

# Break Binge Eating: Reach, engagement, and user profile of an Internet-based psychoeducational and self-help platform for eating disorders

Jake Linardon PhD  | John Rosato BBus | Mariel Messer PhD

School of Psychology, Deakin University,  
Geelong, Victoria, Australia

## Correspondence

Jake Linardon, School of Psychology, Deakin University, 221 Burwood, Highway, Burwood, VIC 3125, Australia.

Email: jake.linardon@deakin.edu.au

## Abstract

**Objectives:** Internet-based psychoeducational and self-help platforms hold promise for alleviating existing help-seeking barriers and addressing the unmet needs of people with eating disorders (EDs). In this paper, we report data related to the reach, engagement, and visitor profile of *Break Binge Eating*, an online platform designed to provide evidence-based information and self-help strategies for people at all stages of an ED.

**Method:** Two sources of data were presented: (a) usage data from platform visitors generated through Google Analytics; and (b) characteristics of a sample of platform visitors ( $n = 786$ ).

**Results:** In 13 months, approximately 46,311 unique users worldwide have accessed this platform, with usage rates rapidly increasing each month. Most visitors came from organic searches (when ED-related information is directly searched in a browser). Self-help content was the most accessed material, and 81% of the sample stated that their reason for accessing the platform was to get help. Sample visitors were highly symptomatic; 52% met criteria resembling a threshold ED and 87% engaged in at least one ED behavior in the past month. Across different symptomatic subgroups, ~50% were unsure whether they needed help, ~80% were not receiving any help, and ~75% were highly concerned with their symptoms.

**Conclusion:** This online platform has broad reach and is engaging its intended audience. It is an aim of this platform to improve mental health literacy, facilitate symptom recognition and improvement, and alleviate help-seeking barriers. Evaluating whether this platform is achieving its intended aims in a randomized controlled trial is the next step.

## KEYWORDS

barriers to seeking mental health care, "binge eating", eating disorders, "mental health literacy", "online psychoeducational platform", self-help

## 1 | INTRODUCTION

Eating disorders (EDs) are serious psychiatric conditions that are characterized by high rates of comorbidity and relapse (Klump, Bulik, Kaye,

Treasure, & Tyson, 2009). Although evidence-based treatment and prevention options are available (Linardon, 2018; Linardon, Fairburn, Fitzsimmons-Craft, Wilfley, & Brennan, 2017), the reality remains that less than one-quarter of people with an ED receive help (Weissman

& Rosselli, 2017). Numerous factors are contributing to this treatment gap, the most common being low mental health literacy regarding recognition of ED symptoms and their seriousness, stigma associated with help-seeking, lack of knowledge about appropriate intervention options, and cost of treatment (Kazdin, Fitzsimmons-Craft, & Wilfley, 2017). Thus, there is an urgent need for additional, innovative resources that can provide the necessary information needed for people to better understand, recognize, and address EDs.

In recent years the Internet has become a scalable, cost-effective tool for delivering information and reducing existing help-seeking barriers. Online psychoeducational platforms in particular are a popular low-intensity intervention modality for people with mental health problems (Berry, Lobban, Emsley, & Bucci, 2016). Psychoeducational interventions can vary from the delivery of *passive* materials, such as websites providing general information about psychological disorders or feedback to individuals based on screening tests, to *active* materials, such as unguided or therapist-guided self-help exercises to address or prevent mental health problems (Donker, Griffiths, Cuijpers, & Christensen, 2009). The ability for users to access online psychoeducational resources from multiple geographical sites, at all times of the day, and at a low cost makes this intervention modality potentially appealing to those who may not want to seek help via traditional methods. Importantly, online psychoeducational interventions can improve mental health literacy, promote help-seeking, and effectively address a range of mental health problems (Christensen, Griffiths, & Jorm, 2004; Linardon, Cuijpers, Carlbring, Messer, & Fuller-Tyszkiewicz, 2019; Taylor-Rodgers & Batterham, 2014).

To capitalize on the strengths of the Internet, we recently developed *Break Binge Eating* (<https://breakbingeeating.com/>), an online psychoeducational platform designed to provide evidence-based information and self-help strategies for EDs. Although several existing active (e.g., *Student Bodies*; Zabinski et al., 2001) and passive (e.g., *ProYouth*; Bauer et al., 2013) online psychoeducational platforms for EDs exist, each are limited by their relatively narrow aims and target audience. For example, *Media Smart* (Wilksch et al., 2017) is a universal, active psychoeducational prevention program designed to primarily prevent weight and shape concerns in people at low risk, while the *Reach Out and Recover* website was designed to facilitate help-seeking among symptomatic individuals (McLean, Caldwell, & Robertson, 2019). In contrast, *Break Binge Eating* has several broader aims, such as improving ED mental health literacy, facilitating symptom recognition and prompting subsequent help-seeking, and equipping visitors with the self-help skills for addressing a range of ED symptoms. Similarly, the intended audience of *Break Binge Eating* is more diverse than existing online ED platforms for three following reasons. First, it offers content applicable to all stages of care, spanning universal and selective prevention, to early intervention, to treatment. Second, it contains educational content on important and highly debilitating conditions (e.g., orthorexia nervosa, muscle dysmorphia, night eating syndrome etc.) that are not previously covered in existing online platforms. Third, it contains a blend of passive and active psychoeducational material, and is thus relevant for those who either

want to learn more about the nature of EDs, or for those who are ready to commit to change and engage in self-help steps.

