

Review articles (systematic or scoping)

Experiences of Users of Pro-Eating Disorder Online Communities and Their Effects on Eating Behavior: A Scoping Review

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Abstract

There is growing concern regarding the proliferation of websites associated with the pro-anorexia and pro-bulimia movement, which promote eating disorders (EDs) as a lifestyle. This scoping review aimed to examine the evidence available in the scientific literature concerning the experiences of users of pro-eating disorders virtual communities and the effects of these experiences on eating behavior. Systematic searches were conducted in the MEDLINE/PubMed, Web of Science, PsycINFO, CINAHL/EBSCO, and LILACS databases from 2013 to 2023. From a total of 1370 articles initially retrieved, 10 primary studies conducted in six different countries were selected according to the inclusion and exclusion criteria, comprising 20,266 adolescent, young, and adult participants, the majority of whom were women. The results indicate a predominance of cross-sectional studies with a qualitative focus. Exposure to digital platform content that glorifies and celebrates the ideal of extreme thinness is associated with probable ED diagnoses among users. The motivation for engagement in these social media platforms involves the search for acceptance, belonging, and protection against social stigmatization, particularly among users with an active disorder. Regarding the impacts on users' well-being, the findings suggest a possible worsening of body image dissatisfaction. However, they also highlight the potential influence of virtual groups on the recovery process, as participation in these communities provides members with a sense of personal agency, reinforcing their motivation for change.

Keywords: feeding and eating disorders. internet. social networks. information technology. review

EXPERIÊNCIAS DE USUÁRIOS DE COMUNIDADES VIRTUAIS PRÓ-TRANSTORNOS ALIMENTARES E SEUS EFEITOS SOBRE O COMPORTAMENTO ALIMENTAR: REVISÃO DE ESCOPO

Comunidades Virtuais Pró-Transtornos Alimentares

Resumo

Atualmente, nota-se uma crescente preocupação com a proliferação dos websites vinculados ao movimento pró-anorexia/pró-bulimia, que fazem apologia aos transtornos alimentares (TAs) como estilo de vida. Esta revisão de escopo teve como objetivo analisar as evidências disponíveis na literatura científica acerca das experiências de usuários de comunidades virtuais pró-TAs e seus efeitos sobre o comportamento alimentar. Foram realizadas buscas sistemáticas nas bases MEDLINE/PubMed, Web of Science, PsycINFO, CINAHL/EBSCO e LILACS, no período de 2013 a 2023. De um total de 1.370 artigos originalmente recuperados, foram selecionados com base nos critérios de inclusão/exclusão dez estudos primários de seis países diferentes, compreendendo um total de 20.266 participantes adolescentes, jovens e adultos, em sua maioria mulheres. Os resultados mostram domínio de estudos transversais com enfoque qualitativo. A exposição dos usuários a conteúdos produzidos em plataformas digitais que cultuam e celebram o ideal de magreza extrema guarda relação com seus prováveis diagnósticos de TAs. A motivação para o engajamento nessas mídias sociais consiste na busca de acolhimento, senso de pertencimento e proteção contra a estigmatização social, especialmente para usuários com transtorno ativo. Em relação aos impactos sobre o bem-estar dos usuários, os resultados apontam possível recrudescimento na insatisfação com a imagem corporal, mas também chamam a atenção para a potencial influência dos grupos virtuais no processo de recuperação, na medida em que a adesão às comunidades virtuais confere aos seus membros um senso de agência pessoal, fortalecendo a motivação para a mudança.

Palavras-chave: transtornos da alimentação e da ingestão de alimentos, internet, redes sociais, tecnologia da informação, revisão

IMPACTO DE LA EXPOSICIÓN A COMUNIDADES EN LÍNEA PRO-TRASTORNOS ALIMENTARIOS: REVISIÓN INTEGRATIVA

Comunidades en Línea Pro-Trastornos Alimentarios

Resumen

Actualmente, se nota una creciente preocupación por la proliferación de sitios web vinculados al movimiento proanorexia/probulimia, que defienden los trastornos alimentarios como estilo de vida. Esta

revisión integrativa tuvo como objetivo analizar la evidencia disponible en la literatura científica sobre los impactos de la exposición a comunidades virtuales pro-trastornos alimentarios en el comportamiento alimentario de sus usuarios. Se realizaron búsquedas sistemáticas en las bases MEDLINE/PubMed, Web of Science, PsycINFO, CINAHL/EBSCO y LILACS, en el período 2013–2023. De un total de 1370 artículos originalmente recuperados, se seleccionaron 10 estudios primarios de seis países diferentes, comprendiendo un total de 20,266 participantes adolescentes/jóvenes/adultos, en su mayoría mujeres. Los resultados muestran predominio de estudios transversales con enfoque cualitativo. La exposición de los usuarios a contenidos producidos en plataformas digitales que enfatizan el ideal de extrema delgadez está relacionada con sus probables diagnósticos de trastornos de la alimentación. La motivación para el compromiso en estas redes sociales consiste en la búsqueda de acogida, un sentido de pertenencia y protección contra la estigmatización social, especialmente para usuarios con trastorno activo. En relación con los impactos en el bienestar de los usuarios, los resultados señalan un posible recrudescimiento en la insatisfacción con la imagen corporal, pero también destacan la influencia de los grupos virtuales en el proceso de recuperación, en la medida en que la adhesión a las comunidades virtuales otorga a sus miembros una posición de agencia personal. Se detectaron limitaciones y lagunas en la investigación con enfoque cualitativo y en los estudios en el contexto brasileño/latinoamericano.

Palabras clave: trastornos de alimentación y de la ingestión de alimentos, internet, redes sociales, tecnología de la información, revisión

Eating disorders (EDs) are specific forms of suffering that have become increasingly prominent in contemporary society. Their visibility has grown, particularly on digital social media, where concerns and dissatisfaction regarding body image, understood as the subjective perception of one's own appearance, have also attracted growing interest (Moraes et al., 2021; Perloff, 2014; So & Kwon, 2022). Eating disorders are characterized as psychopathological conditions permeated by severe disturbances in eating behavior (Gil et al., 2022). In some types of EDs, such as Anorexia Nervosa (AN) and Bulimia Nervosa (BN), the affected individual develops an excessive fear of weight gain as a consequence of severe body image distortion. This aspect is not observed in other types of EDs, such as Pica (characterized by the persistent ingestion of non-nutritive substances), rumination disorder (repeated regurgitation of food), and Avoidant/Restrictive Food Intake Disorder - ARFID (significant food restriction motivated by lack of interest, sensitivity to sensory characteristics of food, or fear of the consequences of eating) (American Psychiatric Association [APA], 2022).

Anorexia and bulimia are the most well-known and most extensively studied types of EDs in the scientific literature (Santos et al., 2023). One of the prominent clinical features of AN/BN is that patients obsessively strive to achieve the culturally valued body standard (Maia et al., 2023; Scorsolini-Comin & Santos, 2012; Souza et al., 2019). Over the past decades, this ideal standard has been equated with slenderness, especially for women (Santos, Banuth, & Oliveira-Cardoso, 2016; Santos et al., 2019).

