



Preventing depression: Qualitatively examining the benefits of depression-focused iCBT for participants who do not meet clinical thresholds



C. Earley^{a,b,*}, C. Joyce^a, J. McElvaney^b, D. Richards^{a,b}, L. Timulak^b

^a SilverCloud Health, The Priory, John's Street West, Dublin, Ireland

^b School of Psychology, Trinity College Dublin, Ireland

1. Introduction

Depressive disorders are a leading cause of disability worldwide (Ferrari et al., 2013) with the prevalence of major depression ranging from 8 to 12% (Andrade et al., 2003). The World Health Organisation (WHO) predicts that depressive disorders will have the highest burden of disease in developed countries by 2030 (Mathers and Loncar, 2006). The early-age onset, role impairment and significant personal and interpersonal distress associated with depression make it a considerable burden of suffering for individuals and society at large (Richards, 2011).

Some individuals experience depressive symptoms that do not meet clinical thresholds (Cuijpers and Smit, 2008). Prevalence rates of sub-clinical depression range from 2% to 24% in community samples and 5% to 16% in primary care samples (cf. Rucci et al., 2003). While there is no consensus on a definition of subclinical depression, a more dimensional approach to the categorisation has been taken by the DSM-5 (DSM-5; APA, 2013). Rather than being categorically distinct, this approach sees subclinical depression along a continuum of severity, differing from major depression only by degree. Subclinical depression is found to be highly prevalent, associated with decreased levels of health-related quality of life, increased use of health services, economic costs and mortality rates (Cuijpers et al., 2014). The risk of developing MDD is substantially increased, along with risk of co-morbid disorder development and related functional impairments (Cuijpers and Smit, 2004).

1.1. Treatment of depression

The effectiveness of psychological interventions in treating depression is established (Cuijpers et al., 2011). Cognitive Behavioural Therapy (CBT) is considered a treatment of choice, with particular effectiveness in the treatment of depression and anxiety (National Institute for Health and Clinical Excellence, 2009). Individuals with subclinical symptoms have been found to display less behavioural avoidance than those with more severe presentations, which suggests that they may be more amenable to help-seeking and treatment

(Takagaki et al., 2014). Preventative interventions have been found to reduce incidence of MDD by up to 21% (Van Zoonen et al., 2014). According to the World Health Organisation (WHO, 2004), being able to offer individuals interventions that strengthen personal resources in a timely and proactive way can reduce the risk of developing a clinical disorder (Cuijpers et al., 2014).

Current treatment options possess limitations in decreasing disability due to mental health disorders (WHO, 2004). Preventative strategies that equip people with life skills and coping strategies to enhance quality of life and help them to endure stressors may be the most sustainable means of reducing the burden of depression (APA, 2014). The National Institute for Health and Care Excellence NICE (National Institute for Health and Clinical Excellence, 2009) guidelines recommend the use of low-intensity psychosocial interventions for subclinical and mild to moderate depression. By targeting treatment options in line with symptom severity the adequacy and cost effectiveness of service provision may be enhanced (Batelaan et al., 2006). Evidence supports the use of psychological interventions in treating subclinical symptoms (Van Zoonen et al., 2014), and in recent times these have been transferred to internet-delivered CBT or iCBT and have been found effective (Richards and Richardson, 2012).

1.2. iCBT for depression

CBT's cognitive and behavioural strategies have been successfully translated for internet administration (Andersson, 2015). Over a decade of research provides evidence for iCBT as an efficacious and cost-effective framework for treatment (Richards and Richardson, 2012). In addition to short and long-term benefits for those diagnosed with MDD, studies indicate high levels of accessibility, adherence and satisfaction with this treatment modality (Andrews et al., 2010).

The research to date is positive in evaluating the effectiveness of iCBT for depression. Work has been published on the effectiveness of iCBT for those with mild, moderate and severe depression (Andersson and Cuijpers, 2009; Meyer et al., 2015). Indeed, the intervention used in the current study has been evaluated as efficacious in the treatment of depression in the community (Richards et al., 2015). However, the

* Corresponding author at: SilverCloud Health, The Priory, John's Street West, Dublin, Ireland.
E-mail address: caroline.earley@silvercloudhealth.com (C. Earley).

Table 1
Characteristics of the participants.

| Gender | Age | Education level | Confidence with ICT | Civil status | Pre-BDI-II score | Post-BDI-II score |
|-------------------|-----|---|-----------------------------------|-----------------------------------|------------------|-------------------|
| (Female) - female | 62 | (Other certificate) - other certificate | (Confident) - confident | (Other) - other | 12 | 7 |
| (Female) - female | 26 | (Undergraduate degree) - undergraduate degree | (Very confident) - very confident | (Have a partner) - have a partner | 5 | 4 |
| (Male) - male | 60 | (High school) - high school | (Confident) - confident | (Married) - married | 1 | 2 |
| (Female) - female | 33 | (Postgraduate degree) - postgraduate degree | (Confident) - confident | (Married) - married | 11 | 5 |
| (Female) - female | 33 | (Postgraduate degree) - postgraduate degree | (Confident) - confident | (Single) - single | 0 | 0 |

Note. Data available for 5 of the 8 participants.

efficacy of this approach is less established when delivered to those who do not meet clinical thresholds (Hadjistavropoulos et al., 2014).

