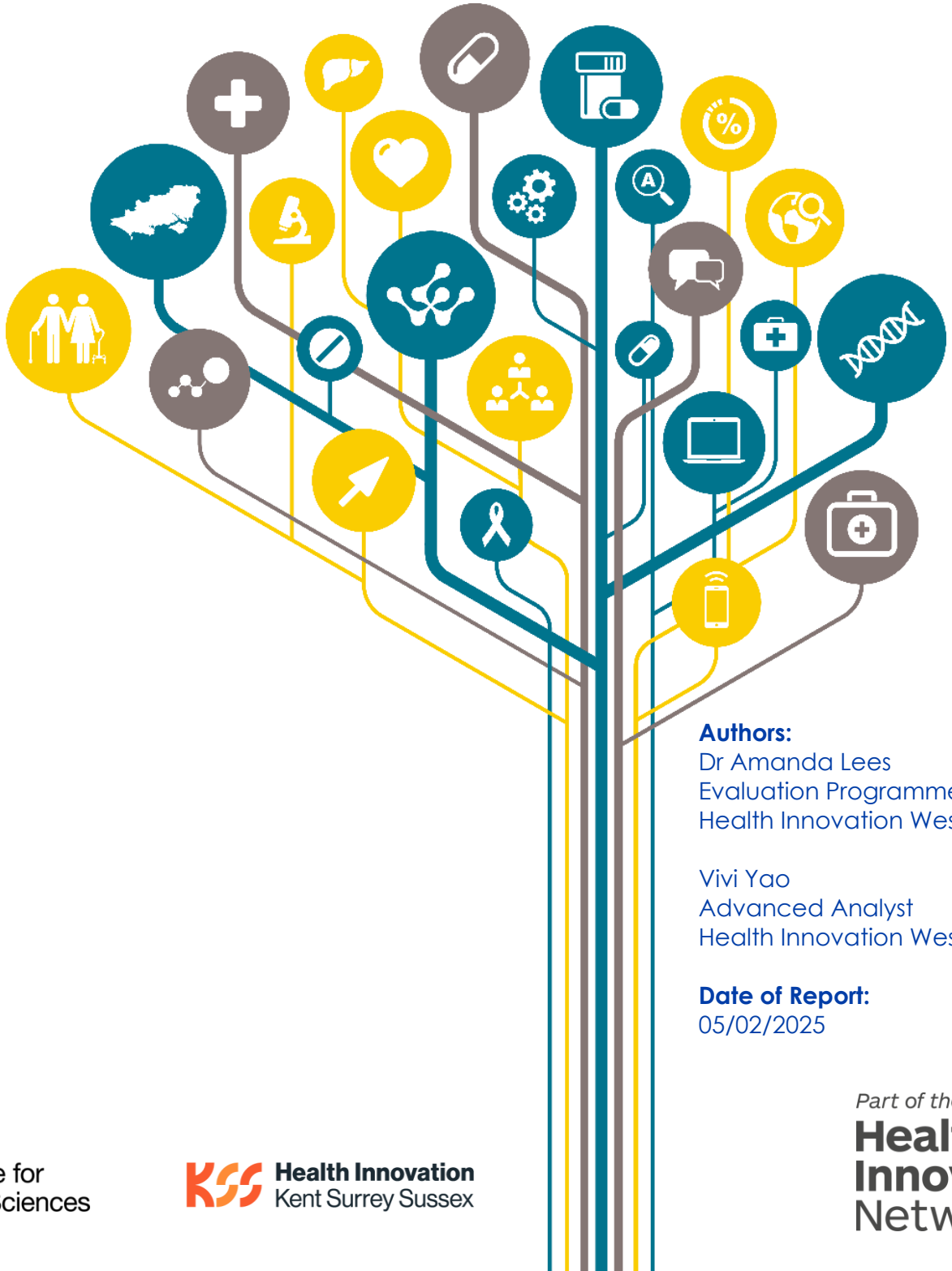
Health Innovation Wessex

Independent evaluation of the pilot of Supported Digital CBTe within Kent and Medway All Age Eating Disorders Service



Authors:
Dr Amanda Lees
Evaluation Programme Manager
Health Innovation Wessex

Vivi Yao
Advanced Analyst
Health Innovation Wessex

Date of Report:
05/02/2025

Office for Life Sciences

Health Innovation Kent Surrey Sussex

Part of the Health Innovation Network

Evaluation Team

Emily Hunter, Senior Programme Manager
Dr Amanda Lees, Evaluation Programme Manager
Dr Emmanuel Defever, Evaluation Programme Coordinator
Vivi Yao, Advanced Analyst

Correspondence

Dr Amanda Lees, Evaluation Programme Manager
Health Innovation Wessex
Innovation Centre, 2 Venture Road, Southampton Science Park, Chilworth, Hampshire SO16 7NP.

Disclaimer

This report presents the findings of an independent evaluation of the pilot of Digital CBTe (enhanced cognitive behavioural therapy) in Kent and Medway All Age Eating Disorders Service. The findings of this independent evaluation are those of the author and do not necessarily represent the views of the wider stakeholders.

Declaration of Interest Statement

Health Innovation Wessex supports innovators to bring their innovations to the NHS as well as provide an evaluation service more broadly to our members and others. On occasion, we evaluate innovations that we have also supported. Whilst these evaluations are independent to protect the robustness of the findings, for transparency we disclose our dual role where applicable. In this instance, Health Innovation Wessex was commissioned by Health Innovation Kent Surrey Sussex to deliver independent evaluation of Supported Digital CBTe. Health Innovation Kent Surrey Sussex supported the delivery of the pilot of Supported Digital CBTe within Kent and Medway All Age Eating Disorders Service.

Acknowledgements

The pilot of Digital CBTe within Kent and Medway All Age Eating Disorders Service was funded by Health Innovation Kent Surrey Sussex via their commission from the Office for Life Sciences. We would like to thank Kent and Medway All Age Eating Disorders Service (especially the Clinical Lead, Assistant Psychologists and Mental Health and Wellbeing Practitioners) and patients involved with the pilot, for their support and participation in this evaluation.

We would also like to thank Credo Therapies Limited for their operational support and CREDO for their advice on the evaluation specification and analysis.

Health Innovation Wessex

Table of Contents

Executive Summary

Kent and Medway All Age Eating Disorders Service piloted Digital Enhanced Cognitive Behavioural Therapy (CBTe), supplemented by online support sessions ('Supported Digital CBTe'), for patients who experience binge eating disorder (BED), between January and October 2024. Health Innovation Wessex (HIW) Insight team was commissioned to carry out an independent evaluation of the pilot.

