Targeted Update

Cognitive behavioural therapy compared with any other psychological therapy for binge eating disorder

This is a **Targeted Update** of the Cochrane Review
Hay PJ, Stefano SC, Kashyap P. Psychological treatments for bulimia nervosa and binging. Cochrane Database of Systematic Reviews 2009, Issue 4. Art. No.: CD000562. DOI: 10.1002/14651858.CD000562.pub3.

Latest search was performed: **6 January 2016**

Results of the search, list of new references, details of updates to methods, study characteristics, risk of bias assessments, and details of data analyses with forest plots can be found in the Supplementary material.

This **Targeted Update** was prepared by Hanna Bergman[1] and Nuala Livingstone[2]. Data were taken from the published full review and results of the updating process, carried out by Hanna Bergman[1], Molly Grimes[1], Sarah R Davies[3] and Sarah Dawson[3]. The abstract was adapted from the published full review.

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What's a Targeted Update?

Targeted Updates are two to three-page documents that use the Cochrane Review as their foundation, but focus on updating only one or two important comparisons, and the seven most relevant outcomes. They include an updated Summary of Findings table and Abstract, and use Cochrane methodology. The full search results, risk of bias assessments, analyses, and references do not form part of the Targeted Update, but are available as supplementary information. Targeted Updates are intended for use by policy makers.

What's the context for this Targeted Update?

The Norwegian Health Directorate commissioned this Targeted Update to help develop a guideline.

What's new

The comparison 'CBT versus any other psychological therapy' was included in this Targeted update. Four new included studies with 410 participants and seven new ongoing studies were identified.

At end-of-treatment CBT probably slightly reduces bingeing symptoms, but may make little or no difference to 100% abstinence from bingeing compared with any other psychotherapy.

The Cochrane review this Targeted Update is based on has a wider scope, included 48 studies, and concluded that there is a small body of evidence for the efficacy of CBT in bulimia nervosa and similar syndromes, but more and larger trials are needed, particularly for binge eating disorder. Further, there is a need to develop more efficacious therapies for those with both a weight problem and an eating disorder.

Cognitive behavioural therapy for binge eating disorder compared with any other psychological therapy:

- May make little or no difference to 100% abstinence from binge eating;
- Probably slightly reduces mean bingeing symptoms.

Background

A specific manual-based form of cognitive behavioural therapy (CBT) has been developed for the treatment of binge eating disorder (BED). Other psychotherapies and modifications of CBT are also used to treat BED.

Objectives

To evaluate the efficacy of CBT compared with any other psychotherapies in the treatment of adults with BED.

Search methods

The CCMD-CTR-Studies and References Register was searched on 6 January 2016. ClinicalTrials.gov and the World Health Organization's trials portal (ICTRP) were also searched. Reference lists of all included studies and relevant systematic reviews were checked to identify additional studies.

Selection criteria

Randomised controlled trials of psychotherapy for adults with BED which applied a standardised outcome methodology and had less than 50% drop-out rate.

Data collection and analysis

Relative risks (RRs) were calculated for binary outcome data. Mean differences (MDs) or standardised mean differences (SMDs) were calculated for continuous variable outcome data. A random effects model was applied.

Main Results

We included 9 RCTs, published 1994 to 2013, involving 851 participants in this Targeted Update. Ten ongoing RCTs were identified, and three studies are awaiting classification.

CBT was compared with interpersonal psychotherapy in two studies, behavioural weight loss therapy in five studies, integrated multimodal medically managed inpatient program in one study, and brief strategic therapy in one study. No studies evaluating psychoanalytic psychodynamic psychological therapy were found.

For most of the included studies the risk of bias was unclear, as the randomisation process and allocation concealment were not adequately described in the report. Further, blinding is difficult to achieve in this type of study, which could lead to risk of performance and detection bias.