In studies conducted, internet-delivered interventions have been found to benefit those with subclinical symptoms and reduce incidence of MDD (Buntrock et al., 2015, 2016). Unguided iCBT has been effective in significantly reducing and maintaining lower depression scores in a subclinical sample of individuals over 50 years of age at 1 year follow up (Spek et al., 2008). Improvements in subthreshold symptomatology have also been identified with the use of bi-weekly automated email reminders that include psychoeducational material and suggestions for evidence-based coping strategies (Morgan et al., 2012). There is thus potential to investigate the therapeutic benefit of internet-delivered CBT for subclinical populations.

1.3. Clients' experiences of therapy

It is recommended that psychotherapy practice and research be informed by evidence representing clients' own experiences of therapy (Levitt et al., 2016). The same may be advised for internet-delivered interventions also. Examining the aspects of internet-delivered interventions that clients find helpful and hindering and how such aspects might facilitate therapeutic change or outcomes has been explored (Gega et al., 2013). In qualitative research of this type, client-identified helpful aspects have included; heightened awareness of problematic functioning; beneficial support and helpful psycho-education/practical material (McElvaney and Timulak, 2013). Hindering aspects have included feeling exposed and not understanding the psycho-educational material. Within significant events research in psychotherapy, Timulak (2007) produced 9 meta-categories of events from his meta-analysis: awareness/insight/self-understanding, reassurance/support/safety, personal contact, behavioural change/problem solution, client involvement, feeling understood, exploring feelings/emotional experiencing, empowerment and relief. In online interventions, developing awareness, insight, learning new coping skills, behavioural changes and achieving self-efficacy are helpful events identified (Richards and Timulak, 2012). Unhelpful events identified in this study included the form of deliver, content issues and technical difficulties. These led to impacts such as irritation, frustration and disappointment.

1.4. Current study

The current study examined what, if any, changes do participants with subclinical symptoms or those who do not meet clinical thresholds of depression report as a result of completing the iCBT *Space from Depression* Programme. The study also looked at what participants found helpful and unhelpful about engaging with the programme. This is the first qualitative study to look at the effects of an iCBT programme on a subclinical population and the objective is to learn more about what may or may not be working in this type of delivery format.

2. Method

2.1. Design

The study was a nested (Creswell et al., 2006) semi-structured interview exploring clients' changes as a result of participating in iCBT for depression as well as their experiences (helpful and unhelpful) of the treatment and was one aspect of a larger RCT on online treatments for depression (Richards et al., 2015).

2.2. Participants & recruitment

The RCT recruited 641 individuals and 188 were included into the RCT and randomised to immediate treatment group or a waiting list control group. Participants who scored below the cut-off of 14 on the BDI-II or beyond the upper cut-off of > 28 were excluded from the formal RCT but were delivered the intervention with support from a trained volunteer. Eight ($N = 8$) participants (7 female: 1 male) who self-selected themselves for the programme and who scored < 14 on the BDI-II were recruited by email within one week of completing the post-treatment outcome assessment. Characteristics of the group are summarised in Table 1 below.

2.3. Procedure

Twenty-nine participants met eligibility criteria and were sent email invitations to participate in the qualitative semi-structured research. The programme was free to access and there was no incentive to participate in the qualitative research. Eleven of the 29 participants expressed interest in participating and 8 were able to commit to a suitable time for an interview. Informed consent was obtained before arranging an interview to take place over the phone at a time convenient for the participant. Interviews lasted 40–90 min and were recorded and transcribed verbatim by the second author (CJ).

2.4. Measures

2.4.1. The Beck Depression Inventory – second edition

(BDI-II; Beck et al., 1996) is a 21-item questionnaire that is widely used to measure symptoms and severity of depression based on the criteria for depressive disorder diagnosis as outlined in The American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders–Fourth Edition (DSM-IV) (American Psychiatric Association, 2000). The scale designates levels of severity, Minimal (0–13); Mild (14–19); Moderate (20–28); and Severe (29–63) (Beck et al., 1996). The BDI-II is widely used and demonstrates good internal consistency (Cronbach's α of 0.76–0.95) and test-retest reliability of 0.8 (Beck et al., 1996).

