, 2018. In 2019 the document will be updated and tapering off schedules for tricyclic antidepressants (TCA's) will be included.

Summary of recommendations

- 1. Combine the tapering off with prevention of relapse through PCT
- 2. Provide sufficient and adequate therapist support
- 3. Base all decisions concerning tapering off on "shared decision making"
- 4. Taper off gradually
- 5. Choose a wise time to start tapering off
- 6. Make a clear tapering off plan
- 7. Provide information on ADS

3.1.2. Summary of feedback of interviews for the script

All the feedback received from the semi-structured interviews is included in Appendix 5. The adapted script is included in Appendix 6. Below you find a summary of the feedback received from the interviewees on the initial script. It is advised to review the script simultaneously when looking at this summary.

1. How to engage first contact with the client

Unanimously the interviewees agreed that engaging in first contact via the phone was a good idea. Secondly, it was suggested by multiple interviewees to agree on an informal/formal communication style with the client during this first telephone conversation. (In Dutch this would translate to using the words "u" of "je" when addressing a client. There is no equivalent translation for this in English.) Thirdly, all interviewees with the exception of one person agreed on making a compliment on the participation of client when engaging in first contact. (In psychology people are referred to as clients whereas in psychiatry or medicine the word patients is preferred. During the discussion of the results I will refer to people who are completing the modules as clients.) Fourthly, it was suggested that especially when dealing with elderly clients to emphasize that all the information on the platform is confidential. Additionally ask if the client prefers to receive phone calls or messages. Lastly, checking if you have the correct email address is a relevant suggestion.

2. Communication style

Most of the interviewees agreed that smiley should only be used occasionally and with youngsters underneath sixteen years old. By the focus group it was suggested to work with "calls to action". This means giving one simple instruction when wanting to activate a client.

3. The client did not start the program yet

Interviewees who have worked with Therapieland in the past all suggest inviting the client again via the platform first. If the client does not respond then email can be sent. The majority of the interviewees suggested to simply ask why the client has not started yet. Some indicated that naming the advantages of the E-health module could sound too "salesy", however the majority thought it was appropriate so it was decided to include stating the advantages.

4. The client did not finish the weekly module

The initial idea was to send a message after two days. The majority of the interviewees, especially the POH GGZ interviewees who have worked with Therapieland before indicated that was too short notice. The script was adapted, and it multiple parties agreed with using a week of delay. In this message the majority of the interviewees agreed upon suggesting a fixed day to make the module. There was some disagreement on when was the ideal time to call a client after a period of absence. A middle ground was chosen to call the client after two weeks of delay. During this

5. The client is completing the modules every week according to plan

Most of the interviewees thought that weekly affirming the client after completion of every module was a good idea. However the POH GGZ interviewees who have worked with Therapieland indicated that this might be too enthusiastic. A middle ground was chosen to positively affirm every two weeks. Not only positively affirm but also keep a conversation going by asking the client how they are experiencing the module.

6. The client does respond since 3 weeks

In this stage it was agreed upon amongst most of the interviewees that the emphasis should be put on empathy. Also multiple interviewees suggested it to keep the conversation open by simply asking why the client has not been using the modules. Additionally simply enquiring how the client is doing was agreed upon to be appropriate. Also specifically asking if the client is experiencing depressive symptoms was agreed upon by multiple parties. Afterwards informing the client on the known effects of the modules and how they can contribute to the prevention of depression in the future is suitable. Hence these suggestions were added to the script.

7. The client has not been responding since 4 weeks

Emphasis on sending an empathetic message was advised by all of the interviewees. Additionally the time span of 4 weeks was agreed upon to stop with the modules and inform the GP. All the interviewees agreed upon that it should be stressed that the client can always call the surgery when experiencing depressive symptoms.

8. The client says he/she does not need the E-health module anymore as he or she is feeling well enough

Starting with acknowledging the feelings of the client is important, all the interviewees agree this upon. Secondly, it was agreed upon to carefully remind the client that depression is often a recurrent symptom and that this is supported by research.

9. The client is showing less obvious suicide alarm signs

Almost all the doctor's assistants agreed that making a risk assessment on suicidality is not suited for a doctor's assistant. So it any symptoms become apparent via the messages in Therapieland, the GP

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or POH GGZ should do the following up. Most of the doctor's assistants felt that this was too much responsibility for them. Additionally all the doctors assistants indicated they would want to receive training before starting with guiding clients.

10. The client is showing acute suicide signs

No comments were made on this subject.

11. Who helps the counselor?

No comments were made on this subject.

12. Additional comments

Several interviewees suggested a final closing module. Suggestions for the content of this module were emphasizing that the client can always reread all the information. Also this is an ideal time to ask for feedback. Next to this it was suggested to stimulate the client to reflect by asking what they have learned from the modules and what information made an impression on them.

A valuable additional comment is to always keep in mind that the clients are a fragile group who might be experiencing residual depressive symptoms or might be going through relapse again. These people are extra susceptive for negative comments so be extra gentle with this group of people. A final additional suggestion was that psychology students or medical students are also ideal candidates to execute the guidance for these E-health modules.

3.1.3. Recommendations for E-health modules for the prevention of relapse of depression

Therapy for E-health module

PCT vs MBCT vs CBT

As briefly mentioned in the introduction of this research; the short term results of online PCT indicate favorable course of residual depressive symptoms in remitted/recovered recurrently depressed patients, whereas the long term results show no protective effect. It is hypothesized that actively prescribing more therapist support would have prolonged the positive effect (Klein, et al., 2018). The adequate amount of therapist support should be explored more elaborately in future research in order to create a long-term effective PCT based module.

With Mindfulness-Based Cognitive therapy (MBCT) a mindfulness meditation element is integrated added with regular CT (Kuyken, et al., 2010) to reduce (RDS) residual depressive symptoms and

relapse prophylaxis. MBCT has been translated into online modules and have proven to be effective not only face-to-face but also online. Mindful Mood Balance (MMB), the first web-based approach to deliver the core content of MBCT, reported significant reduction in depressive severity than patients receiving UDC (usual depression care) with preliminary indications that these results maintained over a period of six months (Dimidjian, Beck, Felder, Boggs, Gallop, & Segal, 2014). Additionally a significant improvement was measured on rumination, RDS severity and self-reported mindfulness (Dimidjian, Beck, Felder, Boggs, Gallop, & Segal, 2014). The outcomes of both the open trial and the quasi-experimental comparison included in Table 1 prove to be effective as a scalable approach on the treatment of RDS. However the relapse preventive effects of MMB were not examined as during the six-month follow-up, the sample available for the study decreased after the intervention phase (Dimidjian, Beck, Felder, Boggs, Gallop, & Segal, 2014). It is vital for future research to evaluate outcomes over a longer period of time to examine relapse preventive effects (Dimidjian, Beck, Felder, Boggs, Gallop, & Segal, 2014).

With regard to online CBT based interventions; this therapy is effective not only for the treatment of anxiety or depression but also in preventing relapse in depression (Biesheuvel-Leliefeld, Kok, Bockting, Cuijpers, Hollon, & Van Marwijk, 2015). CBT based online treatments were used in several studies included in this research. In the research of Holländare et al. (2013), guided CBT proved to have a protective effect that was still present after 24 months post treatment. These results suggest that the specific techniques used within CBT can be effectively delivered via the internet (Holländare, et al., 2013). In the RESPOND trial, an internet-based guided rumination-focused Cognitive Behavioral Therapy (i-RFCBT) was used to target risk factors for the development of depression such as rumination (Cook, Mostazir, & Watkins, 2019). Results show that guided i-RFCBT reduced the risk of depression by 34% relative to usual care (Cook, Mostazir, & Watkins, 2019). In the GET READY relapse prevention program, an ongoing mixed method observational study, a CBT based intervention is also used. Results are yet to be published.

In conclusion all of the interventions described above show promising results. However internetbased CBT only has proven to have a long-term protective effect on the relapse of depression. Therefore, based on current research, it is preferred to use guided CBT to prevent relapse of depression in on internet-based setting. Further elaboration on the amount of guidance/therapist support can be found below under "Therapist support".

Social networking/ Peer support

Due to high comorbidity rates between MDD and anxiety disorders, 46% of people with lifetime MDD have a lifetime anxiety disorder (Kessler et al., 2015). It is highly important to develop

internet-based tools that address both of these issues to maximize the effects of the intervention (Santesteban-Echarri, 2017). Young people, who experience comorbid symptoms of social anxiety, may be more likely to talk online as they feel less apprehensive in this setting (Pierce, 2009: Hammick and Lee, 2014).