The first overarching objective of this paper is to understand the uptake, usage, and engagement of *Break Binge Eating*. Specifically, we intend on understanding visitor behavior in terms of what content is visited the most, where visitors come from, and for how long content is accessed. Knowledge of visitor behavior is important for informing revisions of content in a way that ensures we are meeting the needs of the end-user. For example, if overcoming binge-eating content is most frequently accessed, then subsequent efforts would be best served toward improving this content by adding more sophisticated functionality or self-help techniques. Further to this, we aim to understand the main sources of website traffic, as this would have important implications for the future marketing strategy of online ED platforms.

The second overarching objective is to understand whether *Break Binge Eating* is reaching its intended audience. To do this, we assessed several characteristics of a sample of platform visitors. First, we assessed current symptom levels to investigate whether our platform is engaging people at all different stages, levels, and profiles of an ED, consistent with its intended purpose. Second, we assessed help-seeking behaviors, barriers, perceptions, and motivations to determine if *Break Binge Eating* is reaching those who might not otherwise have access to standard care but recognize a need to get help and are wanting to change. We also examined whether different symptomatic subgroups vary in their current and prior help-seeking patterns, along with their perception of needing help. These subgroup analyses were important for helping us to pinpoint specific groups for whom help-seeking rates or symptom recognition are low, which will consequently allow for more targeted efforts to better engage, educate, and motivate these users. Third, we assessed the self-reported reasons for visiting the platform as a method to complement the usage data generated, while at the same time gathering further information on what content/features may need to be refined, added, or improved.

## 2 | METHOD

### 2.1 | Design and ethics

Two sources of data are presented in this paper. First, usage data from platform visitors between April 2019 to May 2020 were collected, measured using Google Analytics (Cutroni, 2010). Google Analytics data do not contain any personally identifiable information and all data are presented in aggregated format, making it an accessible tool used in research without ethical concerns. Second, to obtain data on the characteristics of a sample of platform visitors, a brief survey was presented on the site in April and May 2020. Data collection on platform visitors commenced at this time because this was when we received ethical clearance to conduct this research. We stopped data collection during May 2020 as we had a sufficient sample size for the aims of this research.

**TABLE 1** Overview of break binge eating themes, articles and features, and associated metrics

Theme title	Theme objectives	Web feature/abbreviated article title	Released (year)	Total views	Average time spent
Homepage	Provides an overview of the Break Binge Eating platform, and outlines the purpose of the platform, the intended audience, author credentials, and tabs linking to remaining themes, features, and articles.	<ul style="list-style-type: none"> <li>Homepage</li> </ul>	April 19	8,113	1 min 10s
General Eating Disorder Information	Collection of articles designed to educate visitors on the importance EDs, including each EDs signs, symptoms and diagnostic criteria, associated complications, epidemiology, and available evidence-based treatment and prevention approaches. Also includes a brief screening tool (EDE-Q) that provides users with feedback on their symptom severity, and directs users toward where to find appropriate help if elevated symptoms are reported.	<ul style="list-style-type: none"> <li>Brief Disordered Eating Screening Tool</li> <li>What is Binge Eating Disorder?</li> <li>What is Bulimia Nervosa?</li> <li>What is Anorexia Nervosa?</li> <li>Types of Eating Disorders</li> <li>List of Key Eating Disorder Statistics</li> <li>Effects of Eating Disorders: Why they are Dangerous</li> <li>Eating Disorders in Adolescents and Children</li> <li>Recovering from an Eating Disorder: Is it Possible?</li> <li>A Guide to Eating Disorder Treatments</li> <li>What is Night Eating Syndrome?</li> </ul>	June 19 May 19 April 19 April 19 January 20 April 19 April 19 November 19 March 20 March 20 April 20	4,355 1,133 454 366 394 4,166 267 398 316 34 498	4 min 7 s 2 min 40s 3 min 51 s 3 min 11 s 1 min 48 s 3 min 2 s 3 min 53 s 2 min 51 s 3 min 2 s 3 min 21 s 4 min 38 s
Eating Disorder Risk and Protective Factors	Collection of articles designed to educate readers about empirically-supported ED risk and protective factors. Includes information on how each risk/protective factor is defined, their epidemiology, what causes them, and intervention approaches that can effectively address them.	<ul style="list-style-type: none"> <li>List of Body Image Statistics</li> <li>A Guide to Body Image Issues and How Address Them</li> <li>What Causes Eating Disorders: Analysis of Risk Factors</li> <li>What is Intuitive Eating and How Can I Learn It?</li> <li>Orthorexia Nervosa: Not the Healthy Eating Disorder</li> <li>Muscle Dysmorphia: A New Eating Disorder?</li> </ul>	May 20 April 20 April 19 May 19 March 20 March 20	23,177 883 451 1,512 92 80	3 min 44 s 3 min 58 s 3 min 58 s 4 min 3 s 4 min 50 s 1 min 49 s
Self-Help for My Eating Disorder	A series of evidence-informed ED self-help articles, a freely downloadable Break Binge Eating eBook containing 5 practical CBT steps to stop binge eating, and recommendations for published, evidence-based ED self-help books.	<ul style="list-style-type: none"> <li>Downloadable Self-Help eBook to Stop Binge Eating</li> <li>Five Evidence-Based Steps to Stop Binge Eating</li> <li>What Should I do After an Episode of Binge Eating?</li> <li>12 Helpful Eating Disorder Books to Improve your Eating</li> </ul>	May 20 April 19 June 19 March 20	~4,000 8,228 2,403 2,578	N/A 4 min 43 s 3 min 38 s 4 min 52 s
Getting Professional Help	A single webpage that provides direct links to numerous available ED and mental health services worldwide.	<ul style="list-style-type: none"> <li>Getting Help Webpage</li> </ul>	April 19	1,797	1 min 33 s