A relevant dimension to be considered in this field, and one that frequently pervades studies conducted with individuals with anorexia and bulimia, is the growing engagement of users on digital social media platforms (Moraes et al., 2021, 2024). Individuals with symptoms or a clinical diagnosis of EDs experience disruption in their social support networks due to the development of psychopathology, and the interactions within interpersonal relationships tend to be impoverished, characterized by fragile bonds and unstable, minimally diversified social ties (Leonidas & Santos, 2014, 2020; Scorsolini-Comin, Souza, & Santos, 2010).

Given the fragility of their personal support networks and the tendency toward social isolation due to difficulties in forming bonds and in interpersonal communication (Leonidas & Santos, 2013, 2014; Leonidas et al., 2013), it is plausible to consider that young women affected by AN/BN seek alternative sources of social support to alleviate psychological distress, seeking to form connections in cyberspace (So & Kwon, 2022; Tiggemann & Zaccardo, 2016). Protected by anonymity, individuals who maintain a problematic relationship with food may use virtual spaces, such as websites, weblogs, and online forums, as a channel to discuss a significant aspect of their lives that is generally kept secret (So & Kwon, 2022).

The digital space also facilitates the dissemination and circulation of discourses that reinforce socially hegemonic beliefs, values, and aesthetic ideals related to the body, attracting the attention of susceptible individuals prone to experiencing body image distortions (Slater et al., 2017; Tiggemann & Slater, 2017; Tiggemann et al., 2018). In the early 2000s, alongside the popularization of the internet, a movement favorable to anorexia and bulimia emerged in the

digital sphere. This phenomenon, initially propagated in the United States and the United Kingdom, quickly expanded to other nations, taking advantage of the reach of online communication and the expansion of digital culture (Slater et al., 2017). In Brazil, pro-Ana and pro-Mia blogs appeared during this period and gained momentum with the advent of the social networking site Orkut. In that environment, virtual communities began to proliferate, bringing together both individuals undergoing treatment to overcome these disorders and those who chose to remain in this condition unchanged (Moraes et al., 2024).

In a hyperconnected society, content disseminated on the internet without any external mediation or control movements, such as that associated with the pro-anorexia (pro-Ana) and pro-bulimia (pro-Mia), plays a significant role in shaping collective representations of dominant ideals regarding body and physical appearance in contemporary times (Jiotsa et al., 2021). These representations reach nearly all internet users; however, they may be more sensitive and problematic for individuals who are in a transitional stage of physical, emotional, and social development, as occurs in adolescence (Mento et al., 2021; Rodgers et al., 2016).

The lack of critical awareness, combined with the ostentatious display of certain aesthetic ideals defining the idealized body on digital social media, often corresponds to modes of psychic functioning commonly observed in the clinical practice of EDs. This alignment contributes to the reinforcement of distorted beliefs and values about the body among individuals diagnosed with AN or BN (Meier & Gray, 2014; Moraes et al., 2024). The social isolation in which these individuals are immersed constitutes an additional risk factor that can intensify their dependence on contact within the “bubbles” of digital social networks, contributing to continued exposure to the abundant material indiscriminately displayed on the digital pages of weblogs and online forums (Fava & Peres, 2011; Tiggemann & Slater, 2017; Tiggemann & Zaccardo, 2016).

Therefore, pro-ED websites are characterized as platforms for the dissemination of discourses considered harmful to public health, attracting especially young women dissatisfied with their body measurements and composition, who often use these environments as an extension of their own psychopathological functioning (Perloff, 2014). They share their complex relationship with their own body and food, and often utilize digital spaces to endorse narratives and anchor personal experiences of suffering (Tiggemann & Zaccardo, 2016). Uncritical engagement in these online communities may, to some extent, encourage the reiteration of pro-ED practices (Rodgers et al., 2016; Wooldridge, 2016). On the other hand, the continuous use of these platforms and adherence to radical pro-Ana/pro-Mia discourses offer some compensation for the loneliness experienced, mitigating the social isolation in which users find themselves (Fava & Peres, 2011; Rodrigues & Cunha, 2025).

Due to the influence that pro-Ana and pro-Mia virtual groups can exert on individuals who present some predisposition or inclination to endorse dysfunctional patterns of eating behavior, research has been conducted to understand what drives the creation, functioning, and maintenance of these communities (Fava & Peres, 2011; Perloff, 2014; Wooldridge, 2016), as well as how these environments can affect the mental health of those who participate in them

(Moraes et al., 2021). The encouragement of practices consistent with ED symptoms can lead to serious consequences for the physical and psychological health of those engaged, since these websites reinforce users' obsessive relationship with weight and body shape, resulting in greater dissatisfaction with their own bodies (Rodgers et al., 2016).

Although a significant number of studies address the impact of pro-Ana and pro-Mia websites (Mento et al., 2021; Rodgers et al., 2016; Wooldridge, 2016), many of these studies face methodological challenges, such as the difficulty of addressing sensitive topics and ethically and reliably tracing or accessing virtual communities (Fardouly et al., 2015; Perloff, 2014). Although the debate on the risks of pro-ED websites has grown, there is still no integration of research findings on this topic (Rouleau & von Ranson, 2011). Knowledge production in this field remains dispersed and has received limited attention from the scientific community, as much of the literature focuses on analyses of user communications extracted directly from posts shared on websites, rather than directly accessing the lived experiences of those who engage with them (Rodgers et al., 2016).

There are substantial differences between user narratives produced within the context of peer interactions on specific websites available in the digital environment and those constructed from interviews conducted in the context of direct interaction with a researcher. These methodological differences can generate data of a distinct nature (Minayo & Costa, 2018). In the first case, the researcher's perspective is based on material shared by the individual at a given time in a digital niche protected by anonymity, which was later tracked, extracted, and analyzed without the author's knowledge or prior consent. In the second case, while still safeguarding confidentiality and privacy, the material analyzed consists of an investigation into the thoughts, perceptions, and feelings expressed by the user of online communities, through access to narratives produced during the interaction established with an interviewer.

The present investigation adopted this latter perspective, seeking to synthesize literature produced from the direct listening to users, who were encouraged to narrate their experiences. This included understanding what motivates individuals who adhere to pro-anorexia and pro-bulimia virtual groups to seek digital spaces, and examining the psychological repercussions of engagement in such communities on their eating behavior.

From this standpoint, this study aimed to investigate the phenomenon of virtual communities linked to the pro-Ana and pro-Mia movement, which encompasses a set of websites, blogs, and online forums that promote the advocacy and maintenance of EDs as a voluntary choice of a particular lifestyle, from the perspective of their users. The term advocacy refers to the act of defending, praising, or exalting something. This research interest is justified by the association of the investigated phenomenon with a public health issue. It is based on the assumption that such online communities support and disseminate behaviors related to anorexia and bulimia as a counter-narrative to the hegemonic discourse of health, which frames and classifies such behaviors as psychopathological manifestations of a set of mental disorders that

tend to take a chronic and disabling course and are considered challenging and difficult to recover from (Rodgers et al., 2016; Slater et al., 2017; Tiggemann & Slater, 2017).