Connecting online with peers contributes to the feeling of social connectedness for those who seek this and who do not have a sufficient established social network in real life (Santesteban-Echarri, 2017). Engaging in social networking promotes a lack of hierarchy amongst users, increase a sense of belonging, decreases inhibition and isolation and development of supportive relationships and reduced self-stigma experiences (Santesteban-Echarri, 2017). The most valuable trait of the social networking is (consistent with social comparison theory, see appendix 3) similarity in background, age and shared experiences among all the users. Ass young people with depression often perceive themselves as having a lower social rank compared to others (Gilbert, 2000), user similarity may offer an opportunity to improve social self-efficacy and depressive symptoms. Maintaining a sense of equal hierarchy among users is key as less favorable feedback on having a special designation for some young people (Santesteban-Echarri, 2017).

For next generation e-mental health interventions to be effective and engaging, an increasing amount of interactivity and support from peers will be required or possibly expected by users (Rice, 2014). Incorporating peer support within e-health interventions works to mobilize available community-based resources, decrease stigma and bolster adaptive coping (Rice, 2018). Additionally embedding peer support in e-mental health serves to meet recent global targets established within the WHO's Mental Health Action Plan (WHO, 2013-2020). (Referenties van dit stuk nog in de lijst plaatsen.)

Adherence

For most patients who have had 3 or more major depressive episodes in their medical history, chance of recovery is very small (Bockting, Hollon, Jarrett, Kuyken, & Dobson, 2015). Therefore, an sustainable extention of "well times" (i.e. absence or at most mild depressive symptoms) is desired. In order to increase the amount and extension of well times a sufficient amount of adherence is a prerequisite (Zarski, 2018).

Internet-based interventions have several advantages such as high flexibility and low-threshold access to treatment, however these treatments place high self-regulatory demands on patients and therefore entice treatment cessation (Donkin, 2010). Despite being highly motivated many individuals struggle to complete internet-based interventions (Zarski, 2018). According to literature, internet-based interventions suffer from high attrition; the rates can amount up to 80% in unguided Internet interventions. Fortunately this can be reduced by personal contact (Johansson & Andersson,

2012). The supportive accountability model (see appendix 4) assumes that human support in the context of internet-based interventions increases adherence rates because participants tend to develop a sense of commitment toward an eCoach who is perceived as trustworthy, benevolent, and knowledgeable (Mohr, Cuijpers, & Lehman, 2011). This underlines again the importance of guided interventions.

In the study of Zarksi et al. (2018) planning was the strongest predictor of adherence; this should be a key dimension in future internet-based interventions. Self-efficacy and the maintenance of this is a prerequisite as it allows patients to overcome potential barriers in the course of the treatment. It is hypothesized that patients might need further support when it comes to detailed planning on how to complete modules on a regular basis to maintain their adherence motivation. Individuals with minimal planning skills especially might benefit greatly from identifying obstacles with regards to completion of a certain module. To promote the implementation of these action plans, participants should have the option to formulate if-then plans (eg, "If I do not feel like logging in and completing a module, then I review my treatment goals").

For maintaining self-efficacy throughout the module, evaluation of treatment barriers and developing coping strategies should be repeated frequently during execution of the module (Zarksi, et al., 2018). Additionally at the end of every module, participants may benefit from scheduling their next login for the coming week. If it is the case that a participant did not live up to their adherence goals, it is advised to give additional support to motivate them to retry and choose different coping strategies or adapt goals. It is of importance to recognize what works best for whom as different features may have different outcomes depending on the motivational status of the participant (Zarksi, et al., 2018). In the following subject the importance of an individually tailored strategy is explained.

Adaptive strategy

According to several studies, relapse prevention should be flexible and tailored to the patient's individual needs, situation and preferences, this in order to increase acceptability of the program (Boggs, Beck, Felder, Dimidjian, Metcalf, & Segal, 2014). A stable symptom course in depression and its recurrence is exceptional. Although a considerable proportion of patients who suffer from recurrent depression may benefit from therapy, may it be pharmaceutical or psychological; the majority will experience a novel episode. Not being prepared for the recurrent nature of depression may affect a patients coping efforts in a negative manner. Patients may attribute this development to their own failure. Inter- and intraindividual courses of depression vary greatly; this underscores

the value of an adaptive, flexible individualized and in many cases long-term strategy (Kordy, et al., 2016).

Therefore, a personalized individual relapse prevention plan is a good suggestion to meet the need for a personalized approach. This can be executed in the form of a personal relapse prevention plan. See below for a more detailed prescription of the relapse prevention plan. The prevention plan should be accompanied with flexible E-health modules aiming at the promotion of self-management skills ((Krijnen-de Bruin, et al., 2019).

CMP Crisis management plan/ relapse prevention plan

Almost all the studies form Table 1 use a crisis management plan (CMP) in their prevention strategy. As mentioned below this type of relapse prevention in combination with contact with a professional is a preferred strategy for patients (Muntingh, Hoogeboom, Van Schaik, Van Straten, Stolk, & Van Balkom). Not only is it a preferred strategy for patients but also it is in line with the NICE guidelines for the treatment of depression and management of depression. By using a relapse prevention plan, patients are encouraged to cope proactively with an upcoming crisis. This may reduce the feelings of helplessness and might increase the patient's willingness to share responsibility for their depression management and consequently get more out of the program (Kordy, et al., 2016). Additionally, the use of a prevention plan/crisis management plan is that it serves as an early recognition and management tool of personal potential triggers and signs that indicate relapse. These triggers and signs vary amongst patients and therefore a personalized plan is a prerequisite for the prevention plan to be effective.

Patient preferences

Muntingh et al (*in press*) examined preferences of patients regarding relapse prevention. This study revealed that patients prefer a program that is not too time consuming and effective. Duration should take up to a maximum of 1 hour per week. The most preferred strategy was frequent contact with a professional (about ones every three months was sufficient) in combination with a relapse prevention plan.

Therapist support

Internet-based interventions have better effects with therapy support in the study of Klein et al. (2017) there was no sustainable effect measured of an internet-based relapse prevention plan over 24 months. This same program was however effective over a period of 3 months (Kok, 2015). The latter findings are in line with the promising outcome of Holländare et al. (2013) where partially remitted individuals using internet-based relapse prevention plan profit greatly as the risk pf relapse is reduced over a period of 24 months. It is suggested that therapist support is a key factor in this

process (Klein, 2017). It is hypothesized that actively prescribing more therapist support on the long term might have maintained the results described by Kok et al. (2015) over a period of 3 months. With Holländare et al. (2013) the mean therapist time was 150min, with and with Kok et al. (2015) 18 min en Klein et al (2017) 17,4 min. This implies that more therapist support produces more effective relapse prevention, especially long term. Future studies should examine the long-term effectiveness of internet-based interventions and the optimal dosage of therapist support (Klein, 2017).

In the Netherlands primary healthcare is usually provided a mental health professional (MHP), working in a general practitioners surgery, reporting to the GP (Krijnen-de Bruin, et al., 2019). Different professionals could fulfill the role of a MHP. For example; a social worker, a mental health nurse, (junior) psychologist or a doctor's assistant. They can play a key role in the supporting of self-help during the execution of the E-health modules and have and subsequently have influence on the prevention of relapse (Krijnen-de Bruin, et al., 2019). In literature very limited information was found on how patients should be guided for the prevention of relapse of depression. In Appendix 6 you will find a protocol/script developed for the doctors assistant specifically to guide the patients during execution of E-health modules for the prevention of relapse of depression.

Summary of recommendations

- 1. Use CBT based content
- 2. Incorporate social networking/peer support
- 3. Make a planning with the client, this boosts adherence
- 4. Utilize an adaptive strategy (optional modules)
- 5. Modules of maximum 60 minutes
- 6. Incorporate a CMP
- 7. Guidance of the intervention is essential
- 8. Use a mean therapist time of 150 min
- 9. Use the protocol/script for guidance (Appendix 6)

4. Discussion

4.1. Strengths and limitations

A strength of this study is that a broad variety of interviewees was utilized to provide an extensive view on the protocol/script that is tested from multiple angels.

This study has several limitations. Firstly, references are made to the study of Muntingh et al. whilst this article is still in press. Also references are made to trials that are still running like the GET READY trial and the ICare prevention trial.

Secondly, the recommendations concerning the tapering of AD are partially based the multidisciplinary document "Tapering off SSRI's and SNRI's, 2018. This document is not evidence based due to the lack of empirical substantiation. Based on the combination of the perspective of the patient, available empirical evidence, knowledge on psychopharmaceuticals, expert opinions and experiences in practice, the guidelines have become about. It was decided to use this document as no other evidence-based materials are currently available on this topic.

Thirdly, the second aim of this research entails formulating recommendations for the content of future E-health modules for the prevention of relapse depression (based on current literature). The RESPOND trial that targets depressive rumination was added to the article selection of this research. This article was included in this research as Topper et al. (2017) has demonstrated that ruminations play a causal role in the onset and duration of MDD in adolescents and young people. Future research needs to indicate if these results are generalizable to a broader target with different age groups (not only adolescents and young adults). As rumination is more prevalent in this patient group a relevant suggestion could be to develop an optional module specially developed for ruminating adolescents. This optional specialized module can be incorporated in future E-health programs and in this way the accurate patient group is targeted.