## 2.2 | Break Binge Eating platform

Details of the *Break Binge Eating* platform are presented in Table 1. This platform was released in April 2019 with the broad

aims of providing evidence-based information and self-help resources for people at all stages of an ED. The term “evidence-based” implied that the information was sourced from peer-reviewed research published by experts in the field, and that the

self-help related strategies were supported in randomized controlled trials.

There are five broad themes to the platform, with each theme providing various features, information, and resources related to EDs. The first theme is the “homepage” (see Figure 1 for a screenshot), which outlines the purpose of the platform and provides links to remaining theme pages. The second theme is “general ED-related information,” which contains a collection of articles designed to educate visitors on the importance of EDs (e.g., signs, symptoms, causes, consequence, and epidemiology), as well as a screening test (Eating Disorder Examination Questionnaire; EDE-Q; Fairburn & Beglin, 1994). Any visitor can complete this screener, and those who complete it receive automated feedback based on their EDE-Q global score. Specifically, those who score above community norm means receive feedback that they may be exhibiting elevated levels of disordered eating, and are consequently directed toward the “help page” and the self-help theme. Those who score below community norm means are notified that their symptom levels are within what is expected of the general population. The third theme is “ED risk and protective factors,” which contains articles designed to educate readers about ED risk (e.g., weight/shape concerns, thin-ideal internalization) and protective (e.g., intuitive eating, positive body image) factors. The fourth theme is “self-help for my ED,” which contains information on effective self-help strategies as well as a freely downloadable eBook that provides five sequential steps to overcoming binge eating, based on standard CBT for EDs (Fairburn, 2013). Since these self-help resources are not used for research purposes, any visitor can download them and practice the self-help steps. However, all visitors are provided with instructions for how to implement the self-help steps in the corresponding resource, and users have the opportunity to email the authors any questions. The fifth theme is “getting professional help,” which provides links to a range of mental health

and ED-related services (e.g., the Butterfly Foundation) worldwide for people looking for additional help.

The platform has been marketed in a number of ways. First, there is a corresponding *Break Binge Eating* Instagram, Facebook, and Twitter account, each of which promotes the content of the platform and directs followers to it. Second, the authors have advertised the platform through their university affiliation, as well as through several media, blog, and podcast interviews. Third, the platform organically ranks in Google for a number of key phrases that people are actively searching. Fourth, the platform has been promoted through a limited amount of paid advertisements on Google and Facebook.

### 2.3 | Data source 1: Platform uptake and usage

Google Analytics was used to extract data on uptake, usage, and engagement of *Break Binge Eating*. Data collected include the language of the browser, the device used to access the website, user country of residence, and other audience-centric information. Google Analytics also collects data related to the nature of the platform visit, such as the traffic source, and what, when, and how long content was viewed. Google Analytics differentiates page views from sessions. Page views refers to an instance of a single page being loaded or reloaded in a browser. A session refers to a group of user interactions with a website that takes place within a given time frame. Thus, the number of page views is normally higher than the number of sessions as website users will generally view more than on page. Google Analytics also differentiates six main groups of traffic sources: *Organic* (traffic from the organic results of search engines like Google); *Social* (traffic from search engines such as Facebook and Instagram); *Direct* (traffic where a user types in a website to the address bar); *Referral* (traffic from other websites such as a mention in a blog); *Paid*

