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New developments in cognitive-behavioural therapy for eating disorders (CBT-ED)

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Purpose of review
This review summarizes recent developments in cognitive-behavioural therapy for eating disorders (CBT-ED). More specifically, the past five years were covered, with the latest UK and Dutch guidelines for eating disorders as a starting benchmark, and with special consideration of the past 18 months.

Recent findings
The new research can be divided into findings that have: (1) reinforced our existing understanding of CBT-ED's models and impact; (2) advanced our understanding and the utility of CBT-ED, including its application for the 'new' disorder Avoidant/Restrictive Food Intake Disorder (ARFID); (3) suggested new directions, which require further exploration in clinical and research terms. These include learning from the circumstances of the COVID-19 pandemic.

Summary
CBT-ED has developed substantially in the past 5 years, with consolidation of its existing evidence base, further support for real-life implementation, extension of methods used, and the development of new approaches for working with younger people – particularly in the form of treatments for ARFID. Over the past 18 months, even more promising changes in delivery occurred in response to the COVID19 pandemic, showing that we can adapt our methods in order to work effectively via remote means. Challenges remain regarding poor outcomes for anorexia nervosa.

Keywords
Avoidant/Restrictive Food Intake Disorder, cognitive-behavioural therapy for eating disorders (CBT-ED), cognitive-behavioural therapy, eating disorders, recent developments

INTRODUCTION

In 2017, both the UK's National Institute for Health and Care Excellence (NICE) [1] and the Dutch Foundation for Quality Development in Mental Healthcare (AkwaGGZ) [2] published their updated guidance on the treatment of eating disorders, based on the evidence to that point. Those findings were broadly supported in the Academy for Eating Disorders (2020) [3] summary. The guidelines recommended cognitive-behavioural therapy for eating disorders (CBT-ED) as the key therapy for nonunderweight adults, and as one of a number of options for underweight adults. However, it was not recommended as the first choice treatment for younger patients, as family based methods had the strongest value.

CBT-ED is a generic term that encompasses all of the evidence-based forms of CBT that have been developed for such disorders, reflecting the fact that those different methods share a common core of encouraging nutritional and behavioural change as key to addressing the cognitions and emotions that underpin eating pathology and body image issues. It is noteworthy that these revised NICE and Dutch guidelines had more of an emphasis on CBT-ED than the original guidance, published in 2004 [4] and 2006 [5], respectively. Indeed, there had been

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KEY POINTS

- CBT-ED has built on its existing evidence base in recent years.
- CBT-ED for ARFID is an exciting new development in the field.
- There are still gaps in clinicians' delivery of CBT-ED.
- Further research is needed to develop CBT-ED, particularly with reference to anorexia nervosa and less well-studied subtypes of eating disorders (e.g., pica and rumination disorder).

substantial development in the evidence base for CBT-ED in the intervening decade, meaning that its effectiveness was demonstrably greater than that of the other therapies by the 2017 updates. Importantly, the Dutch guidelines addressed the treatment of Avoidant/Restrictive Food Intake Disorder (ARFID), a recently acknowledged DSM5 [6] feeding/eating disorder which is characterized by eating too little/too selectively, which is not driven by fear of weight gain or body image disturbance. As detailed below, our understanding of CBT for ARFID is one of the most important recent developments in CBT-ED.

This review paper will outline developments in CBT-ED over the past 5 years, detailing our greater understanding of the role of CBT-ED in treating individuals across the age span. The new research in the field can be divided into recent findings that have:

(1) reinforced our existing understanding of CBT-ED's models and impact
(2) advanced our understanding and the utility of CBT-ED, including its application for the newly acknowledged feeding/eating disorder ARFID
(3) suggested new directions, which require further exploration in clinical and research terms. These include learning from the peculiar circumstances of the COVID-19 pandemic.

RECENT FINDINGS FURTHERING THE EXISTING EVIDENCE REGARDING COGNITIVE-BEHAVIOURAL THERAPY FOR EATING DISORDERS

The core value of CBT-ED – addressing eating disorder pathology and body image – has long been established [1,7]. Similarly, CBT-ED was already known to have an impact on comorbidity [8,9], and difficulties in its delivery had been identified [10]. However, there has been additional evidence to support each of those points, adding to those well-established findings.