2.4.2. Client change interview schedule

(Elliott et al., 2001) was used to complete semi-structured interviews with each participant. This provided a flexible framework for the interviews and was modified slightly to reflect participants' engagement

Table 2
Participants' reported changes due to engagement with the programme.

| Changes | Participants |
|--|--------------|
| (i) Awareness/insight | 8/8 |
| (ii) Applying new coping skills/behavioural change | 7/8 |
| (iii) Self-efficacy/empowerment | 7/8 |
| (iv) Enhanced well-being | 5/8 |
| (v) Feeling connected/validated | 6/8 |

with an online intervention rather than face-to-face therapy. Questions included; *What changes, if any, have you noticed in yourself since you started the programme? In general, what do you think has caused these various changes? Can you sum up what has been helpful about taking part in the programme so far? What kinds of things have been hindering, unhelpful, negative or disappointing for you?* In addition, three questions were added to reflect their engagement with an online intervention. These questions were; *Do you think that taking part in the programme has changed the way you will look at things in the future? Do you think that taking part in the programme has prevented your low mood from getting worse? Are there any other changes that you have experienced since starting or finishing the programme, that you have not had a chance to discuss so far and that you would like to mention now?*

2.5. Intervention

The Space from Depression intervention is an internet-delivered CBT-based programme for the treatment of depression. It contains 7 modules; *Getting Started* introduces CBT and the Thought Feeling Behaviour (TFB) cycle; *Understanding Feelings* focuses on the 'feelings' component of the TFB cycle; *Boosting Behaviour* focuses on the inactivity and lack of motivation associated with depression, *Spotting Thoughts* focuses on the 'thoughts' component of the TFB cycle, *Challenging Thoughts* focuses on taking action against negative and distorted thoughts, *Core Beliefs* is unlockable to those who struggle to think of alternatives to their negative thoughts, and *Bringing It Altogether* prepares the user for coming to the end of the programme. These modules are comprised of cognitive and behavioural components including self-monitoring, thought recording, behavioural activation, and cognitive restructuring along with incorporating relaxation exercises and personal stories from past users of the programme to help guide clients on how to adapt the cognitive and behavioural strategies learned into their own lives (cf. Richards et al., 2015).

2.6. Supporters

A trained volunteer with the Aware charity was assigned to support each participant. A dashboard interface gave supporters an overview of their participant's level of engagement with the programme. Supporters monitored their participant's progress and provided asynchronous post-session feedback of between 10 and 15 min.

2.7. Data analysis

Data was analysed using a descriptive and interpretive method (Elliott and Timulak, 2005) led by the first author (CE). Results were discussed and reflected upon with the second author (CJ). This ensured clarity and consensus on interpretations of the data and their meaning. The method of analysis followed clear steps:

1. The data was divided into discrete meaning units which captured the essence of what participants were trying to convey and provided understanding of the data irrespective of context (Elliott and Timulak, 2005).
2. Data was divided into domains, which are broad headings used to

organise the data. Three domains: Changes due to iCBT, Helpful Aspects of iCBT, and Unhelpful Aspects of iCBT were created.

3. Meaning units were coded according to which participant produced them and in the order they occurred. This provided a clear audit path. Meaning units were grouped into categories on the basis of having similar meanings. This process is subjective and interactive; the data was organised so that it corresponded with the participants' meanings while also acknowledging the impact of theoretical knowledge (Elliott and Timulak, 2005).
4. Some meaning units were included in more than one category because they contained more than one relevant meaning. The analytic process, the creation of domains and categories were audited by fellow researchers (JM, DR, LT).

3. Results

Analysis of the data derived from participants is presented below. Reported *Changes due* to the programme fell into 5 categories (Awareness and insight; Self-efficacy/empowerment; Applying new coping skills/Behavioural change; Enhanced well-being; Feeling Connected and Validated). See Table 2. *Helpful Aspects* of the programme reported were organised into 4 categories (The format of on-line delivery; CBT techniques; Provision of Information; Support). *Unhelpful Aspects* of the programme reported were organised into 2 categories (The format of online delivery and Feedback). See Table 3.

3.1. Participants' reported changes due to engagement with the programme

Participants' reported changes due to engagement with the programme were organised into five categories. All eight participants reported the bringing into focus of something previously unknown to them (*Awareness and Insight*) and their recognition of that, or an event causing a reframing, deeper recognition and understanding of something previously unknown to the participant. Insight is characterised particularly, by a personal resonance that distinguishes it from awareness only. The following participant quotes are examples of the findings from this category: *...I... was always a kind of person who put things off... avoiding things... like when I first started the programme, it was talking about negative behaviours, and I was thinking 'well I don't have any negative behaviours... But then I realised it's because there are no behaviours... It never occurred to me that that's the way it was going about before [referring to her inaction and procrastination not being initially perceived as a negative behaviour]; ...I suppose it has given me an understanding as well that perhaps I have some thoughts that are kind of rigid...and that maybe I am kind of change them.*

Seven of the eight participants reported *Applying New Coping Skills* or techniques learnt to successfully manage symptoms and improve mood/well-being. This category includes the application of skills learned to life outside of the programme, resulting in positive behavioural changes for the participant. The following participant quotes are examples of the findings from this category: *... would definitely use the core belief challenge thing ...what you do on the course, it doesn't end with you, you pass it on, so it becomes part of your language;... can kinda*

Table 3
Participants' reported helpful and unhelpful aspects of the programme.

| Helpful aspects | Participants |
|--------------------------------|--------------|
| (i) Format of online delivery | 8/8 |
| (ii) CBT technique | 8/8 |
| (iii) Provision of information | 6/8 |
| (iv) Supporter | 3/8 |
| Unhelpful aspects | |
| (i) Format & content | 8/8 |
| Frustration/Annoyance | 3/8 |
| (ii) Feedback | 3/8 |

stop my feelings in their tracks a bit, ... I'd just throw it [my upset] on the pile...until it all gets too much, whereas now I can kinda deal with one thing at a time.