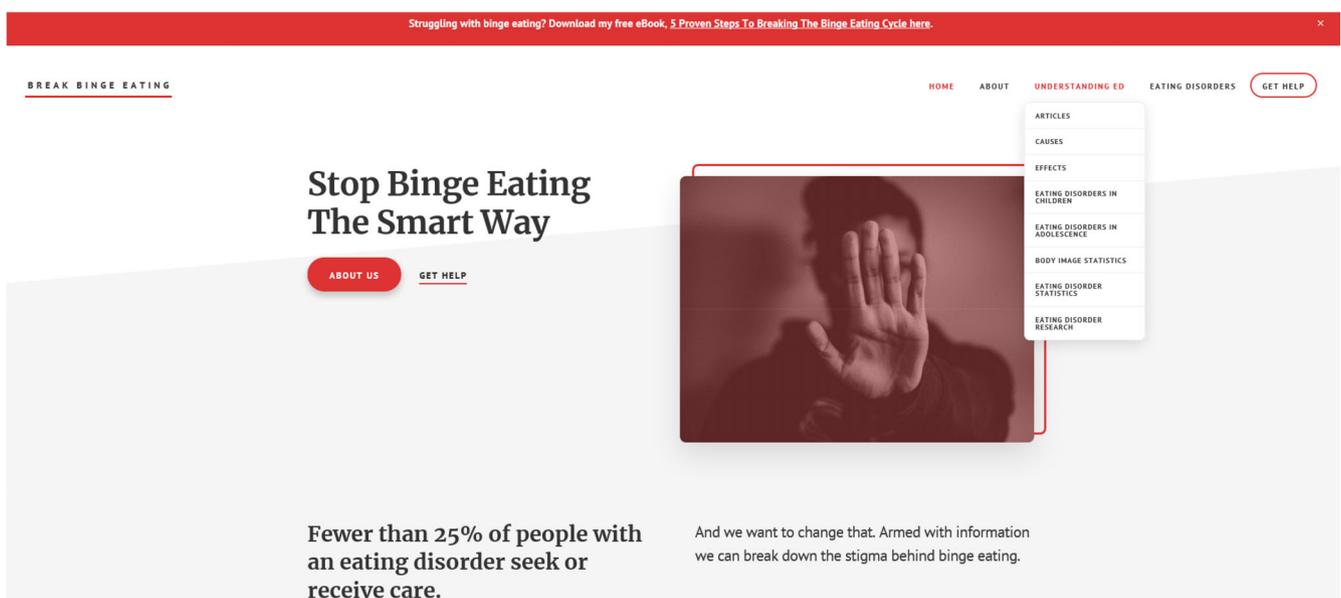


FIGURE 1 Screenshot of the break binge eating homepage

*Search* (traffic that directly comes from paid advertisements in Google and other search engines); and *Email* (email campaigns & newsletters).

## 2.4 | Data source 2: Platform visitors

Characteristics of visitors were collected through an anonymous online survey. This online survey was presented on one of the main web-pages, and anyone who visited this page could voluntarily complete this survey. All platform visitors had the chance to complete the survey. A link advertising this survey was also presented on the sites homepage. Visitors who decided to complete this survey were made aware that their responses would be used for research purposes, and that the responses of those aged 18 years or over would only be analyzed. In total, 788 platform visitors completed the survey; 42 were excluded from subsequent analyses as they reported an age younger than 18 years.

### 2.4.1 | Online survey battery

#### *Demographic*

Participant sex, ethnicity, country of residence, and height and weight were collected.

#### *Treatment status*

Participants indicated whether they had ever seen or were currently seeing a mental health professional for disordered eating behaviors and/or thoughts. Participants were also asked whether they felt like they needed professional help for the level of disordered eating behaviors and/or thoughts they were currently experiencing.

#### *Motivation*

Participants indicated how motivated they are to change their disordered eating behaviors and/or thoughts. Responses were rated along a 6-point scale, ranging from 0 (*extremely unmotivated*) to 5 (*extremely motivated*).

#### *Ambivalence*

Participants indicated the extent to which they are ambivalent toward changing their ED behaviors and/or thoughts. Response were rated along a 6-point scale, ranging from 0 (*not at all true of me*) to 5 (*very true of me*).

#### *Symptom concern*

Participants rated their level of concern in terms of their current disordered eating behaviors and/or thoughts. Responses were rated along a 5-point scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

#### *Reason for platform visit*

Participants indicated their reasons for visiting *Break Binge Eating*. Five options were presented: (1) to learn more about EDs; (2) to get help for my ED behaviors and/or thoughts; (3) to help a loved one with an

ED; (4) to find other helpful ED-related resources; (5) other. Participants could select as many options as they like.

#### *Help-seeking barriers*

Participants indicated the barriers that might prevent or deter them from seeking help for their ED behaviors and/or thoughts. Five common barriers were presented: (1) financial cost; (2) geographical constraints; (3) confidentiality/privacy concerns; (4) stigma; (5) not knowing where to seek help from. Participants could select as many options as they like.

#### *Eating disorder symptoms*

The 28-item EDE-Q was used to assess ED symptom severity over the past month (Fairburn & Beglin, 1994). A global score is also calculated by averaging the four subscales, which include items rated along a 6-point scale. There are also individual items that assess the frequency of ED behaviors experienced over the past month, including objective binge eating, self-induced vomiting, laxative use, and driven exercise.

#### *Creation of study subgroups*

We used responses from the EDE-Q to generate five symptomatic subgroups that have been created in past research (Linardon, Shatte, Tepper, & Fuller-Tyszkiewicz, 2020; Mitchison et al., 2019). These subgroups included probable anorexia nervosa, probable bulimia nervosa and probable binge-eating disorder, a possible clinically significant ED based on an EDE-Q cut-off, and the presence of a recent ED behavior. We created these subgroups to observe patterns of help-seeking across people who exhibit a range of different symptom levels and profile. Due to space constraints, the operationalization of each subgroup is described in the Supporting information.