DETERMINING COGNITIVE-BEHAVIOURAL THERAPY FOR EATING DISORDERS's BENEFITS IN BROADER USE

Delivery of CBT-ED can enhance outcomes, but broad implementation of empirically supported treatments can be slow [11]. De Jong *et al.* [12▪] demonstrated that Fairburn *et al.*'s [13] enhanced CBT for eating disorders (CBT-E) can be delivered more quickly and via less intensive interventions than treatment as usual, and was more effective in increasing self-esteem. Van den Berg *et al.* [14▪] proved that CBT-E could be well implemented in a routine inpatient and outpatient setting, which also resulted in lower costs. Therefore, we should be encouraged that CBT-ED can be implemented in routine clinical practice. However, it is obviously important to consider the growing evidence that CBT-ED works under those conditions.

DETERMINING COGNITIVE-BEHAVIOURAL THERAPY FOR EATING DISORDERS's BENEFITS IN REAL LIFE SETTINGS

The recommendations of the NICE [1] guideline regarding CBT-ED were based primarily on the outcome of well controlled and supported research trials [8,15]. While there were also studies that indicated the effectiveness of those therapies in routine clinical practice [9,16,17], that evidence has been supported by several further studies, which broadly demonstrate that CBT-ED delivered in routine clinical settings can have the same impact as when it is delivered in research settings, though the attrition rate tends to be higher [18–20].

DETERMINING COGNITIVE-BEHAVIOURAL THERAPY FOR EATING DISORDERS's BENEFITS IN SELF-HELP SETTINGS

Self-help approaches are lower intensity interventions, which can have substantial benefits in terms of accessibility and cost, as long as they are relatively effective. Therefore, it is positive that recent research has enhanced the evidence that CBT-ED guided self-help can be effective, in specific forms and for certain eating disorders [21▪,22,23].

PREVENTION METHODS

The most widely used prevention-oriented CBT-ED approach is the Body Project, which was well established by 2017 [24]. Since that time, the Body Project has been widely rolled out in a number of studies. Most importantly, it is beginning to establish its effectiveness in a range of countries and in non-Western cultures [25▪,26]. Other CBT-based body

image prevention methods have also been shown to be effective, but with smaller effect sizes [27].

COMORBIDITY

Studies such as Fairburn *et al.* [8] and Turner *et al.* [9] had already shown that CBT-ED has positive impacts on other, comorbid aspects of psychopathology, such as depression and anxiety. That finding has been extensively consolidated in the past five years, with evidence that CBT-ED has a particular impact on comorbid depression, anxiety, self-esteem, and quality of life [12▪,28–30].

CLINICIAN ADHERENCE TO COGNITIVE-BEHAVIOURAL THERAPY FOR EATING DISORDERS PROTOCOLS

The evidence above shows that that CBT-ED can be delivered in nonresearch settings [31,32], indicating that it is viable in all settings, as long as the clinician delivers the core techniques that effect change. Unfortunately, preliminary evidence that many clinicians do not deliver core tasks of CBT-ED [10] has been replicated very closely [33], confirming that clinicians' emotions, beliefs and reactions to patients play a part in whether patients receive key elements, such as exposure therapy, weighing, etc. [34]. In particular, it appears that apparently inflated beliefs about the therapeutic power of the working alliance results in lower adherence to core CBT-ED methods [35].

ADVANCES IN THE FIELD OF COGNITIVE-BEHAVIOURAL THERAPY FOR EATING DISORDERS

As detailed above, some of the new evidence regarding CBT-ED has reinforced our existing understanding of the role of this therapy. However, there is also a substantial amount of new research, which allows us to develop new understanding and clinical practice.

IMPACT OF COGNITIVE-BEHAVIOURAL THERAPY FOR EATING DISORDERS ON YOUNGER PEOPLE

CBT-ED was not recommended as a first choice treatment for nonadults in NICE [1] and Dutch guidelines [2], due to a lack of evidence to support its use. However, since that time there has been promising research on the treatment of the eating disorders that are most commonly associated with children, and on when CBT-ED might be the appropriate choice for young people.

