Effectiveness of online psychoeducational and online self-help platforms for eating disorders: Protocol for a systematic review

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Abstract

Background: Access to psychological healthcare is extremely difficult, especially for individuals suffering from severely stigmatized disorders such as eating disorders (ED). There has been an increase in children, adolescents, and adults suffering from ED symptoms and ED, especially following the COVID-19 pandemic. Online self-help platforms allow people to bridge the treatment gap and receive support when in-person treatment is unavailable or not preferred. To the knowledge of the authors, this is the first systematic review evaluating the efficacy of solely online self-help platforms.
Aim: This systematic review aims to evaluate the effectiveness of online self-help platforms for EDs

Method: The proposed systematic review will follow the guidelines for the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). The review has been registered to PROSPERO with the registration number: CRD42024520866. This review will report and evaluate the literature concerning the efficacy of self-help platforms for EDs. Two independent authors will utilize the search terms to conduct the initial search. The collated articles will then be screened by their titles and abstracts, and finally, full-text screenings will be conducted. The results will be discussed, and the final report will be submitted to a peer-reviewed journal. Data extraction will be conducted and included studies will undergo narrative synthesis.
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Abstract

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Keywords: self-help, online self-help, eating disorders, anorexia nervosa, bulimia, binge eating.

Introduction

Eating disorders (ED) are a group of heterogeneous psychiatric disorders that are characterized by irregular eating behaviours [1]. Research demonstrated that between 5.5% -17.9% of women and 0.6%-2.4% of men meet the Diagnosis and Statistical Manual of Mental Disorders (DSM-5) criteria for EDs [2]. Moreover, gender and sexual minorities are demonstrated to be particularly at risk for developing EDs, with anorexia nervosa and bulimia being the most prevalent [2-4]. Notably, compared to any other psychiatric conditions, anorexia nervosa and bulimia have the highest suicidality and mortality rates and lowest quality of life levels, highlighting the importance of urgency of care [5-6]. Research demonstrated that merely one-fourth of individuals with ED

symptoms or developed EDs access care, which is explained by the lack of access to treatment and the individual's preference for treatment [7]. EDs have been demonstrated to negatively impact the psychological, cognitive, physical, and social development of individuals which evidences the need for accessible resources, such as self-help platforms, which support individuals and prevent, treat, and avoid the relapse of EDs [8].

During the COVID-19 pandemic, there was an increase in children and adolescents struggling with ED symptoms and EDs, leading to an increase in waiting times [9-10]. Although face-to-face treatments such as ED-specific family therapy, medication, and hospital treatments have been demonstrated to effectively reduce ED symptoms, many previously in-person psychoeducational support systems transitioned to online self-help platforms [11-12]. Online self-help platforms are stand-alone support websites or mobile applications which do not require the presence or assistance of trained professionals [8]. Self-help platforms overcome issues related to the help-seeking stigma, geographical isolation, and time constraints, and notably, do not require the individual to interact with any healthcare professional to access support, which have been demonstrated as factors which prevent help-seeking [13]. Healthcare systems have evolved to provide a resource-efficient framework for communities to provide stepped support for individuals depending on their level of need. One such framework is the THRIVE framework.

The THRIVE framework guides many initiatives for preventing and helping vulnerable individuals who may need access to help [14]. The framework provides service providers with a set of principles which provide approaches for the development of supportive resources. Self-help platforms are the initial stage of accessing support, and when more support is needed, then the initial stage of "getting advice" to "getting help" [14]. Self-help platforms are available for the general public and provide psychoeducational information for those requiring additional resources or support [14]. Despite self-help platforms being good prevention strategies, research has demonstrated that while individuals are significantly more satisfied when self-help platforms are provided in combination with in-person interventions [15].

Psychoeducational self-help online platforms aid the understanding of ED's causes, risk factors, and potential consequences for individuals and their families with the aim of developing effective coping mechanisms[16-17]. Self-help platforms allow for primary, secondary, and tertiary approaches in the prevention or treatment of ED long-term effects [18]. A variation of approaches can be utilized in addition to the psychoeducation, such as implementing cognitive behavioral therapy (CBT) techniques, dissonance-based interventions (DBI) and motivation enhancement therapeutic techniques (MET). The specific aims and target groups for the therapeutic techniques can be found in

Table 1.

Table 1. Cognitive Behavioral Therapy, Dissonance Based Intervention, and Motivation Enhancement Therapy

Therapeutic design	Aim	Target group
CBT	Focuses on the relationship between thoughts, behaviors and feelings. For ED, it addresses one's thoughts and behaviors related to their irregular eating patterns [19].	Effective for all age groups, target a variety of disorders, including ED.
DBI	Challenges society and media-propagated body ideals [20]. It is often most effective when implemented during key developmental stages.	Effective for all age groups, most effective for individuals who have maladaptive and conflicting attitudes and behaviors, often utilized for EDs and substance abuse issues.
MET	Urges people with ED's to make changes to their behaviors and cognitive processes [21]	Effective for all age groups, MET often combined with CBT to enhance individuals' motivation to change maladaptive behaviors and relationship with food.