Considering this scenario, the research problem was defined as follows: how do pro-anorexia and pro-bulimia virtual groups influence the eating behavior of their users? To answer this question, this scoping review was designed to analyze the evidence available in the scientific literature concerning the experiences of users of pro-ED virtual communities and their effects on eating behavior.

Method

A scoping review was conducted, which is a type of literature review designed to collect and critically analyze studies on a given topic. It begins with a broad question to map the key concepts of a specific research field and to identify the main sources and types of available evidence (Arksey & O'Malley, 2005). Review studies are considered essential for advancing a given research topic or furthering a field of investigation (Carvalho, Pianowski, & Santos, 2023). Although this type of review provides a broader overview of the published studies, its depth may vary according to its objective and the amount of data extracted from the studies. The method was chosen because it is an appropriate strategy for examining evidence on an emerging topic, enabling the formulation of more specific research questions (Peters et al., 2015).

The following methodological steps were undertaken: (1) identification of the research question; (2) identification of relevant studies; (3) selection of studies; (4) data mapping; (5) grouping, analysis, and summary of findings (Carvalho et al., 2023). To operationalize the review, the methodological procedures proposed by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) guideline were also followed (Tricco et al., 2018).

For the formulation of the guiding question and the construction of the search strategy, the PCC strategy was applied, an acronym for P = population; C = concept; and C = context (Joanna Briggs Institute, 2015). The population (P) includes individuals with EDs who are users of virtual groups; the concept (C) refers to the effects of exposure to the online environment; and the context (C) encompasses websites of pro-Ana and pro-Mia communities. Accordingly, this study was guided by the following research question: What evidence is available in the scientific literature regarding the experiences of individuals (population) who are users of pro-ED virtual communities (context) and their possible effects on eating behavior (concept).

Criteria for the inclusion of material in the review

Articles published in journals indexed in the following databases were included: PubMed/MEDLINE, Web of Science, PsycINFO, CINAHL/EBSCO, and LILACS, selected for their international and regional relevance and comprehensiveness. The construction of the search strategy and consultation of the databases were carried out with the assistance of a professional librarian with expertise in systematic reviews.

The eligibility criteria were as follows: (1) peer-reviewed primary studies that investigated pro-ED websites; (2) studies available in full-text format; (3) published between 2013 and 2023, this time limit being justified by the existence of reviews on the topic covering earlier periods (Rouleau & von Ranson, 2011); (4) written in English, Portuguese, or Spanish; (5) containing empirical results from investigations conducted with members of the virtual groups/communities of interest; and (6) using interviews, standardized questionnaires, and/or self-report measures as research instruments.

The exclusion criteria were defined as follows: (1) publications that were not primary studies with original research results; (2) materials presented as dissertations, theses, book chapters, books, manuals, editorials, reviews, letters, commentaries, news articles, or critiques, given that the employed method does not admit grey literature or non-peer-reviewed publications; (3) literature reviews, meta-analyses, and meta-syntheses; (4) essays or theoretical articles; (5) studies whose primary data source included, but was not limited to, posts shared by users on websites; and (6) articles distant from the concept of interest or related to other topics (for example, studies addressing health problems not categorized as EDs, such as obesity).

Documentary data collection procedures

The search was conducted across all databases on August 17, 2023, through the CAPES Journals Portal system, accessed via VPN (Virtual Private Network) provided by the research team's affiliated institution. The PCC search strategy was used to combine the descriptors corresponding to each letter of the acronym, after selecting appropriate search terms for each database. The terms were chosen from the lists of Health Sciences Descriptors (DeCS), Medical Subject Headings (MeSH), and Thesaurus of Psychological Index Terms (APA Thesaurus), according to the requirements for each database.

To compose the research corpus, the following terms were used: Eating Disorders OR Feeding and Eating Disorders OR Anorexia OR Bulimia OR Body Dissatisfaction OR Drive for Thinness AND Pro-Ana OR Pro-Mia OR Pro-Eating Disorders OR Online Communities OR Social Network OR Social Media OR Blogs OR Electronic Publications, along with their corresponding terms in Spanish and Portuguese, in both singular and plural forms, and using different association paths among the terms. To standardize the searches across databases, entry terms were combined using the Boolean operators OR among the descriptors listed for each letter of the acronym and AND among the sets of descriptors corresponding to the three letters, as follows: (P1 OR P2 OR Pn) AND (C1 OR C2 OR Cn) AND (C1 OR C2 OR Cn). The "advanced search" tool was used in the databases. The search was limited to the period from January 2013 to July 2023 by applying the time filter. The complete electronic search strategy, including the descriptor paths and formats used, as well as the applied limits, is systematized in Table 1.

Table 1*Descriptors and keywords used in the searches*

Acronym	Descriptors and keywords
Population	Eating Disorders OR Transtorno Alimentar OR Feeding and Eating Disorders OR Anorexia OR Transtorno da Alimentação e da Ingestão de Alimentos OR Bulimia OR Imagem corporal OR Body Image Disorder OR Feeding behavior OR Comportamento alimentar
Concept	Electronic Publications OR Publicações Eletrônicas OR Publicaciones Electrónicas OR Pró-Ana OR Pró-Mia OR Pró-Eating Disorders OR Body Dissatisfaction OR Insatisfação corporal OR Drive for Thinness
Context	Social Media OR Mídias Sociais OR Medios de Comunicación Sociales OR Blogs OR Blogging OR Social Network OR Redes Sociais OR Redes Sociales OR Online Communities OR Comunidades Online

All stages, from selection to the organization of themes, were carried out independently by two reviewers with expertise in systematic reviews. Searches were conducted using the reference management software Rayyan for Systematic Reviews® (Ouzzani et al., 2016). After the preliminary study selection stage, the lists prepared by the reviewers were compared to verify agreement between the two datasets regarding the inclusion or exclusion of articles. The concordance index between the two reviewers was considered satisfactory (Kappa coefficient = .80). Disagreements were examined by a third reviewer with extensive experience in systematic review methods and resolved by consensus.

Analysis procedures

Articles that met the inclusion criteria were selected and retrieved in full, constituting the research corpus. The next step consisted of extracting the data of interest to address the aim of the review, using a form previously tested by the research team, composed of the following fields: authorship, year, origin, context, objective, methodological design, instruments, level of evidence, and strategies for data collection and analysis. Again, two reviewers independently performed the data extraction, blinded to each other's work. The contents were exported to a Microsoft Office® Excel 2016 spreadsheet and cross-checked, generating a single consolidated document.

For the critical appraisal of the included evidence sources, methodological quality was assessed using the Critical Appraisal Skills Program (CASP, 2018), and the classification of Levels of Evidence (LOE) proposed by Melnyk and Fineout-Overholt (2005) was applied.

