Evidence-based Clinical Guidelines for Eating Disorders: International Comparison

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Running title: Evidence-based Clinical Guidelines for Eating Disorders

Abstract

Purpose of review – This systematic review sought to compare available evidence-based clinical treatment guidelines for all specific eating disorders.

Recent findings – Nine evidence-based clinical treatment guidelines were located through a systematic search. The international comparison demonstrated notable commonalities and differences among current evidence-based clinical guidelines for eating disorders. Consistency across guidelines was greatest for treatments with a larger evidence base, while those with a lower evidence base had recommendations that varied considerably.

Summary – Evidence-based clinical guidelines represent an important step toward the dissemination and implementation of evidence-based treatments into clinical practice. Despite advances in clinical research on eating disorders, a growing body of literature demonstrates that individuals with eating disorders often do not receive an evidence-based treatment for their disorder. Regarding the dissemination and implementation of evidence-based treatments, current guidelines do endorse the main empirically validated treatment approaches with considerable agreement, but additional recommendations are largely inconsistent. An increased evidence base is critical in offering clinically reliable and consistent guidance for the treatment of eating disorders. Because developing and updating clinical guidelines is time-consuming and complex, an international coordination of guideline development, for example, across the European Union, would be desirable.

Keywords – eating disorders, evidence-based, guideline, treatment, therapy

Introduction

Anorexia nervosa (AN), bulimia nervosa (BN), and binge-eating disorder (BED) represent the specific eating disorders defined in the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5 [1]). They are characterized – at varying degrees – by persistent disturbances in eating or weight-control behavior and shape and weight overconcern. The central characteristic of AN is a significantly low body weight, induced by restriction of energy intake. The main features of BN and BED are recurrent binge-eating episodes. While individuals with BN usually attempt to prevent weight gain through inappropriate compensatory behaviors (e.g., self-induced vomiting), those with BED do not make recurrent use of them. All eating disorders result in significant impairments in health, psychosocial functioning, and quality of life [2,3]. Increased health care utilization and health care costs have been documented [4,5]. With a first onset that often occurs in adolescence or young adulthood [6], AN and BN show a long-term natural course with remission in more than 50% of cases, whereas evidence on the natural course of BED is scarce [7]. While AN occurs in up to 4% of young women [7,8], BN and BED have a lifetime prevalence of 1.0% and 1.9%, respectively [9].

Given the clinical significance of eating disorder symptomatology, over the past decades sustained effort has been placed on designing and evaluating psychological and medical treatments for eating disorders in rigorous, randomized-controlled efficacy studies [10–14]. Despite these advances, a growing body of literature demonstrates that individuals with eating disorders often do not receive an evidence-based treatment for their disorder [15,16]. For example, Kessler et al. [9] documented in 24,124 adults from 14 countries that only 47.4% of lifetime cases with BN and 38.3% of lifetime cases with BED ever received a specific treatment for their eating disorder. In a study among 5,658 women 40-50 years old from the United Kingdom (UK), only 27.4% of all women with a DSM-5 life-time diagnosis of an eating disorder had sought help or received treatment for an eating disorder at any point

in their life [17]. Multiple system factors (e.g., lack of screening for eating disorders) and personal patient factors (e.g., lack of information) may account for this “treatment gap” [15,18,19]. In addition, a “research-practice gap,” indicating a discrepancy between evidence-based treatments and actual treatment delivery, was identified: As an example, the majority of eating disorder therapists do not adhere to evidence-based treatment protocols, but rather pursue eclectic combinations of interventions [20–22]; findings such as this highlight the significant challenge of disseminating and implementing of evidence-based eating disorder treatments into clinical practice [15,23,24].

As a first step toward the dissemination and implementation of evidence-based treatments into clinical practice, evidence-based clinical guidelines for eating disorders were issued in several countries across the world. Their general aim is to inform clinical decision-making of health care professionals and patients on efficacious interventions and treatment strategies. Based on a systematic search, selection, and evaluation of the treatment literature, evidence-based treatment guidelines offer specific recommendations in order to optimize patient care [25–27]. In one narrative review, Herpertz-Dahlmann et al. [28] compared several evidence-based clinical guidelines from four European countries (Germany, Spain, The Netherlands, and the UK) regarding the treatment of AN. They found correspondence in major recommendations, but no consensus on treatment intensity/setting, as well as no consensus and lack of evidence on nutritional rehabilitation and weight restoration. The authors identified a need for European research initiatives on AN in order to enhance the evidence base and clinical guidance. Since this report, several new guidelines were issued (e.g., The Netherlands, UK, Australia), however, current comparative information is lacking, especially for BN and BED. This systematic review sought to compare the available evidence-based clinical treatment guidelines for all specific eating disorders in order to investigate the necessity of future work on guidelines for translation into practice.

Method

Guideline Identification

In May 2017, we systematically searched the electronic databases PubMed and Cochrane Database of Systematic Reviews ("guideline AND (eating disorder OR anorexia nervosa OR bulimia nervosa OR binge-eating disorder)"); the National Guideline Clearinghouse and the International Guideline Library ("eating disorder OR anorexia nervosa OR bulimia nervosa OR binge-eating disorder"); the website of the Academy of Eating Disorders through which partners and affiliate organizations were obtained and contacted; and contacted other experts in the field. Relevant clinical guidelines were required to be evidence-based; the latest version; address the treatment of AN, BN, and/or BED; have a focus on adults; to be published in Dutch, German, or English; and have a national or international scope.

Assessments and Analysis

In order to compare the content of the guidelines, key recommendations were summarized regarding pre-defined categories. For AN, BN, and BED, these categories included: first-line treatment setting, criteria for hospitalization, recommended treatment modalities including nutritional counseling, specific psychological interventions, and medications. For the treatment of AN, guidelines were additionally compared with respect to the following categories: compulsory treatment, criteria for partial hospitalization, criteria for discharge, recommended energy intake and weight gain, feeding supplements, and artificial feeding.

Included guidelines were independently examined by two authors. Relevant content was extracted into a pre-defined coding table using the guidelines' original text by one author with corrections from the second author. For comparative purposes, it was noted whether a recommendation was given (✓) or not reported (N.R.), and if possible, the guidelines'

recommendations were recoded into three ratings: explicit recommendation in favor (+), recommendation requiring caution ((+)), and recommendation against (-). In addition, and if recoding was not possible, the guidelines' recommendations were reported in text format.

Results

A total of 33 guidelines were identified, as depicted in the PRISMA flow chart (Figure 1). Most guidelines had to be excluded for not meeting the language criterion (n = 12). In addition, 5 guidelines were earlier versions of included guidelines, 4 guidelines were non-evidence based, 2 guidelines solely focused on childhood eating disorders, and 1 guideline had a regional scope. Accordingly, 9 guidelines from 8 countries, published between 2009 and 2017, were included in this report.