Fourthly, the foundation for the "draft" protocol/script is questionable. This protocol/script is written based on information retrieved from team meetings performed at Therapieland. There is no insight on who participated in these meetings and therefore a quality assessment of this information is not possible. Additionally inspiration for the protocol/script was based on current knowledge on online therapist behaviors for the treatment of depression, not for the prevention of relapse of depression (Holländare et al, 2016).

Finally the script/protocol was tested with several subjects. Six doctors assistants were interviewed to give feedback on the script/protocol. Neither of the doctors' assistants was familiar with the usage of E-health. Their input on how the guidance should executed is of value but would have been more substantiated if they had had more experience with E-health.

4.2. Implications for future research

A recent publication in 2018 of Bockting et al. shows promising results for PCT whilst tapering off antidepressant medication. PCT provides an alternative for individuals who suffer from recurrent MDD and who would like to stop or have already stopped maintenance medication after recovery. This therapy is also translated onto an online module. Future research should investigate weather online PCT could also have protective effects for recurrent major depressive disorder whilst or after tapering off antidepressant medication. Additionally the relation with the optimal dosage of therapist support should be further investigated as this is speculated to be a crucial factor during the prevention of relapse of depression with online PCT. Evidence on this topic is scarce.

Additionally, social networking/peer support needs to be reached further in future research. This topic is highly relevant in our increasingly technological world where communication is taking place online. Research shows that adding social networking with peer support to prevention programs is preferred by patients and to date shows promising results.

Furthermore, very limited information on effective therapist behaviors for the internet-based prevention for relapse of depression is available. The fundamentals components of this guidance are not transparent. In most studies demonstrating the efficacy of online depression prevention programs the nature of the guidance is not clearly described.

Finally as mentioned earlier, depression and anxiety or often comorbid. Relapse into another disorder occurs frequently (from depression to anxiety and the other way around) (Krijnen-de Bruin, et al., 2019). Therefore to target the prevention of relapse (not only for depression but also for anxiety) is very relevant. However to date, little is known on the efficacy of relapse preventions programs for patients who are suffering from anxiety disorders (Scholten, Batelaan, Van Oppen, Smit, & Van Balkom, 2013). Future research, apart from the ICare prevent trial and the GET READY trials, should investigate if and how prevention relapse programs can target anxiety disorders.

As a side note; there are several relevant trials that are currently running that investigate E-health for the prevention of (relapse) of depression. The ICare prevent trial is a three armed randomized controlled trial researching the efficacy and cost-effectiveness of guided and unguided internet-and mobile based indicated trans-diagnostic prevention of depression and anxiety performed by Weisel et al. Additionally the GET READY (Guided E-health for Relapse prevention in Anxiety and Depression) relapse prevention program for anxiety and depression is a mixed-methods study protocol. The aim of this research is to determine patients' usage of the program and the associated course of their symptoms.

4.3. Conclusion

In conclusion, this review provides recommendations on the content for E-health modules for successfully tapering off ADs whilst also preventing the relapse of depression and on the prevention of relapse of depression in general. Additionally a protocol/script is written for the guidance of the modules for the prevention of relapse of depression.

No evidence-based data is available on how internet-based depression relapse prevention programs can support patients during tapering off ADs. Therefore no evidence-based recommendations can be formulated for the content for these E-health modules. Based on findings in literature on tapering off in clinical practice recommendations are formulated. Tapering off should be done gradually in combination with face-to-face PCT. Sufficient and adequate therapist support must be provided for aiding with tapering off ADs. Additionally information on ADS is key and a clear tapering off plan should be made. Also a wise time to start tapering off is essential and all decisions should be done based on "shared decision making". Concerning the content for E-health modules for depression relapse prevention in general the following recommendations were formulated; guided CBT or guided PCT (with sufficient therapist support, a minimum of 150 minutes) can be used as a choice of therapy for the E-health modules. Incorporate social networking/peer support, make a clear plan as this has proven to boost adherence, utilize an adaptive strategy with optional modules, make a CMP and finally modules should not take longer than 60 minutes to complete. The formulated protocol/script (Appendix 6) can be used as a manual for therapist guidance. Future research should further investigate the influence of adding social networking with peer support to prevention programs. Social networking is preferred by patients and shows promising results. This is a relevant tool in the fast paced digital world we are living in today where individualization is lurking. Additionally, future studies should further research the relation of the nature and the amount of guidance with the effectiveness of depression relapse prevention programs as this is a crucial element in depression relapse prevention programs.

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Appendix

1. Description depressive disorders (DSM V)

Depressive disorders include disruptive mood dysregulation disorder, major depressive disorder (including major depressive episode), persistent depressive disorder (dysthymia), premenstrual dysphoric disorder, substance/medication-induced depressive disorder, depressive disorder due to another medical condition, other specified depressive disorder, and unspecified depressive disorder (DSM V). The common feature of all of these disorders is the presence of sad, empty, or irritable mood, accompanied by somatic and cognitive changes that significantly affect the individual's capacity to function. What differs among them are issues of duration, timing, or presumed etiology (DSM V).

• Disruptive mood dysregulation disorder

A. Severe recurrent temper outbursts manifested verbally (e.g., verbal rages) and/or behaviorally (e.g., physical aggression toward people or property) that are grossly out of proportion in intensity or duration to the situation or provocation.

B. The temper outbursts are inconsistent with developmental level.

C. The temper outbursts occur, on average, three or more times per week.

D. The mood between temper outbursts is persistently irritable or angry most of the day, nearly every day, and is observable by others (e.g., parents, teachers, peers).

E. Criteria A–D have been present for 12 or more months. Throughout that time, the individual has not had a period lasting 3 or more consecutive months without all of the symptoms in Criteria A–D.

F. Criteria A and D are present in at least two of three settings (i.e., at home, at school, with peers) and are severe in at least one of these.

G. The diagnosis should not be made for the first time before age 6 years or after age 18 years.

H. By history or observation, the age at onset of Criteria A–E is before 10 years.

I. There has never been a distinct period lasting more than 1 day during which the full symptom criteria, except duration, for a manic or hypomanic episode have been met.

Note: Developmentally appropriate mood elevation, such as occurs in the context of a highly positive event or its anticipation, should not be considered as a symptom of mania or hypomania.

J. The behaviors do not occur exclusively during an episode of major depressive disorder and are not better explained by another mental disorder (e.g., autism spectrum disorder, posttraumatic stress disorder, separation anxiety disorder, persistent depressive disorder [dysthymia]).

Note: This diagnosis cannot coexist with oppositional defiant disorder, intermittent explosive disorder, or bipolar disorder, though it can coexist with others, including major depressive disorder, attention-deficit/hyperactivity disorder, conduct disorder, and substance use disorders. Individuals whose symptoms meet criteria for both disruptive mood dysregulation disorder and oppositional defiant disorder should only be given the diagnosis of disruptive mood dysregulation disorder. If an individual has ever experienced a manic or hypomanic episode, the diagnosis of disruptive mood dysregulation disorder should not be assigned.

K. The symptoms are not attributable to the physiological effects of a substance or another medical or neurological condition

- Major depressive disorder (MDD)
- A. Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure.
 - **Note:** Do not include symptoms that are clearly attributable to another medical condition.
 - 1. Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad, empty, hopeless) or observation made by others (e.g., appears tearful). (**Note:** In children and adolescents, can be irritable mood.)
 - 2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation).
 - Significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day. (Note: In children, consider failure to make expected weight gain.)
 - 4. Insomnia or hypersomnia nearly every day.
 - 5. Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down).
 - 6. Fatigue or loss of energy nearly every day.
 - 7. Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick).
 - 8. Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others).
 - 9. Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.
- B. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

C. The episode is not attributable to the physiological effects of a substance or another medical condition.

Note: Criteria A–C represent a major depressive episode.

Note: Responses to a significant loss (e.g., bereavement, financial ruin, losses from a natural disaster, a serious medical illness or disability) may include the feelings of intense sadness, rumination about the loss, insomnia, poor appetite, and weight loss noted in Criterion A, which may resemble a depressive episode. Although such symptoms may be understandable or considered appropriate to the loss, the presence of a major depressive episode in addition to the normal response to a significant loss should also be carefully considered. This decision inevitably requires the exercise of clinical judgment based on the individual's history and the cultural norms for the expression of distress in the context of loss.

