Systematic review of the efficacy and acceptability of computerised CBT in the treatment of bulimia nervosa and binge eating disorder.

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Introduction

Within the UK, 82% of adults access the internet daily (Office of National Statistics, 2016). Mental health treatment provision is attempting to adapt. Computer-assisted psychotherapy is already recommend by NICE in the treatment of depression and panic disorder (NICE, 2006). Bulimia nervosa (BN) and binge eating disorder (BED) are associated with poor treatment uptake (Hudson et al. 2007), perceived stigma from healthcare professionals (Palmili et al. 2013) and inequitable service provision (Waller et al. 2012).

Computer-assisted CBT, if proven to be an effective treatment, could have the potential to improve these challenges to service provision. Loucas et al. (2014)'s meta-analysis assessed the efficacy of computerised CBT in the treatment of eating disorder. The review did not consider controlled trials or the acceptability of treatments. The current review aims to consider both of these while updating the literature regarding the efficacy of computer assisted CBT in the treatment of BN and BED.

Methods

Search terms:

"Binge eating disorder" OR "Bulimia nervosa" AND "Cognitive behavioural therapy" AND "Computer*"

Inclusion criteria:

Studies were included if;

-participants experienced BN and BED as defined by the DSM-IV or V.

-interventions were based upon a CBT treatment protocol as well as primarily involving the participants' active engagement with a computer.

-they involved comparison with at least one control group.

Search strategy:

The PsychINFO, CINAHL, Medline, Embase and Web of Science databases were searched from April 2017 until a final search on 1st September 2017.

Results

Ten studies were identified, eight of which focused on cCBT delivered via the Internet (iCBT) and two by CD-ROM (CD-CBT).

Quality of studies

Many of the studies did not control for concurrent psychotherapy, whilst in some, additional psychotherapy was offered. In some studies, stable antidepressant medication was not an exclusion criterion. The majority of the studies utilised convenience samples which could bias towards more highly motivated participants. Only a small number of studies blinded the assessor to the participants' group allocation, which may have increased the risk of assessment bias. Four of the studies were underpowered, possibly preventing a significant result from being detected.

Efficacy

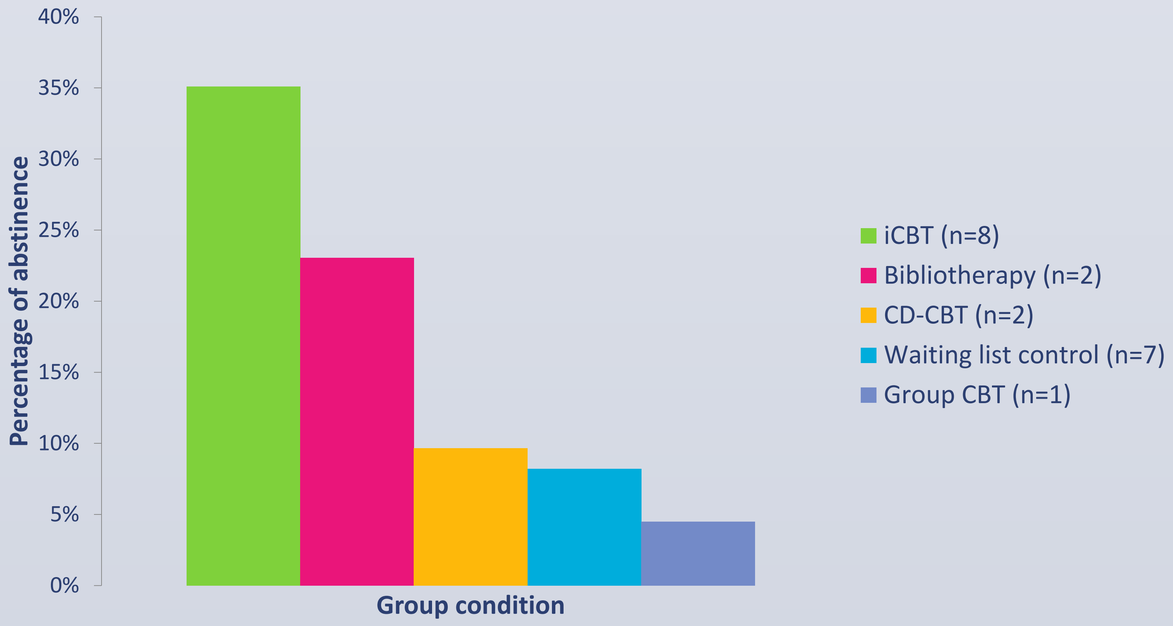

Figure 1. Graph demonstrating the median percentage of participants who were abstinent from binge eating and compensatory behaviour during the 28 days before treatment completion in studies with internet delivered CBT (iCBT), bibliotherapy , CD-ROM delivered CBT, waiting list controls and group CBT. (n=*number of studies).*

The iCBT abstinence rates ranged from 22% to 47.6% and the intervetion was superior to all controls except in one study where bibliotherapy was superior. At the follow-up, iCBT was found to be superior to bibliotherapy. Abstinence rates were maintained or improved at the follow-up in all other studies.