Note: Cognitive Behavioral Therapy (CBT), Dissonance Based Intervention (DBI), Eating disorder (ED), Motivation Enhancement Therapy (MET).

Previous systematic reviews have demonstrated guided online self-help platforms as effective in reducing ED core symptoms and ED-related behaviours by altering maladaptive behaviours and changing the individual perseverative thinking, thin idealization, body dissatisfaction, depression, quality of life, and lack of motivation to change [17, 22]. However, to the knowledge of the authors, there has not yet been a systematic review evaluating the effectiveness of solely self-help platforms for EDs [17,23-24]. Therefore, the current systematic review aims to evaluate the literature on the effectiveness of ED self-help platforms. The effectiveness of self-help platforms will be primarily measured by the platform's ability to reduce ED symptomology. Secondarily, the effectiveness will be evaluated based on the platform's ability to decrease ED-related behaviors such as perseverative thinking, thin idealization, body dissatisfaction, depression, quality of life, and resistance to change.

This systematic review aims to explore literature which has evaluated the following research questions:

1. Are online psychoeducational and self-help platforms effective in preventing the onset of EDs?

2. Are online psychoeducational and self-help platforms effective in reducing the core ED symptoms?

3. Are online psychoeducational and self-help platforms effective in improving the long-term effects of EDs?

Strengths and Limitations of this systematic review

- This is the first systematic review solely reviewing literature regarding the efficacy of only online self-help platforms.

- This review will be conducted according to the rigorous guidelines for systematic reviews outlined in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA).

- Searches and data extraction will be conducted by two independent researchers increasing the internal validity of the findings.

- There is limited research within this area. Consequentially, the systematic review will have a limited overview of the efficacy of online self-help platforms.

Methods and analysis

A systematic review will be conducted to explore the literature regarding the effectiveness of online psychoeducational and online self-help platforms for people with ED symptoms and developed EDs. This review abides by the PRISMA guidelines.

Eligibility Criteria:

Population:

This systematic review will not have a set age restriction for the population. The systematic review

will consider research that has screened participants at baseline level, prior to the intervention, and following intervention. The population will include individuals with no ED behavioral patterns, individuals who are at-risk of developing ED's, and individuals with any diagnosed ED.

Concept:

This review will include literature examining the clinical effectiveness of online delivered self-help psychoeducational and other online self-help platforms. Clinical effectiveness is defined as a decrease in ED symptoms, ED related behaviors, and associated mental health difficulties, such as depression and anxiety.

Context:

This review will consider studies conducted in any geographical context utilizing any online intervention platform for EDs.

Types of evidence source:

This review will consider studies with all types of research designs (e.g., randomised controlled trials, quasi-experimental and case-control studies, clinically on-controlled studies, observational studies) and studies using qualitative, quantitative, or mixed methods. Grey literature will be analyzed and included as appropriate. Moreover, only studies published in English will be included.

Inclusion criteria:

(1) Research with original data, including grey literature, (2) Research evaluating the efficacy of online psychoeducational self-help platforms for EDs, (3) people with ED diagnosis, (4) people with ED symptoms, (5) people at risk of developing EDs, (6) people from the general population without ED related behaviors, (7) research which examined the pre- and post-online intervention clinical outcome of ED symptoms, (8) research which examined the pre- and post-online intervention associated mental health difficulties, (9) literature in English.

Exclusion criteria:

(1) guided self-help platforms, (2) only in-person interventions with no online comparison group, (3) only in-person delivered CBT, (4) self-help platforms for conditions other than eating disorders, (5) systematic reviews, (6) meta-analyses, (7) posters, (8) leaflets, (9) books, (10) reviews, (11) research that only reported physical outcomes.

Search strategy

A systematic search was conducted utilizing Ovid MEDLINE (R), Embase, Global Health, and APA PsychInfo up to the established date of 31st of May 2024. A manual search of references was conducted utilizing Google Scholar to identify alternative literature. Moreover, a reference list search

will be conducted to identify any other potential literature that can be included.

An initial search conducted by AG utilizes OVID on the 31st of May 2024 with preliminary search terms developed by AG, YK, and reviewed by EC. AG utilized the search terms depicted in Table 2.