Seven of the eight participants reported *Self-efficacy and/or Empowerment*, which is the development of a sense of progress or accomplishment that leads to some change in behaviour or thought. This refers to a sense of being successful or feeling a renewed sense of self-belief that one can be the agent of one's own change and/or that one is capable of performing in certain ways to attain desired goals. This includes feeling more confident in opening up to others. The following participant quotes are examples of the findings from this category: ... I changed roles in work as well recently... And it's a lot more high-pressured... But I'm confident that I can kind of deal with things as they come along rather than letting things pile up and getting really stressed; the whole course, even just sitting down and doing it puts you in a frame of mind of taking charge; ...I would have taken a Xanax for them [panic attacks] while now even if I have a mini one I just know I wouldn't need one I just feel a stronger person...and know it's going to pass.

Five of the eight participants indicated *Enhanced well-being* as an outcome of the programme. This category refers to a change in general well-being including improvements in mood, physical symptoms and lifestyle. This includes improved coping and outlook. The following participant quotes are examples of the findings from this category: a lot less stressed... I have a lot more energy when I'm not stressed, just a happier person in general; at the moment I actually feel in a much more positive mind-set; ... stuff would happen I would get angry ... I'd been drained...but now with all of this I'm not as much so I'm still there but I'm more happy in myself as well.

Six participants reported outcomes from feeling *Connected and Validated*. The following participant quote is supportive evidence of the findings from this category: ... you're like oh god I'm the only one that's feeling like this so to read back on [personal stories] was I suppose interesting... and it was nice to know you weren't the only one.

3.2. Helpful aspects of the programme

All eight participants reported the *Format of online delivery* of the programme as helpful. Comments related to programme structure and layout along with its flexibility, accessibility and privacy. The following participant quotes are supportive evidence of the findings from this category;...digestible...easy-to-do and a bit easier to fit into life; I liked having it online...it's easy for me to maybe say stick it on the iPad or something and be able to look at it whenever it suited me...I didn't have to go anywhere to do it...; I liked the way I could go back and forth and in and out of things.

All eight participants reported the use of a *CBT technique* from the programme as helpful to them. Cognitive restructuring involves the identification and challenging of maladaptive thoughts. The following participant quotes are examples of findings from this category; '[TFB] cycle explained in the programme...by stopping the thought it stops me getting you know a little bit anxious...it actually stops the cycle so yes very powerful it did help; challenging thoughts...I'm sure I found that one really good. Behavioural activation focuses on the inactivity and lack of motivation characteristic of depression. The boosting behaviour module aims to help users to identify ways to motivate themselves to engage in pleasurable activities. The following participant quotes are examples of the findings from this category; ...I liked the boosting behaviour one... that was useful; the activities thing that was saying for yourself, I did start the couch to 5k and I did start feeling great.

Six of the eight participants reported the *Provision of Information* as helpful. This involved delivery of psycho-educational information to the participant, e.g., learning about what core beliefs are, thinking errors and the relationship between thoughts, feelings and behaviours. The following participant quotes are examples of the findings from this category: ... core beliefs, I hadn't really...come across literature on that before; ... I was catastrophizing so it was lovely to learn a term to explain

what I was doing you know; ...the programme maybe gave me ... the theory on how certain things in your life or your beliefs or thoughts...maybe influence how you're thinking.

Three participants reported the presence of a *Supporter*, contact with a supporter or the provision of feedback as helpful. The following participant quotes are examples of the findings from this category: ...the fact that the supporter came back to me and told me I was doing alright ... I think that was good too like if you knew someone was there, I didn't bother him too much but at the same time I knew he was there;...it was nice getting feedback from the mentor as well each week.

3.3. Unhelpful aspects of the programme

Participants reported unhelpful aspects of the programme were organised into two categories. All eight participants reported that aspects of the programme's *Format & Content* were unhelpful. Comments related to technical difficulties, privacy and aspects of the programmes usability, layout and content. These aspects could incite feelings of frustration and annoyance. The following participant quotes are examples of the findings from this category: ...I know when I started navigating around the site..., I kinda didn't know where to start; if you just wanted the review page in a hurry it was a little bit hard to find;...they [personal stories] were a lot younger than me...they weren't so relevant right;...the whole setting goals was kind of annoying me...; I found it very hard just to get onto [the programme] ... it was very frustrating.