In distinguishing grief from a major depressive episode (MDE), it is useful to consider that in grief the predominant affect is feelings of emptiness and loss, while in an MDE it is persistent depressed mood and the inability to anticipate happiness or pleasure. The dysphoria in grief is likely to decrease in intensity over days to weeks and occurs in waves, the so-called pangs of grief. These waves tend to be associated with thoughts or reminders of the deceased. The depressed mood of an MDE is more persistent and not tied to specific thoughts or preoccupations. The pain of grief may be accompanied by positive emotions and humor that are uncharacteristic of the pervasive unhappiness and misery characteristic of an MDE. The thought content associated with grief generally features a preoccupation with thoughts and memories of the deceased, rather than the self-critical or pessimistic ruminations seen in an MDE. In grief, self-esteem is generally preserved, whereas in anMDE feelings of worthlessness and self-loathing are common. If self-derogatory ideation is present in grief, it typically involves perceived failings vis-à-vis the deceased (e.g., not visiting frequently enough, not telling the deceased how much he or she was loved). If a bereaved individual thinks about death and dying, such thoughts are generally focused on the deceased and possibly about "joining" the deceased, whereas in an MDE such thoughts are focused on ending one's own life because of feeling worthless, undeserving of life, or unable to cope with the pain of depression.

- D. The occurrence of the major depressive episode is not better explained by schizoaffective disorder, schizophrenia, schizophreniform disorder, delusional disorder, or other specified and unspecified schizophrenia spectrum and other psychotic disorders.
- E. There has never been a manic episode or a hypomanic episode.
 - Persistent depressive disorder (dysthymia)

A. Depressed mood for most of the day, for more days than not, as indicated by either subjective

account or observation by others, for at least 2 years.

Note: In children and adolescents, mood can be irritable and duration must be at least 1 year.

B. Presence, while depressed, of two (or more) of the following:

1. Poor appetite or overeating.

2. Insomnia or hypersomnia.

3. Low energy or fatigue.

4. Low self-esteem.

5. Poor concentration or difficulty making decisions.

6. Feelings of hopelessness.

C. During the 2-year period (1 year for children or adolescents) of the disturbance, the individual has

never been without the symptoms in Criteria A and B for more than 2 months at a time.

D. Criteria for a major depressive disorder may be continuously present for 2 years.

E. There has never been a manic episode or a hypomanic episode, and criteria have never been met for

cyclothymic disorder.

F. The disturbance is not better explained by a persistent schizoaffective disorder, schizophrenia,

delusional disorder, or other specified or unspecified schizophrenia spectrum and other psychotic

disorder.

G. The symptoms are not attributable to the physiological effects of a substance (e.g., a drug of abuse, a

medication) or another medical condition (e.g., hypothyroidism).

H. The symptoms cause clinically significant distress or impairment in social, occupational, or other

important areas of functioning.

• Premenstrual dysphoric disorder

A. In most menstrual cycles during the past year, five (or more) of the following symptoms occurred during the final week before the onset of menses, started to improve within a few days after the onset of menses, and were minimal or absent in the week postmenses, with at least one of the symptoms being either (1), (2), (3), or (4):(1) marked affective laibility (e.g., mood swings; feeling suddenly sad or tearful or increased sensitivity to rejection)

(2) marked irritability or anger or increased interpersonal conflicts

(3) markedly depressed mood, feelings of hopelessness, or self-deprecating thoughts

(4) marked anxiety, tension, feelings of being "keyed up" or "on edge"

(5) decreased interest in usual activities (e.g., work, school, friends, hobbies)

- (6) subjective sense of difficulty in concentration
- (7) lethargy, easy fatigability, or marked lack of energy
- (8) marked change in appetite, overeating, or specific food cravings
- (9) hypersomnia or insomnia
- (10) a subjective sense of being overwhelmed or out of control

(11) other physical symptoms such as breast tenderness or swelling, joint or muscle pain, a sensation of "bloating," weight gain

B. The symptoms are associated with clinically significant distress or interferences with work, school, usual social activities or relationships with others (e.g. avoidance of social activities, decreased productivity and efficiency at work, school or home).

C. The disturbance is not merely an exacerbation of the symptoms of another disorder, such as Major Depressive Disorder, Panic Disorder, Dysthymic Disorder, or a Personality Disorder (although it may be superimposed on any of these disorders).

D. Criteria A, B, and C should be confirmed by prospective daily ratings during at least two symptomatic cycles. (The diagnosis may be made provisionally prior to this confirmation.)

E. The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication or other treatment) or a general medical condition (e.g., hyperthyroidism).

F. In oral contraceptives users, a diagnosis of Premenstrual Dysphoric Disorder should not be made unless the premenstrual symptoms are reported to be present, and as severe, when the woman is not taking the oral contraceptive.

- Substance/medication-induced depressive disorder
- A. A prominent and persistent disturbance in mood characterized by depressed mood or

markedly diminished interest or pleasure in all, or almost all, activities.

B. Evidence from the H&P or laboratory findings of both (1) and (2):

1. The symptoms in Criterion A developed during or soon after substance intoxication or withdrawal.

2. The involved substance can produce the symptoms in Criterion A.

C. The disturbance is not better explained by a depressive disorder that is not substance induced. Evidence of an independent depressive disorder may include:

1. The symptoms preceded the onset of the substance use; the symptoms persist for a substantial period of time (e.g., about 1 month) after the cessation of acute withdrawal or severe intoxication; or there is evidence of an independent depressive disorder (e.g., a history of recurrent non-substance related episodes).

D. The disturbance does not occur exclusively during delirium.

E. The disturbance causes clinically significant distress or impairment in social,

occupational, or other important areas of functioning.

• Depressive disorder due to another medical condition

A. A prominent and persistent period of depressed mood or markedly diminished interest or pleasure in all, or almost all, activities that predominates in the clinical picture.

B. There is evidence from the history, physical examination, or laboratory findings that the disturbance is a direct pathophysiological consequence of another medical condition.

C. The disturbance is not better explained by another mental disorder such as adjustment disorder, with depressed mood, in which the stressor is a serious medical condition.

D. The disturbance does not occur exclusively during the course of a delirium.

E. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

• Other specified depressive disorder

This category applies to presentations in which symptoms characteristic of a depressive disorder that cause clinically significant distress or impairment in social, occupational, or other important areas of functioning predominate but do not meet the full criteria for any of the disorders in the depressive disorders diagnostic class. The Other Specified Depressive Disorder category is used in situations of when the clinician chooses to communicate the specific reason that the presentation does not meet the criteria for any specific depressive disorder. This is done by recording "other specified depressive disorder" followed by the specific reason such as "short-duration depressive disorder".

Examples of presentations that can be specified using the "other specified" designation include the following:

- 1. Recurrent brief depression: Concurrent presence of depressed mood and at least four other symptoms of depression for 2-13 days at least once per month (not associated with the menstrual cycle) for at least 12 consecutive months in an individual whose presentation has never met criteria for any other depressive or bipolar disorder and does not currently meet active or residual criteria for any psychotic disorder.
- 2. Short-duration depressive disorder (4-13 days): Depressed affect and at least four of the other eight symptoms of a major depressive episode associated with clinically significant distress or impairment that persists for more than 4 days, but less than 14 days, in an individual whose presentation has never met criteria for any other depressive or bipolar disorder, does not currently meet active or residual criteria for any psychotic disorder, and does not meet criteria for recurrent brief depression.
- 3. Depressive episode with insufficient symptoms: Depressed affect and at least one of the other eight symptoms of a major depressive episode associated with clinically significant distress or impairment that persists for at least two weeks in an individual whose presentation has never met criteria for any other depressive or bipolar disorder, does not currently meet active or residual criteria for any psychotic disorder, and does not meet criteria for mixed anxiety and depressive disorders.
 - Unspecified depressive disorder

This category applies to presentations in which symptoms characteristic of a depressive disorder that causes clinically significant distress or impairment in social, occupational, or other important areas of functioning predominate but do not meet the full criteria for any of the disorders in the depressive disorders diagnostic class. The Unspecified Depressive Disorder category is used in situations in which the clinician chooses not to specify the reason that the criteria are not met for a specific depressive disorder, and includes presentations for which there is insufficient information to make a more specific diagnosis such as in an emergency room setting.

2. Preventative cognitive therapy

PCT consists of eight individual sessions once a week, offered as sequential treatment after response PCT is an adapted type of CT specifically developed to prevent relapse in recurrent depression. Similar to regular CT, each PCT session follows a fixed structure, with agenda setting, review of homework, explanation of rationale of each session, and assignment of homework.

PCT is not primarily directed toward modifying negative thoughts. Instead, it starts with the identification of negative thoughts and dysfunctional attitudes and beliefs, aided by a self-report questionnaire with examples of attitudes and specific techniques such as the downward arrow technique. The focus of treatment is then directed on examining these attitudes using different cognitive techniques such as Socratic questioning and identification of positive phantasy attitudes.

Moreover, patients are encouraged to practice with alternative attitudes in the final sessions. In addition, unlike with traditional CT, specific attention will be paid to enhancing the memory and retrieval of positive experiences and making a personal prevention plan (de Jonge, Bockting, Kikkert, Bosmans, & Dekker, 2015).