Table 2. Table of search terms

Example   of   search   strategy   on   Ovid   Medline

_____

Population	1.	Eating Disorder*
	2.	Anorexia
	3.	Anorexia nervosa
	4.	Bulimia
	5.	Binge eating
	6.	Avoidant restrictive food intake disorder
	7.	ARFID
	8.	Otherwise specified feeding or eating disorder
	9.	OSFED
	10.	OR/ 1-9
Intervention		
	11.	Intervent*
	12.	Treatment*
	13.	Psychoedu*
	14.	OR/ 11-13
Treatment implemented		
	15.	ICBT
	16.	Internet cognitive behavioral therapy
	17.	Self-help
	18.	Digital
	19.	Online
	20.	OR/ 15-19
Combination of search	21.	10 AND 14 AND 20

Study selection

After the completion of the search, studies will be exported to EndNote and duplicates will be removed. Articles were then initially screened independently by AG and YK by titles and abstracts. Following this, the authors full text screened the literature and collected research which abided by the inclusion and exclusion criteria. In case of any inconsistencies, the reviewers will meet to discuss the pertinent articles. If AG and YK cannot reach an agreement following the discussion, EC will be contacted to provide further insight and resolve any disagreements. Literature that does not meet the inclusion criteria will be excluded from the systematic review.

Data Extraction

Data extraction was completed by the researchers capturing key aspects of studies which fit the inclusion criteria. The key aspects will be initially recorded on an Excel spreadsheet. The aspects extracted will include: primary author name and published date, sample population demographics, follow-up times and sample size, outcome measure, intervention, key findings, and overall risk-of-bias. A draft of the table is presented in table 3, however, this table may be modified in the final review. The data will be inputted by AG and YK independently for each included study, to assess the studies eligibility. In cases of any disagreements, the reviewers will discuss to reach a consensus. EC will be consulted in the case of uncertainty or unsolved disagreement.

Table 3. Data extraction table

Author(s), date
Baseline sample (N), Female %, and Mean age
Follow-up times and sample size (% of initial sample)
Outcome Measure
Intervention
Key findings

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│                             │
│   Risk of bias              │
│                             │
└─────────────────────────────┘
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Data analysis and synthesis

The findings of the systematic review will be initially summarized in an Excel table and then narratively synthesized and analyzed based on Popay et al. (2006) guidelines. Included studies utilised diverse methods to analyze primary and secondary outcomes (i.e. clinical effectiveness and associated mental health difficulties). Therefore, the reliability of the questionnaires will be analyzed and reported. Following the initial search, the primary author found all included literature was randomized controlled trials (RCTs) therefore the Cochrane risk-of-bias quality assessment tool was selected. If additional research methods are detected in the included literature, the quality assessment tool may be revised. the Cochrane risk-of-bias quality assessment tool will be utilized to ensure that all questionnaires were approximately similar in validity and reliability. Detailed information regarding the selection procedure will be presented in a PRISMA flow diagram. Where applicable, common findings amongst the research will be identified and reported.

The primary outcomes will be reported in terms of the online self-help platforms' effectiveness in decreasing the clinical symptoms of eating disorders in participants. Secondary outcomes will be analyzed in terms of associated mental health difficulties (i.e. perseverative thinking, body dissatisfaction, thin idealization, fear of becoming fat, preoccupation of food and weight, motivation to change their weight, self-esteem, depression, and quality of life.

Researchers will independently analyze potential biases of the studies utilizing the Cochrane risk-of-bias assessment tool. The quality assessment examined five domains of potential risk-of-bias: randomization, divergence from the intended intervention, analysis of missing data, measurement of outcomes, and selection of reported results.

Missing values

Self-help platforms have been demonstrated to have high drop-out and attrition rates. Therefore, the bias caused by missing values will be determined at the discretion of the authors. The authors will take into consideration how the magnitude of the missing values, how researcher accounted for the missing values, and how the final data was analyzed.

Patient and public involvement

No patients or members of the public were involved in the development of this protocol or will be

involved in the final scoping review. Nevertheless, including qualitative studies should give a valuable insight into patient and carer perceptions and experiences with intensive community and home treatments.

Ethics and dissemination

Ethical approval will not be required for this review as the data will be obtained from publicly available sources. Dissemination of the review's findings will be performed through peer-reviewed publication and through conference presentations. Additionally, the researchers will use social media (ie, Twitter and Instagram) to reach the wider public.

Summary and conclusion

To the knowledge of the authors, this is the first systematic review to identify literature which solely includes literature examining online self-help platforms for EDs. The findings will provide an overview of the effectiveness of the online self-help platforms and the feasibility of implanting the platforms in clinical settings. It is expected that this systematic review will provide directions for future research and tactics to improve already existing online self-help platforms.

Acknowledgements

Conflict of interests

None declared.

Abbreviations

ARFID: Avoidance Restrictive Food Intake Disorder

CBT: Cognitive behavioral therapy

DBI: Dissonance based intervention

DSM: Diagnosis and Statistical Manual of Mental Disorders

ED: Eating Disorder

ICBT: Internet cognitive behavioral therapy

MET: Motivation enhancement therapy

OSFED: Otherwise Specified Feeding or Eating Disorder

PRISMA: Preferred Reporting Items for Systematic Reviews and Meta-Analyses

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