The results were analyzed descriptively and qualitatively. Qualitative data were compiled, organized, and subsequently subjected to thematic analysis (Minayo & Costa, 2018) using the ATLAS.ti 23 software. The narrative synthesis process allowed summarization of the topics identified in the selected articles and the development of their central themes, focusing on the objective and research question. The analysis occurred in three stages: (a) pre-analysis; (b) exploration of the material; and (c) processing of the results obtained (Minayo & Costa, 2018).

Through these procedures, three themes were developed: (1) Organization and functioning of pro-ED online groups; (2) Participants' perceptions of pro-ED online communities; (3) The role of pro-ED virtual groups in the health recovery process. The data were carefully

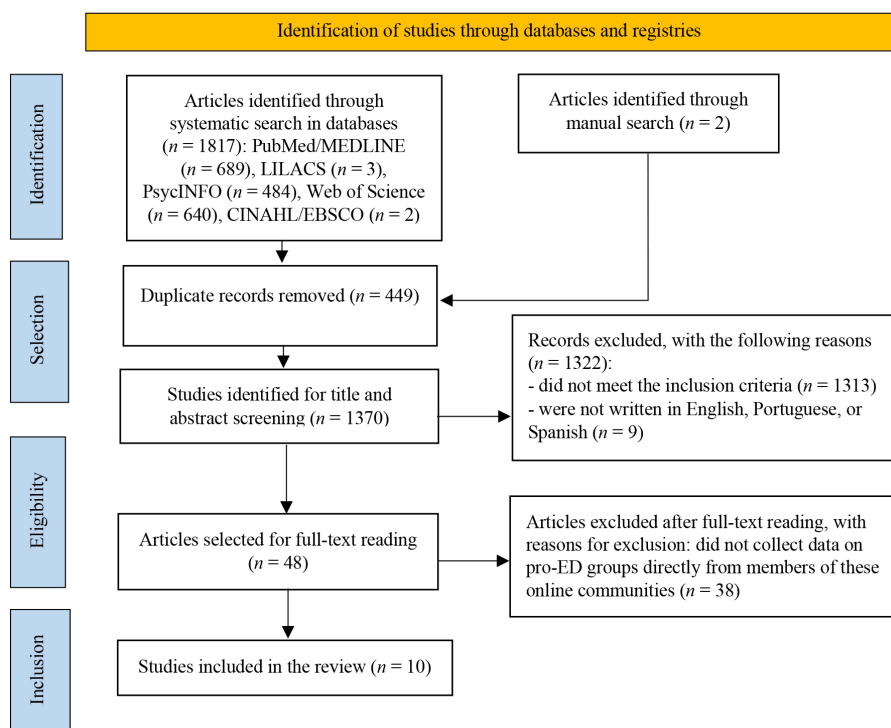
organized according to the prevailing content in the research corpus and analyzed following recommendations established in the literature (Joanna Briggs Institute, 2015).

Results and Discussion

Figure 1 presents the flowchart of the integrative review, developed according to the PRISMA 2020 guidelines (Matthew et al., 2021).

Figure 1

Flowchart of the Search and Selection Steps of the Articles According to the PRISMA 2020 Guidelines (Matthew, et al., 2021)



In the initial search, a total of 1,817 articles were identified. Two studies were manually retrieved from the references of selected articles. Of the total records identified, 449 duplicates across different indexing databases were removed, leaving 1,370 articles for title and abstract screening. Of these, 1,322 were excluded using Rayyan; 48 articles met the eligibility criteria and were retrieved in full for reading and analysis. Of these, 46 articles were available in full via the VPN system. Access to the remaining two documents was obtained through direct contact with the first author of each article. After full-text reading, 38 records were excluded for not including

data obtained directly from users of pro-ED communities. The refined search resulted in a final sample composed of 10 articles.

Appraisal of the general characteristics of the articles in the study corpus

Given the influence of the sociocultural context in which research is conducted on the perspective adopted to investigate the topic, it is relevant to examine the countries of origin of the authors of the studies included in the analysis corpus. Using the institutional affiliation of the first author as a criterion, four studies were conducted by authors from the U.S.A., four by researchers affiliated with European research centers (two from the United Kingdom, one from France, and one from the Czech Republic), one from Israel, and one from Peru. The predominance of publications from the Global North reflects the hegemonic axes of scientific production and aligns with trends observed in other review studies (So & Kwon, 2022).

Regarding the focus areas, the journals concentrated on topics in nutritional sciences (44.4%), followed by health (33.3%), psychology (11.1%), and social sciences (11.1%). Only one-third of the publications appeared in journals specialized in the topic of EDs. Even though one of the databases used (LILACS) predominantly indexes articles produced in Latin American and Caribbean countries, only one of the selected studies was authored by a researcher from South America (Peru). This suggests a research gap in the Latin American context on this subject. All included articles were published in English, although the inclusion criteria allowed studies in Portuguese and Spanish. Regarding publication year, the topic has been regularly discussed in the literature at least since 2014.

Concerning the methodological design, all studies adopted a cross-sectional design. Seven employed qualitative methods, and three used a quantitative approach. The reviewed articles included a total of 20,266 participants. In the quantitative studies, sample sizes were robust, ranging from 405 to 18,709 subjects (mean: 6,704.67). In the qualitative studies, participant numbers ranged from 6 to 37 (mean: 21.71), recruited from user profiles of pro-ED virtual communities.

Data were collected using structured questionnaires and self-report scales and/or individual interviews, mostly semi-structured, conducted either in person or remotely. The studies' focus was predominantly descriptive, and the instruments aimed to gather data not only on participants' experiences in online groups but also on body (dis)satisfaction, eating behavior, and satisfaction with treatment.

Table 2 systematizes information related to author and year of publication, research context, objective, design and sample, instruments used, risk of bias for each study based on the level of evidence (LOE), and the main findings identified.

Table 2

Characterization of the Studies According to Authorship, Year, Origin, Context, Objective, Design, Instruments, Level of Evidence, Strategies, and Main Findings.