There was low quality evidence that CBT may make little or no difference to 100% abstinence from binge eating (RR 0.93, 95% CI 0.67 to 1.28, 5 studies, 408 participants) or to mean psychosocial/interpersonal functioning (MD -0.025, 95% CI -0.145 to 0.09, 3 studies, 280 participants), compared with any other psychotherapy. There was moderate quality evidence that CBT probably slightly reduces mean bingeing symptoms (MD -0.513, 95% CI -0.836 to -0.171, 7 studies, 511 participants), that CBT probably makes little or no difference to mean depressive symptoms (MD 0.332, 95% CI -1.162 to 1.826, 7 studies, 489 participants), and that CBT probably does not reduce weight (MD 1.239, 95% CI 0.295 to 2.183, 9 studies, 611 participants), compared with any other psychotherapy. The effect on general psychiatric symptoms is uncertain; quality of evidence was very low.

Implications and conclusions

There is some evidence that CBT probably slightly reduces binging symptoms compared with any other psychological therapies, but that it may make little or no difference to 100% abstinence from bingeing. The quality of the evidence was moderate to low due to imprecision in the results and unclear risk of bias. Therefore, further research may have an important impact on these estimates.

Included studies

Agras WS, Telch CF, Arnow B, et al. *Behavior Therapy* 1994;**25**:225-238.

Castelnuovo G, Manzoni GM, Villa V, et al. *Clinical Practice & Epidemiology in Mental Health* 2011;**7**:29-37.

Cesa GL, Manzoni GM, Bacchetta M, et al. *Journal of medical Internet research* 2013;**15**:e113.

Grilo CM, Masheb RM, Wilson GT, et al. *Journal of consulting and clinical psychology* 2011;**79**:675-85.

Munsch S, Biedert E, Meyer A, et al. *International Journal of Eating Disorders* 2007;**40**(2):102-113.

Nauta H, Hospers H, Kok G, et al. *Behavior Therapy* 2000;**31**:441-61.

Porzelius LK, Houston C, Smith M, et al. *Behavior Thearpy* 1995;**26**:119-134.

Tasca GA, Ritchie K, Conrad G, et al. *Psychotherapy Research* 2006;**16**(1):106-21.

Wilfley DE, Welch RR, Stein RI, et al. *Archives of General Psychiatry* 2002;**59**:713-21.

Summary of Findings: CBT compared with any other psychological therapy for binge eating disorder at end-of-treatment

***Patients and setting*: Adults (aged >16 years) diagnosed with BED at specialist settings (eating disorder centre or clinic, or inpatient units) in Canada, Italy, the Netherlands, Switzerland, and the USA.**

***Comparison:* Cognitive behavioural therapy (face-to-face) versus any other psychological therapy (face-to-face), including behavioural weight loss therapy, psychodynamic interpersonal psychological therapy, integrated multimodal medically managed inpatient program, and brief strategic therapy.**