3. Social comparison theory

"Social comparison theory, initially proposed by social psychologist Leon Festinger in 1954, centers on the belief that there is a drive within individuals to gain accurate self-evaluations. The theory explains how individuals evaluate their own opinions and abilities by comparing themselves to others in order to reduce uncertainty in these domains, and learn how to define the self." (Festinger, 1954)

4. Model of Supportive Accountability



5. Feedback from interviews on script

	1.First contact	2.Communicatio n style	3. Client didn't start yet	4. Client did not finish module	5. Client is completing modules	6. No response since 2 weeks	7. No response since 4 weeks	8. Clients wants to quit	9. Less obvious suicide signs	10. Acute suicide signs	Additional comments
Doctors assistant A.	Do make a compliment, that is always good	A personal approach is important. Smileys are okay to use if it fits the communication style of the client.	Informing the clients on effects and consequences is important. Ad to quote; it is going well and we would like to keep it that way.	To suggest a fixed time to do the module might be too oppressive	No comments. Keep affirming every week.	2 weeks is ok Keep it up, ask what the reason is for not completing the module.	4 weeks is ok. Express worry, and tell client they can always call us.	Make it more personal, we are happy you are doing well and we want to keep it that way.	GP or POH GGZ should perform this call. This is too much responsibility for an assistant and too specialized.	No comment	Assistants should receive an official training before starting to guide people. Expressed feelings of insecurity about capacity to deal with this vulnerable patient group.
Doctors assistant M.	Don't make a compliment, insincere and patronizing. Tell the clients that we work together with GP and POH GGZ.	First keep the style neutral, after a while personalize.	Ask why the client has not started yet, keep it open. Naming the advantages sounds like a sales talk. Don't make it sound like a routine.	2 days is too soon, message after 7 days.	Complement ing on perseveranc e is a good idea. Erase the sentence "how great is that?" too salesy Make the message more personal as the client already knows about the recurrent nature of depression	After two weeks calling is appropriate. Keep the responsibilit y with the client. It is up to you if you want to finish the modules, you don't have to do it for me, do it for yourself.	No comment	Don't use scientific quotes, keep it more simple. Focus on what still needs to happen. Only this module.	GP or POH GGZ should perform this call. If assistants would to this provide a training. Assistants are not sufficiently schooled for this.	No comment	At the end of the modules always ask for feedback to the clients.
Doctors assistant H. (medical student)	Good that you are participating in these modules. Keep it simple.	Use formal approach when people are above 50. Only use smiley for youths <12 years old. Important to keep in professional.	Ask for the motive why the client has not started with the module.	Send a short message after 2 days, "the module is ready for you"	Keep affirming weekly.	After 1 week send another message. Keep it simple and say that the modules work so keep it up.	State in a message that we have seen that he/she has stopped using the modules. Emphasize empathy.	Stress the recurrent nature of depression. Also stress that the modules might prevent this.	Assistants could do the assessment, however provide a questionnair e for assistants to use.	No comment	Use a risk assessment tool/questionnair e when less obvious sings of suicidality are present. Make a point about how to close the contact when finished.

	1.First contact	2.Communicatio n style	3. Client didn't start yet	4. Client did not finish module	5. Client is completing modules	6. No response since 2 weeks	7. No response since 4 weeks	8. Clients wants to quit	9. Less obvious suicide signs	10. Acute suicide signs	Additional comments
Doctors assistant C. (medical student)	Making a first compliment is always good. Using a phone call first is appropriate.	Making use of occasional smiley is fine, keep in mind to keep it also "fun" yet keep it professional. Using occasional jokes is ok, humor can be a tool.	Keep it open, ask why the client has not started yet. Don't name the advantages yet, too pushy.	Send a message after 4 days, 2 days is too soon.	Keep affirming positively, perhaps not weekly but every two weeks. After 3 weeks.	Make a phone call at this point. Ask kindly why the client is not completing the modules.	Stress empathy and the hope that clients are doing okay.	Tell clients it is understandabl e to feel this way. Kindly do remind of recurrent nature.	GP or POH GGZ should perform the risk assessment. Too much responsibility and stress for assistants.	Perhaps take these out as this is pretty obvious. However important.	Always be kind to clients and keep in mind they might be in a vulnerable state.
Doctors assistant N. (student physician assistant)	First phone call is a good idea, start by making a compliment. Emphasize that all the information is confidential, especially with the elderly as they might experience distrust with the internet.	Do not use smileys with older people. Keep it professional. You do not want to be the friend of the client but the counselor.	Emphasize that research has shown that these modules are probable to help to prevent future episodes.	After 2 days send a reminder. After 4 days send another message and suggest to make a planning.	Send a compliment every 3 weeks, weekly is too much. Emphasize clients can always ask questions.	Ask how the clients is doing is good. Is there a reason why you did not use the modules? Keep it open.	No comment.	Try to motivate by telling the clients they can always decide to quit at a later stage. However don't make them feel obligated. Suggest a break perhaps? Continue at a later stage?	Provide a training for assistants on suicide risk factors. When less obvious signs are showing, let the GP or POH GGZ do a follow up.	No comment	Don't use the word physician assistant, change it to doctors assistant. Make sure the same assistant is guiding the clients. Continuity is important for this client group and building a relationship.
Doctors assistant P.	Keep it light: nice that you are participating. Making a compliment in the beginning is good.	Handle an informal communication style. Except with the elderly.	Ask about the feelings he/she might be experiencing. (anxiety? Doubts?) The advantages are too much, keep it shorter.	Call the patient after 4 days. Contacting after 2 days is too short notice. Make a planning with the patient.	Pointing out different sources of information on the site is important. They might be missed. Keep triggering clients and keep in interesting.	Call the client. Focus on empathy, let the client talk. Express worry. Don't be strict.	After 3 weeks of absence, initiate the closing emails.	Keep it objective. State numbers and facts on depression and possible relapse.	GP or POH GGZ should perform this call, definitely not the doctors assistant.	No comment	The 10 commandments are very good, especially the repetitive factor of it. It is good to have a bit of repetition to let it sink in.

	1.First contact	2.Communicatio n style	3. Client didn't start yet	4. Client did not finish module	5. Client is completing modules	6. No response since 2 weeks	7. No response since 4 weeks	8. Clients wants to quit	9. Less obvious suicide signs	10. Acute suicide signs	Additional comments
POH GGZ V.	Discuss by phone if client prefers calling or messages. Check email. Inform clients that he/she will be contacted when if they are not completing modules. Keep it "light".	Ask patients during first contact if they prefer informal or formal approach. Don't use smileys. Only occasionally with patients <16 years. Keep it fun.	Invite client again via Therapieland after 1 week. Send an email after one week if no response.	2 days of delay is too short notice. Suggesting a fixed day to make the module.	Keep affirming the client every 2 weeks. Not every week, too much.	Change it to 3 weeks. Get it touch the way the client indicated to prefer. Emphasize empathy, ask how the client is doing. Also inform on known effects. Ask if client is experiences depressive symptoms.	Specifically ask if the client is experiencing depressive symptoms. Write an email, make sure not to write a message via the Therapieland	Emphasize the client can always call the GP surgery	This phone call should be executed by the GP or POH.	No comment Other comment: Don't let the client make a CMP alone. This should always be done with guidance.	When communicating with the client, keep in mind that these people could still be vulnerable and are extra sensitive to negative feedback, therefore don't be careful not to come across as too critical. Patients should be guided when making a CMP. Put 10 commandments in front otherwise no one will read it.
POH GGZ I.	Already suggest a fixed day in the week to make the modules. Agree on informal or formal style. Don't create expectations be careful with statements on effects of the modules.	Don't make jokes or use smileys by any means. Make the list shorter here.	Contact them after 2 weeks. Clients might be on a holiday. Practice shows that, clients do not make the modules as disciplined as they initially intended. Express that you hope that everything is ok. Don't say it's not a problem. Motivate.	2 days is much too soon. Send a message after 7 days, if no response send a message again after 14 days. Ask if they are still interested. Is there a reason that you are not making the modules? Offer help.	Keep affirming the clients every week. Keep asking questions. What do you think of the modules? Ask questions about content, why do you write this or what made you realize this or that statement.	After 4 weeks call the client. Keep it open. How are you? Im curious to know how you are doing?	After 6 weeks end the modules. Email and say that the client cannot be reached and that we hope that he/she is doing ok.	Put emphasis on that the modules can contribute to a sustainable recovery.	This phone call should be executed by the GP or POH.	No comment. Additional comment; make a closing module. Ask the client on their experience doing the modules. Ask reflective questions; What will you remember from this experience?	Experience tells that clients do not make the modules as they indicate. Most of the clients do not even start. Thus do not expect clients to respond as quickly as is expected within this script. It is a bit optimistic. Make a note in the file that the modules are not finished.