Most guidelines (n = 7) included treatment recommendations for AN, BN, and BED: these were the guidelines from Australia and New Zealand (AUS; [29]), Germany (GER; [30]), the Netherlands (NETH; [31]), Spain (SP; [32]), the United Kingdom (UK; [33]), the United States (US; [34,35]), and the World Federation of Societies of Biological Psychiatry (WFSBP; [36]). The guideline from Denmark (DEN; [37,38]) addressed the treatment of AN and BN, while the French guideline (FR; [39]) focused on AN only. All guidelines are described in Table 1. The guideline by the WFSBP provided recommendations for medical treatment of eating disorders only, whereas all other guidelines addressed several treatment approaches. The majority of guidelines were developed by multi-professional working groups (AUS, FR, GER, NETH, SP, UK), while both the US and WFSBP guidelines were developed by psychiatric groups. Regarding the modernity of the guidelines, 3 guidelines were published within the last 3 years (AUS, DEN, UK) or are currently being published (NETH), while the remainder were published at least 5 years ago (FR, GER, SP, US, WFSBP).

Comparison

The comparative results for AN, BN, and BED are summarized in Tables 2, 3, and 4.

Anorexia nervosa. All guidelines which provided information on the treatment setting (n = 7) consistently recommended outpatient treatment as a first-line therapy setting for patients with AN. For determining more intense levels of care, most guidelines provided criteria for partial (n = 5) and full-time hospitalization (n = 7). The degree of detail and range of hospitalization criteria varied between guidelines. However, the guidelines consistently emphasized the necessity to decide about hospitalization on an individual basis taking multiple factors into account. Overall, hospitalization should be considered for patients who have failed at outpatient care, or who are at high risk for medical complications as determined using patient's weight status (e.g., extremely low body mass index), behavioral factors (e.g., decline in oral intake), vital signs (e.g., heart rate < 40 beats per minute), psychiatric comorbidity (e.g., suicide risk), or environmental aspects (e.g., family support). For very malnourished patients who do not consent to treatment, most guidelines provided some information on compulsory treatment (n = 7). Criteria for discharge from hospital were specified by the majority of guidelines (n = 7).

The majority of guidelines (n = 6) emphasized the importance to treat patients with AN and eating disorders in general, respectively, by specialized professionals and/or by professionals with substantial experience in the treatment of eating disorders. Regarding specific treatment modalities, most guidelines included recommendations for nutritional management ranging from artificial feeding (n = 8) to general nutritional counseling (n = 6). Although the extent to which information on artificial feeding was given differed among guidelines (e.g., concerning refeeding practice, duration, or indication), guidelines consistently favored oral enteral nutrition over parenteral nutrition which should only be used as a last option. Regarding general nutritional counseling, 2 (GER, UK) of 6 guidelines explicitly stated that it should be part of a multidisciplinary therapy approach and not used as a stand-alone treatment. While there was substantial agreement across guidelines about the

amount of recommended weight gain per week in inpatient and outpatient settings, mostly ranging between 0.5-1.5 kg and 0.2-0.5 kg, respectively, variation in the amount of recommended energy intake per week was apparent. While some guidelines recommended daily energy intakes of 30-40 kcal/kg (GER, US) or higher (NETH), others recommended considerably lower intakes (SP, UK), particularly for severely malnourished patients at risk for refeeding syndrome. Among the 7 guidelines which specified the use of nutritional supplements, there was a large variation of recommendations regarding the type and indication for nutritional supplements. Some guidelines specifically recommended phosphate (n = 6), thiamine (n = 3), zinc (n = 2), or potassium (n = 2), if indicated, while others made a general recommendation for mineral or vitamin supplements (n = 3).

Although psychotherapy was deemed a central part of treatment by all guidelines, only 7 guidelines recommended specific psychological interventions. All 7 guidelines recommended family-based therapy (for greater detail, see Herpertz-Dahlmann in this issue; [40,41]), particularly for younger patients. For individual psychotherapy, most guidelines recommended cognitive-behavioral therapy (n = 6) which intervenes at the symptom level and centers on the modification of dysfunctional behaviors and cognitions that maintain the disorder [42]. It was recommended as a first-line psychotherapy for AN by 2 guidelines (NETH, UK). Lesser agreement was achieved for psychodynamic therapy and interpersonal psychotherapy, which were explicitly recommended as an alternative by 4 and 2 guidelines, respectively. While psychodynamic therapy includes treatments that operate on an interpretive-supportive continuum [43], interpersonal psychotherapy is a focused, goal-oriented treatment which seeks to treat an eating disorder through resolving interpersonal problems in the context of what the disorder presents [44,45]. Further, the cognitive-interpersonal approach Maudsley Anorexia Nervosa Treatment for Adults [46] and the Specialist Supportive Clinical Management [47,48] were recommended as first-line therapies by 2 guidelines (NETH, UK). While the German guideline only made a general

recommendation for psychological interventions, it recommended involving the patient's family in the treatment of children and adolescents. Some guidelines noted that psychological interventions would be more effective in medically stabilized and cognitively improved patients (n = 3) or through combining psychological and nutritional interventions (n = 1).

Regarding the pharmacological treatment of AN, 5 of 9 guidelines provided specific recommendations with some notable variations. Two guidelines made the general recommendation that medication should not be used as the sole or primary treatment for patients with AN (SP, UK) or that there is no specific medication to treat AN (FR). Antidepressants were generally recommended for those with depressive symptoms by 4 guidelines. At the same time, the German guideline cautioned against the use of antidepressants for weight gain. For selective serotonin reuptake inhibitors (SSRIs), there was 1 guideline which recommended its use for treating depressive symptoms in conjunction with psychotherapy or after weight restoration (US), while two other guidelines made general recommendations against their use, particularly in children and adolescents (AUS, NETH). The use of tricyclic antidepressants was not explicitly favored, given that there was 1 recommendation against (US) and 1 cautious recommendation in favor (FR). The use of monoamine oxidase inhibitors (MAOIs) or bupropion, an atypical antidepressant, was not recommended by the US guideline, the only guideline reporting on these medications. Four guidelines consistently recommended the cautious use of antipsychotics for treating obsessional thinking in patients with AN, particularly olanzapine, because evidence from randomized-controlled trials and regarding long-term effects were lacking. Conflicting results were found for weight gain, given that 1 guideline recommended antipsychotics for weight gain (US) while another guideline stated that antipsychotics would not be appropriate for weight gain (GER). Pro-motility agents and anti-anxiety agents were only recommended by the US guideline for treating gastrointestinal problems and to reduce anticipatory anxiety concerning food intake, respectively. The use of appetizers and lithium was not recommended

by the German guideline. In addition, 4 guidelines consistently stated that estrogen should not be routinely offered to patients with AN, as this would depend on the patient's menarche status or chronicity of AN, for example.