Digital CBTe was originally developed by the Centre for Research on Eating Disorders at Oxford (CREDO). It is a digital programme-led psychological treatment designed for people experiencing binge eating, closely derived from Enhanced Cognitive Behaviour Therapy (CBT-E). The programme is available as a mobile application (app) and website. It provides an evidence-informed eating-disorder-focused programme for adults who experience eating disorders characterised by binge eating. NICE (2017) recommends that this type of programme should also be supplemented with brief supportive sessions when delivered as a first-line treatment. 'Supported Digital CBTe' refers to the programme being accompanied by brief supportive sessions from a health professional (such as a non-specialist support worker). The total amount of support time is around three hours, to be spaced across the twelve sessions and eight weeks of Digital CBTe. These sessions focus on helping the patient to follow the programme.

The evaluation used a mixed-methods approach comprising the analysis of standardised self-reported measures recorded within the Digital CBTe programme (Eating Disorder Examination questionnaire, EDE-Q 6, Clinical Impairment Assessment questionnaire, CIA, and Patient Health Questionnaire, PHQ-9), descriptive analysis of activity data provided by Credo Therapies Limited, semi-structured interviews with patients and two staff who acted as Supporters for patients going through the programme, and a staff survey.

Within the context of a limited sample size (described below), the quantitative findings provide evidence for the positive impact of Supported Digital CBTe on the clinical outcomes of the patients in the pilot cohort. **In summary, those who completed Supported Digital CBTe reported statistically and clinically significant decreases in the frequency of objective binge eating (over the past four weeks) (EDE-Q Q14), eating disorder psychopathology (Global EDE-Q), secondary impairment (Global CIA), and severity of depression (PHQ-9). It should however be noted that the small sample size of 16 means that the results may be less generalisable than those gathered from a larger population.**

Qualitative findings also described behaviour change including building routine and consistency as well as reduced binge eating. Staff respondents described positive benefits for their own practice (e.g. feeling more prepared for sessions with patients) and the service (e.g. improving flow of patients into and through the service). Qualitative findings indicated specific benefits associated with the support sessions that supplemented Digital CBTe. These included the opportunity to discuss, clarify and problem solve programme content, which reinforced and promoted active learning and engagement. The support sessions also provided a forum for patients to safely express any doubts, concerns or difficult feelings with their Supporter, who helped to

reframe these concerns in a more positive light. This helped patients to feel more positive about themselves and their ability to make a change to their eating behaviours.

The positive findings from this evaluation suggest that other Eating Disorders Services may benefit from the piloting of Supported Digital CBTe, whilst continuing to assess its effectiveness and wider applicability. It would be useful to explore whether there are adaptations to Supported Digital CBTe that would allow increased accessibility for a broader patient population including those with co-occurring conditions or more severe symptoms. To address any initial scepticism around the benefits of a digital programme, patients may benefit from enhanced communication at the outset concerning the programme's potential benefits, structure and expected outcomes. Whilst this real-world evaluation provides encouraging preliminary evidence, research studies should explore long-term outcomes, conduct comparisons with other interventions or control groups and evaluate cost-effectiveness to support broader adoption.

This is an independent report produced for Health Innovation Kent Surrey Sussex, funded by the Office for Life Sciences.

1 Introduction

The South East Innovation in Eating Disorder roadshow held in November 2022 showcased five innovations (informally selected by the South East Eating Disorders Early Intervention Collaborative as interesting and potentially beneficial) to ninety clinicians and commissioners across the South East and Dorset. As a result of this event, two eating disorder services across the South East and Dorset piloted a Digital Enhanced Cognitive Behaviour (Digital CBTe) self-help programme. The Eating Disorders Innovation Roadshow was facilitated by Health Innovation Kent Surrey Sussex (KSS) and Health Innovation Oxford and Thames Valley.

Digital CBTe was developed by the Centre for Research on Eating Disorders at Oxford (CREDO). It is a digital programme-led psychological treatment designed for people experiencing binge eating. The programme is available via a mobile application (app) and website. It provides an evidence-informed programme for adults who experience eating disorders characterised by binge eating. The Digital CBTe programme is informed by two NICE-endorsed approaches developed by CREDO: therapist-led CBT-E; and guided self-help using Overcoming Binge Eating (Second Edition) by Prof. Christopher G. Fairburn. (2013: Guildford [1]. NICE recommends that these types of self-help programmes should be "guided" i.e. supplemented with brief supportive sessions which focus on helping the person to follow the programme. In this form, this programme is referred to as 'Supported Digital CBTe'.

Supported Digital CBTe was piloted within the Kent and Medway All Age Eating Disorders Service (provided by the North East London NHS Foundation Trust, NELFT). The pilot ran between January and October 2024. During the pilot period, once a patient was referred or self-referred to the All Age Eating Disorders Service, a clinician carried out a brief assessment with the patient. Patients diagnosed with binge eating disorder were accepted by the service and assigned a Mental Health and Wellbeing Practitioner to act as a Supporter, who invited the patients to Digital CBTe via an email link. Patients created an account and completed in-app suitability screening, designed to identify whether Digital CBTe was likely to be helpful for their eating disorder. The suitability criteria used for this pilot were determined by the service, following careful consideration of patient safety and potential benefits. In those cases where the screening suggested that Digital CBTe was suitable, patients were invited to use Digital CBTe, alongside a series of online support sessions with their Supporter. The frequency of the sessions was decided between the patient and the Supporter, with approximately three hours of support offered in total. In those cases where Digital CBTe appeared unsuitable, then the patient's case was reviewed. If the programme was still considered unsuitable, patients would be referred to an alternative treatment pathway within the service or they were signposted to a different service that would better meet their needs.

The pilot at Kent and Medway All Age Eating Disorders Service was funded by NHS England. Health Innovation KSS commissioned the Health Innovation Wessex (HIW) Insight team to independently evaluate the pilot of Supported Digital CBTe to

[1] Overcoming Binge Eating (Book) - CBT-E (cbte.co)

understand patients' experiences and any impacts on patient outcomes and staff experience. The evaluation was designed in collaboration with the staff from the Kent and Medway All Age Eating Disorders Service, Credo Therapies Limited, CREDO and Health Innovation KSS, with independent analysis by HIW Insight team.

2 Methods

The evaluation used a mixed-methods approach comprising the analysis of standardised self-reported measures recorded within the Digital CBTe programme, descriptive analysis of activity data provided by Credo Therapies Limited, semi-structured interviews, and a staff survey.

2.1 Clinical outcomes: standardised self-reported measures

Following in-app consent, users of Digital CBTe were asked to complete the following standardised self-reported measures before the commencement of Digital CBTe (before programme); after completing all twelve sessions of Digital CBTe (end of programme full completion); and three months after they completed the programme (follow-up). These measures were scored according to the standardised method for each respective measure.