Authors (year)	Country	Context Investigated	Objective	Design / sample	Instruments	NE*	Strategies / main results
Casilli et al. (2014)	France	Pro-Ana Websites	Identify global patterns in a pro-Ana online forum.	Qualitative, cross-sectional. N=37 young and adult women (100% female sample).	Semi-structured interview	6	More pro-recovery guidance may emerge when the conditions of use of the online forum are controlled.
Yeshua-Katz (2015)	USA	Pro-Ana Blogs	Analyze the reports of the bloggers responsible.	Qualitative, cross-sectional. N=33 adult women (100% female sample).	Semi-structured interview	6	To protect the user group from stigmatization, pro-ED blog administrators reinvent their own norms in the online environment.
Almenara et al. (2016)	Peru	Pro-Ana/Mia Websites	Explore possible differences in exposure to pro-ED websites.	Quantitative, cross-sectional. N=18,709 adolescents (50% female, 50% male sample).	Online self-administered questionnaires	4	The search for new sensations and online disinhibition were the motivations associated with greater exposure to pro-Ana and pro-Mia websites.
Yom-Tov et al. (2016)	Israel	Pro-Ana Websites	Examine differences in exposure to pro-ED websites.	Quantitative, cross-sectional. N=1000 (70.3% female, 1.4% male, 28.3% no response).	Online questionnaire	3	Users were also interested in discussing and learning more about treatment-related issues.
Gale et al. (2016)	United Kingdom	Pro-ED Websites	Analyze access to and continued use of pro-ED websites.	Qualitative, cross-sectional. N=7 adult women (100% female sample).	Semi-structured interview	6	Websites promote a sense of support, personal validation, and safety among users with eating disorders.
Firkins et al. (2019)	United Kingdom	Pro-Ana Websites	Explore the decision to disengage from the websites.	Qualitative, cross-sectional. N=6 adult women (100% female sample).	Questionnaire and interviews	6	Disengagement from pro-ED websites proved to be a central requirement for disorder recovery.
Smahelova et al. (2020)	Czech Republic	Pro-ED Platforms	Investigate perceived harms and benefits in the use of pro-ED websites.	Qualitative, cross-sectional. N=30 adult women (100% female sample).	Semi-structured interview	6	Women sought on websites either support for their need to lose weight or, conversely, motivation to maintain their recovery.
Fitzsimmons-Craft et al. (2020)	USA	Pro-ED Websites	Examine exposure to body image content on digital platforms.	Quantitative, cross-sectional. N=405 adolescents (100% female sample).	Online self-administered questionnaires	3	About 84% of self-reported symptoms by adolescents were consistent with clinical or subclinical manifestations of eating disorders.
Jones et al. (2022)	USA	Pro-recovery online communities	Examine how online communities can support ED recovery.	Qualitative, cross-sectional. N=29 adolescents and adults (86.2% female, remainder unspecified).	Questionnaire and open interview	6	Websites help users feel connected to one another and accepted for their struggles and achievements throughout eating disorder treatment.
Mincey & Hollenbaugh (2022)	USA	Pro-ED Websites	Explore the experiences of young adults involved with pro-ED digital media.	Qualitative, cross-sectional. N=10 adolescents and adults (80% female, 20% male).	Body satisfaction scales	6	Engagement in pro-ED communities occurs out of curiosity, a search for understanding, and the need for support, safety, and a sense of control.

* The level of evidence (LOE) was assessed in accordance with the classification proposed by Melnyk and Fineout-Overholt (2005). LOE 6 includes evidence derived from a single descriptive or qualitative study; LOE 3 corresponds to evidence obtained from well-designed clinical trials without randomization; LOE 4 corresponds to evidence from well-designed cohort and case-control studies.

Methodological quality was assessed using the Critical Appraisal Skills Program (CASP, 2018) tool (Table 3). Seven studies were rated with the maximum score (10) and three with a score of 9, indicating a high level of methodological quality and low risk of bias.

Table 3

Methodological Quality Assessment of the Studies Included in the Review, according to the Critical Appraisal Skills Program (CASP) Tool

Authors and year of publication	1	2	3	4	5	6	7	8	9	10	Total
Casilli et al., 2014	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
Yeshua-Katz, 2015	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
Almenara et al., 2016	✓	x	✓	✓	✓	✓	✓	✓	✓	✓	9
Yom-Tov et al., 2016	✓	x	✓	✓	✓	✓	✓	✓	✓	✓	9
Gale et al., 2016	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
Firkins et al., 2019	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
Smahelova et al., 2020	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
Fitzsimmons-Craft et al., 2020	✓	x	✓	✓	✓	✓	✓	✓	✓	✓	9
Jones et al., 2022	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
Mincey & Hollenbaugh, 2022	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10

Note: Retrieved from the Critical Appraisal Skills Programme (2018). CASP (Qualitative) Checklist. [online].

✓ : yes; ? : inconclusive; x: no

1. Was there a clear statement of the aims of the research?
2. Is a qualitative methodology appropriate?
3. Was the research design appropriate to address the aims of the research?
4. Was the recruitment strategy appropriate to the aims of the research?
5. Was the data collected in a way that addressed the research issue?
6. Has the relationship between researcher and participants been adequately considered?
7. Have ethical issues been taken into consideration?
8. Was the data analysis sufficiently rigorous?
9. Is there a clear statement of findings?
10. How valuable is the research?

Using the thematic analysis procedure, three central themes were organized: (1) Organization and functioning of online pro-ED groups; (2) Participants' perception of online pro-ED communities; and (3) The role of pro-ED virtual groups in the health recovery process.

Theme 1: Organization and functioning of online pro-ED groups

Most articles did not specify which websites and online forums were used by the participants. Studies only reported that individuals were selected based on self-reported eating disorders and that these users interacted in pro-Ana communities. The most used digital social networks, according to Fitzsimmons-Craft et al. (2020), were Instagram, Snapchat, Facebook, Tumblr, YouTube, Twitter, and Reddit. Some blogs characteristic of pro-ED content were also identified in Yom-Tov et al. (2016), such as Myproana, Pro-Ana Nation, and Proanorexia.

Regarding participants' diagnoses, there was a predominance of AN compared to other types of EDs mentioned in the studies (BN and Other Specified Feeding or Eating Disorders – OSFED) (Casilli et al., 2014; Jones et al., 2022). In Firkins et al. (2019), all participants reported having previously received a clinical diagnosis of an ED, including AN, BN, and OSFED. Fitzsimmons–Craft et al. (2020) noted that, as participants were recruited via an online invitation on digital platforms, as observed in most studies (Almenara et al., 2016; Casilli et al., 2014; Firkins et al., 2019; Mincey & Hollenbaugh, 2022; Smahelova et al., 2020; Yeshua–Katz et al., 2015; Yom–Tov et al., 2016), the criterion of having a formal clinical diagnosis could not be fully ensured. Nonetheless, Fitzsimmons–Craft et al. (2020) argued that such data were already significant to suggest a probable diagnosis, which could eventually be corroborated by a healthcare provider. Only in Gale et al. (2016) and Jones et al. (2022) did the authors ensure the clinical diagnosis of participants.

Examining the structure of the sites, particularities emerge that encompass both sociocultural aspects and specific features of the operation and management of online groups. The growing popularity of ED–related content circulating on social networks, combined with the pressure exerted by aesthetic standards regarding body weight and shape in the virtual environment (Jett et al., 2010), especially affecting females (Brown & Tiggermann, 2016), results in the near–total predominance of women participating in pro–ED communities (Almenara et al., 2016; Harmon & Rudd, 2019).

Based on the results, three crucial factors can be highlighted for understanding pro–Ana and pro–Mia websites and blogs. First, the hierarchical position, which is overtly displayed and reinforced through posts and regulates users' behaviors. The prestige hierarchy is based on criteria such as the severity of the user's ED symptoms and their personal engagement in posts (Yeshua–Katz, 2015). Individuals are classified according to their more active or passive participation in the communities (Gale et al., 2016). Active participants are those who post content related to their disorder and use the virtual space similarly to a personal diary. Passive participants are those who only contribute by viewing posts from active members and may occasionally comment on certain posts (Casilli et al., 2014). Active members are positioned at the top of the online community hierarchy.