Adjunctive treatment recommendations were rarely made and included meal support, eating training, and supervised physical activity, as described by the Danish guideline. Physical therapies (e.g., electroconvulsive therapy, transcranial magnetic stimulation) were not recommended by 2 guidelines. Of note, 4 guidelines included information on the medical management of AN and 3 guidelines additionally reported on pregnancy and pregnancy attempts. Two guidelines specifically provided information about the treatment of physical and mental comorbidities, as well as artificial feeding including refeeding syndrome.

Bulimia nervosa. Among the guidelines reporting on the prioritized treatment setting of BN, all recommended outpatient therapy as a first-line treatment (n = 5). Four and 5 guidelines provided criteria for partial and full-time hospitalization, respectively. Regarding specific treatment modalities, nutritional counseling was generally recommended by the Danish guideline, in individualized or standardized format, while 2 other guidelines emphasized that nutritional interventions (e.g., to help develop a structured meal plan) should not be offered as stand-alone therapy (SP, US).

Other than the WFSBP guideline, all available guidelines issued recommendations on specific psychological interventions. In agreement, 5 guidelines recommended cognitive-behavioral therapy as a first-line psychotherapy for patients with BN, particularly in an individual format. The remaining 2 guidelines also made recommendations in favor of cognitive-behavioral interventions, but prioritized cognitive-behavioral, guided self-help treatment as a first-line treatment (UK), or did not provide an explicit treatment hierarchy (SP). Overall, among the 6 guidelines which recommended self-help approaches, 4 highlighted the use of guided self-help based on cognitive-behavioral interventions (AUS, GER, NETH, UK), i.e., using structured self-help manuals supplemented with brief

supportive sessions [49]. Interpersonal psychotherapy was recommended as an alternative to cognitive-behavioral therapy by most guidelines (*n* = 4), while psychodynamic therapy (*n* = 2) was rarely recommended. Family-based therapy was in particular recommended for younger patients with BN (*n* = 4), and only explicitly recommended for adults by the US guideline. While the German guideline recommended cognitive-behavioral therapy for children and adolescents with BN, they emphasized the importance of including the patient's family into treatment. Alternative psychological interventions were, for example, the combination of psychodynamic and cognitive-behavioral therapies (*n* = 1), couples therapy (*n* = 1), or support groups (*n* = 1).

Among the recommendations for pharmacological treatment, 7 out of 8 guidelines consistently recommended antidepressants, specifically the SSRI fluoxetine, although with some restrictions (e.g., to use antidepressants in combination with psychotherapy). Conflicting recommendations were obtained for the use of tricyclic antidepressants such as imipramine and desipramine, which were recommended by the WFSBP, while the US guideline explicitly did not recommend tricyclic antidepressants for initial treatment in patients with BN. Consistently, 2 guidelines advised against the use of MAOIs (US, WFSBP). The use of anticonvulsants, specifically topiramate, was consistently recommended by 2 guidelines, while the remaining guidelines did not report on anticonvulsants. The only guideline which made a recommendation about lithium cautioned against its use (US). For patients with comorbid obesity, 1 guideline recommended the anti-obesity medication orlistat (AUS).

Of note, 4 guidelines included specific information about the treatment of comorbidities, and 3 guidelines made recommendations for the medical management of BN.

Binge-eating disorder. Only 3 out of 7 available guidelines explicitly included the recommendation that outpatient treatment is the first-line treatment setting for BED (GER, NETH, UK). Criteria for hospitalization were provided by 4 guidelines (AUS, GER, NETH,

UK). An explicit recommendation for nutritional counseling was made by the US guideline, specifically within the context of behavioral weight loss programs. The Spanish guideline generally recommended nutritional counseling for patients with eating disorders, with a psychiatrist's approval.

All guidelines provided recommendations for specific psychological interventions, except the WFSBP guideline. Cognitive-behavioral therapy was consistently recommended by all 6 guidelines, followed by guided (n = 6) or unguided (n = 2) cognitive-behavioral self-help treatment and interpersonal psychotherapy (n = 4). An explicit recommendation for psychodynamic therapy was made by the German guideline only. With respect to first-line psychotherapy, 4 guidelines recommended cognitive-behavioral therapy, while 1 guideline favored guided cognitive-behavioral self-help treatment (UK). Regarding the treatment format, guidelines varied highly, with 1 guideline specifically recommending individual psychotherapy (AUS), 1 prioritizing group format (UK), and 2 guidelines not including any preference (NETH, US). Family-based treatment was recommended for children and adolescents with BED by the Dutch guideline only.

The use of antidepressants was generally recommended by 3 guidelines (AUS, SP, US). These 3 guidelines and 3 other guidelines (GER, NETH, WFSBP) consistently made a specific recommendation in favor of SSRIs for reducing binge-eating episodes, at least in the short-term. For tricyclic antidepressants, only the WFSBP recommended their use, particularly imipramine. For anticonvulsants, 3 guidelines (AUS, US, WFSBP) consistently recommended the use of topiramate, while the remaining guidelines did not report on it. Consistently, 2 out of 2 guidelines reporting on anti-obesity medications explicitly recommended their use, specifically orlistat, for weight loss in patients with BED and comorbid obesity. In addition to weight loss, the anti-obesity medication sibutramine was recommended for reducing binge eating (US). Two guidelines explicitly made a

recommendation for pharmacological treatment in conjunction with psychological therapies (AUS, US).

Of note, 3 guidelines reported on the treatment of comorbidities, and 2 guidelines made recommendations for the medical management of BED.

Discussion

This systematic review of evidence-based clinical guidelines for eating disorders revealed many consistent recommendations, but also notable differences among the guidelines.

For the treatment of AN, the guidelines showed a substantial agreement on the amount of recommended weight gain, while recommended daily energy intakes varied considerably, which is consistent with Herpertz-Dahlmann et al. [28], who had narratively reviewed four European guidelines for the treatment of AN. Also in line with their findings, the recommendations for nutritional supplements varied widely, against a background of a lack of evidence. More consistently, most guidelines made recommendations for specific psychological interventions in the treatment of AN, especially for family-based therapy for younger patients, because of a large evidence base [40,50,51]. Most guidelines further supported cognitive-behavioral therapy [52]. Cognitive-behavioral therapy, the Maudsley Anorexia Nervosa Treatment for Adults, and the Specialist Supportive Clinical Management were even recommended as first-line therapies by the two current guidelines from the Netherlands and the UK, based on recently published results [53,54]. Little agreement was found for psychodynamic therapy and interpersonal psychotherapy as alternative treatments, because of scant evidence for their use [55–57]. A need for further research on the psychological treatment of AN was noted for all ages [28,58].

Regarding pharmacotherapy of AN, recommendations varied widely – four guidelines, among them the medically-oriented WFSBP guideline, made no specific recommendation for

any medication, or advocated against their sole or primary use. The greatest level of consistency across four out of nine guidelines was found for the careful use of antipsychotics to reduce associated obsessional thinking in patients with AN, but it was inconsistent whether or not antipsychotics should be recommended for weight gain. In addition, three guidelines generally recommended antidepressants for the treatment of depressive symptoms, but a consistent recommendation for specific types of antidepressants (SSRIs, tricyclic antidepressants) could not be identified. Single guidelines' recommendations emerged regarding other medications, for example, against the use of bupropion. Estrogen was with some consistency recommended to be offered only upon specific indication (see [59]). Overall, these inconsistent pharmacological recommendations for the treatment of AN may reflect the scarce evidence base for the pharmacological treatment of this disorder [13,28,60].