	1.First contact	2.Communicatio n style	3. Client didn't start yet	4. Client did not finish module	5. Client is completing modules	6. No response since 2 weeks	7. No response since 4 weeks	8. Clients wants to quit	9. Less obvious suicide signs	10. Acute suicide signs	Additional comments
POH GGZ A.	Phoning for the first contact is good.	No comment.	Don't say it is not a problem, ask why the module was not started. Be careful not to create expectations. State modules can help, not that they definitely will.	Gain ask why they did not complete the modules. Say "it helps to choose a fixed moment to make the modules". But keep it non-binding.	Keep complimenti ng after every module. In others modules this is also done. (uva care)	Start calling after two weeks of absence. Use sentences like I'm curious how you are doing? I would like to help you.	Is it officially allowed to email a client? Sensitive content. Otherwise no comment.	You don't have to tell them again that research supports the use of these modules as by now the clients already know. Just keep it positive and focus on motivating.	This is for the GP or POH GGZ.	No comment. Additional remark. Make a closing module. Wishing them the best and compliment. State they can always call.	Doctors assistants might not be the prefects candidates, perhaps psychology students or medicine students who have received a training and are merely focusing on the guidance of clients within Therapieland.
Focus Group Therapielan d	A phone call is a good idea. Encourage right away. "I think it is really good you are starting with these modules". Immediately manage expectations	An uniform communication style is not necessary as every client is different. Work with "calls to action" give one assignment to activate and do not give to many assignments at ones.	Invite the client again in Therapieland. Name advantages and state the proof for these advantages.(don' t use a APA style citation but keep it simple and personal) Use examples of other people who have had good results with similar problems. Possibly this step can be automated.	Don't write I see you forgot. Do no put the sentence here that the modules are part of a treatment process here, mention it earlier. Specify a planning, just choosing a day does not suffice.	Keep asking the clients questions. How they are experiencing the modules and if affirm positively is in order.	Ask why they client did not finish the modules. Keep it open. Offer help. Is there a barrier for you in making the modules?	When writing messages to clients keep in mind that automatic messages are also sent to the client. You don't want to over stimulate.	Acknowledging the feelings of the client is crucial. Emphasize that the recurrent nature of depression is a real thing.	No comment. In their opinion it could be done by doctors assistants.	No comment. It looks good. Additional comment: in the future video calls will be probably incorporate d on the platform.	Add an additional chapter in the script for clients who are too enthusiastic and who need to be slowed down. Make a closure module. And name that the client can always reopen the modules and reread everything. State that the client can always fall back on the CMP that was created.

6. The protocol/script after adjustments based on interviews

Script for guidance during E-health module for the prevention of relapse depression in general and for patients who are tapering off antidepressant medication.

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General advice on communication via E-health modules

1. The physician's assistant 10 commandments for online guidance:

- 1. Validate how the client experiences the use of E-health. E-health is a new concept, possibly for both parties involved!
- 2. **Motivate the client** by positively affirming them, also give them recognition. (also see the motivation booster for tips on how to motivate).
- 3. If the client sends you a long text, summarize the core message.
- 4. **Substantive feedback**: determine what is relevant to the assignment and/or fits the treatment. Don't feel pressured to discuss everything. Face-to-face or telephone appointments are there to further discuss issues in detail. Some issues might not even be relevant anymore when the clients visits or telephones you as he or she might have developed adequate coping mechanisms.
- 5. **Limit the amount of questions**: Rule of thumb: You will get one answer to one question, but no answers to three questions. Ask your questions one by one.
- 6. If the clients has a lot of questions: only select a few and discuss these. Other questions may wait until you meet face-to-face or for a telephone appointment.
- 7. Use assignments and messages for activation between face-to-face or telephone appointments. If no appointments are scheduled, and you want the client to fill out a daily schedule before next Wednesday for example, make sure you clearly indicate this.
- 8. **Planning:** Check together with the client how they can use the modules at home (plan the right circumstances, plan the time, space and frequency adjusted to the lifestyle of the client) Often the clients lack the initiative to start using E-health at home. Additionally planning is known to increase adherence.
- 9. Be aware of **chaotic writing** of clients, this could indicate a relapse.
- 10. **Make it personal**! Every client is different, it is important to develop a method that works well for you and your client.

2. Tips for writing an online message:

- 1. Keep it short and simple.
- 2. Write unambiguous messages only.
- 3. Avoid technical jargon.
- 4. Adjust to client, with language and examples.
- 5. Use sentences of 10 words, paragraphs of 3 sentences.
- 6. **Utilize other mediums** like: YouTube, images, websites with good content (a picture is worth a thousand words).
- 7. Use summaries.
- 8. Make certain words **bold** or <u>underline</u> them to emphasize.

3. Tips for adequate motivation via a written message through the system:

Motivation booster:

- Give positive feedback. Reinforcing the client works very well as motivational trigger.
- Give content based feedback. This way the clients knows you are engaged.
- Test interpretations you have to prevent misunderstandings.
- Limit the amount of questions.
- Give specific instructions. A "call to action" can persuade a clients to participate and creates clear expectations.
- Send a message as a reaction to a completed assignment. Mostly an online reaction resembles a face-to-face contact, only more concrete and unambiguously put.
- Keep the answers short, elaborate therapeutic content is better done in person or via telephone.

Tips for adding therapeutic value:

- Acknowledge the feelings and experiences of the client.
- Normalize the complaints of the patient.
- Repeat the underlying rationale of the assignment.
- Appoint the expected effect of the assignment.
- Encourage the clients, give them hope and pronounce the confidence you have in the client.

Source: Therapieland

The script

→ Guidance during the completion of an e-health module is done via the phone or by written messages. The content of the support is not therapeutic but **motivational/supportive**.

1. How to engage first contact with client. First contact by phone!

- Start by **welcoming the client** in a warm way by making the message personal and encouraging. Using the name of the clients adds to the feeling of involvement. Also welcoming the client is essential.
- Introduce yourself.
- Additionally **encourage** the client by making a compliment that he or she wants to participate in the program.
- **Inform the client** that he/she will be contacted when not completing the modules. Keep it light "we will chase you" so don't be alarmed if you if you receive messages or have a missed phone call.
- Ask the client prefers mostly text messaging or telephone contact, engage accordingly.
- Ask if the client prefers to be addressed **informally or formally**.
- Check if you have the correct email address.
- Finally make yourself **easily approachable** for the clients by stating that you are there for the client of he or she has any questions.
- Emphasize that all the **information** on the platform is **confidential.**
- Inform the client that **you will contact them** when not completing the modules, so they should not be alarmed when receiving a messages or a phone call.

For example:

Doctors assistant (DA): *Hi Matthijs, welcome to e-Health module. This is Susan, I am a doctors assistant and I am here to help your during the completion of this E-health module. To start off with, my compliments that you have started with the program for the prevention of relapse of depression. Research shows that this module can help people who have dealt with depression in the past and contributes to the prevention of a possible future depressive episode. So it is important and good for you to complete the modules. If you have any questions don't hesitate to ask them, which is what I am here for. Good luck!*

2. Communication style with client

- When you get a sense of who the client is, **adjust your writing style and vocabulary** to the person you are chatting with. If the client for example makes a lot of grammar mistakes, you can adjust your style to theirs by only using simple sentence constructions and fairly common vocabulary.
- **Make it personal** by using the first name of the client. Only in patients under 16 years old smileys occasionally. Keep it fun/ light without overdoing it.
- Make sure to **avoid technical jargon** whilst communicating with the client.
- Remember that **every client is different**, it is important to develop a method that works well for you and your client.
- Make use of **lists/summaries** is a clear way of explaining things.

3. Client did not start the program yet

- After one week invite the client again via Therapieland.

- **If there is no response** after the second invite, **send an email** to personal address and remind the client to start with the modules.
- Let the client know you **are aware** of the fact that he or **she did not start the module** yet, this way the clients knowns you are involved.
- **Ask why** he/she has not started yet.
- However try keeping the tone of the **message positive.**
- Name the **advantages** of the E-health program.
- Also inform the client on the **known effects and consequences** of completing E-health modules for the prevention of depression.

For example:

DA: Hi Matthijs! Welcome again to the e-health module. I saw you did not start the module yet. I would like to remind you that it is never too late to start with the module. Also, research has shown that these modules can really help you. I would like to inform you on the advantages of doing an E-health module;

- → First of <u>all you can decide</u> when you work on the program.
- → Second, you can <u>decide what you work on.</u>
- → Third, you have the <u>freedom to determine your own pace</u>.
- → And lastly you <u>can reread all the information on this platform</u>.

4. Client did not finish the weekly module

- → Give to client <u>1 week of delay</u>, afterwards send a message.
- **Suggest** a **fixed day** to work on the E-health module. Concrete planning is known to boost adherence.