In Gale et al. (2016), passive members reported using this route to access the group because they felt less valued compared to those who shared posts about their ED symptoms. The hierarchical system contributes to users, especially viewers, believing they are not “ill enough” to seek a diagnosis, potentially minimizing the severity of their symptoms (Mincey & Hollenbaugh, 2022). Conversely, the more posts disseminated and the more severe the perceived ED, the higher the member's status and importance according to the prestige hierarchy logic (Yeshua–Katz, 2015).

The second point is the issue of body image distortion associated with the disorder. This theme recurs in posts shared within online communities. Messages tend to normalize self–harming behaviors, treating them as expressions of a voluntarily adopted lifestyle, encouraging

users to refine weight-loss strategies and escalate symptom severity (Bardone-Cone & Cass, 2007; Gale et al., 2016; Mincey & Hollenbaugh, 2022). The third aspect concerns fear of social rejection, reflecting a pronounced need for acceptance, expressed in attitudes and beliefs shared in posts (Casilli et al., 2014; Fitzsimmons-Craft et al., 2020; Gale et al., 2016; Jones et al., 2022; Mincey & Hollenbaugh, 2022; Yeshua-Katz, 2015).

Another perspective analyzed is the negotiation of meanings attributed to authority, explored in members of a pro-ED group studied by Yeshua-Katz (2015). The study aimed to define the criteria determining who can join and belong to the community. Participants reported the presence of some individuals perceived as not truly having anorexia or bulimia, referred to pejoratively as *wannarexics*. Participants perceived *wannarexics* as approaching the community solely to obtain information to lose weight quickly, for example, through compensatory or purgative methods. However, the presence of these individuals was not welcomed by long-standing members who considered themselves legitimate participants due to experiencing an ED. The free circulation of *wannarexics* in pro-ED communities could “discredit” the seriousness of the group and the gravity of the diagnosis members proudly display.

The participants reported discomfort when identifying healthy users who spoke of ED as if it were a positive and/or desirable personal attribute (Borzekowski et al., 2010). The participants felt that the intimacy of their group refuge was being invaded and regarded the “others” as usurpers of the only space they had for socialization. Those considered pseudo-members of the community were cancelled and virtually excluded from the groups in an attempt to preserve the space for those who are in a situation of genuine psychological distress (Yeshua-Katz, 2015).

The freedom to present oneself as one wishes, facilitated by the possibility of protecting one’s identity behind a virtual profile, is one of the greatest advantages perceived by users of pro-ED groups. In individuals with a clinical diagnosis, a persistent feeling of shame is observed when exhibiting behaviors identified as disordered. This feeling appears to be heightened by the fear of public exposure of their eating habits and symptoms, which generates a desire to conceal them from social and family groups as a defense against social stigmatization (Almenara et al., 2016; Casilli et al., 2014; Gale et al., 2016; Nechita et al., 2021). Accordingly, those navigating pro-ED environments rely on confidentiality and the protection of anonymity to preserve their identity, avoiding the embarrassment they might feel in offline interactions (Walther & Boyd, 2002).

Walther and Boyd (2002) highlighted that upon joining pro-Ana communities, individuals feel free to express their feelings about their disorder more openly, safely, and protected than in the offline world. Almenara et al. (2016) noted the effect of online disinhibition to explain why the virtual context provides comfort even when social interaction occurs outside the digital environment, precisely because it does not imply direct and overt contact. Online disinhibition refers to the phenomenon in which individuals feel less restrained or inhibited in digital environments compared to in-person interactions. Communication mediated through technology supporting virtual reality can help individuals with EDs share their narratives and experiences,

both related to psychopathology and life in general, without shame or self-criticism acting as inhibitory factors or stressors (Smahelova et al., 2020).

The guarantee of anonymity is another facilitating factor contributing to a permissive environment in which the person feels safe to show themselves as they truly “are.” This partially fulfills the need to develop a sense of autonomy and personal identity, which are recurrent developmental deficits in individuals with EDs (Fava & Peres, 2011). In their psychodynamic functioning, these individuals show a refusal of desire and rejection of the other. These defenses are intensified by an undifferentiated model of object relations and by frustrated attempts to establish a personal identity. By participating in pro-ED communities, individuals perceive an opportunity to take control of their lives, even if illusory, as it relies on omnipotent fantasies detached from reality. The relatively safe and reliable environment provided by pro-Ana sites reinforces the illusion that they can continue living in their “bubble,” distant from reality and adult responsibilities, including self-care and facing frustrations and obstacles to achieving life goals (Almenara et al., 2023; Gale et al., 2016; Mincey & Hollenbaugh, 2022).

Theme 2: Participants' perception of online pro-ED communities

Upon entering pro-Ana and pro-Mia environments, virtual community participants heavily consume content exposed on blogs, social networks, and digital platforms. Such materials not only reinforce but also enhance, in various ways, their distorted views on eating behavior, glorifying the disorder as a way of life and exalting those who maintain their symptoms (Gale et al., 2016; Ging & Garvey, 2018; Mincey & Hollenbaugh, 2022). These individuals are glorified as determined, resolute, and persevering, distinguished by their high degree of control over their own basic needs.

From the perspective of healthcare providers, pro-Ana websites are seen as closed spaces that validate the anorexic lifestyle by offering tips, tricks, and images (*thinspirations*, inspirations to stay thin), as well as suggestions for intentional self-harm, cutting, and skin scarification, which help users achieve low body weight, obtain relief, and experience vicarious compensation for suffering (Almenara et al., 2016; Firkins et al., 2019; Ging & Garvey, 2018; Yom-Tov et al., 2016). Opinions and behavioral models shared in these environments run counter to biomedical standards for maintaining good health and well-being (Gale et al., 2016; Smahelova et al., 2020). On the other hand, the use of pro-ED sites as a safe and protected space, reinforcing a sense of belonging, is a recurrent meaning reported by those involved in these contexts. Social comparison tendencies and encouragement to adopt risky behaviors were also commonly revealed by the studies (Gale et al., 2016; Jones et al., 2022; Mincey & Hollenbaugh, 2022).

Research conducted with patients with a clinical diagnosis of EDs indicates the internalization of the ideal of extreme thinness and a strong tendency toward comparison based on physical appearance (Ging & Garvey, 2018). During the phase in which symptoms are active, it becomes evident that, for many individuals with EDs, the mantra of “the worse, the better”

applies. When they encounter someone who is more emaciated and debilitated than themselves, and who stoically maintains prolonged fasting or persists in compensatory behaviors, individuals with EDs report feelings of envy and may even become depressed for not having achieved the “standard of perfection” that the other supposedly reached (Harmon & Rudd, 2019; Leonidas & Santos, 2020).