For the treatment of BN, all guidelines but the medically-oriented WFSBP guideline issued recommendations on specific psychological interventions: The majority of them recommended cognitive-behavioral therapy as a first-line treatment for BN, reflecting the treatment literature [11,52]. In contrast, the UK guideline recommended offering cognitive-behavioral self-help treatment first, presumably because of an emphasis on cost-effectiveness [27], for which initial data are available [61]. Interpersonal psychotherapy was recommended as an alternative to cognitive-behavioral therapy by the majority of guidelines, given its slower short-term efficacy, but equivalent long-term efficacy [52]. Psychodynamic therapy was recommended by the German and US guidelines only, despite its limited evidence base [62,63], possibly because of particularities in health care systems. Family-based therapy was recommended mostly for younger patients by half of the guidelines, which is supported by recent clinical research [64]. Most guidelines recommended self-help treatment, and the majority of these, especially the more recent guidelines, emphasized guided cognitive-behavioral self-help treatment, documented to be efficacious in the treatment of BN [65]. A few recommendations with unclear rationale and/or sparse evidence base were issued for

alternative treatments (e.g., a combination of psychodynamic and cognitive-behavioral therapies) and nutritional counseling.

Regarding the pharmacological treatment of BN, most guidelines recommended antidepressants for the treatment of BN, specifically the SSRI fluoxetine, albeit with several restrictions (e.g., combined use with psychotherapy only). Fluoxetine has approval for the treatment of adults with BN in several countries (e.g., US, Germany). However, only a few and often inconsistent recommendations were made for the use of tricyclic antidepressants and anticonvulsants, specifically topiramate, and against the use of MAOIs and lithium. Again, these singular and contradictory recommendations may mirror the overall paucity of research on pharmacological treatments of BN [13].

For the treatment of BED, all guidelines provided recommendations for specific psychological interventions (except the medically-oriented WFSBP guideline). Cognitive-behavioral therapy was consistently recommended by all respective guidelines and mostly as a first-line treatment, given its comprehensive evidence base [10, Hilbert A, Petroff D, Herpertz S, et al, unpublished data]. Cognitive-behavioral therapy was followed by cognitive-behavioral self-help treatment, with the majority of guidelines recommending a guided format, a treatment with an increasing evidence base [65, Hilbert et al, unpublished data]. Of note, the guideline from the UK favored guided cognitive-behavioral self-help treatment as a first-line treatment, likely for economic reasons, as described for BN. Interpersonal psychotherapy was further recommended by the majority of the guidelines, based on a small number of studies [52, Hilbert et al, unpublished data]. An explicit non-evidence-based recommendation for psychodynamic therapy was made by the German guideline only [66] reflecting health care system specificities, while family-based treatment was recommended for children and adolescents with BED by the Dutch guideline only, based on emerging evidence for family-based treatment of adolescents with BN [64]. A recommendation for

nutritional counseling was made by two guidelines, which may reflect findings of lower efficacy of this treatment regarding binge-eating outcome [67, Hilbert et al, unpublished data].

Regarding the pharmacological treatment of BED, the majority of guidelines made a recommendation for SSRIs, which is in line with current literature [10], while only the WFSBP guideline recommended tricyclic antidepressants, based on studies published before 1999. Three guidelines recommended the use of the anticonvulsant topiramate; however, the drug's side-effects, especially cognitive impairment, have been noted [68]. Regarding anti-obesity medications, two guidelines recommended orlistat for weight loss in BED and BN [69,70] and sibutramine for binge eating in BED, the latter being withdrawn from many markets because of adverse cardiovascular events. Combined psychological and pharmacological treatment was recommended by two guidelines; however, this is not supported by current evidence [71, Hilbert et al, unpublished data].

Overall, consistency across guidelines seemed to be the greatest for psychological treatments and for single medications with a larger evidence base, while for psychological and medical treatments with a smaller evidence base, recommendations varied considerably, and expert consensus played a greater role. Regarding the dissemination and implementation of evidence-based treatments into clinical practice, the guidelines thus do endorse main empirically validated treatment approaches with considerable agreement, but beyond this, the variability is greater in what recommendations evidence-based clinical guidelines subsume. A larger evidence base is critical in offering clinically reliable and consistent guidance in eating disorders, and many important areas of future clinical research have been identified for all eating disorders at different ages, given the treatment gap and the research-practice gap described at the outset of this article [15,22].

The available evidence is one reason for differences among guidelines. Among additional reasons, while several guidelines were issued within the past three years or are about to be published, the majority were five years and older. Especially for disorders such as

BED with a large recent increase in clinical research [Hilbert et al, unpublished data], changes in recommendations over time are to be expected. Several recommendations were non-evidence-based and likely reflected particularities in health care systems, for example, the availability of outpatient, day patient, and inpatient settings or of therapists trained in a specific intervention. The guidelines differed as well in their scope, considering treatment in selected aspects (e.g., DEN, FR) or comprehensively (e.g., GER, US). Some guidelines were created by one health care profession or one specialized professional organization only (e.g., US, WFSBP), and may thus reflect the view of this profession only. Most guidelines, however, pursued a multi-professional approach in guideline development, and some of them noted the inclusion of other stakeholders as well. In fact, the current literature for guideline development advocates for broad stakeholder involvement of all relevant professions, health care providers, and patients [e.g., 25–27] for optimal acceptance and implementation.

Another additional source for differences among guidelines may be how the evidence was examined, with guidelines based on meta-analyses (e.g., GER, UK), systematic reviews (e.g., AUS, US), or unsystematic reviews of the evidence (e.g., FR). The transparency with which evidence was converted into specific recommendations further varied across guidelines; several guidelines explicitly evaluated the strength of evidence and provided clear rationale for a specific recommendation (e.g., GER, UK, WFSBP), while others did not (e.g., FR), leaving the empirical foundation of a recommendation unclear. To develop a guideline, it has been recommended to use a systematic approach to evaluate the strength of evidence, for example the Grading of Recommendations Assessment, Development, and Evaluation (GRADE; [72]), or the system of the Oxford Centre for Evidence-Based Medicine [73, see 26]. For some guidelines, only summary statements without the systematic review component were available in the review languages, making the empirical background of a recommendation difficult to understand (e.g., DEN). Guidelines differed further in readability, with most guidelines providing clear or even standardized recommendations that were easily

located (e.g., GER, UK), while others provided them in a more complex text format (e.g., US). Although these aspects are central to the quality of a guideline, it is notable that a systematic quality evaluation [74] of clinical eating disorder guidelines is currently lacking; this was considered to be beyond the scope of this treatment-oriented review, but could help to systematically identify strengths and limitations of current eating disorder guidelines.