Comparison with family based treatments

Dalle Grave *et al.* [36,37▪] indicate strong conceptual reasons for using CBT-ED with adolescents and children. Although Le Grange *et al.* [38] have shown that FBT is superior to CBT-ED for bulimia nervosa (at least in the short-term), not all cases are suitable for FBT. Craig and colleagues [39] have shown that CBT-ED is a strong alternative to family based therapies in this age group, where the family or patient fail to engage in FBT or where FBT has not been effective. Therefore, it appears that CBT-ED is a suitable approach where FBT is not viable or does not work.

Impact on Avoidant/Restrictive Food Intake Disorder in younger cases

The development in 2013 of a new diagnostic structure for eating disorders [6] provided us with a new category (ARFID), but no treatments to offer to the many parents who wanted help with their children once they heard about this new diagnosis [40]. Moreover, the diagnosis of ARFID is also applicable to adults, for whom no RCTs have been conducted, as yet. The 2017 NICE guidelines [1] had no recommendations about what to offer this group, due to the lack of evidence at that time. The Dutch guidelines [2] recommended a behavioural 12-step program (SLIK) [41] for very young children, but unfortunately that was not published internationally. For older children (and adults), those guidelines suggested using a form of CBT as applied in the field of anxiety disorders - a focus on exposure combined with expectancy violation.

Since then, there has been considerable progress in the development of measures [42] and cognitive-behavioural approaches [43▪,44▪] that appear to offer very positive outcomes for young people. Although more definitive RCTs are needed to support these early developments, it is clear that CBT-ED (in the form of CBT-AR) is a very promising potential means of treating a wide range of younger cases. The principles (e.g., focus on exposure) can also be extended to working with adults, though we are still awaiting evidence for these forms of CBT-ED for ARFID beyond childhood years.

DEVELOPMENT OF THERAPEUTIC METHODS IN COGNITIVE-BEHAVIOURAL THERAPY FOR EATING DISORDERS

Different CBT-ED models emphasise specific CBT elements to different degrees. For example, Fairburn's CBT-E [13] does not use exposure therapy, whereas it is central to other approaches [43▪,45,46]. However, a number of methods have come to

prominence in recent years, and are likely to be important in CBT-ED training.

Inhibitory learning approach to exposure

This approach is based on developments in the field of CBT for anxiety disorders, but has begun to be used effectively in the field of CBT-ED [30,43▪,46–49]. This approach requires pushing for more substantial change than many clinicians are used to, in order to achieve the necessary expectancy violation and positive learning, but the outcomes are likely to be more positive and sustained than the graded exposure method.

Virtual reality methods

Another promising direction is the use of virtual reality methods, which become more viable as technological costs fall. For example, Nameth *et al.* [50] have shown that virtual reality can be used to deliver cue exposure among patients who binge. Similarly, Porras-Garcia *et al.* [51▪] have demonstrated that virtual reality body exposure has positive effects on body image.

Imagery

Although imagery is a very broad church in CBT, the evidence to date appears to support the use of imagery rescripting in body image work and in working with emotional states more broadly [30,52]. It appears to be related to working with the 'anorexic voice' in CBT-ED [53].

Progress and routine outcome measures

The use of Progress and Routine Outcome Measures (PROMS) is well established as key to enhanced outcomes in psychotherapy [54▪▪]. The ability to use the weekly information provides feedback that the clinician and patient can use collaboratively. Although this has still to be shown to be effective in CBT-ED, a key step has been the development of measures that allow eating pathology to be measured weekly [55▪,56,57], rather than monthly, as before [58].

THE ROLE OF TEMPORAL FACTORS IN COGNITIVE-BEHAVIOURAL THERAPY FOR EATING DISORDERS

The duration of therapies for eating disorders is comparatively long, relative to that for other disorders. Such long durations might be necessary, but that issue needs to be considered, as it makes therapy relatively costly in a number of ways. Time is an important issue in three interlinked areas of treatment for eating disorders – the treatment dose effect, the benefits of early change, and speed of access to therapies. These issues will be considered with particular reference to recent CBT-ED findings, before considering the potential value of briefer therapies.