## 3 | RESULTS

### 3.1 | Platform uptake, usage, and engagement

#### 3.1.1 | Overall usage

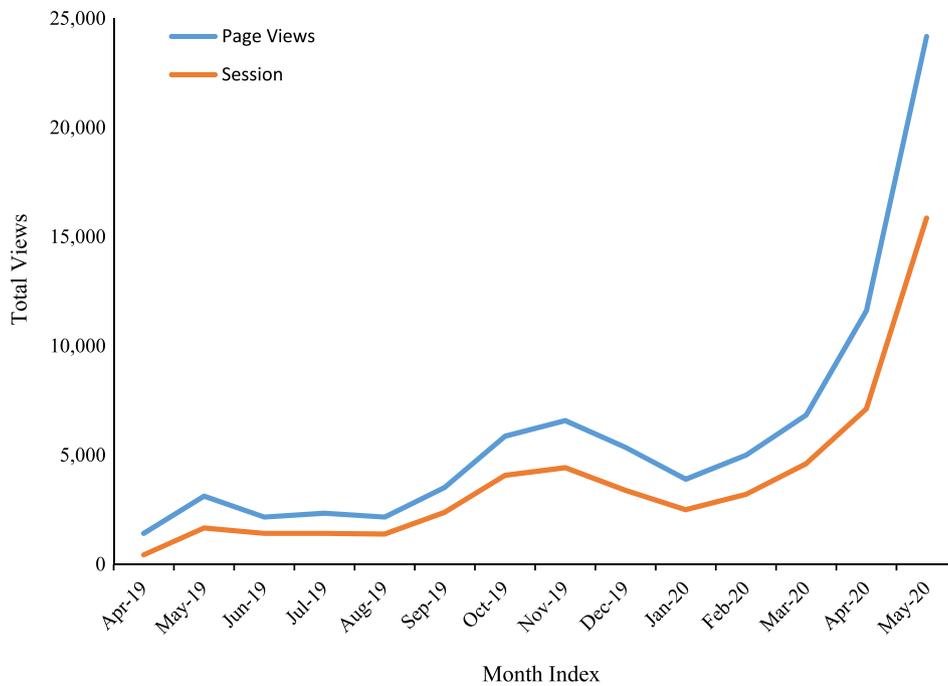
Since its release in April 2019, there have been approximately 46,311 unique users to the *Break Binge Eating* platform, 84,054 page views, and 53,554 sessions.

#### *Monthly views*

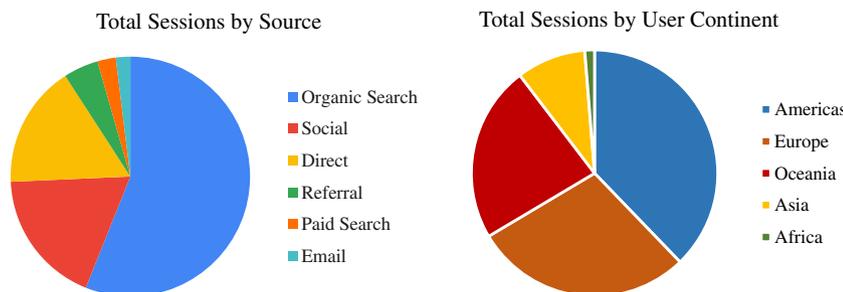
Figure 2 presents the monthly page views and sessions of the platform. Reach and engagement have steadily increased over time, with the month of May 2020 showing large spikes in the number of page views (24,165) and sessions (15,858). The largest spike in page views and sessions occurred during April–May 2020, which corresponded to the release of the downloadable self-help eBook that was marketed through social media.

#### *Traffic source*

Total sessions are broken down by traffic source in Figure 3 (left panel). The most popular traffic source was organic searches (30,238 sessions),



**FIGURE 2** Total page views and sessions of the break binge eating platform since its release



**FIGURE 3** Breakdown of traffic source and user continent of break binge eating

followed by social media (9,837 sessions) and direct traffic (8,926 sessions). Fewer total sessions came from remaining traffic sources.

(18.8%); homepage (16.9%); general ED information (10.8%); getting professional help (7.1%).

*Usage by continent*

Figure 3 (right panel) presents the total session numbers from users of each continent. Users from the Americas comprised most session numbers (20,235 sessions), followed by users from Europe (15,360 sessions), Oceania (12,405 sessions), Asia (4,874 sessions), and then Africa (680 sessions).

**3.1.2 | Usage by theme**

The total number of page views per theme was generated. The theme with this most views was “self-help for my ED,” which encompassed 46.4% of total page views. As seen in Table 1, the most accessed content within this theme was the self-help eBook (~4,000 downloads), recommended evidence-based self-help books (2,578 views), and articles related to how to stop binge eating (8,228 views) and what to do after an episode of binge eating (2,403 views). The order of views for the remaining four themes is as follows: risk and protective factors

**3.2 | Platform visitor characteristics**

**3.2.1 | Participant characteristics**

The characteristics of the 786 website visitors are presented in Table 2. The majority of participants were women, Caucasian, and resided in the United States, Australia, or England. Most participants had not received prior ED treatment (65%), were not currently receiving ED treatment (88%), were unsure about whether they needed to seek help (52%), and were concerned about the nature and level of ED symptoms experienced (75%).