Strengths of this study were a systematic compilation of main treatment recommendations of current evidence-based eating disorders guidelines. Not within the scope of this review were: general setting-oriented recommendations (e.g., communication with the patient, therapeutic infrastructure, organization of transitions between different levels of care); methods for the identification, assessment, and diagnosis of eating disorders; and the practical applicability of the guidelines and their actual implementation in clinical settings. Several of these aspects warrant further investigation. One further limitation is that several guidelines had to be excluded from this review because of not meeting the language requirement. For further comparative research it would be desirable to have guidelines published not only in the national language, but also in other languages for international reception.

Conclusion

This systematic, international comparison demonstrated notable commonalities and differences among current evidence-based clinical guidelines for eating disorders. Currently, several evidence-based clinical guidelines for eating disorders are in progress (e.g., GER, US). Because developing and updating clinical guidelines is time-consuming and complex, an international coordination of guideline development, for example, across the European Union, would be desirable. Collaborative efforts would need to carefully specify the goals and scope of a common “guideline trunc” which should be based on an elaborated, quality-assuring developmental process, while accounting for different cultures and national requirements.

European clinical studies on major research gaps could represent an important first step towards this end.

Key points

- The systematic review showed notable commonalities and differences among evidence-based clinical treatment guidelines for eating disorders.
- Regarding the dissemination and implementation of evidence-based treatments, current guidelines endorse main empirically supported treatment approaches with considerable agreement, but additional recommendations are largely inconsistent.
- An increased evidence base is critical in offering clinically reliable and consistent guidance for the treatment of eating disorders.
- Because clinical guideline development is time-consuming and complex, an international coordination, for example, across the European Union, would be desirable.

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Conflicts of interest

None.

Table 1

Evidence-based clinical guidelines for eating disorders published between 2009-2017

Abbreviation	Full guideline name	Year	Country	Status	Scientific society	Target	Multi-professional	Eating disorders
AUS	Royal Australian and New Zealand College of Psychiatrists clinical practice guidelines for the treatment of eating disorders [29]	2014	Australia and New Zealand	Active	Royal Australian and New Zealand College of Psychiatrists	Specialists	Multi-professional: Working group of health care academics and professionals, consultation with key stakeholders and the community	AN, BN, BED
DEN	National clinical guideline for the treatment of	2016	Denmark	Active	Danish Health Authority	*Specialists*	N.R.	AN, BN

Abbreviation	Full guideline name	Year	Country	Status	Scientific society	Target	Multi-professional	Eating disorders
	anorexia nervosa – quick guide [37], National clinical guideline for the treatment of moderate and severe bulimia nervosa – quick guide [38]							
FR	Clinical practice guidelines anorexia nervosa: management [39]	2010	France	Active	Association Française pour le Développement des Approches Spécialisées des Troubles du Comportement Alimentaire,	Specialists	Multi-professional: Multi-disciplinary working group	AN

Abbreviation	Full guideline name	Year	Country	Status	Scientific society	Target	Multi-professional	Eating disorders
					Fédération Française de Psychiatrie, Haute Autorité de Santé			
GER	S3-guideline for the assessment and therapy of eating disorders [30]	2010	Germany	In revision	Association of the Scientific Medical Societies in Germany (AWMF)	Specialists	Multi-professional: Clinicians and researchers with expertise in the field of eating disorders	AN, BN, BED
NETH	Standard of care for eating disorders [31]	2017	The Netherlands	To be published	National Health Care Institute	Population and	Multi-professional:	AN, BN, BED

Abbreviation	Full guideline name	Year	Country	Status	Scientific society	Target	Multi-professional	Eating disorders
						specialists	Carers and patients	
SP	Clinical practice guideline for Eating Disorders [32]	2009	Spain	Active	Catalan Agency for Health Technology Assessment and Research, Ministry of Health and Consumer Affairs	Population and specialists	Multi-professional: Group of professionals involved in the field of eating disorders and experts on Clinical Practice Guidelines' methodology	AN, BN, BED

Abbreviation	Full guideline name	Year	Country	Status	Scientific society	Target	Multi-professional	Eating disorders
UK	Eating disorders: recognition and treatment, full guideline [33]	2017	United Kingdom	Active	National Institute for Health and Care Excellence	Specialists	Multi-professional: Committee comprising healthcare professionals, researchers and lay members	AN, BN, BED
US	Practice guideline for the treatment of patients with eating disorders, third edition, Guideline watch (August 2012) [34,35]	2010, 2012	United States	Active, guideline watch	American Psychiatric Association	*Specialists*	Psychiatric: Psychiatrists who are in active clinical practice and some who are primarily	AN, BN, BED

Abbreviation	Full guideline name	Year	Country	Status	Scientific society	Target	Multi-professional involved in research or other academic endeavors	Eating disorders
WFSBP	World Federation of Societies of Biological Psychiatry (WFSBP) guidelines for the pharmacological treatment of eating disorders [36]	2011	-	Active	World Federation of Societies of Biological Psychiatry	*Specialists*	Psychiatric: WFSBP task force on eating disorders	AN, BN, BED

Note. N.R. not reported; AN anorexia nervosa; BN bulimia nervosa; BED binge-eating disorder; italicized words indicate that the information was referred from the text, where explicit information from the guideline was lacking.

Table 2

Comparison of evidence-based clinical guidelines for anorexia nervosa regarding key recommendations

	Clinical guideline								
Recommendation	AUS	DEN	FR	GER	NETH	SP	UK	US	WFSBP
Treatment setting									
First-line treatment: outpatient	+	N.R.	+	+	+	+	+	+	N.R.
Criteria for day hospital treatment	N.R.	N.R.	✓	✓	N.R.	✓	✓	✓	N.R.
Criteria for hospitalization	✓	N.R.	✓	✓	✓	✓	✓	✓	N.R.
Criteria for discharge	✓	✓	✓	✓	N.R.	✓	✓	✓	N.R.
Information on compulsory treatment	N.R.	N.R.	✓	✓	✓	✓	✓	✓	N.R.
Treatment modalities									

	Clinical guideline								
Recommendation	AUS	DEN	FR	GER	NETH	SP	UK	US	WFSBP
Refeeding/Nutrition[a]									
Recommended energy intake, per day	Start at 6,000 kJ, increases of 2,000 kJ every 2-3 days until adequate intake for weight restoration	N.R.	N.R.	Start at 30-40 kcal/kg for severely underweight patients, 800-1,200 kcal supplementary intake/day necessary for 100 g	Start at 40-60 kcal/kg for severely underweight patients, 800-1,100 kcal supplementary intake/day necessary	25-30 kcal/kg or total kcal < 1,000 for severe malnutrition, day hospital: supplementary intake of 300-1,000 kcal	Inpatient settings[b]: sometimes lower starting intakes (e.g., 5-10 kcal/kg) for severely underweight patients, stepwise	Start at 30-40 kcal/kg (i.e. 1,000-1,600 kcal), weight gain phase: up to 70-100 kcal/kg, male patients with	N.R.