- Eating disorder examination questionnaire (EDE-Q 6)[2] : a validated questionnaire consisting of 28 questions to assess eating disorder features with good psychometric properties, over the previous four weeks.
- Clinical Impairment Assessment (CIA) questionnaire[3]: a validated 16-item self-reported measure of the severity of psychological and social impairment due to eating disorder features.
- Patient Health Questionnaire (PHQ-9)[4]: a validated nine-question instrument which asks about the frequency of depression-related features and feelings over the past four weeks.

The programme also included two 'Your View' questions related to the perceived effects on patients' understanding of their eating disorder, and their binge eating overall. This data was collected in the Digital CBTe programme, retrieved and pseudonymised. Credo Therapies Limited then shared de-identified row level data with HIW Insight team via a password-protected secure SharePoint space. Credo Therapies Limited also provided aggregated data on the flow of people who registered for Digital CBTe, through to completion. Relevant approvals for information governance and data sharing were granted by NELFT.

The following statistical analyses were performed.

[2] ede-q-eating-disorder-examination-questionnaire-subscales.pdf (insideoutinstitute.org.au)
[3] Clinical Impairment Assessment Questionnaire (CIA) – NovoPsych
[4] Patient Health Questionnaire-9 (PHQ-9) - Mental Health Screening - National HIV Curriculum (uw.edu)

- The EDE-Q 6 questionnaire was scored using the standard method[5]. Question 14 was treated as frequency data and analysed individually. This item was chosen as a relevant outcome given that the programme targets binge eating in particular. Responses to certain questions were converted to a numerical score (0-6) and then converted to a global score. The global score ranges from 0 to 6. (Note that question 14 does not inform the calculation of the global score).
- Responses to the CIA questionnaire were converted to a standard prorate[6] global score. The Global score can range from 0 to 48.
- Responses to the PHQ-9 were converted to numerical scores (0-3), using the standard method[7] and added together to generate the overall severity score. The total score can range from 0 to 27.

We employed suitable paired statistical tests (depending on the distribution of the mean scores) to allow before and after comparison i.e. for normal distributions the paired t-test.

2.2 Experiences of Supported Digital CBTe: semi-structured interviews

HIW Insight team conducted semi-structured interviews, via Microsoft (MS) Teams or telephone, to investigate patients' experiences of using Supported Digital CBTe (one interview was carried out by a NELFT Assistant Psychologist not involved in the patient's care). The Supporters introduced the evaluation to potential participants and shared the details of those who expressed an interest (and consented for their details to be passed on) with HIW Insight team, who then followed up with further information and scheduled appointments as appropriate. Written consent was sought via an electronic Adobe consent process. We aimed to interview both completers and non-completers of the programme; however, it was not possible to recruit any interviewees from the latter category. As mitigation to this, we carried out one additional (joint) interview with the Supporters to investigate their perceptions of why people may not have completed the programme.

Interviews lasted in the region of an hour. Interviews were recorded, transcribed and imported into NVivo 14 (qualitative data analysis software). Thematic analysis (Braun and Clark, 2006) was employed to derive a coding frame, from which themes were developed. Following initial analysis, the HIW Insight team met with CREDO to discuss initial impressions, after which themes were refined and finalised into a thematic map (please see Figure 7).

[5] Fairburn, C, Cooper, Z. & O'Connor, M. 'Eating Disorder Examination' in Fairburn, C.G. Cognitive Behaviour Therapy and Eating Disorders. Guildford Press, New York, 2008.
[6] To obtain the global CIA impairment score the ratings on all items are added together with prorating of missing ratings, so long as at least 12 of the 16 items have been rated. THE CLINICAL IMPAIRMENT ASSESSMENT QUESTIONNAIRE (CIA) (cld1ltd.com)
[7] phqscreeners

2.3 Staff experiences of Supported Digital CBTe: qualitative survey

The survey aimed to elicit staff views on Supported Digital CBTe and its effects for patients, their own roles, and the service. It was sent to a sample of staff who were identified as being involved with the pilot (n=10). Following a short explanation and consent section, the questionnaire consisted of nine free text questions and one question to elicit respondents' job roles. A link to the survey (Microsoft Forms) was shared via email and distributed to relevant staff by our key contact for the evaluation in Kent and Medway All Age Eating Disorders Service.

Free text responses were coded in NVivo 14 and, because of the high degree of consensus, findings from survey data were integrated into the thematic map developed from the entire qualitative dataset.

3 Patient flow and clinical outcomes

The numbers of patients from initial registration to completion are shown in Table 1 below. Of the 43 patients who completed the suitability questions in Digital CBTe, the programme was suitable for 36 (according to the programme's suitability criteria agreed with Kent and Medway All Age Eating Disorders Service). Of those, six patients were still in the process of working through Digital CBTe at the close of data collection and so could not be included in the analysis. 17 of the remaining 30 participants had completed Digital CBTe (With completion defined here as having taken part in Steps 1 and 2, comprising the nine active treatment sessions of the programme during the evaluation period). 16 patients completed Step 3[8]and the end of programme questionnaires. These 16 respondents make up our cohort for the analysis of before and end of programme changes. One patient completed the follow up outcome questionnaires, but this data could not be shared due to NHS data suppression rules (which address data disclosure risks by ensuring that small numbers are not disclosed). Following the completion of Supported Digital CBTe, 10 of the 17 participants were discharged without further input and 7 were referred to other supportive services within the NHS.

Status	Number
Number of patients who registered for Digital CBTe	43
Patients who completed the suitability (screening) questionnaire	43
Patients for whom Digital CBTe was deemed not suitable	7

[8] Treatment completion was defined as the proportion of patients (of those for whom Digital CBTe was deemed suitable) who completed Steps 1 and 2 of treatment (i.e. completed Session 9). This is because Step 3 helps with staying well and does not address the factors that are maintaining the patient's eating disorder. Note that this is a recent update following feedback from CREDO's research advisory team and patients.

Patients for whom Digital CBTe was deemed suitable	36
Patients still working through Digital CBTe at the close of data collection	6
Patients not fully completing Digital CBTe (mean sessions completed=8)	13
Patients completing Digital CBTe Steps 1 and 2 (session 9) during evaluation period	17
Patients completing Step 3 (staying well) and the end of programme questionnaires	16

Table 1: Patient flow from sign-up to completion

3.1 Profile of patients (for whom Supported Digital CBTe was suitable)

Whilst the evaluation focuses on those individuals with before and end of programme data, it is interesting to note the profile of all those for whom Supported Digital CBTe was considered suitable. Table 2 below shows the clinical profile of the total population for whom Supported Digital CBTe was deemed suitable (n=36). In this cohort, the mean total/global scores for EDE-Q 6, CIA and PHQ9 indicate levels of impairment above the clinical cut off level, i.e. severe enough to be considered a clinical case. (Please note, it is worth noting that the suitability screening was not based on EDE-Q global scores or CIA global scores).**Error! Reference source not found.**