Three participants reported the content and adequacy of supporters' *Feedback* as unhelpful. The following participant quote is an example of the findings from this category: ... I felt sometimes when she'd respond it would be all very lovely but... you know didn't really have concrete sort of answers... very scripted.

4. Discussion

The current study qualitatively examined what, if any, changes do participants with subclinical symptoms or those who do not meet clinical thresholds of depression perceive as a result of completing the SilverCloud iCBT *Space from Depression* Programme. The findings provide insight into the outcomes can be achieved from participating in the programme, along with what may be more or less helpful to users. The psychological intervention could be delivered successfully over the internet and participants found the format of delivery helpful in general, although some of them reported unhelpful aspects of the intervention. The intervention saw many of the beneficial outcomes one would expect from any psychological intervention including building insight and awareness, learning new coping skills and strategies for managing symptoms, feeling empowered and enhanced well-being, alongside feeling a greater sense of connection and support in one's life.

Awareness and insight was reported by all participants as a result of the programme. Users felt that they reframed and developed a deeper understanding of their situation. Participants also felt that aspects of their own functioning were brought into focus and that they learned about aspects of themselves that they were before unaware of. These findings correspond with previous qualitative research in face-to-face and iCBT studies (Timulak, 2007, 2010; Richards and Timulak, 2012; McElvaney and Timulak, 2013). Bringing into focus aspects of cognition and behaviour that have potentially been disruptive and debilitating to a person's life has the ability to induce awareness which forms the springboard for therapeutic change that can be delivered through CBT core skills and strategies such as cognitive restructuring and behavioural activation (Hofmann, 2012).

Insights are recognised as important mechanisms of change across a variety of theoretical approaches in psychotherapy (Castonguay and Hill, 2007). There is evidence of developing greater understanding of one's thinking, emotions and behaviours that are necessary aspects of the active mechanisms for change in a CBT model. For some participants, the content of the programme was already familiar, yet on more

than one occasion it was reported that although they knew content already, it was *seeing it* and being *reminded* of it that prompted insight and awareness. Online interventions afford the opportunity to read, reflect and review and this may be regarded as an important asset. Insight into cognitions and behaviours are central in facilitating therapeutic change in CBT so that maladaptive behaviours caused from automatic negative thinking can be identified and reversed (Hofmann, 2012).

Most participants reported applying new coping skills that saw behavioural changes for them. They applied skills to successfully manage their symptoms, mood and overall functioning. That participants found the lessons and activities on the programme useful and that they could apply strategies learned to life outside the programme provides further confirmation that CBT's cognitive and behavioural strategies can be successfully translated to internet administration (Andersson, 2015).

Participants reported feeling a renewed sense of self-belief that they are the agent of their own change. Along with management of their symptoms, participants reported greater self-efficacy in relation to their work and their interpersonal relationships, in feeling more confident expressing their emotions to others. The CBT model prizes the individual as the agent of their own life and understands that personal schemata can distort one's appraisal of a situation or event but that individuals can learn to identify and evaluate their own beliefs in order to think more realistically, behave more functionally and feel better (Hofmann, 2012).

Participants reported enhanced well-being as a result of the programme with improved physical symptoms, lifestyle, better coping with negative situations and more positive outlook. Positive emotions and well-being have been shown to buffer against stress and depression (Wood and Joseph, 2010). Along with better coping with negatives, it is hypothesised that individuals greatly benefit from better appreciating life's positives (Sin and Lyubomirsky, 2009).

Participants reported feeling supported and reassured as a result of the programme. The provision of feedback and knowing that there was a supporter present led to participants feeling validated, encouraged and comforted. The relationship between a client and their therapist has been implicated in the success of any therapy. It seems that in addition to CBT skills and strategies, providing some support to participants undergoing an internet-delivered intervention is worthwhile (Richards and Richardson, 2012; Richards and Timulak, 2012). Validation was also found in reading personal stories and having their feelings normalized. This affirms the value of content that indicates understanding, empathy and that *you're not the only one*. These aspects of treatment are long reported in face-to-face therapy and significant events research (Timulak, 2010).

Some research has considered who are most suitable for internet-delivered interventions (Titov et al., 2010; Andersson and Titov, 2014). Findings have suggested that those with a higher degree of computer literacy and education may be most appropriate. The details of participants in the current study (Table 1) are interesting and support the potential utility of internet-delivered interventions for those with different educational and demographic characteristics, although our sample is small (Spek et al., 2008; Andersson and Titov, 2014).

Unhelpful aspects of the programme centred on technical difficulties and content issues. Design issues centred around initially navigating the site and the consistency of module labels. Although reported less, these aspects of the programme carry importance in that participants consequently felt frustrated or annoyed. This corresponds with previous research (Richards and Timulak, 2012). It is important that these issues are addressed as they may lead to drop-out and negatively influence the perceived usefulness of online treatments, thereby affecting treatment outcomes (Richards and Timulak, 2012). It is fortunate that many of these issues are design related, as there is much that can be done to improve delivery.