	Clinical guideline								
Recommendation	AUS	DEN	FR	GER	NETH	SP	UK	US	WFSBP
				weight gain/day			increase to 20 kcal/kg within 2 days, about 3,500-7,000 extra calories/week	higher energy need	
Recommended weight gain per week, inpatient settings	0.5-1.4 kg	N.R.	0.5-1 kg	0.5-1 kg	0.5-1.5 kg	0.5-1 kg	N.R.	0.9-1.4 kg	N.R.
Recommended	N.R.	N.R.	0.25 kg	0.2-0.5 kg	0.25-0.5	N.R.	N.R.	0.2-0.5kg	N.R.

	Clinical guideline								
Recommendation	AUS	DEN	FR	GER	NETH	SP	UK	US	WFSBP
weight gain per week, outpatient settings					kg				
Recommended supplements	(+) Phosphate, thiamine (risk of refeeding syndrome)	N.R.	(+) Phosphate, vitamin and trace elements (risk of refeeding syndrome)	(+) Zinc (skin lesions), potassium chloride (cardiac arrhythmia), iron (iron-deficiency anemia),	(+) Phosphate, thiamine (risk of refeeding syndrome)	(+) Oral multivitamin and/or mineral supplements	(+) Multi-vitamin and multi-mineral supplements, biphosphonates	(+) Phosphate, magnesium, potassium, calcium, vitamin D, zinc	N.R.

	Clinical guideline								
Recommendation	AUS	DEN	FR	GER	NETH	SP	UK	US	WFSBP
				thiamine, riboflavin, niacin, folic acid, phosphate					
Recommendations for artificial feeding	✓	N.R.	✓	✓	✓	✓	✓	✓	✓
Nutritional counseling	N.R.	N.R.	+	(+) Only in multidiscip linary therapy approach	+	+	(+) Only in multidiscip linary therapy approach	(+) Registered dieticians	N.R.
Psychological	+ (More	+	(Cannot	+	(When	N.R.	N.R.	(Formal	N.R.

	Clinical guideline								
Recommendation	AUS	DEN	FR	GER	NETH	SP	UK	US	WFSBP
interventions	intense when medically stabilized and cognitively improved from starvation)		treat severe AN alone, but in conjunction with refeeding)		medically stabilized and cognitively sufficiently recovered from malnutrition)			psychotherapy with starving patients may be ineffective)	
CBT	+*	N.R.	+	N.R.	+ (1st)	+	+ (1st)	+ (After weight restoration)	N.R.

	Clinical guideline								
Recommendation	AUS	DEN	FR	GER	NETH	SP	UK	US	WFSBP
FBT	+*	+*	+*	N.R.	+*	+*	+*	+*	N.R.
Psychodynamic therapy	N.R.	N.R.	+	N.R.	N.R	+	+	+ (Acute AN and after weight restoration)	N.R.
IPT	N.R.	N.R.	N.R.	N.R.	N.R.	+	N.R.	+ (After weight restoration)	N.R.
Other	Specialist therapist-led	N.R.	Support therapies, systemic	N.R.	MANTRA (1st), SSCM (1st)	Behavioral therapy	MANTRA (1st), SSCM (1st)	+ Non-verbal therapeutic	N.R.

	Clinical guideline								
Recommendation	AUS	DEN	FR	GER	NETH	SP	UK	US	WFSBP
	manualized based approaches (1st), adolescent focused therapy		and strategic therapies, motivational approaches, non-verbal approaches in conjunction					methods (chronic AN), group psychotherapy for adults (after weight restoration)	
Medication	N.R.	N.R.	(No specific	N.R.	N.R.	(Not as only	(Not as sole	N.R.	N.R.

	Clinical guideline								
Recommendation	AUS	DEN	FR	GER	NETH	SP	UK	US	WFSBP
			medication to treat AN)			primary treatment)	treatment)		
Antidepressants	(+)*	N.R.	+ Depressive disorders, anxious disorders, OCD	- Weight gain + depressive symptoms	N.R.	N.R	N.R.	+ Depressive, anxiety, or obsessive-compulsive symptoms, or bulimic symptoms	N.R.
SSRIs	-*	N.R.	N.R.	N.R.	-	N.R.	N.R.	- Weight	N.R.

				Clinical guideline					
Recommendation	AUS	DEN	FR	GER	NETH	SP	UK	US	WFSBP
								gain + depressive, anxiety, obsessive- compulsiv e, or bulimic symptoms (in combinatio n with psychother apy or	

	Clinical guideline								
Recommendation	AUS	DEN	FR	GER	NETH	SP	UK	US	WFSBP
								after weight restoration)	
Tricyclic antidepressants	N.R.	N.R.	(+)	N.R.	N.R.	N.R.	N.R.	-	N.R.
MAOIs	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	-	N.R.
Antipsychotics	(+) Obsessional thinking (olanzapine)	N.R.	(+)	- Weight gain (+) Obsessional thinking (only short-term)	(+) Obsessional thinking (olanzapine)	N.R.	N.R.	(+) Weight gain (+) Obsessional thinking (olanzapine,	N.R.

	Clinical guideline								
Recommendation	AUS	DEN	FR	GER	NETH	SP	UK	US	WFSBP
								risperidone , quetiapine, chlorpromazine)	
Appetizers	N.R.	N.R.	N.R.	-	N.R.	N.R.	N.R.	N.R.	N.R.
Lithium	N.R.	N.R.	N.R.	-	N.R.	N.R.	N.R.	N.R.	N.R.
Estrogen	N.R.	N.R.	(+)	N.R.	N.R.	(+)	(+)	(+)	N.R.
Other medication	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	+ Pro-motility agents - Buproprion	N.R.

	Clinical guideline								
Recommendation	AUS	DEN	FR	GER	NETH	SP	UK	US	WFSBP
								(+) Anti-anxiety agents	
Other treatments	N.R.	+ Meal support/eating training (as adjunct) + Supervised physical activity (as adjunct during	N.R.	N.R.	N.R.	N.R.	- Physical therapy (transcranial magnetic stimulation, acupuncture, weight training, yoga or	- Electroconvulsive therapy (or only for severe co-occuring disorders)	N.R.