Treatment dose effect

Clinicians routinely act as if adding more therapy will enhance the treatment benefits (the 'treatment dose effect'), though the evidence for this is limited. For example, Delgadillo *et al.* [59] have shown that treatment effects tail off substantially after six sessions of CBT for depression. More recent evidence has supported that conclusion in treatment of eating disorders, both across therapies [60] and specifically for CBT-ED [31]. Rose and Waller [31] found that the impact of therapy tended to plateau after the 8^{th}–12^{th} session, for a range of eating disorders (including underweight patients). This finding stresses the need for early change, before the treatment becomes less potent.

The benefits of early change

As with other disorders [61], early change has been proposed to be key to longer-term treatment outcome. There have been several meta-analyses demonstrating that early change is a key predictor (possibly the key predictor) of treatment outcome across eating disorders [62▪▪,63,64]. Although these reviews have not been specific to CBT-ED, the papers that they review indicate very clearly that early change is critical in the outcome of eating disorders when using CBT-ED Figure 2 in [62▪▪].

Early access to treatment

It is reasonable to assume that shortening waiting times will enhance outcomes for patients with eating disorders, as they do for other mental health problems [65]. In the UK, the First Rapid Early Intervention for Eating Disorders (FREED) has been set up to address this issue, to ensure that patients get treatment as quickly as possible. Although the results to date are promising [66▪], there are no data that specifically relate to CBT-ED at present. The impact of early access to CBT-ED requires further research, to determine whether this specific therapy is more beneficial if accessed early in the eating disorder and after a short waiting time.

BRIEF COGNITIVE-BEHAVIOURAL THERAPIES FOR EATING DISORDERS

Given the impact of these temporal factors, it can be suggested that a brief, effective therapy is important,

to reduce waiting times and to ensure rapid access. NICE [1] made the specific research recommendation that briefer treatments should be explored. In part, this was due to the cost of treating eating disorders relative to other disorders, and in part it was in response to the fact that treatments that are longer than necessary result in extended waiting times for patients who might otherwise benefit from that treatment, with potential long-term negative impacts for those with eating disorders of relatively recent onset.

Since that time, there has been considerable evidence for the benefits of brief forms of CBT-ED for nonunderweight patients, along with evidence that a brief form of group dialectical behaviour therapy (DBT) can be as effective as longer versions [67]. The development of a 10-session version of CBT-ED (CBT-T) [68] has been supported by case series and cohort comparison studies showing that this approach is as effective as 20-session therapy (e.g., CBT-E), with comparable outcomes at the end of treatment and at follow-up [30,69,70,71▪]. However, while these brief therapies offer rapid access to effective treatment for the majority of patients with eating disorders, there remains a very pressing need for further research into effective brief therapies for anorexia nervosa, speeding access and implementing effective treatments that take less than the current recommendation of up to 40 sessions of CBT-ED.

'SEVERE AND ENDURING' EATING DISORDERS

A different issue relating to temporal factors is the proposal that individuals with 'severe and enduring' eating disorders (particularly anorexia nervosa) are less likely to recover from their eating disorder, and hence should be treated in a way that is more about supporting quality of life than aiming for recovery. The research in this field is limited by inconsistent definitions of severity and duration [72–74] and poor methodological quality [75], meaning that there is no clear evidence of a distinct syndrome of 'severe and enduring' disorders. However, a meta-analysis [76] has shown no evidence of any impact of duration on treatment outcomes. In keeping with that conclusion, recent studies have shown that severity and duration have no impact on the outcome of CBT-ED for anorexia nervosa, whether in intensive or outpatient settings [77–79]. Therefore, whether or not there is a syndrome of 'severe and enduring' eating disorders (and the evidence is very weak at present), there is no evidence that CBT-ED needs to be adapted to work successfully with such patients. Indeed, it could simply be the case that the patients who we label as 'severe and enduring' only receive that label because they have never had access to good therapy before (either receiving nonevidence-based therapies or receiving therapies where the evidence-based elements have been omitted – see above). Hence, any future definition of this 'syndrome' (which remains hypothetical at present) would have to take account of whether or not the patient had had evidence-based treatments in the past.

WHERE TO NEXT? EVOLVING RESEARCH INTO COGNITIVE-BEHAVIOURAL THERAPY FOR EATING DISORDERS, AND GAPS THAT NEED TO BE ADDRESSED

The material presented above has shown that CBT-ED has developed substantially over the past 5 years, with both consolidations of existing knowledge and development of exciting new areas such as CBT-ED for ARFID. However, there are other developments that are under way, and other areas that need to be addressed.