One negative consequence of frequent use of pro-ED websites is the normalization of psychopathology as a desired lifestyle (Gale et al., 2016; Mincey & Hollenbaugh, 2022). This phenomenon is evident in the glorification of practices that favor psychopathological manifestations and in the creation of a sense of community around adherents of this ideology, which unites members among themselves and further separates them from the rest of society (Mincey & Hollenbaugh, 2022; Smahelova et al., 2020).

Distorted perception of symptoms is highlighted in the study by Fava and Peres (2011), who interpret this phenomenon as evidence of denial of the psychopathological nature of the disorder. The authors argued that there is a relationship between disturbances in self-image, found in those developing the psychopathological condition, and the cleavage between the ego and the body. The evidence that AN or other ED symptoms come to be regarded as normal eating habits within pro-Ana communities (“a healthy routine”), combined with self-image disturbance, reflects a defensive effort by the psychic apparatus against a reality perceived as unbearable, in a denial process extending to the individual’s fragile condition (Gale et al., 2016; Mincey & Hollenbaugh, 2022). Fava and Peres (2011) further noted that the psychic apparatus begins to falsify reality, leading the affected individual to believe they can exert omnipotent control over their body and manage the symptomatic manifestations of the disorder, without awareness that this “choice” is grounded in denial of primary helplessness and refusal of symbolic castration, structuring elements of the psyche that organize mental functioning.

The establishment of pro-Ana communities is based on the weakening of reality testing, collapsed by distortions of psychic functioning amplified in the shared digital space. Group members autocratically determine what they consider real and what they refuse to recognize as reality. Beliefs shared in the digital environment are often marked by arrogance and superiority, which tend to intensify as manifestations of the disorder increase (Gale et al., 2016; Yeshua-Katz, 2015). Once this hierarchical vision is established, two other phenomena characteristic of these websites emerge: a propensity for social comparison and intense competitiveness. Through the posting of photos and narratives detailing restrictive and/or purgative behaviors, group members compare themselves with those who post most frequently about their private lives and whose symptoms are most apparent and severe, competing to see “who is worse” (Mincey & Hollenbaugh, 2022). Photos of emaciated, skeletal bodies are valued, and the profile of those who display them occupies a high position in the group hierarchy.

Gale et al. (2016) concluded that when intergroup comparisons were unfavorable (i.e., when the individual did not identify strong similarities with the other), feelings of inadequacy, jealousy, and failure were reported. According to the authors, this sense of inferiority often fuels

users' desire to advance and further exacerbate their disorder, revealing the high degree of toxic competitiveness within the communities.

In contrast, Jones et al. (2022) identified a positive aspect in the impulse to compare, which commonly occurs within pro-ED community interactions, noting that this tendency could also favor recovery. The authors comment that social comparison, also observed in traditional treatment settings, can have a healthy side when the individual compares themselves with someone recovering more rapidly and feels motivated to continue their own recovery process.

It is noteworthy that, despite the exaltation of risky behaviors permeating discussions within pro-ED groups, it also fosters a sense of solidarity among members sharing this content (Wooldridge, 2016). Mincey and Hollenbaugh (2022) illustrated this ambivalence with a participant's statement expressing gratitude for receiving tips and advice from the community on how to avoid damaging their teeth while purging, protecting dental enamel from the harmful effects of self-induced vomiting.

In a sense, sharing messages that promote ED behaviors can be experienced as a form of care and reassurance, as it helps maintain a sense of belonging often observed within pro-Ana communities. Research findings indicate that pro-ED communities contribute to promoting an individual's feeling of being part of "something larger," mitigating experiences of loneliness resulting from weakened personal networks, impoverished affective bonds, and pronounced difficulties in relating to others (Gale et al., 2016; Jones et al., 2022). Therefore, individuals with an active disorder find in virtual environments a space where they can openly express their suffering or escape painful experiences, as well as a context in which self-disclosure does not result in judgment or stigmatization, as frequently occurs offline (Gale et al., 2016; Jones et al., 2022).

Membership in virtual communities confers a sense of personal agency (Firkins et al., 2019). Yeshua-Katz (2015) highlights that the sense of community is established as a form of resistance to both social stigma associated with the mental disorder and the denigration of being part of a stigmatized virtual community comprised of outsiders and misfits. This contributes to the consolidation and intensification of users' unity around a common ideal, reinforcing imaginary identification bonds among peers and enhancing group cohesion, which, in turn, strengthens the sense of community belonging. Consequently, belonging to pro-ED communities appears to provide some degree of shelter, compensation, and comfort for their users.

Theme 3: The role of pro-ED virtual groups in the health recovery process

Recovery was a theme frequently addressed in the reports of members of pro-ED groups. Many had already participated and/or were participating in some rehabilitation effort (Firkins et al., 2019; Fitzsimmons-Craft et al., 2020; Gale et al., 2016; Jones et al., 2022; Mincey & Hollenbaugh, 2022; Smahelova et al., 2020; Yom-Tov et al., 2016). Recovery begins with a shift in the individual's perception, as they come to understand themselves as someone experiencing significant psychological suffering that exceeds their personal coping resources. Many individuals diagnosed with EDs retrospectively report that, for a long time, they were unaware of the

seriousness of their eating difficulties and did not comprehend the gravity of the situation. Therefore, they considered it not to be a problem, or at least not a sufficiently serious problem that required professional help. Others hesitate to seek treatment because they consider themselves self-sufficient and, therefore, believe they should be able to take care of themselves, tenaciously refusing assistance and care from others (Fitzsimmons-Craft et al., 2020; Gale et al., 2016; Mincey & Hollenbaugh, 2022).

As they acquire critical awareness of their problems, they may finally accept their condition of suffering and engage in treatment. At this stage of awareness, they may discern that digital platforms and media stimulate the continuation of their symptoms and that, for this reason, they need to remain alert to the dangers of being influenced by messages if they continue connected to the communities (Casilli et al., 2014; Mincey & Hollenbaugh, 2022; Smahelova et al., 2020). However, the group atmosphere of inclusion and acceptance that they find in online groups and the strength of the bonds established among members cause users to hesitate to stop attending the sites, where they feel welcomed and comfortable with their ED-related personality.

Based on this conflict between the pursuit of improvement and the possible sense of helplessness users may experience when distancing themselves from virtual groups, Firkins et al. (2019) identified two ways of initiating treatment: one based on the individual's voluntary decision to leave the group, and the other defined by coercive pressure exerted by the social and family circle for disengagement to occur, resulting in a forced withdrawal. The authors note that, regardless of the strategy used, distancing from the communities is a necessary requirement for the stabilization of the emotional conditions that support the recovery process.

Possible relapses in the use of digital social networks represent challenges to be faced in the course of recovery, but it is also necessary to consider the complexity and uncertainties experienced when seeking a new personal identity without being able to rely on the "crutch" of the disorder (Firkins et al., 2019). Gale et al. (2016) reproduce the report of a participant who stated that they had an "anorexic voice" and a "normal voice" inside their head, as if the ED, more than an illness process, had become "another personality" integrated into the self. Fava and Peres (2011, p. 358) noted that "the personification of anorexia nervosa represents, ultimately, the indicator of significant narcissistic fragility, as it attests to the unsustainability of self-sufficiency." In this context, treatment should assist in building a healthy, autonomous identity for someone who no longer sees themselves detached from the characteristics of the disorder, nor perceives themselves as competent to confront the tasks inherent to personal growth and maturation. This shows that becoming ill is a complex process of constructing a pseudo-identity shaped with the support of the disorder, in individuals with preexisting narcissistic fragilities. The desire to maintain a lifestyle shaped by the ED may therefore function as a powerful anti-recovery narrative (Firkins et al., 2019).