This sample was highly symptomatic. The mean EDE-Q global score was 3.83 (SD = 1.11), which is nearly two standard deviations above community norms (Mond, Hay, Rodgers, & Owen, 2006). Six-hundred and eighty-nine participants (88%) reported engaging in at least one ED behavior over the past month. A total of 408 participants (52%) met criteria for a probable ED, including anorexia nervosa (n =

**TABLE 2** Characteristics of the sample ( $n = 786$ )

Variable	N (%)
Sex	
Male	55 (7%)
Female	731 (93%)
Ethnicity	
White/Caucasian	645 (82.1%)
African American	5 (0.6%)
Hispanic	34 (4.3%)
Asian	64 (8.1%)
Native American	3 (0.4%)
Other	34 (4.5%)
Country of residence	
U.S	189 (24.0%)
Australia	188 (23.9%)
England	149 (19.0%)
Ireland	51 (6.5%)
Canada	32 (4.1%)
New Zealand	19 (2.4%)
India	11 (1.4%)
Germany	10 (1.3%)
Italy	10 (1.3%)
Other	127 (16.2%)
Prior ED treatment	
Yes	276 (35.1%)
No	510 (64.9%)
Current ED treatment	
Yes	94 (12.0%)
No	692 (88.0%)
Recognizes a need to seek help	
Yes	267 (34%)
No	113 (14.4%)
Not sure	406 (51.7%)
Concern about ED symptoms	
Yes	588 (74.8%)
No	198 (25.2%)
	<b>M (SD) range</b>
Age	28.59 (8.10); 18–68
BMI	26.38 (6.06); 15.43–51.17
Motivation to change	3.74 (1.27); 0–5
Ambivalence to change	2.09 (1.61); 0–5
EDE-Q global	3.83 (1.11); 0.18–6
Objective binge-eating frequency	16.60 (23.17); 0–100
Compensatory behavior frequency	6.71 (10.95); 0–100

Note: Concern was dichotomized through the following: ratings of 1 (strongly disagree), 2 (disagree), or 3 (neither disagree nor agree) were categorized as “no concerned,” whereas ratings of 4 (agree) and 5 (strongly agree) were categorized as “concerned.”

11), bulimia nervosa ( $n = 280$ ), and binge-eating disorder ( $n = 117$ ). Finally, 387 participants (49%) scored above the clinical cut-off on the EDE-Q.

#### Help-seeking variables by subgroup

Help-seeking variables were analyzed across the five symptomatic subgroups (Table 3). Across subgroups, the percentage of participants who have received prior ED treatment ranged from 31 to 63%, while the percentage of participants who are currently receiving treatment ranged from 12 to 18%. Around half of the participants in each subgroup were unsure about whether they needed to seek help (range = 45–60% across subgroups), and around three-quarters were concerned about the nature and level of their ED symptoms.

### 3.2.2 | Perceived barriers to help-seeking

The barrier to help-seeking that received the highest agreement rating was “financial cost” ( $n = 493$ ; 62.7%), followed by “not knowing where to seek help” ( $n = 348$ ; 44.3%), “stigma associated with seeking help” ( $n = 322$ ; 41.1%), “concern about privacy or confidentiality” ( $n = 170$ ; 11.8%), and “geographical constraints” ( $n = 93$ ; 11.8%). “Other” was selected by 113 participants (14.4%), with “lack of time” ( $n = 13$ ; 1.6%), and “fear of gaining weight in treatment” ( $n = 6$ ; 0.1%) being two uniquely cited barriers.

### 3.2.3 | Reasons for visiting break binge eating

The vast majority of participants indicated that their reason for visiting *Break Binge Eating* was to “get help for my ED behaviors/thoughts” ( $n = 636$ ; 80.9%). The next most common reasons were “to learn more about EDs” ( $n = 465$ ; 59.2%) and “to find other helpful ED-related resources” ( $n = 311$ ; 39.5%). Few participants selected “to help a loved one with an ED” ( $n = 24$ ; 3.1%), and “other” ( $n = 13$ ; 1.7%).

Help-seeking patterns for those who visited the platform for self-help reasons ( $n = 636$ ) were also explored separately. Among these participants, 36% had received prior treatment and 12% are currently receiving treatment. The help-seeking barrier that received the highest agreement ratings was financial cost (66%), followed by not knowing where to seek help (45%), stigma (41%), confidentiality/privacy concerns (21%), and geographical constraints (13%). These findings are largely consistent with the pattern of findings from the overall sample.

## 4 | DISCUSSION

### 4.1 | Summary of findings

Usage data indicate that *Break Binge Eating* is being accessed by a large number of people worldwide. In just over 12 months, nearly