ONLINE DELIVERY OF COGNITIVE-BEHAVIOURAL THERAPY FOR EATING DISORDERS

The impact of online/telehealth treatment methods in eating disorders has previously been very limited [11]. However, since the onset of COVID-19, online/telehealth methods of delivery have received considerable attention, with detailed clinical recommendations being made for the delivery of CBT-ED [80,81▪]. Although it is too early to conclude whether these new recommendations make online CBT-ED, viable, current data collection should allow us to reach that conclusion, to guide planning for the future. This approach offers the important possibility of widening access to evidence-based treatments to populations where there are no local services.

'THIRD WAVE' THERAPIES

Third wave therapies include a relatively diverse set of developments of CBT, often characterised by a focus on approaches such as mindfulness, self-compassion and metacognition. Some are well established as being moderately effective compared to CBT-ED, such as DBT, and include elements that have been incorporated into existing CBT-ED approaches. Recent developments have been limited, though Blood *et al.* [82] and Adams *et al.* [67] have shown that DBT can be delivered in routine clinical settings, and in a briefer form. Furthermore, Lammers *et al.* [83] showed comparable results in clinically meaningful changes for DBT-ED and CBT in obese patients with binge eating disorder. It is also

clear that self-compassion is effective in reducing body and eating concerns [84], though this has largely been shown in nonclinical groups rather than clinical samples, so further application to clinical settings is needed. Although there is similar emergent evidence for other third-wave and emerging therapies for eating disorders (e.g., Integrative Cognitive-Affective Therapy), the data remain limited [85], and more comprehensive evidence is needed before one can be conclusive about their effects.

DIVERSITY

In other areas of mental health, CBT's suitability for diverse populations has been addressed to a greater degree than in CBT-ED. Although there have been a small number of studies demonstrating the effectiveness of CBT-ED with nontraditional clients [25▪,86], this is an area where substantially more work is required, and where potentially necessary adaptations are considered and tested in groups with different ethnicity, race, sexual identity, gender, gender identity, religion and more.

THE NEED FOR EVIDENCE-BASED SUPERVISION

Case-focused supervision is established as ensuring that supervisees deliver more effective CBT [87]. However, the value of such supervision has yet to be tested in the field of eating disorders. To do so will require the development of disorder-specific measures of supervisor and clinician competence, to ensure that such supervision can be rolled out widely.

COGNITIVE-BEHAVIOURAL THERAPY FOR EATING DISORDERS FOR RARER EATING DISORDER VARIANTS

Understandably, the eating disorders literature has tended to focus on the development of treatments for the more commonly presenting disorders. However, there are a number of less common presentations that merit further attention. Further research is required to build on existing preliminary evidence regarding the use of CBT-ED for disorders such as pica [88], rumination disorder [89], purging disorder [90], and night eating syndrome [91].

THE THORNY ISSUE OF ANOREXIA NERVOSA

Finally, it is important that all therapies – CBT-ED included – face the fact that our effectiveness with underweight cases is far too limited. This review has shown that we have made considerable advances in working with nonunderweight adults and with younger patients with ARFID. However, our outcomes when treating anorexia nervosa remain far poorer, whatever the therapy. Based on a review of the evidence to date, Waller and Raykos [46] have suggested that a focus on a more behavioural approach might be the necessary element that needs to be enhanced in CBT-ED for anorexia nervosa.

CONCLUSION

CBT-ED has developed substantially in the past 5 years, with consolidation of its existing evidence base, further support for real-life implementation, extension of methods used, and the development of new approaches for working with younger people – particularly in the form of much-needed treatments for ARFID. Over the past 18 months, there have been even more promising changes in delivery in response to the COVID-19 pandemic, showing that we can adapt our methods in order to work effectively via remote means. There remains a real need for improvement, especially as we roll out our treatments for ARFID and young people in general and towards adults with ARFID, and tackle the problem of comparatively poor outcomes for anorexia nervosa. However, it is certainly important to acknowledge how far CBT-ED has advanced in recent years.

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G.W. is co-author on and receives royalties from three text books cited in the work (Becker et al., 2020; Waller et al., 2007; Waller et al., 2019).

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- ▪ of special interest
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