Recommendations on care provided by healthcare providers and guidelines for ED treatment were also addressed in the articles comprising the corpus of this review (Firkins et al.,

2019; Gale et al., 2016; Jones et al., 2022; Smahelova et al., 2020). Mincey and Hollenbaugh (2022) argued that, in many cases, there is misunderstanding on the part of professionals, which hinders patients' pursuit of recovery, whether due to fear of criticism and stigmatization associated with the disorder (Casilli et al., 2014) or due to clinicians' lack of professional qualification on how to handle EDs sensitively and empathically, abstaining from an adaptational or moralizing approach.

Fitzsimmons-Craft et al. (2020) alerted healthcare providers to the need to actively explore the possible participation of patients in pro-Ana communities and the impact these may have on the progression of their symptoms. Psychotherapy can be an important ally in addressing various issues, such as distinguishing one's own sense of identity from "ED thoughts," developing socioemotional skills, establishing healthy bonds, and achieving effective communication with others outside the context of virtual communities. As Rouleau and von Ranson (2011) highlighted, virtual friends are only a mouse click away, but they can never replace genuine love and care.

Jones et al. (2022) identified positive aspects in online groups, such as providing emotional support and the connection that members create through support networks, which may function as collective pro-recovery spaces if used intelligently and healthily. This finding suggests that the beneficial or harmful effects of contact with pro-Ana and pro-Mia websites depend on how these spaces of sociability are used.

In conclusion, the results of studies investigating what occurs within the intimacy of closed virtual communities challenge a series of unquestioned assumptions. Contrary to the most widespread ideas, these websites clearly do not constitute a single, cohesive movement. Research shows that there is no unified philosophy glorifying weight loss, since much of the message content shared describes users' daily struggle with their conflicts and suffering. The assumption that pro-Ana and pro-recovery websites present exclusive and polarized perspectives also does not hold. As observed, most communities simultaneously contain both pro-illness and pro-recovery elements (Firkins et al., 2019).

Final Considerations

This scoping review, guided by the research question of how pro-anorexia and pro-bulimia virtual groups influence users' eating behavior, was based on the systematic analysis of results obtained from primary empirical studies, which provides a reliable foundation for inferences and conclusions. The synthesis of current knowledge on the problematic use of pro-ED media and virtual communities revealed that exposure to online content produced on websites and digital platforms emphasizing the ideal of radical thinness is associated with probable ED diagnoses among users. Although pro-ED websites tend to be perceived as a source of social support, they often appear to contribute to the exacerbation or maintenance of the symptoms that characterize these disorders. In other words, frequent use of such virtual communities may influence individuals' eating behavior by reinforcing the maintenance of problematic habits.

The results of most studies converge in indicating that virtual communities provide an environment conducive to the encouragement of harmful practices of weight loss and control. Among the identified risks, the reinforcement of dysfunctional eating behaviors and the prevention or delay in seeking professional help stand out, both of which hinder recovery. On the other hand, this scoping review also revealed research results suggesting that, depending on how individuals use the online environment, the content to which they are exposed may help mitigate feelings of helplessness, loneliness, and inferiority that reinforce low self-esteem. When individuals feel supported within virtual communities, some may use this experience as encouragement to seek treatment and as an incentive to take the first steps toward ED recovery.

This hypothesis is supported by the fact that one of the main motivations found for users' engagement in social media that endorse pro-ED behaviors is the desire to protect themselves from the social stigmatization they face in daily life as a subalternized group. People turn to pro-anorexia/bulimia websites when they feel lonely and misunderstood in their life contexts, as a means of alleviating or mitigating feelings of inferiority and strengthening their sense of community and social identity. Therefore, it is necessary to adopt a broader perspective toward this phenomenon and examine both the negative and positive aspects resulting from the use of digital spaces conventionally referred to as "pro-ED communities."

From this perspective, this review shows the need to expand research on the potentially positive effects of some online environments that present themselves as pro-ED, avoiding generalizations or a priori condemnatory stances. This is because adherence to online communities is motivated not only by concerns about weight but also by the emotional support provided and the possibility of expressing one's needs and emotional distress. Consequently, social support is understood by users as one of the main reasons for seeking pro-ED websites. The scarcity or superficiality of such support in these individuals' lives seems to be intertwined with the maintenance of their eating symptoms, more so than with the harmful influence of peers.

It is recommended that new studies be conducted to examine the impact of exposure to pro-anorexia and pro-bulimia websites, a phenomenon of growing importance given the expansion of digital culture and its influence on youth behavior. Future studies should seek to clarify the still underexplored mechanisms through which exposure influences users' eating behavior. On the other hand, the results of this review have notable implications for the clinical practice of professionals working across different lines of care and levels of assistance, contributing to the questioning of clinical treatment models excessively focused on the recovery of weight and body composition, as such strategies may reinforce symptomatic aspects of the disorder in some cases.

Healthcare providers may use these findings to enhance their qualified listening in existing support services, but they should understand that interpersonal communication difficulties also foster the engagement of individuals prone to AN/BN in the online world, particularly younger ones, as they belong to a hyperconnected generation that finds on the internet accessible resources for self-expression and the opportunity to be heard by peers

without criticism or judgment. This aspect is crucial considering the perception of not being listened to or of having their complaints undervalued, frequently reported during consultations with healthcare providers.

The findings may guide the implementation of acceptance strategies for this high-risk population for developing EDs. Prevention programs and therapeutic and psychoeducational interventions should take into account the dual nature of users' engagement with these websites, whether as a sign of conformity or as an expression of resistance and identity affirmation. Recognizing the potential of these communities, rather than condemning them outright, is an important step toward eventually using them as resources in favor of recovery and the re-signification of symptoms. How to operationalize this goal remains little explored in the literature, which suggests the need for further research in this direction.

The results of this review should also be interpreted in light of its main limitations. The included articles were derived from cross-sectional studies, which restrict causal inferences between the analyzed variables. It is recommended that longitudinal studies be conducted, as they allow the exploration of causal relationships and are more suitable for investigating issues from a developmental perspective, as they can provide more robust evidence for explaining different trajectories of engagement with the online environment. Furthermore, most of the reviewed studies, despite their good methodological quality, presented a low level of evidence, suggesting the need to invest in more sophisticated methodological designs. Future research should aim to clarify how specific characteristics of pro-ED websites contribute to the development, maintenance, or exacerbation of psychopathological conditions. This requires conducting studies with prospective/longitudinal designs and randomized clinical trials, including clinical samples and diverse age groups.

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