Drawing more attention to prevention within psychological research and practice may see the needs of people more effectively met,

especially the needs of those with fewest resources (APA, 2014). To provide the current programme without support ought to be considered in future research. We may find that the provision of support may be lessened or omitted for this population and thus the cost-effectiveness of the intervention enhanced further. To find that those with subclinical symptoms and those who do not meet clinical thresholds of depression reported such benefits as discussed from the programme supports the assertion that prevention, along with treatment, may be a more effective strategy in reducing the burden of depression (Van Zoonen et al., 2014). The findings suggest that this population are responsive to online treatments and this research may help service providers to prevent the number of people who go on to develop more debilitating symptoms (van Zoonen et al., 2014).

4.1. Limitations

To our knowledge this was the first study to qualitatively examine an iCBT programme for subclinical depression. There was a small sample size but the number of participants is acceptable for this type of qualitative research (Hill, 2012). The potential for social desirability bias on behalf of the participants and the subjective interpretation of the data by the researcher should also be taken into account. This study provides an initial view into the potential of iCBT for subclinical benefit. Future research could build upon the current findings to determine whether they may be generalizable to the wider population.

4.2. Conclusion

The data obtained from the client change interview schedule provided insight into the experiences of individuals with subclinical symptoms and those not meeting clinical thresholds of depression who engaged in a guided iCBT programme. The American Psychological Association (2014) expound and support the implementation of preventative strategies that stop, delay, and reduce problem behaviours while strengthening personal resources and promoting well-being. Irrespective of baseline scores on the primary measure (BDI-II), participants self-selected to use the programme as they felt an intervention on management of mood would benefit them. The delivery of CBT content in an online format had a positive impact on users and realised many significant therapeutic outcomes for participants. That participants reported many of the same outcomes and helpful/unhelpful aspects of iCBT as previous studies on both face-to-face and iCBT treatments offers much promise for the utility of this type of intervention. By targeting treatment options in line with the severity of symptomology the burden on health care services may be managed more effectively and cost-effectiveness of service provision enhanced (Batelaan et al., 2006).

Acknowledgements

Thanks to the people who participated in the study. Thanks to the Aware service for hosting the study. Thanks to the reviewers for their helpful comments and direction.

References

- American Psychiatric Association, 2000. Diagnostic and Statistical Manual of Mental Disorders, 4th ed. <http://dx.doi.org/10.1176/appi.books.9780890423349>. (text rev.).
- American Psychiatric Association, 2013. Diagnostic and Statistical Manual of Mental Disorders, 5th ed. American Psychiatric Publishing, Arlington, VA.
- American Psychological Association, 2014. Guidelines for prevention in psychology. *Am. Psychol.* 69 (3), 285. <http://dx.doi.org/10.1037/a0034569>.
- Andersson, G., 2015. The Internet and CBT: A Clinical Guide. CRC Press, FL.
- Andersson, G., Cuijpers, P., 2009. Internet-based and other computerized psychological treatments for adult depression: a meta-analysis. *Cogn. Behav. Ther.* 38 (4), 196–205. <http://dx.doi.org/10.1080/16506070903318960>.
- Andersson, G., Titov, N., 2014. Advantages and limitations of internet-based interventions for common mental disorders. *World Psychiatry* 13 (1), 4–11. <http://dx.doi.org/10.1002/wps.20083>.