Outcome	Plain language summary	Absolute effect		Relative effect (95% CI) Nº oparticipants & studies	Certainty of the evidence (GRADE)
		Any psychological therapy (except CBT)	CBT		
Number of people who did not show 100% abstinence from binge eating	CBT **may make little or no difference** to reducing 100% abstinence from binge eating in people with BED compared with any other psychological therapy at EOT.	376 per 1000	349 per 1000 Difference 26 fewer per 1000 (from 124 fewer to 105 more)	RR 0.93 (0.67 to 1.28) Based on data from 408 participants in 5 studies	⊕⊕OO LOW [1,2]
Mean bingeing symptoms Measured by binge days per week, binge days per month and BES, assessed by binge days per week[3]	CBT **probably slightly reduces** mean binging symptoms in people with BED compared with any other psychological therapy at end of treatment.	Mean: 1.11 binge days/week**	Mean: 0.597 binge days/week Difference 0.513 lower (0.836 to 0.171 lower)	MD -0.513 (-0.836 to -0.171)* Based on data from 511 participants in 7 studies	⊕⊕⊕O MODERATE [1]
Mean depressive symptoms Measured by BDI, CES-D and SCL-90-D, assessed by BDI[4]	CBT **probably makes little or no difference** to mean depressive symptoms in people with BED compared with any other psychological therapy at EOT.	Mean: 11.1 points**	Mean: 11.4 points Difference 0.332 higher (1.162 lower to 1.826 higher)	MD 0.332 (-1.162 to 1.826)* Based on data from 489 participants in 7 studies	⊕⊕⊕O MODERATE [1]
Mean general psychiatric symptoms Measured and assessed by GSI	We are uncertain about the effect of CBT on general psychiatric symptoms compared with any other psychological therapy at EOT.	Mean: 32.3 points**	Mean: 32.8 points Difference 0.5 higher (2.2 lower to 3.2 higher)	MD 0.5 (-2.2 to 3.2) Based on data from 158 participants in 1 study	⊕OOO VERY LOW [5,6]
Mean psychosocial/interpersonal functioning Measured by FLZ, IIP and SAS, assessed by SAS[7]	CBT **may make little or no difference** in improving psychosocial/interpersonal functioning in people with BED compared with any other psychological therapy at EOT.	Mean: 1.9 points**	Mean: 1.875 points Difference 0.025 lower (0.145 lower to 0.09 higher)	MD -0.025 (-0.145 to 0.09)* Based on data from 280 participants in 3 studies	⊕⊕OO LOW [1,8]
Weight (BMI preferable) Measured by BMI or kg, assessed by BMI[9]	CBT **probably does not reduce weight** in people with BED compared with any other psychological therapy at EOT.	Mean: BMI 35.7**	Mean: BMI 36.9 Difference 1.239 higher (0.295 to 2.183 higher)	MD 1.239 (0.295 to 2.183)* Based on data from 611 participants in 9 studies	⊕⊕⊕O MODERATE [1]

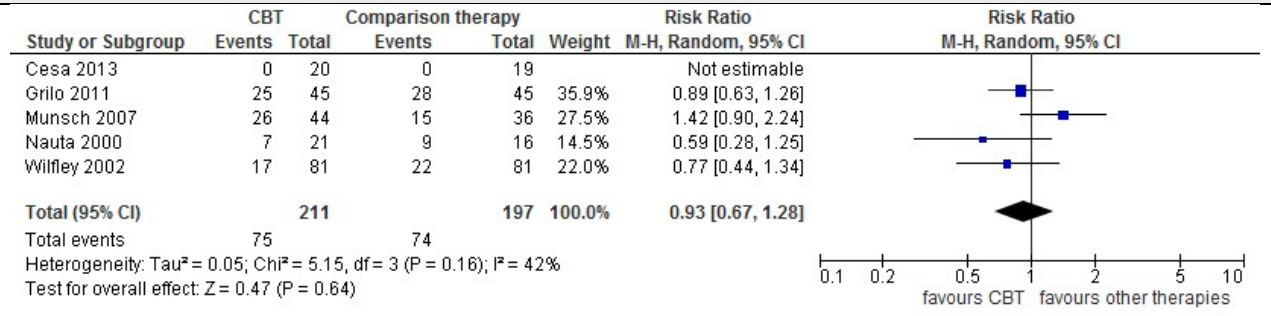
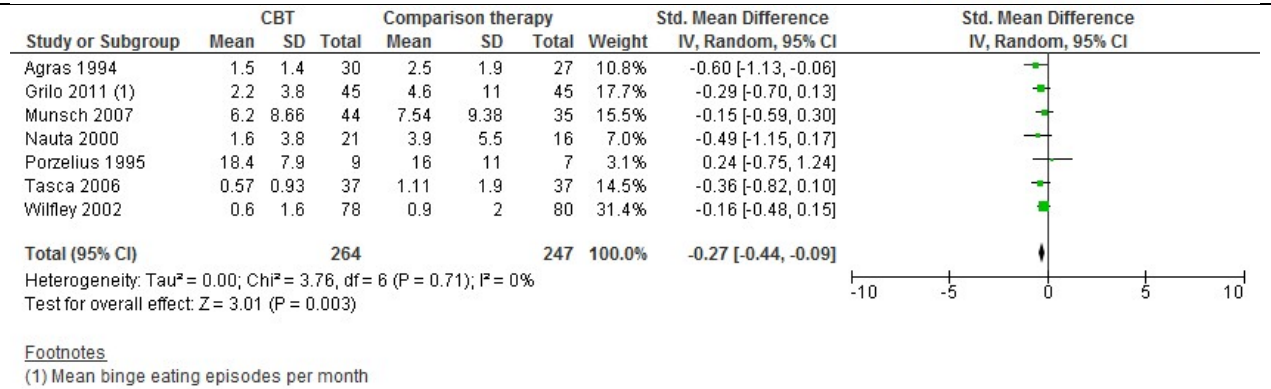
BDI=Beck Depression Inventory; BED=Binge Eating Disorder; BES=Binge Eating Scale; BMI=Body Mass Index; CBT=Cognitive Behavioural Therapy; CES-D= Center for Epidemiological Studies-Depression Scale; CI= confidence interval; EOT=End of treatment; FLZ=Fragebogen zur Lebenszufriedenheit; GSI=Global Symptom Index; IIP= Inventory of Interpersonal Problems; MD= mean difference; RR= risk ratio; SAS=Social Adjustment Scale; SCL-90-D=Symptom Checklist-90-Revised Depression Subscale; SMD=standardised mean difference