	Subscale (Range)	Clinical cut off (if relevant)	Mean (Standard Deviation)	Range
EDE-Q 6	Global score (0-6)	2.77	4.03 (1.11)	1.05 - 5.80
	Frequency of objective binge eating (over the past four weeks) (Q14)		16.56 (8.80)	4 - 50
CIA	Global score (0-48)	16[9]	30.69 (7.64)	12 - 43
PHQ9	None (0-27)	10	12.88 (5.49)	2 - 24

Table 2: Clinical profile of total suitable population (n=36)

[9] The cut off score is referenced from CIA3.0 Instruction for Users. More information can be found here at: CIA 3.0 Instructions for users - CBT-E (cbte.co)

3.2 Eating disorder examination questionnaire (EDE-Q 6)

As seen in Figure 1, the EDE-Q 6 global score significantly decreased after the use of Supported Digital CBTe from 3.94 to 1.85 (T-statistic: -8.34, 95% confidence interval: lower level -2.62 – upper level – 1.55, P<0.0001). As well as indicating statistical significance, 10 patients in the sample moved to below 2.77, which is considered clinically meaningful.

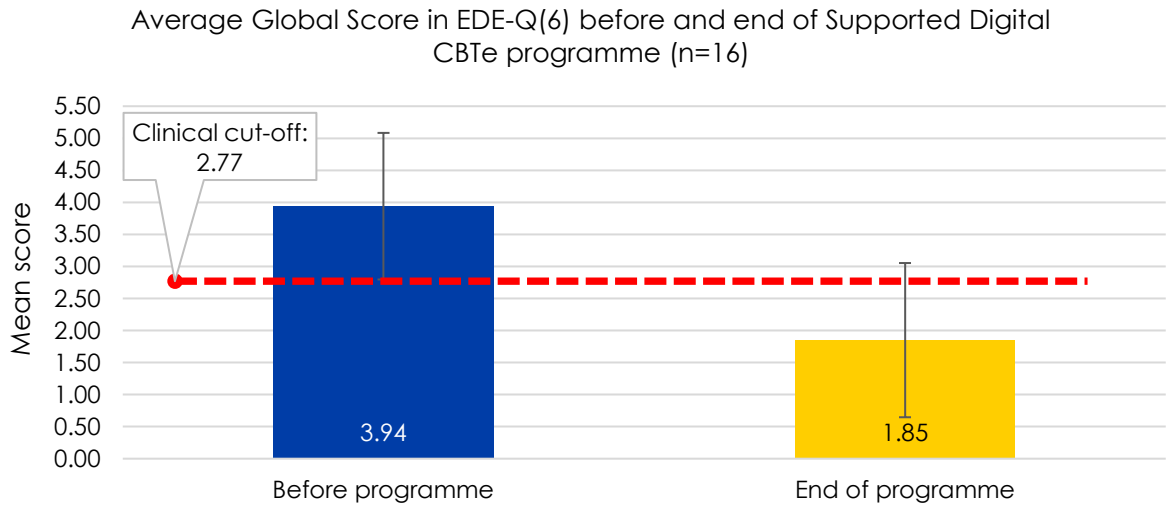


Figure 1: Change of EDE-Q 6 global score before and end of Supported Digital CBTe programme
*The standard deviation is indicated by the error bar above each column.

As shown in Figure 2, after Supported Digital CBTe, the majority of patients reported a reduction in frequency of objective binge eating (Q14). The average number of times patients felt a loss of control over their eating (Q14) decreased significantly from 18.91 to 1.88 over the past 28 days ((T-statistic: -6.01, 95% confidence interval: lower level -21.93 – upper level – 10.44, P<0.0001). Patients who completed all sessions and the end of programme questionnaire reported significant reductions in the frequency of objective binge eating at the end of programme.

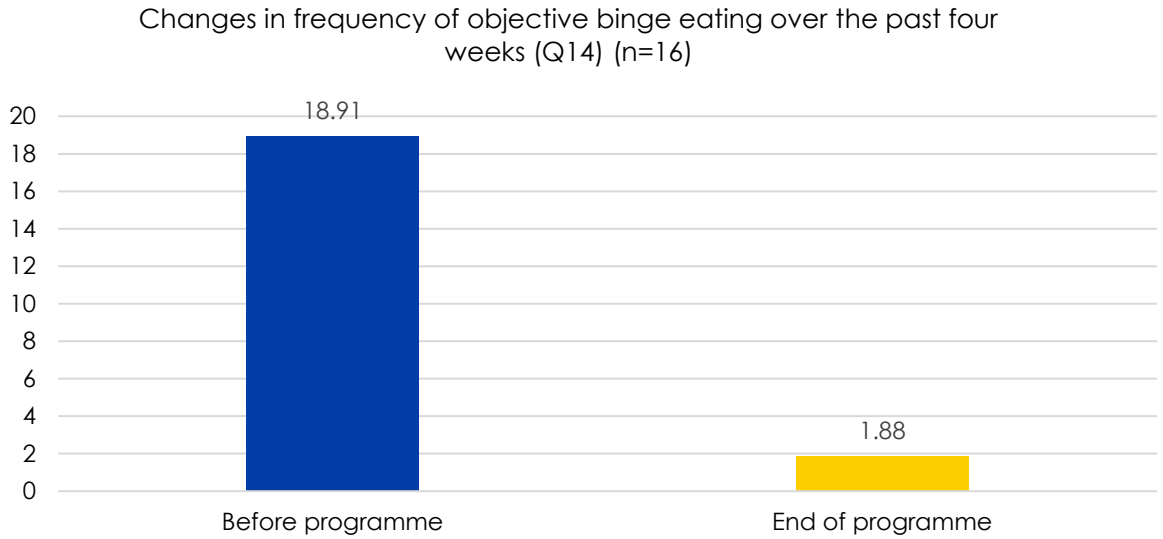


Figure 2: Changes in frequency of objective binge eating over the past four weeks (Q14) (n=16)

3.3 Clinical Impairment Assessment (CIA) questionnaire

As shown in Figure 3, the number of patients with CIA global impairment score below 16 (the cut off score indicating clinically significant impairment) after the use of Supported Digital CBTe increased by 69% compared to before its use. At the individual level, out of 16 patients, only one patient (6%) scored below 16 before the use of the Supported Digital CBTe whereas this number increased to 12 (75%) after the use of Supported Digital CBTe. At the aggregated level, the average global score of CIA decreased significantly from 30.75 to 12.56 (T-statistic: -10.02, 95% confidence interval: lower level -22.06 – upper level – 14.31, P<0.0001). This reduction is not only statistically significant but also clinically meaningful, as it brings the score below the clinical cut-off of 16