For example:

DA: He there Matthijs, I see that you missed a module last week. I hope everything is ok? Did you have a busy week or do you perhaps find it challenging to do a module every week? Doing something new like E-health weekly can be a difficult task. Some people make the module on a fixed day during the week. Perhaps this is a good idea? Let me know if you have any questions or if you need help.

- → <u>No response after 2 weeks?</u> Call the client.
- First **ask why** the client has not completed the module
- If the client is **experiencing difficulty in planning** for the modules. Give advice to plan **sufficient time** to complete the module in order to avoid rushing
- Choosing a fixed day to do the module can help
- Tell the client that it helps to make the module in a **tranquil environment** so that you will not be bothered whilst completing the module
- Emphasize the fact that the E-health **modules are a part** of the total **treatment process**. This will encourage the clients to also look at it this way

For example:

DA: He there Matthijs, I see that you missed a module two weeks ago. I hope everything is ok? Did you have a two weeks or do you perhaps find it challenging to do a module every week? Doing something new like E-health weekly can be a difficult task. Some people make the module on a fixed day during the week. Perhaps this is a good idea? Also the E-health modules are an important part of your total treatment program as these modules can really help you.

5. The client is completing the modules every week according to plan

- **Positively affirm** the client every two weeks and give them recognition on how well they are doing.
- Keep asking the client questions on how they are experiencing the modules
- **Refer to other sources of knowledge** within the module to keep things varied and interesting for the patient. Refer to movies, photos, optional modules or other sorts of information available within the modules.

For example:

DA: Hee Matthijs, well done! You have been completing your modules every week. This shows perseverance from your side. If I can help you with anything let me know. Also in case you did not know, we have some interesting videos on depression. Perhaps you would find them interesting.

6. The client does not respond since 3 weeks

- Get in touch again with the client in the way he/she previously indicated to prefer.
- Keep the conversation open by simply asking how the client is doing and why he or she has not been using the modules.
- Put emphasis on **empathy** in messages or phone call.
- Afterwards inform the client on the **known effects and consequences** of completing the e-health modules.
- Enquire if client is experiencing **depressive symptoms.**
- → If the client is not completing the modules because of symptoms of depression that are reoccurring and this is limiting him or her to complete the modules, then make an appointment with the POH GGZ of the GP surgery.

For example:

DA: Hey Matthijs, How are you? I saw that you have not been using the modules since three weeks. I hope you are doing ok? Are you perhaps feeling any depressive symptoms again? I just wanted to remind you that making use of these modules is proven to help with the prevention of depression. Studies have shown that if you complete all the 8 sessions, you are protected for relapse of your depression for 2 to 10 years. (Bockting et al, 2018).

7. The client has not been responding since 4 weeks

- → If the client cannot be reached via the phone or via the platform. Inform the GP. Also make a note in the file of the patient about the cessation of the E-health modules.
- → Additionally write an encouraging and open final message via an email and inform the client that the modules will be stopped.
- → Emphasize the client can always call the GP surgery.

For example:

DA: Hello Matthijs, hopefully you are doing okay. I have tried to contact you but unfortunately we could not get a hold of you. The E-health modules on Therapieland will be stopped. However if you wish to restart at some point let us know. Don't hesitate to call our practice if you want to get in touch.

8. The client says he/she does not need the E-health module anymore as he or she is feeling well enough

- Acknowledge the feelings and experiences of the client.
- Inform the clients on the **known effects and consequences** of completing E-health modules for the prevention of depression.
- Tactfully inform the patient on the **possible recurrent nature of depression**.

For example:

DA: Hai Matthijs, I am happy to hear that you are feeling well. Also I understand that you do not feel the need to complete the modules right now. However unfortunately depression can be recurrent symptom. By completing the modules it is very likely you will contribute to the prevention of a possible recurrent depression in the future. Studies have shown that if you complete all the 8 sessions, you are protected for relapse of depression for 2 to 10 years. (Bockting et al, 2018).

9. The client has finished all the modules

- **Congratulate** the client with completing all the modules
- Emphasize the client can always reopen and reread all in the information in the modules
- Emphasize that the client can always **fall back** on their **CMP** if experiencing depressive symptoms
- Ask what the client has learned from the modules
- At the end of the module ask for feedback
- Wish them good luck
- Emphasize that the client can always call the surgery when experiencing depressive symptoms

For example:

DA: Hey Matthijs, congratulations on finishing all the modules, well done! What did you learn from the modules? I'm curious to know. Know that you can always reread and reopen all the modules. If you are feeling depressive symptoms emerging again don't hesitate to take a look at your CMP. I wish you all the best and do not hesitate to call our surgery if you are experiencing depressive symptoms again.

10. The client is showing less obvious suicide alarm signs

- **Depressiveness/ feeling down**: The client has been expressing feelings of depression for a longer period of time.
- Hopelessness: the client sees no way out and sees no solutions to their problems.
- Loss of interest: the client has no interest in activities that used to interest him or her.
- Feelings of indifference: the client does not respond or responds with indifference to emotional events like to loss of a loved one.
- **Sleeping problems**: The clients indicates to experience sleeping problems (either too little or too much sleep)
- Isolation: the clients tells you he or she does not want to engage in social activities.

- **Reckless behavior**: the clients talks about engaging in risk full behavior such as driving recklessly engaging in risky sexual behavior etc.
- Alcohol or drug use: the client talks about using too much alcohol or drugs or more than usual.



11. The client is showing acute suicide signs

- Saying **literally he or she wants to do die**. Or things like you will not be bothered by me anymore.
- Making reparations for suicide: buying a gun, the clients tells you he are she saved up pills.
- **Saying goodbye**: the clients is giving away personal belongings, is talking about making a testament or is saying goodbye to you family or friends.
- Expressions about death: the client is talking about death, or dying (direct or indirectly)
 - → Get in touch with the GP and arrange a specialized mental health professional to take action. When talking is not helpful anymore it is sometimes necessary to call for more drastic measures. A doctor can make sure the clients gets admitted in a psychiatric hospital. This however is a last resort as this can have a huge impact on the client.

12. Who helps the counselor?

Dealing with suicidal clients can have a huge impact on the care giver. De confrontation with other people's suffering can lead to stress and can cause serious psychological complaints. Therefore it is very important you think and safe guard your own mental health. Being resilient and being sure of oneself is a prerequisite to offer help to others.

- → Talk to other colleagues about your feelings about the situation. Perhaps they have been through similar experiences.
- → Also you can call 113 to talk to a volunteer. They have sufficient experience with suicide and therefore can give you solid advice.
- ➔ If your complaints get more serious don't hesitate to contact your own GP. Also ask yourself at this stage if you are still able to help others...

Sources: 113.nl, preventiezelfdosing.be

7. The protocol/script before adjustments: the "draft" version

Script for guidance during E-health module for the prevention of relapse depression in general and for patients who are tapering off antidepressant medication

The script

→ Guidance during the completion of an e-health module is done via the phone or by written messages. The content of the support is not therapeutic but motivational/supportive.

13. How to engage first contact with client?

- Start by **welcoming the clients if possible by phone** in a warm way by making the message personal and encouraging. Using the name of the clients adds to the feeling of involvement. Also welcoming the client is essential. This way the clients knows there is a real person involved behind the computer screen. This is not always felt by the clients as the relapse prevention plan is largely done in an online setting.
- Introduce yourself

- Additionally **encourage** the client by making a compliment that he or she wants to participate in the program.
- Finally make yourself **easily approachable** for the clients by stating that you are there for the client of he or she has any questions.

For example:

Physician assistant (PA): Hi Matthijs, welcome to e-Health module. This is Susan, I am a physician assistant and I am here to help your during the completion of this E-health module. First of all my compliments that you have started with the program for the prevention of relapse of depression. Working actively on this program will contribute to the prevention of the recurrence of your depression. If you have any questions don't hesitate to ask them, that is what I am here for...

14. Communication style with client?

- When you get a sense of who the client is **adjust your writing style and vocabulary** to the person you are chatting with. If the client for example makes a lot of grammar mistakes, you can adjust your style to theirs by only using simple sentence constructions and fairly common vocabulary.
- **Make it personal** by using the first name of the client or adding an occasional smiley if you feel this could match the communication style of your client.
- Make sure to **avoid technical jargon** whilst communicating with the client.
- Remember that **every client is different**, it is important to develop a method that works well for you and your client.
- Make use of **lists/summaries** is a clear way of explaining things.