- Andrade, L., Caraveo-anduaga, J.J., Berglund, P., Bijl, R.V., Graaf, R.D., Vollebergh, W., ... Kawakami, N., 2003. The epidemiology of major depressive episodes: results from the international consortium of psychiatric epidemiology (ICPE) surveys. *Int. J. Methods Psychiatr. Res.* 12 (1), 3–21. <http://dx.doi.org/10.1002/mpr.138>.
- Andrews, G., Cuijpers, P., Craske, M.G., McEvoy, P., Titov, N., 2010. Computer therapy for the anxiety and depressive disorders is effective, acceptable and practical health care: a meta-analysis. *PLoS One* 5 (10), e13196. <http://dx.doi.org/10.1371/journal.pone.0013196>.
- Batelaan, N., De Graaf, R., Van Balkom, A., Vollebergh, W., Beekman, A., 2006. Thresholds for health and thresholds for illness: panic disorder versus sub-threshold panic disorder. *Psychol. Med.* 37 (02), 247–256. <http://dx.doi.org/10.1017/S0033291706009007>.
- Beck, A.T., Steer, R.A., Brown, G.K., 1996. *Manual for the Beck Depression Inventory-II*. Psychological Corporation, San Antonio, TX.
- Buntrock, C., Ebert, D., Lehr, D., Riper, H., Smit, F., Cuijpers, P., Berking, M., 2015. Effectiveness of a web-based cognitive behavioural intervention for subthreshold depression: pragmatic randomised controlled trial. *Psychother. Psychosom.* 84 (6), 348–358. <http://dx.doi.org/10.1159/000438673>.
- Buntrock, C., Ebert, D.D., Lehr, D., Smit, F., Riper, H., Berking, M., Cuijpers, P., 2016. Effect of a web-based guided self-help intervention for prevention of major depression in adults with subthreshold depression: A randomized clinical trial. *JAMA* 315 (17), 1854–1863. <http://dx.doi.org/10.1001/jama.2016.4326>.
- Castonguay, L.G., Hill, C.E., 2007. *Insight in Psychotherapy*. American Psychological Association, Washington DC.
- Creswell, J.W., Shope, R., Plano Clark, V.L., Green, D.O., 2006. How interpretive qualitative research extends mixed methods research. *Res. Sch.* 13 (1), 1–11 (Retrieved from: <http://www.msra.org/docs/rits-v13n1-complete.pdf#page=8>).
- Cuijpers, P., Andersson, G., Donker, T., van Straten, A., 2011. Psychological treatment of depression: results of a series of meta-analyses. *Nord. J. Psychiatry* 65 (6), 354–364. <http://dx.doi.org/10.3109/08039488.2011.596570>.
- Cuijpers, P., Koole, S.L., van Dijke, A., Roca, M., Li, J., Reynolds, C.F., 2014. Psychotherapy for subclinical depression: meta-analysis. *Br. J. Psychiatry* 205 (4), 268–274. <http://dx.doi.org/10.1192/bjp.bp.113.138784>.
- Cuijpers, P., Smit, F., 2004. Review article subthreshold depression as a risk indicator for major depressive disorder: a systematic review of prospective studies. *Acta Psychiatr. Scand.* 109 (5), 325–331. <http://dx.doi.org/10.1111/j.1600-0447.2004.00301.x>.
- Cuijpers, P., Smit, F., 2008. Subclinical depression: a clinically relevant condition? *Tijdschr. Psychiatr.* 50 (8), 519–528 (Retrieved from: <http://europepmc.org/abstract/med/18688776>).
- Elliott, R., Slatick, E., Urman, M., 2001. *Qualitative change process research on psychotherapy: alternative strategies*. In: Frommer, J., Rennie, D.L. (Eds.), *Qualitative Psychotherapy Research: Methods and Methodology*. Pabst Science, Lengerich, Germany, pp. 69–111.
- Elliott, R., Timulak, L., 2005. Descriptive and interpretive approaches to qualitative research. In: *A Handbook of Research Methods for Clinical and Health Psychology*, pp. 147–159 (Retrieved from: http://nideffer.net/classes/GCT_RPI_S14/readings/interpretive.pdf).
- Ferrari, A.J., Charlson, F.J., Norman, R.E., Patten, S.B., Freedman, G., Murray, C.J., ... Whiteford, H.A., 2013. Burden of depressive disorders by country, sex, age, and year: findings from the global burden of disease study 2010. *PLoS Med.* 10 (11), e1001547. <http://dx.doi.org/10.1371/journal.pmed.1001547>.
- Gega, L., Smith, J., Reynolds, S., 2013. Cognitive behaviour therapy (CBT) for depression by computer vs. therapist: patient experiences and therapeutic processes. *Psychother. Res.* 23 (2), 218–231. <http://dx.doi.org/10.1080/10503307.2013.766941>.
- Hadjistavropoulos, H.D., Pugh, N.E., Nugent, M.M., Hesser, H., Andersson, G., Ivanov, M., ... Austin, D.W., 2014. Therapist-assisted internet-delivered cognitive behavior therapy for depression and anxiety: translating evidence into clinical practice. *J. Anxiety Disord.* 28 (8), 884–893. <http://dx.doi.org/10.1016/j.janxdis.2014.09.018>.
- Hill, C.E. (Ed.), 2012. *Consensual Qualitative Research: A Practical Resource for Investigating Social Science Phenomena*. American Psychological Association, Washington DC.
- Hofmann, S., 2012. *An Introduction to Modern CBT: Psychological Solutions to Mental Health Problems*. Wiley-Blackwell, Malden, MA.
- Levitt, H.M., Pomerville, A., Surace, F.I., 2016. A qualitative meta-analysis examining clients' experiences of psychotherapy: a new agenda. *Psychol. Bull.* 142 (8), 801–830. <http://dx.doi.org/10.1037/bul0000057>.