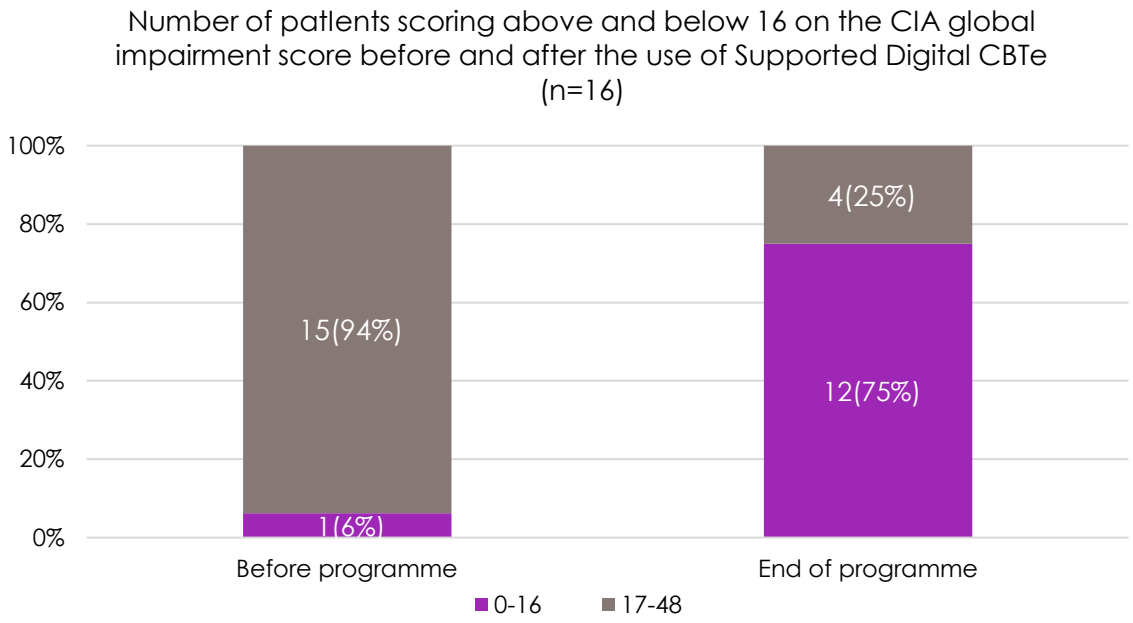


Figure 3: Number of patients with CIA global impairment scores of above and below 16, before and end of programme (n=16)

3.4 Patient Health Questionnaire-9 (PHQ-9)

As shown in Figure 4, the average score in PHQ-9 among 16 patients decreased from 12.12 (moderate depression) to 4.81 (no depression) (T-statistic: -7.57, 95% confidence interval: lower level -9.37 – upper level – 5.26, P<0.0001), demonstrating a significant reduction on depression levels (PHQ-9 scores) among patients who completed all sessions and the end of programme questionnaire. At the individual level, the number of patients who scored below ten (the clinical cut off for depression 'caseness'[10]) after the use of Supported Digital CBTe increased from 5 (31%) to 15 (93%).

[10] Caseness: a term applied by NHS talking therapy to describe patients who have symptoms of depression and anxiety. For more info: IAPT Manual (england.nhs.uk)

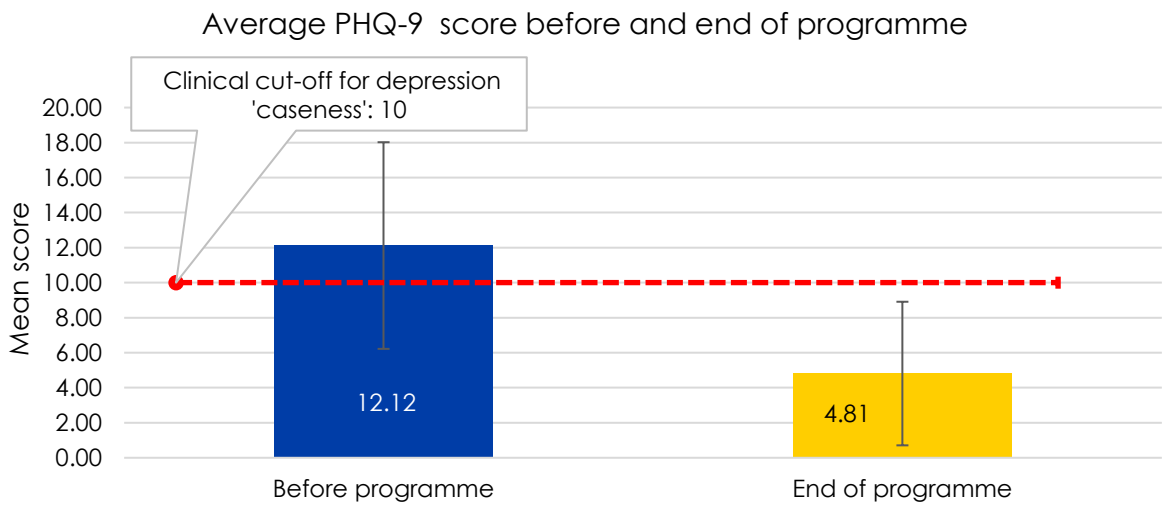


Figure 4: Average PHQ-9 score before and end of programme
*The standard deviation is indicated by the error bar above each column.

3.4.1 Your view data

The programme also included two 'Your View' questions related to users' views and satisfaction with the sessions and the perceived effects on their understanding of their eating disorder, and their binge eating problem overall. Figure 5 shows that all 16 patients stated they had a better understanding of their eating problems and that their binge eating problem was somewhat, or much, better at the end of Supported Digital CBTe.

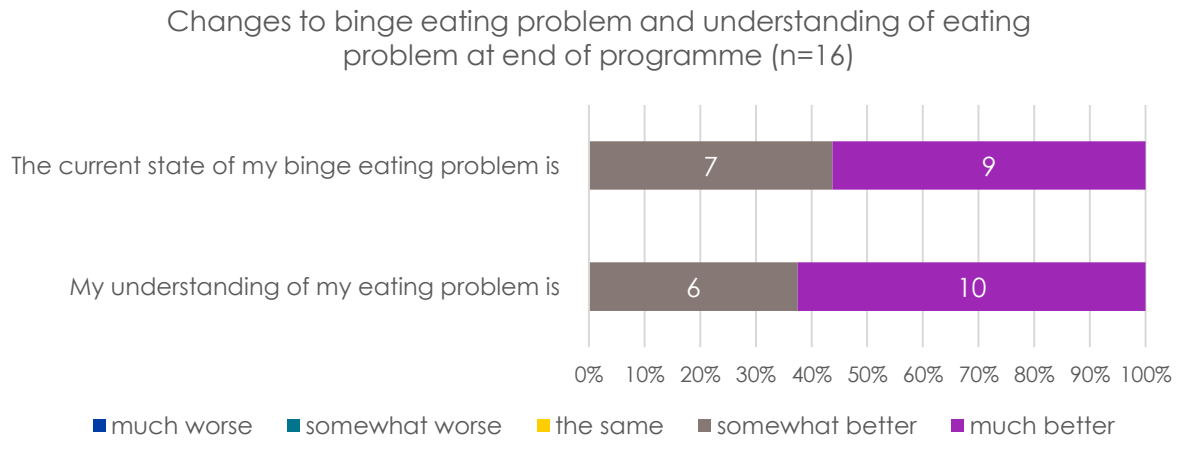


Figure 5: Your view survey responses

3.4.2 Summary

In summary, those who completed Supported Digital CBTe and end of programme questionnaire reported statistically and clinically significant decreases in the frequency of objective binge eating (over the past four weeks) (EDE-Q Q14), eating disorder psychopathy (Global EDE-Q), secondary impairment (Global CIA), and severity of depression (PHQ-9).