**TABLE 3** Treatment-related variables by symptomatic subgroup

Variable	Probable threshold eating disorder			EDE-Q clinical cut-off ( $\geq 4$ ) $n = 387$	ED behavior presence $n = 689$
	Anorexia nervosa $n = 11$	Bulimia nervosa $n = 280$	Binge-eating disorder $n = 117$		
Prior treatment for ED					
Yes	7 (63.6%)	108 (38.6%)	37 (31.6%)	158 (40.8%)	248 (36.0%)
No	4 (36.4%)	172 (61.4%)	80 (68.4%)	229 (59.2%)	441 (64.0%)
Current treatment for ED					
Yes	2 (18.2%)	38 (13.6%)	15 (12.8%)	55 (14.2%)	87 (12.6%)
No	9 (81.8%)	242 (86.4%)	102 (87.2%)	332 (85.8%)	602 (87.4%)
Recognizes a need to seek help					
Yes	6 (54.5%)	123 (43.9%)	36 (30.8%)	176 (45.5%)	244 (35.4%)
No	0	18 (6.4%)	10 (8.5%)	25 (6.5%)	89 (12.9%)
Not sure	5 (45.5%)	139 (49.6%)	71 (60.7%)	186 (48.1%)	356 (51.7%)
Concerned about ED symptoms					
Yes	8 (72.7%)	223 (79.6%)	89 (76.1%)	309 (79.8%)	514 (74.6%)
No	3 (27.3%)	57 (20.4%)	28 (23.9%)	78 (20.2%)	175 (25.4%)

50,000 users have accessed the platform. This figure is remarkable and indicates that our platform is reaching a broader audience than some other existing online platforms for EDs (McLean et al., 2019). Traffic source suggests that the majority of visitors come from organic searches, suggesting that many people are actively using the Internet to search for ED information or self-help strategies. In further support of this, the most accessed content was that related to self-help tips, while the vast majority of visitors (81%) stated that their reason for accessing the platform was to get help. These findings overall underscore the importance of the Internet as a tool for potentially reducing the existing treatment gap and addressing the unmet needs of people with EDs.

Characteristics of a sample of platform visitors were also analyzed. Unsurprisingly, most participants were women of Caucasian descent, highlighting the need for us to tailor our marketing strategy in a way that better reaches minority groups and/or develop content that is more relevant or appealing to them. Moreover, the sample of visitors was highly symptomatic, with 88% having engaged in at least one ED behavior over the past month and 52% meeting criteria that resembles a threshold ED. While it is encouraging that these individuals are searching for self-help information via the Internet, it is concerning that only a minority have received prior treatment (~40%) or are currently in treatment (~20%), despite more than three-quarters expressing concern with their symptoms. These low rates of help-seeking were mostly a result of participants' stated concerns with the cost of treatment, stigma associated with help-seeking, and not knowing where to seek help. These findings are not surprising in light of recent findings related to low help-seeking rates in EDs (Mohler-Kuo, Schnyder, Dermota, Wei, & Milos, 2016), but they also reiterate the importance of ensuring that people who do

not receive standard treatment have access to care via other mediums.

Another important finding was that across all symptomatic subgroups, around half were unsure if they needed professional help. This finding aligns with prior research showing that low mental health literacy regarding recognition of ED behaviors is common among symptomatic individuals (Mond, Hay, Rodgers, & Owen, 2008). Ensuring that online psychoeducational programs contain accurate information on the signs and symptoms of EDs, along with providing users with automated feedback from screening tests, will likely improve mental health literacy and subsequent help-seeking.

## 4.2 | Considerations

It is important to point out that data from this research were collected during the time of the COVID-19 pandemic, and so it is possible that the current findings were impacted by this pandemic for the following reasons. First, COVID-19 has not only forced an abrupt change to the delivery of clinical services (with many services shifting to online delivery), but it has also negatively impacted the financial status of many individuals (Weissman, Bauer, & Thomas, 2020). It is therefore likely that many more people affected by EDs are relying on the Internet to search for freely available information or self-help tools. This may explain why: (a) platform usage increased exponentially during April and May 2020; (b) total page views are substantially higher than other platform page views; (c) traffic source mostly came from organic searches; (d) self-help for my ED was the most accessed theme; and (e) there were lower rates of current treatment-seeking than usual. Second, many of consequences of COVID-19 (e.g., social isolation,

increased social media usage, etc.) have been shown to exacerbate ED symptoms in those with an existing ED and also in otherwise healthy populations (Phillipou et al., 2020; Rodgers et al., 2020), which may explain the high symptom levels reported in this sample.

### 4.3 | Implications and future directions

Important implications and directions for future research emerged. First, that self-help material was most in demand (based on both usage data and user feedback) suggests that efforts to reach, engage, and sustain a larger audience over time may rely upon the addition or modification of content that helps users address symptoms themselves. For example, incorporating additional digital functionality (e.g., self-monitoring diary), downloadable worksheets (e.g., cognitive restructuring exercises), or self-help strategies from other therapeutic orientations (e.g., dialectical behavior therapy principles) may be important for improving the quality of this platform from the perspective of the end-user. Prior to this, however, we should directly sample the target population on what type of content or functionality they would like featured or perceive to be most helpful. Doing so would ensure that we are meeting the needs and preferences of the end-user.

Second, present findings have implications for the authors of existing online platforms for EDs, with our findings ideally guiding their development, design, and marketing strategy. This is particularly important in light of previous findings showing that some psychoeducational websites for EDs have had difficulty in reaching a large audience. For example, authors of the *Reach Out and Recover* website noted that there were 2,391 website visitors over a 20-month period, corresponding to less than 0.01% of the Australian population (McLean et al., 2019). While there are likely numerous reasons for this, it could be that such platforms are not capitalizing on the main sources of traffic, offering content most in demand or searched for, or understanding the end-user needs. Ideally, our findings will serve as a roadmap for how authors may best market or adapt their platform to optimize reach, uptake, and engagement. For example, offering some content related to self-help—or linking to other platforms with self-help resources—may be a simple way to quickly gain more traffic. However, since each platform will have slightly different aims, it is still important for developers to study their own usage data, why people are visiting their platform, and what their audience needs.