15. Client did not start the program yet?

- Welcome the client again to the module.
- Let the client know you **are aware** of the fact that he or **she did not start the module** yet, this way the clients knowns you are involved.
- However keep the tone of the **message positive**
- Name the **advantages** of the E-health program.
- Also inform the clients on the **known effects and consequences** of completing e-health modules (for the prevention of depression). (this will be elaborated on further below in another dialogue)

For example:

PA: Hi Matthijs! Welcome again to the e-health module. I saw you did not start the module yet. This is no problem, you can still be a part of the module. I would like to inform you on the advantages of doing an E-health module;

- → First of <u>all you can decide</u> when you work on the program.
- → Second, you can <u>decide what you work on.</u>
- → Third, you have the <u>freedom to determine your own pace</u>.
- ➔ And lastly you <u>can reread all the information on this platform</u>.

Also it is know that these modules have a protective effect and prevent your depression from recurring.

16. Client did not finish his or her weekly module?

→ Give to client 2 days of delay, afterwards send a message.

Plan together with the client when he or she will make the module. Concrete planning is known to boost adherence.

- Choose a fixed moment to work on the E-health module
- Plan sufficient time to complete the module in order to avoid rushing
- Make sure you are in a **tranquil environment** so that you will not be bothered whilst completing the module.
- Emphasize the fact that the E-health **modules are a part** of the total **treatment process**. This will encourage the clients to also look at it this way.

For example:

PA: He there Matthijs, I see you forgot to fill in your module 2 days ago. Doing something new like Ehealth weekly can be a difficult task. Perhaps we can set a certain day in the week (where you are less busy) to fill in the module? Does that seem like a good idea? Also the E-health modules are an important part of your total treatment program.

17. The client is completing the modules every week according to plan?

- **Positively affirm** the client and give them recognition on how well they are doing
- Refer to other sources of knowledge within the module to keep things varied and interesting for the patient. Refer to movies , photos or other sorts of information available within the modules

For example:

PA: Hee Matthijs, well done! You have been completing your modules every week. This shows perseverance from your side. If you have any questions don't hesitate to ask. Also in case you did not know, we have some interesting videos on depression. Perhaps you would find them interesting.

18. **Clients does not respond since 2 weeks?**

- Inform the client on the **known effects and consequences** of completing the e-health modules (for the prevention of depression).

For example:

PA: Hey Matthijs, How are you? I saw that you have not been using the modules since two weeks. I just wanted to inform you that making use of these modules is proven to help with the prevention of depression. Studies have shown that if you complete all the 8 sessios, you are protected for relapse of your depression for 2 to 10 years. How great is that? (Bockting et al, 2018).

- ➔ If the client does not respond within a week, try to reach the client telephonically to assess the situation.
- → Try to motivate the client via the telephone by explaining the known effects and consequences. (look at the motivational booster tips at the bottom of the protocol)

➔ If the client is not completing the modules because of symptoms of **depression** that are **reoccurring** and this is limiting him or her to complete the modules, then make an appointment with the POH GGZ of the GP surgery.

19. Client has not been responding since 4 weeks?

- → If the client cannot be reached via the phone or via the platform. **Inform the GP.** Also make a not in the file of the patient about the situation.
- → Additionally write an **encouraging and open final message** via the online platform.
- → Finally send the client an email about the current situation, chances are high that clients do receive these email.

For example:

PA: Hello Matthijs, hopefully you are doing okay. I just wanted to let you know you can always call me or send me questions via this platform. I am here for you. I have tried to call you but unfortunately we could not get a hold of you. I have informed your GP on the current situation.

20. Client says he does not need the E-health module anymore as he or she is feeling well enough?

- Acknowledge the feelings and experiences of the client.
- Inform the clients on the **known effects and consequences** of completing e-health modules for the prevention of depression.
- Also inform the patient on the possible recurrent nature of depression.

For example:

DA: Hai Matthijs, I am happy to hear that you are feeling well. Also I understand that you do not feel the need to complete the modules right now. However unfortunately depression often is a recurrent symptom. But luckily this can prevented. By completing the modules you will contribute to the prevention of your (possible) depression in the future. Studies have shown that if you complete all the 8 sessions, you are protected for relapse of your depression for 2 to 10 years. How great is that? (Bockting et al, 2018).

21. Client is showing less obvious suicide alarm signs such as?

- **Depressiveness/ feeling down**: The clients has been expressing feelings of depression for a longer period of time.
- Hopelessness: the clients sees no way out and sees no solutions to their problems.
- Loss of interest: the clients has no interest in activities that used to interest him or her.
- Feelings of indifference: the client does not respond or responds with indifference to emotional events like to loss of a loved one.
- **Sleeping problems**: The clients indicates to experience sleeping problems (either too little or too much sleep)
- Isolation: the clients tells you he or she does not want to engage in social activities.

- **Reckless behavior**: the clients talks about engaging in risk full behavior such as driving recklessly engaging in risky sexual behavior etc.
- Alcohol or drug use: the client talks about using too much alcohol or drugs or more than usual.



Sources: 113.nl, preventiezelfdosing.be

22. Clients is showing acute suicide signs such as;

- Saying **literally he or she wants to do die**. Or things like you will not be bothered by me anymore.
- Making reparations for suicide: buying a gun, the clients tells you he are she saved up pills.
- **Saying goodbye**: the clients is giving away personal belongings, is talking about making a testament or is saying goodbye to you family or friends.
- Expressions about death: the client is talking about death, or dying (direct or indirectly)
 - → Get in touch with the GP and arrange a specialized mental health professional to take action. When talking is not helpful anymore it is sometimes necessary to call for more drastic measures. A doctor can make sure the clients gets admitted in a psychiatric hospital. This however is a last resort as this can have a huge impact on the client.

23. Who helps the counselor?

Dealing with suicidal clients can have a huge impact on the care giver. De confrontation with other people's suffering can lead to stress and can cause serious psychological complaints. Therefore it is very important you think and safe guard your own mental health. Being resilient and being sure of oneself is a prerequisite to offer help to others.

- → Talk to other colleagues about your feelings about the situation. Perhaps they have been through similar experiences.
- → Also you can call 113 to talk to a volunteer. They have sufficient experience with suicide and therefore can give you solid advice.
- → If your complaints get more serious don't hesitate to contact your own GP. Also ask yourself at this stage if you are still able to help others...

Sources: 113.nl, preventiezelfdosing.be

General advice on communication via E-health modules

4. The physician's assistant 10 commandments for online guidance:

- 11. Validate how the client experiences the use of E-health. E-health is a new concept, possibly for both parties involved!
- 12. **Motivate the client** by positively affirming them, also give them recognition. (also see the motivation booster for tips on how to motivate).
- 13. If the client sends you a long text, summarize the core message.
- 14. **Substantive feedback**: determine what is relevant to the assignment and/or fits the treatment. Don't feel pressured to discuss everything. Face-to-face or telephone appointments are there to further discuss issues in detail. Some issues might not even be relevant anymore when the clients visits or telephones you as he or she might have developed adequate coping mechanisms.
- 15. Limit the amount of questions: Rule of thumb: You will get one answer to one question, but no answers to three questions. Ask your questions one by one.
- 16. If the clients has a lot of questions: only select a few and discuss these. Other questions may wait until you meet face-to-face or for a telephone appointment.
- 17. Use assignments and messages for activation between face-to-face or telephone appointments. If no appointments are scheduled, and you want the client to fill out a daily schedule before next Wednesday for example, make sure you clearly indicate this.
- 18. **Planning:** Check together with the client how they can use the modules at home (plan the right circumstances, plan the time, space and frequency adjusted to the lifestyle of the client) Often the clients lack the initiative to start using E-health at home. Additionally planning is known to increase adherence.
- 19. Be aware of **chaotic writing** of clients, this could indicate a relapse.
- 20. **Make it personal**! Every client is different, it is important to develop a method that works well for you and your client.

5. Tips for writing an online message:

- 9. Keep it **short and simple**.
- 10. Write unambiguous messages only.

- 11. Avoid technical jargon.
- 12. Adjust to client, with language and examples.
- 13. Use sentences of 10 words, paragraphs of 3 sentences.
- 14. **Utilize other mediums** like: YouTube, images, websites with good content (a picture is worth a thousand words).
- 15. Use summaries.
- 16. Make certain words **bold** or <u>underline</u> them to emphasize.

6. Tips for adequate motivation via a written message through the system:

Motivation booster:

- Give positive feedback. Reinforcing the client works very well as motivational trigger.
- Give content based feedback. This way the clients knows you are engaged.
- Test interpretations you have to prevent misunderstandings.
- Limit the amount of questions.
- Give specific instructions. A "call to action" can persuade a clients to participate and creates clear expectations.
- Send a message as a reaction to a completed assignment. Mostly an online reaction resembles a face-to-face contact, only more concrete and unambiguously put.
- Keep the answers short, elaborate therapeutic content is better done in person or via telephone.

Tips for adding therapeutic value:

- Acknowledge the feelings and experiences of the client.
- Normalize the complaints of the patient.
- Repeat the underlying rationale of the assignment.
- Appoint the expected effect of the assignment.
- Encourage the clients, give them hope and pronounce the confidence you have in the client.

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