*Analysed with SMD and back-estimated to MD to enable interpretation (12.6.4 Re-expressing SMDs using a familiar instrument), see footnotes. **Based on mean score for representative study, see footnotes.

[1] Downgraded one level for risk of bias: Most studies reported inadequately on randomisation procedures. [2] Downgraded one level for inconsistency: Heterogeneity was considerable (I^2=42%). [3] Three of the seven studies measured this outcome with binge days/week. Scores were back-estimated to binge days/week from SMD -0.27 (-0.44 to -0.09) using control group SD 1.9 from representative study Tasca 2002. [4] Five of the seven studies measured this outcome with BDI. Scores were back-estimated to BDI from SMD 0.04 (-0.14 to 0.22) using control group SD 8.3 from representative study Grilo 2011. [5]Downgraded one level for risk of bias: The included study reported inadequately on randomisation procedures. [6] Downgraded two levels for imprecision: only one study with 158 participants was included, and confidence intervals were very wide including appreciable benefit for both types of intervention. [7] One of the three studies measured this outcome with SAS. Scores were back-estimated to SAS from SMD -0.05 (-0.29 to 0.18) using control group SD 0.5 from representative study Wilfley 2002. [8] Downgraded one level for imprecision: only 280 participants were included. [9] Five of the nine studies measured this outcome with BMI. Scores were back-estimated to BMI from SMD 0.21 (0.05 to 0.37) using control group SD 5.9 from representative study Grilo 2011.

Forest plot: CBT compared with any other psychological therapy for binge eating disorder at end-of-treatment *

***Patients and setting*: Adults diagnosed with binge eating disorder aged >16 years at specialist settings such as eating disorder centre or clinic, or inpatient units in Canada, Italy, the Netherlands, Switzerland, and the USA.**
***Comparison:* Cognitive behavioural therapy (face-to-face) versus any other psychological therapy (face-to-face), including behavioural weight loss therapy, psychodynamic interpersonal psychological therapy, integrated multimodal medically managed inpatient program, and brief strategic therapy.**

Outcome	Forest plot	Certainty of the evidence (GRADE)
100% abstinence from binge eating at the end of therapy CBT **may make little or no difference** to reducing 100% abstinence from binge eating in people with BED compared with any other psychological therapy at end of treatment.		⊕⊕OO LOW
Mean binging symptom scores CBT **probably slightly reduces** mean binging symptoms in people with BED compared with any other psychological therapy at end of treatment.		⊕⊕⊕O MODERATE

* Forest plot for primary outcomes. Forest plots for all outcomes are presented in Supplementary materials.