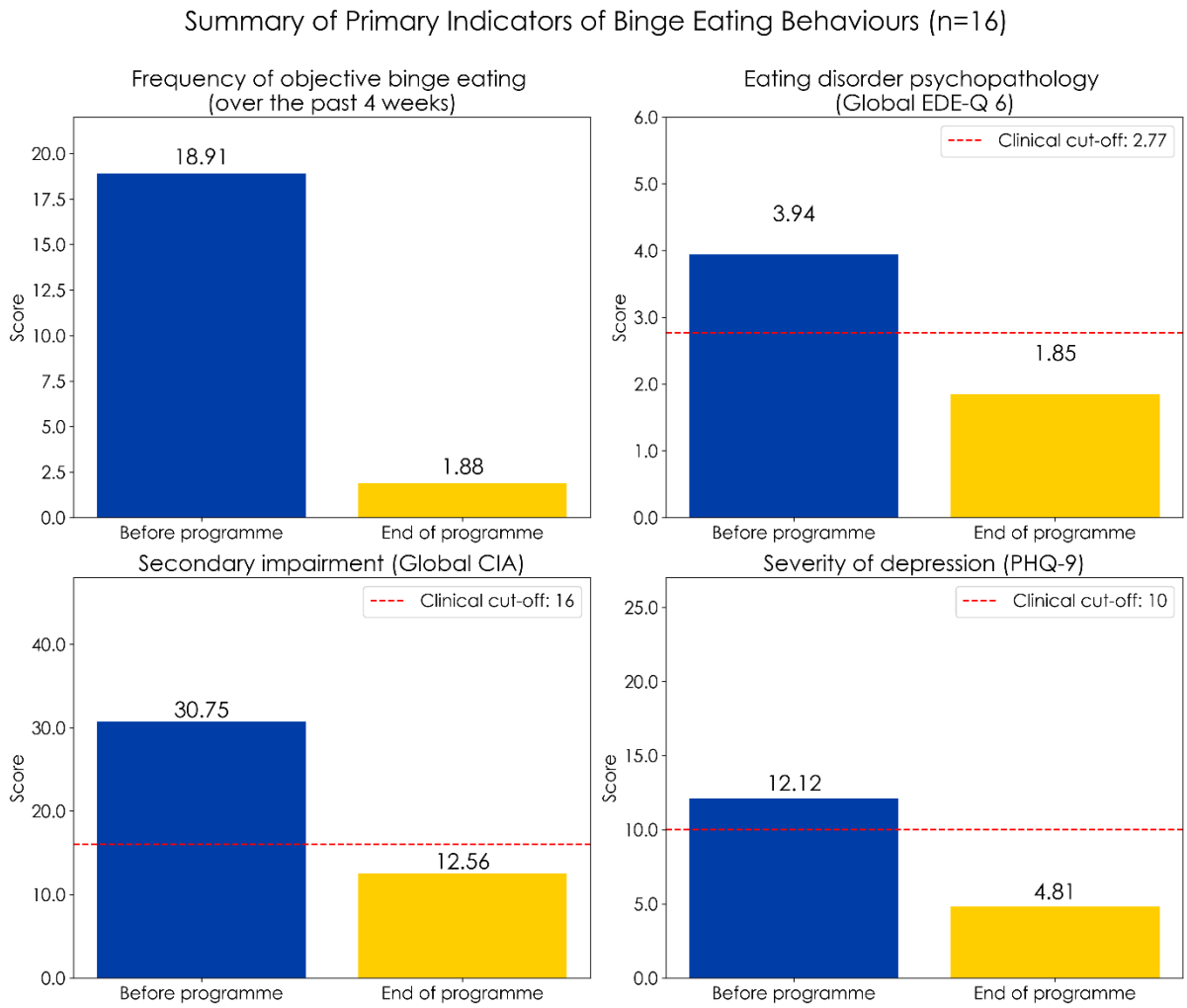


Figure 6: Summary of primary indicators of binge eating disorder (n=16)

4 Experiences of Supported Digital CBTe

We interviewed eight patients (Interviewees 1- 8) concerning their use of Supported Digital CBTe; four had already completed the programme and four had almost completed (expected date of completion within a week of the interview date). The interviewees were predominantly female, all White British with ages ranging from the 26-35 years to the 65-74 years age brackets. We interviewed two Supporters together in a joint interview.

We received a total of six qualitative survey responses, from a distribution of ten staff involved with the Supported Digital CBTe pilot, (i.e. a response rate of 60%). The findings from the patient and Supporters interviews, and the staff survey are reported together below. Staff responses from the survey and the Supporters interview are allocated as Staff respondent 1-7.

The following themes were identified from the data.