CD-CBT was superior to a group-CBT and waiting list control, although in both studies it was found to be inferior after the follow-up period. It should be noted these results were not subjected to statistical analysis and should be more rigorously examined in the future.

Acceptability

The participant dropout rates (see figure 2.) varied from 10% to 45% in computerised CBT intervention and were generally greater than waiting list control but were smaller than bibliotherapy controls. These differences were not subjected to statistical analysis and should be subjected to examination in the future.

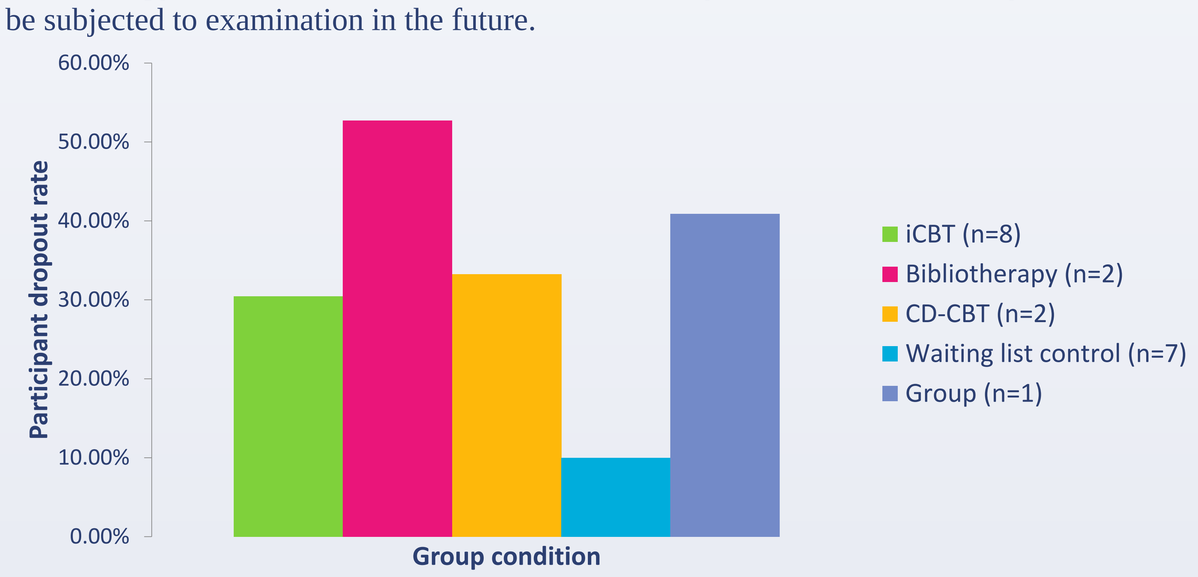

Figure 2. Graph demonstrating the median percentage of dropouts in studies with internet delivered CBT (iCBT), bibliotherapy, CD-ROM delivered CBT (CD-CBT), waiting list controls and group delivered CBT (group). *(n= number of studies).*

Discussion

Efficacy

Results from the current review correspond to Beintner et al.'s (2014) meta-analysis that found internet delivered therapy to be superior to bibliotherapy and CD-ROM delivered therapy. Within-group effect sizes for cCBT on binge eating and purging frequency varied from 0.33 to 1.36 and 0.117 to 0.97, respectively. The results from the current study represent a wider but similar range to those found in Loucas's et al., (2014) meta-analysis. A previous review of the literature found binge eating abstinence to be 37% for standard CBT, which is comparable to the results of the current review (Hay et al., 2009).

Acceptability

Dropout rates between iCBT and CD-CBT were found to be comparable. Previous reviews have found rates for CD-CBT to be greater than the former (Beintner et al., 2014). Within clinical trials of standard CBT, rates fall between 10% and 35% (Brownley, Berkman, Sedway, Lohr, & Bulik, 2007). Within eating disorder services, approximately one-third of referrals never attend (Agras, Walsh, Fairburn, Wilson, & Kraemer, 2000). The preliminary findings of this review suggest that the current forms of cCBT do not enhance treatment acceptability and adherence.

Limitations

It should be noted that due to the design of the studies included, these results don't necessarily correspond to cCBT alone.

In terms of this review, the results were not subjected to further inferential analysis. The data extraction and quality assessment of the studies included was conducted by one researcher which may increase the risk of bias.

Conclusions

The studies reviewed generally reported positive outcomes for iCBT, suggesting that it could be an effective treatment for BN and BED. The addition of iCBT within a 'matched care' model could provide greater choice and flexibility for patients. Further research should investigate whether patient outcomes are improvement by the addition of iCBT within a 'matched care model'. Additionally the patient characteristics that predict a positive outcomes to iCBT should be investigated to facilitate appropriate triage.

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