	Clinical guideline								
Recommendation	AUS	DEN	FR	GER	NETH	SP	UK	US	WFSBP
		weight gain phase)					warming therapy)		
Special issues	Separate recommendations for children and adolescents and for severe and long-standing AN,		Weighing, pregnancy, medical management	Detailed information on artificial feeding, different settings of care, weighing, specific recommen	Separate recommendations for children and adolescents and for severe and long-standing AN,	Treatment of comorbidities, pregnancy, medical management	Separate recommendations for children and adolescents, detailed information on psychotherapies,	Recommendations for acute AN versus after weight restoration versus chronic AN, refeeding	

	Clinical guideline								
Recommendation	AUS	DEN	FR	GER	NETH	SP	UK	US	WFSBP
	refeeding syndrome, medical manageme nt			dations for treatment of core symptoms	progress monitoring , relapse prevention		carer support, weighing, medical manageme nt, treatment of comorbidit ies, pregnancy	syndrome	

Note. ✓ recommendation given; + explicit recommendation in favor; (+) cautious recommendation in favor; - recommendation against; N.R. no recommendation reported; AUS Australia and New Zealand; CBT cognitive-behavioral therapy; Den Denmark; FBT family-based therapy; FR France; GER Germany; IPT interpersonal therapy; OCD obsessive-compulsive disorder; MAOI monoamine oxidase inhibitor; MANTRA Maudsley

Anorexia Nervosa Treatment for Adults; NETH The Netherlands; SSCM Specialist Supportive Clinical Management; SSRI selective serotonin reuptake inhibitor; SP Spain; UK United Kingdom; US United States; WFSBP World Federation of Societies of Biological Psychiatry; [a] recommendations for weight gain and energy intake were derived from both the guideline's text and recommendations; [b]information on energy intake for the UK guideline was obtained from the Management of Really Sick Patients with Anorexia Nervosa (MARSIPAN) guideline, because the UK guideline refers to it in this respect; *indicates that the recommended intervention refers to children and adolescents only

Table 3

Comparison of evidence-based clinical guidelines for bulimia nervosa regarding key recommendations

	Clinical guideline							
	AUS	DEN	GER	NETH	SP	UK	US	WFSBP
Treatment setting								
First-line treatment: outpatient	+	N.R.	+	N.R.	+	+	+	N.R.
Criteria for day hospital treatment	✓	N.R.	✓	N.R.	N.R.	✓	✓	N.R.
Criteria for inpatient treatment	✓	N.R.	✓	N.R.	✓	✓	✓	N.R.
Treatment modalities								
Nutritional counseling	N.R.	+ (Individualized or standardized	N.R.	N.R.	(+) Only with psychiatrist's approval	N.R.	+ (As part of the treatment)	N.R.

	Clinical guideline							
	AUS	DEN	GER	NETH	SP	UK	US	WFSBP
		)						
Psychological interventions	+ (Individual)	N.R.	+	N.R.	N.R.	N.R.	N.R.	N.R.
CBT	+ (1st)	+ (1st, individual or group)	+ (1st)	+ (1st, individual or group)	+	+ (Individual)	+ (1st)	N.R.
FBT	N.R.	+*	N.R.	+*	N.R.	+*	+	N.R.
Self-help	+ (Guided, CBT)	N.R.	+ (Guided, CBT)	+ (Guided, CBT)	+	+ (1st, guided, CBT)	+	N.R.
Psychodynamic therapies	N.R.	N.R.	+	N.R.	N.R.	N.R.	+	N.R.
IPT	N.R.	N.R.	+	+	+	N.R.	+	N.R.
Other	+ Internet-	N.R.	N.R.	N.R.	N.R.	N.R.	+ Group	N.R.

	Clinical guideline							
	AUS	DEN	GER	NETH	SP	UK	US	WFSBP
	based CBT						psychotherapy + Psychodynamic interventions plus CBT and other psychotherapies + Couples therapy + Support groups (as	

	Clinical guideline							
	AUS	DEN	GER	NETH	SP	UK	US	WFSBP
							adjunct)	
Medications	+ (If psychotherapy is not available or as adjunctive therapy)	N.R.	N.R.	N.R.	(Pharmacological treatments other than antidepressants are not recommender)	(Not as sole treatment)	N.R.	N.R.
Antidepressants	+	N.R.	N.R.	N.R.	+	N.R.	+	N.R.
SSRIs	+ (Fluoxetine)	(+)	+ (Fluoxetine, in combination	+ (Fluoxetine)	+ (Fluoxetine)	N.R.	+ (Fluoxetine)	+ (Fluoxetine, fluvoxamine)

	Clinical guideline							
	AUS	DEN	GER	NETH	SP	UK	US	WFSBP
			with psychotherapy)					
Tricyclic antidepressants	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	-	+ (Imipramine, Desipramine)
MAOIs	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	-	- (Phenelzine)
Anticonvulsants	+ (Topiramate)	N.R.	N.R.	N.R.	N.R.	N.R.	(+) (Topiramate)	N.R.
Lithium	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	-	N.R.

	Clinical guideline							
	AUS	DEN	GER	NETH	SP	UK	US	WFSBP
Other	+ Weight loss (orlistat)	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
Other treatments	+ Combined psychological and pharmacological therapy	N.R.	N.R.	N.R.	N.R.	- Physical therapy (transcranial magnetic stimulation, acupuncture, weight training, yoga or warming therapy)	+ Combined treatment of CBT and antidepressants + Bright light therapy (as adjunct)	N.R.

	Clinical guideline							
	AUS	DEN	GER	NETH	SP	UK	US	WFSBP
Special issues	Medical management		Treatment of comorbidities	Treatment of comorbidities, options for weight loss	Treatment of comorbidities, pregnancy, medical management	Separate recommendations for children and adolescent with BN, detailed information on psychotherapies, carer support, medical management	Recommendations for initial versus maintenance phase	No long-term evidence

	Clinical guideline							
	AUS	DEN	GER	NETH	SP	UK	US	WFSBP
						, treatment of comorbidities, pregnancy		

Note. ✓ recommendation given; + explicit recommendation in favor; (+) cautious recommendation in favor; - recommendation against; N.R. no recommendation reported; AUS Australia and New Zealand; CBT cognitive-behavioral therapy; Den Denmark; FBT family-based therapy; GER Germany; IPT interpersonal therapy; MAOI monoamine oxidase inhibitor; NETH The Netherlands; SSRI selective serotonin reuptake inhibitor; SP Spain; UK United Kingdom; US United States; WFSBP World Federation of Societies of Biological Psychiatry; *indicates that the recommended intervention refers to children and adolescents only

Table 4

Comparison of evidence-based clinical guidelines for binge-eating disorder regarding key recommendations

	Clinical guideline						
	AUS	GER	NETH	SP	UK	US	WFSBP
Treatment setting							
First-line treatment: outpatient	N.R.	+	+	N.R.	+	N.R.	N.R.
Criteria for inpatient treatment	✓	✓	✓	N.R.	✓	N.R.	N.R.
Treatment modalities							
Nutritional counseling	N.R.	N.R.	N.R.	(+) (With approval of psychiatrist)	N.R.	+ (In the context of behavioral weight control pragrams)	N.R.
Psychological interventions	+ (Individual)	+	+	N.R.	N.R.	N.R.	N.R.