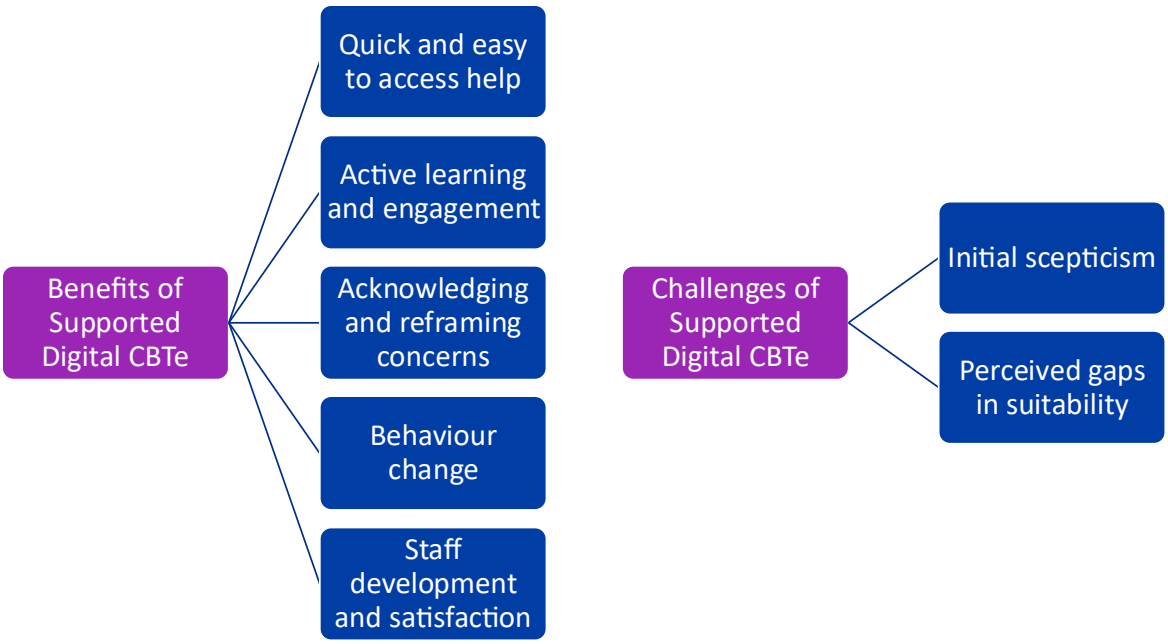


Figure 7 Map of themes from patient and staff feedback

4.1 Benefits of the Supported Programme

4.1.1 Subtheme 1: Quick and easy to access help

Patient interviewees appreciated the speed with which they were offered Supported Digital CBTe (from the time they first sought help),

"It all seemed to happen very quickly, which surprised me… I thought there might be quite a long waiting list, and it would take longer." (Interviewee 6)

Clinicians also appreciated the ability to help more patients within a shorter period, suggesting that patients gained access to Supported Digital CBTe "*quicker than what we might see with treatment as usual."* (Staff respondent 5). Patient interviewees reported that they found the process of registration and onboarding to be *"straightforward"* and *"easy"* and that they were *"up and running very quickly."* (Interviewee 6)

Patient interviewees and staff also commented that in their view the programme itself was well structured and easy to use. *"I think that it is a well-structured and a seemingly simple app to use."* (Staff respondent 1). They felt that the remote and flexible nature of the support sessions also contributed to the ease of use and access,

"For my personal situation to be able to… particularly the support sessions to be able to do them remotely and work around when I'm at home or in the office or whatever was very, very useful." (Interviewee 8)

4.1.2 Subtheme 2: Active learning and engagement

The content of the programme was seen to provide valuable education and to help patients *"to understand what is happening when they binge"* (Staff respondent 3). Support sessions were felt to promote active engagement with the content through the opportunity to discuss, clarify any questions, and *"really problem solve it together"* (Staff respondent 7). Respondents felt that the opportunity for discussion served to reinforce, and provide a different mode of learning, as described by one patient interviewee,

"Instead of it just being me reading a piece of paper and never having to read it again or think about it again…a few days later on then picking it back up…discussing it and it just made it a lot more accessible." (Interviewee 1)

Patient interviewees explained that a regular check in and knowing that *"someone was checking what I would do"* helped to keep them *"on track"* and *"accountable"* (Interviewee 7). Nearing a scheduled support session prompted patients to complete activities,

"People would quite often do the session like just before I check in. And I think it's almost like a reminder of, oh, I need to do this." (Staff respondent 7)

Staff also spoke about support sessions as a mechanism to ensure that patients are *"following the model"* (Staff respondent 1) which ultimately should achieve *"more effective outcomes"* (Staff respondent 2). Support sessions allowed the identification of anyone whose motivation may be flagging and to address this *"to increase the chance they continue and don't drop out"* (Staff respondent 1). Patient respondents suggested that their Supporter helped them to stick with the programme when they may otherwise have dropped out due to lack of understanding or loss of interest,

"If it hadn't been for her, I wouldn't have understood it and I wouldn't have stuck with it." (Interviewee 3)

"If I just had the digital side, I think I'd have lost interest or like given up on it." (Interviewee 7)

4.1.3 Subtheme 3: Acknowledging and reframing concerns

Support sessions were also a forum in which patients felt they could safely share any difficult feelings or concerns that arose; for example, due to the programme content or because of difficult life events *"in an open and non-judgemental space"* (Staff respondent 5). As Interviewee 6 put it,

"Knowing that you've got a weekly session with someone as well that you can talk to, so that kind of counselling side to it as well." (Interviewee 6)

Interviewee 2 describes a therapeutic process whereby the Supporter *"really listened to"* her concerns and was then able to help to reframe them, leading her to feel more positive about her ability to make a change,

"At first, I was very kind of feeling negative about myself …would I be able to make this digital side of it work, and if I'd ever get anywhere and I think with her kind of keep prompting, giving me different ideas….airing my concerns and getting a response each time, it really helped me a few weeks down the line to actually think… I could make a change here." (Interviewee 2)

Interviewee 3 agreed that she felt 'lifted' by the support she received and was therefore more willing to try to make changes,

"When you're depressed, or you have an addiction thing it affects your self-esteem so much and the fact that somebody's willing to do something with you is very valuable for lifting you up and making you more willing to sort of try because it's not easy." (Interviewee 3)

Patient respondents noted the interpersonal skills of the Supporters who were perceived to be personable, understanding, non-judgemental and helpful. Interviewee 1 points out that without these skills, interactions would not have been as beneficial,

"She is really lovely, really friendly, and able to empathise with my own situation and listen and understand, it just makes the session so much easier to be honest." (Interviewee 1)

Whilst the end of support sessions could feel daunting, patient interviewees tended to be reassured by the offer of the continued use of the app and the option of self-referral, if necessary, offered as part of implementation in Kent and Medway All Age Eating Disorders Service,

"I know I could contact the Eating Disorder Service again to ask for more help or to see what they say. Knowing that that's there as a possible option…it is a relief as well. So even though I've been signed off from this bit, I know that if I was struggling, I could ask again…So that's helpful to know as well." (Interviewee 7)

4.1.4 Subtheme 4: Behaviour Change

Patient interviewees described several areas of behaviour change including building routine and consistency as well as reduced binge eating,

"I think it's encouraged me to prioritise consistency. I think it's probably the key thing." (Interviewee 8)

Interviewee 2 (who had also received input from a dietician), and Interviewee 5 explained that their binge eating had improved more than they would have thought possible,

"... I haven't binge eaten for weeks." (Interviewee 2)

Interviewees highlighted the need to keep applying the learning they have gained from the programme,

"I must keep doing what I've learned and keep practising what I've learned to be able to continue to move forward, so I still have work to do." (Interviewee 7)

4.1.5 Subtheme 5: Staff development and satisfaction

Staff felt that Supported Digital CBTe reduced contact time per patient, allowing them to manage larger caseloads,

"I am able to manage more patients under my caseload as the contact time is significantly reduced compared to treatment as usual." (Staff respondent 3)

This approach was seen to support organisational transformation and increase digital engagement,