- Mathers, C.D., Loncar, D., 2006. Projections of global mortality and burden of disease from 2002 to 2030. *PLoS Med.* 3 (11), e442. <http://dx.doi.org/10.1371/journal.pmed.0030442>.
- McElvaney, J., Timulak, L., 2013. Clients' experience of therapy and its outcomes in 'good' and 'poor' outcome psychological therapy in a primary care setting: An exploratory study. *Couns. Psychother. Res.* 13 (4), 246–253. <http://dx.doi.org/10.1080/14733145.2012.761258>.
- Meyer, B., Bierbrodt, J., Schröder, J., Berger, T., Beevers, C.G., Weiss, M., ... Hautzinger, M., 2015. Effects of an internet intervention (Deprexis) on severe depression symptoms: Randomized controlled trial. *Internet Interv.* 2 (1), 48–59. <http://dx.doi.org/10.1016/j.invent.2014.12.003>.
- Morgan, A.J., Jorm, A.F., Mackinnon, A.J., 2012. Email-based promotion of self-help for subthreshold depression: mood memos randomised controlled trial. *Br. J. Psychiatry* 200 (5), 412–418. <http://dx.doi.org/10.1192/bjp.bp.111.101394>.
- National Institute for Health and Clinical Excellence, 2009. *Depression: Treatment and Management of Depression in Adults, Including Adults with a Chronic Physical Health Problem*. (Update of NICE clinical guideline 23) NICE, UK (Retrieved from <https://www.icgp-education.ie/depression/NICE.pdf>).
- Richards, D., 2011. Prevalence and clinical course of depression: a review. *Clin. Psychol. Rev.* 31 (7), 1117–1125. <http://dx.doi.org/10.1016/j.cpr.2011.07.004>.
- Richards, D., Richardson, T., 2012. Computer-based psychological treatments for depression: a systematic review and meta-analysis. *Clin. Psychol. Rev.* 32 (4), 329–342. <http://dx.doi.org/10.1016/j.cpr.2012.02.004>.
- Richards, D., Timulak, L., 2012. Client-identified helpful and hindering events in therapist-delivered vs. self-administered online cognitive-behavioural treatments for depression in college students. *Couns. Psychol. Q.* 25 (3), 251–262. <http://dx.doi.org/10.1080/09515070.2012.703129>.
- Richards, D., Timulak, L., O'Brien, E., Hayes, C., Vigano, N., Sharry, J., Doherty, G., 2015. A randomized controlled trial of an internet-delivered treatment: it's potential as a low-intensity community intervention for adults with symptoms of depression. *Behav. Res. Ther.* 75, 20–31. <http://dx.doi.org/10.2196/ipro.4679>.
- Rucci, P., Gherardi, S., Tansella, M., Piccinelli, M., Berardi, D., Bisoffi, G., ... Pini, S., 2003. Subthreshold psychiatric disorders in primary care: prevalence and associated characteristics. *J. Affect. Disord.* 76 (1), 171–181. [http://dx.doi.org/10.1016/S0165-0327\(02\)00087-3](http://dx.doi.org/10.1016/S0165-0327(02)00087-3).
- Sin, N.L., Lyubomirsky, S., 2009. Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: a practice-friendly meta-analysis. *J. Clin. Psychol.* 65 (5), 467–487. <http://dx.doi.org/10.1002/jclp.20593>.
- Spek, V., Cuijpers, P., Nyklíček, I., Smits, N., Riper, H., Keyzer, J., Pop, V., 2008. One-year follow-up results of a randomized controlled clinical trial on internet-based cognitive behavioural therapy for subthreshold depression in people over 50 years. *Psychol. Med.* 38 (5), 635–639. <http://dx.doi.org/10.1017/S0033291707002590>.
- Takagaki, K., Okamoto, Y., Jinnin, R., Mori, A., Nishiyama, Y., Yamamura, T., ... Yamawaki, S., 2014. Behavioral characteristics of subthreshold depression. *J. Affect. Disord.* 168, 472–475. <http://dx.doi.org/10.1016/j.jad.2014.07.018>.
- Timulak, L., 2007. Identifying core categories of client-identified impact of helpful events in psychotherapy: a qualitative meta-analysis. *Psychother. Res.* 17 (3), 305–314. <http://dx.doi.org/10.1080/10503300600608116>.
- Timulak, L., 2010. Significant events in psychotherapy: an update of research findings. *Psychol. Psychother. Theory Res. Pract.* 83 (4), 421–447. <http://dx.doi.org/10.1348/147608310X499404>.
- Titov, N., Andrews, G., Kemp, A., Robinson, E., 2010. Characteristics of adults with anxiety or depression treated at an internet clinic: comparison with a national survey and an outpatient clinic. *PLoS One* 5 (5), e10885. <http://dx.doi.org/10.1371/journal.pone.0010885>.
- Van Zoonen, K., Buntrock, C., Ebert, D.D., Smit, F., Reynolds, C.F., Beekman, A.T., Cuijpers, P., 2014. Preventing the onset of major depressive disorder: a meta-analytic review of psychological interventions. *Int. J. Epidemiol.* 43 (2), 318–329. <http://dx.doi.org/10.1093/ije/dyt175>.
- Wood, A.M., Joseph, S., 2010. The absence of positive psychological (eudemonic) well-being as a risk factor for depression: a ten year cohort study. *J. Affect. Disord.* 122 (3), 213–217. <http://dx.doi.org/10.1016/j.jad.2009.06.032>.
- World Health Organisation, 2004. *Prevention of Mental Disorders: Effective Interventions and Policy Options*. (Retrieved from http://www.who.int/mental_health/evidence/prevention_of_mental_disorders_sr).