	Clinical guideline						
	AUS	GER	NETH	SP	UK	US	WFSBP
CBT	+ (1st)	+ (1st)	+ (1st, individual or group)	+	+ (Group or individual)	+ (1st, individual or group)	N.R.
FBT	N.R.	N.R.	+*	N.R.	N.R.	N.R.	N.R.
Self-help	+ (Guided, CBT)	+ (Guided, CBT)	+ (Guided, CBT)	+ (Guided or unguided)	+ (1st Guided, CBT)	+ (Guided or unguided, CBT)	N.R.
Psychodynamic therapies	N.R.	+	N.R.	N.R.	N.R.	N.R.	N.R.
IPT	N.R.	+	+	+	N.R.	+	N.R.
Medications	+ (If psychotherapy is not available or as adjunctive	N.R.	N.R.	N.R.	(Not as sole treatment)	N.R.	N.R.

	Clinical guideline						
	AUS	GER	NETH	SP	UK	US	WFSBP
	therapy)						
Antidepressants	+	N.R.	N.R.	+	N.R.	+	N.R.
SSRI	+	+ (Off-label-use, short-term)	+ Binge eating frequency	+ Binge eating frequency	N.R.	+ Binge eating frequency (short-term)	+ (Citalopram/ escitalopram, sertraline)
Tricyclic antidepressants	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	+ (Imipramine)
Anticonvulsants	+ (Topiramate)	N.R.	N.R.	N.R.	N.R.	+ (Topiramate, zonisamide)	+ (Topiramate)
Antiobesity medications	+ Weight loss (orlistat)	N.R.	N.R.	N.R.	N.R.	+ Binge-eating frequency	N.R.

	Clinical guideline						
	AUS	GER	NETH	SP	UK	US	WFSBP
						(sibutramine, short-term) + Weight loss (orlistat, sibutramine)	
Other treatment	+ Combined psychological and pharmacological therapy	N.R.	N.R.	N.R.	- Physical therapy (transcranial magnetic stimulation, acupuncture, weight training, yoga or	+ Behavioral weight control programs + Orlistat plus guided self-help CBT - Fluoxetine	N.R.

	Clinical guideline						
	AUS	GER	NETH	SP	UK	US	WFSBP
					warming therapy)	plus group behavioral treatment	
Special issues	Medical management	No long-term evidence for pharmacological treatment	Treatment of comorbidities, options for weight loss	Treatment of comorbidities, pregnancy	Detailed information on psychotherapies, medical management, treatment of comorbidities, pregnancy		No long-term evidence

Note. ✓ recommendation given; + explicit recommendation in favor; (+) cautious recommendation in favor; - recommendation against; N.R. no recommendation reported; AUS Australia and New Zealand; CBT cognitive-behavioral therapy; FBT family-based therapy; GER Germany; IPT

interpersonal therapy; MAOI monoamine oxidase inhibitor; NETH The Netherlands; SSRI selective serotonin reuptake inhibitor; SP Spain; UK United Kingdom; US United States; WFSBP World Federation of Societies of Biological Psychiatry; *indicates that the recommended intervention refers to children and adolescents only

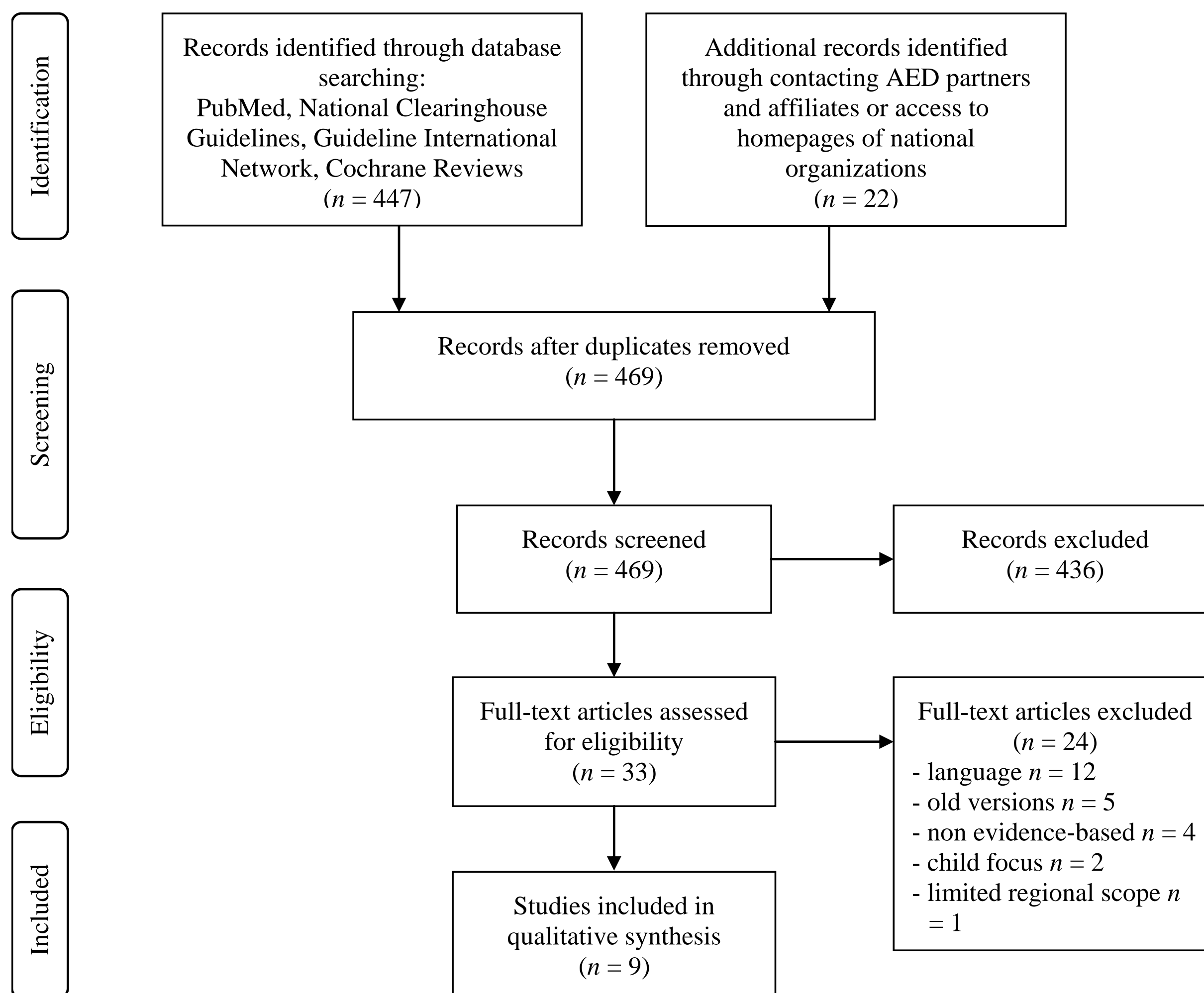

Figure 1. PRISMA Flow Diagram: International comparison of evidence-based clinical guidelines for eating disorders (2017/06/15).