"Increasing the digital footfall of the service helps with our transformation agenda and highlights this developing area of my role." (Staff respondent 2)

Clinicians reported feeling more *"organised and prepared for sessions"* as they were able to access patients' progress and pinpoint progress and barriers to discuss in the support sessions (Staff respondent 5). Staff respondent 5 goes on to explain they felt more confident in their role, experiencing clear benefits in job satisfaction and their ability to effectively support patients,

"Feel that I have a set place in the service now, it has helped me to gain confidence in my abilities to support patients." (Staff respondent 5)

4.2 Challenges of the Supported Programme

4.2.1 Subtheme 1: Initial scepticism

Whilst one patient interviewee expressed initial excitement about the remote delivery of the programme, *"if I can have something that I can sort of do independently at home, I prefer that"* (Interviewee 4), nearly all patient interviewees noted a sense of cynicism and scepticism when they realised the support being offered consisted of a hybrid model of digital self-guided material and remote support sessions; *"I thought… I wasn't going to get anything at all from it being online."* (Interviewee 1). However, this negative first impression was replaced with a positive view of the hybrid approach.

"But having done it now…, it's opened my eyes a bit and it's really helped me learn. And also having the contact, like with the person during the week alongside that has been really good having the combination of both." (Interviewee 8)

4.2.2 Subtheme 2: Perceived gaps in suitability

Staff respondents commented that in their view Supported Digital CBTe is not suitable for all patients with binge eating disorders. One staff respondent suggested that whilst Supported Digital CBTe seemed to be able to achieve outcomes on a par with treatment as usual/therapist led treatment, in their view it *"requires more motivation"* (Staff respondent 4). This led several staff respondents to suggest that it may therefore not be suited to patients with more severe low mood or lowered motivation,

"May not provide sufficient support for those patients who have other comorbid difficulties and therefore have more complex presentation e.g. low mood." (Staff respondent 1)

Similarly, Staff respondent 7 suggested that reasons for withdrawal from Supported Digital CBTe tended to be due to personal stressors or co-occurring conditions which could act as a barrier to engagement,

"The reasons are typically around other either mental health problems they've got going on, or personal just stresses where they don't really have the space to be motivated and engaged with the programme." (Staff respondent 7)

Staff acknowledged that these limitations reduce the number of patients who can be offered this form of help,

"A lot of people that are struggling with binge eating disorder will often have low mood and that does really shrink the amount of people that can do the Digital CBTe and kind of get a lot of benefits out of it" (Staff respondent 7)

A small number of patient interviewees who had completed the programme expressed that they felt they needed further support beyond what had been offered. For example, Interviewee 5 explained,

"I need more support…It just feels like you're halfway through changing your like 25 years of this, and then it's just cut off within 12 weeks and like, ohh, OK, I'm back on my own again…and…my eating has gone back. Really far back." (Interviewee 5)

This led Interviewee 5 to suggest an additional check in session around a month after the finishing point to review how things are, to better manage the ending of the support sessions.

5 Limitations

There were a number of limitations to this evaluation. Because of the timelines of patients completing the programme, we were not able to assess changes to clinical outcomes at the three-month follow-up stage and were therefore unable to establish whether the reported improvements in clinical outcomes are maintained over time. The small sample size of 16 people completing Supported Digital CBTe means that the results may be less reliable than those gathered from a larger population. The statistical testing in this report is likely underpowered due to the small sample size and therefore needs to be treated with caution.

We were unable to speak with any patients who had decided not to complete the programme, meaning we were unable to access reasoning behind non-completion directly from patients.

Additionally, the cohort was self-selecting which raises the possibility that results may not be representative of a larger population. This is because self-selected individuals may have unique characteristics or motivations that are not reflective of the broader population.

6 Conclusions

The evaluation's findings provide compelling evidence for the positive impact of Supported Digital CBTe on the pilot patient cohort's clinical outcomes. Quantitative findings showed a statistically significant, and clinically meaningful improvements, including reductions in EDE-Q6 global score from 3.94 to 1.85, CIA global impairment scores, from 30.75 to 12.56, which also moved patients beneath the eating disorder cut off and PHQ-9 scores (12.12 to 4.81. Qualitative findings described several areas of behaviour change including building routine and consistency as well as reduced binge eating. Staff respondents described positive benefits for their own practice (e.g. feeling more prepared for sessions with patients) and the service (e.g. improving flow of patients into and through the service).

Supported Digital CBTe was seen as a quick and easy way for patients to access help. The Digital CBTe programme was judged to be well structured and easy to use. The ability to schedule support sessions online at a convenient time (rather than needing to travel to appointments) added to ease of access. Patient interviewees appreciated the short period between seeking and being offered help which was characteristic of the implementation in Kent and Medway All Age Eating Disorders Service (and may not be possible to replicate in other services).

Digital CBTe provided valued educational content and support sessions helped people to actively engage with this, through the opportunity for discussion, problem solving and accountability. Respondents suggested that support sessions were likely to prevent dropout that might otherwise occur through lack of interest or understanding. Support sessions also provided an opportunity for patients to share any difficult feelings and thoughts that arose in a safe and accepting space. Supporters offered patients help to reframe doubts and concerns, helping them to feel more positive about themselves and their ability to change their eating behaviours.

Qualitative findings also identified two challenges associated with Supported Digital CBTe. Initial scepticism at the hybrid digital format was experienced by the majority of those invited to use Supported Digital CBTe; however, this was replaced by a positive view after a few weeks of engagement. It is possible that this reaction related to the context of implementation in Kent and Medway All Age Eating Disorders Service, whereby patients received the offer of Supported Digital CBTe after an initial assessment with the service. Patients may have initially compared the offer to use a digital programme with the treatment that they might have expected to receive (for example face-to-face consultations). Secondly, there was acknowledgement that Supported Digital CBTe was not perceived to be suitable for all patients with eating disorders, especially those with co-occurring conditions and/or low mood. One interviewee felt that they would have liked a longer period of support to maintain progress.

7 Summary recommendations

- The positive findings from this evaluation suggest that other Eating Disorders Services may benefit from the piloting of Supported Digital CBTe, whilst continuing to assess its effectiveness and wider applicability.
- It would be useful to explore whether there is scope for adaptations to Supported Digital CBTe that would allow increased accessibility for a broader patient population including those with co-occurring conditions or more severe symptoms. Additionally, to consider whether offering support over a longer period could help sustain recovery.
- To address any initial scepticism around the benefits of a digital programme, patients may benefit from enhanced communication at the outset concerning the programme's potential benefits, structure and expected outcomes.
- Whilst this real-world evaluation provides encouraging preliminary evidence, research studies should explore long-term outcomes, conduct comparisons with other interventions or control groups and evaluate cost-effectiveness to support broader adoption.

This is an independent report produced for Health Innovation Kent Surrey Sussex, funded by the Office for Life Sciences.