Finally, since we found that *Break Binge Eating* is reaching its intended audience, important next steps involve evaluating the effectiveness of this platform. Following platform visitors over time and assessing changes in mental health literacy, intentions to seek help, and symptom severity are needed to ensure that this platform is achieving its desired aims. We recently translated self-help content from this platform into a smartphone app, and are currently evaluating this app in an ongoing randomized controlled trial. Findings from this trial will be crucial for determining whether this platform is meeting its intended aims.

### 4.4 | Limitations

There are limitations to this research that must be considered. First, as data related to participant characteristics were based off self-report, it is possible that participants may have inaccurately reported the nature and level of ED symptoms. Second, our sample primarily consisted of Caucasian women, which limits the generalizability of findings to men and to other ethnic and racial groups. Ideally, these findings will prompt us to expand the reach of this platform to better engage people of different genders and races. Third, user profile data were based off participants who self-selected to complete this survey, which could have introduced some sampling biases, such that our sample overly represented certain demographic and symptom profiles.

## 5 | CONCLUSION

To conclude, we reported data on usage and user characteristics of an online psychoeducational platform for people at all stages of ED. We showed that this platform has nearly reached 50,000 users worldwide in just over 13 months, with most users searching for and accessing content related to self-help. Most platform visitors were highly symptomatic, not receiving treatment, and were unsure whether they require help. It is our aim for this platform to help alleviate many of the barriers that stand in the way of people accessing care for an ED.

### CONFLICT OF INTEREST

The authors declare no potential conflict of interest.

### DATA AVAILABILITY STATEMENT

We do not have ethical clearance to publicly share our data.

### ORCID

Jake Linardon  <https://orcid.org/0000-0003-4475-7139>

### REFERENCES

- Bauer, S., Papezova, H., Chereches, R., Caselli, G., McLoughlin, O., Szumska, I., ... Moessner, M. (2013). Advances in the prevention and early intervention of eating disorders: The potential of Internet-delivered approaches. *Mental Health & Prevention, 1*, 26–32.
- Berry, N., Lobban, F., Emsley, R., & Bucci, S. (2016). Acceptability of interventions delivered online and through mobile phones for people who experience severe mental health problems: A systematic review. *Journal of Medical Internet Research, 18*, e121. <https://doi.org/10.2196/jmir.5250>
- Christensen, H., Griffiths, K. M., & Jorm, A. F. (2004). Delivering interventions for depression by using the internet: Randomised controlled trial. *BMJ, 328*, 265–260. <https://doi.org/10.1136/bmj.37945.566632.EE>
- Cutroni, J. (2010). *Google Analytics: Understanding visitor behavior*. Sebastopol, CA: O'Reilly Media.
- Donker, T., Griffiths, K. M., Cuijpers, P., & Christensen, H. (2009). Psychoeducation for depression, anxiety and psychological distress: A meta-analysis. *BMC Medicine, 7*, 79. <https://doi.org/10.1186/1741-7015-7-79>
- Fairburn, C. G. (2013). *Overcoming binge eating*. London: Guilford Press.

- Fairburn, C. G., & Beglin, S. (1994). Assessment of eating disorders: Interview or self-report questionnaire? *International Journal of Eating Disorders*, *16*, 363–370. <https://doi.org/10.1002/1098-108X>
- Kazdin, A. E., Fitzsimmons-Craft, E. E., & Wilfley, D. E. (2017). Addressing critical gaps in the treatment of eating disorders. *International Journal of Eating Disorders*, *50*, 170–189. <https://doi.org/10.1002/eat.22670>
- Clump, K. L., Bulik, C. M., Kaye, W. H., Treasure, J., & Tyson, E. (2009). Academy for eating disorders position paper: Eating disorders are serious mental illnesses. *International Journal of Eating Disorders*, *42*, 97–103.
- Linardon, J. (2018). Rates of abstinence following psychological or behavioral treatments for binge-eating disorder: Meta-analysis. *International Journal of Eating Disorders*, *51*, 1–13. <https://doi.org/10.1002/eat.22897>
- Linardon, J., Cuijpers, P., Carlbring, P., Messer, M., & Fuller-Tyszkiewicz, M. (2019). The efficacy of app-supported smartphone interventions for mental health problems: A meta-analysis of randomized controlled trials. *World Psychiatry*, *18*, 325–336. <https://doi.org/10.1002/wps.20673>
- Linardon, J., Fairburn, C. G., Fitzsimmons-Craft, E. E., Wilfley, D. E., & Brennan, L. (2017). The empirical status of the third-wave behaviour therapies for the treatment of eating disorders: A systematic review. *Clinical Psychology Review*, *58*, 125–140. <https://doi.org/10.1016/j.cpr.2017.10.005>
- Linardon, J., Shatte, A., Tepper, H., & Fuller-Tyszkiewicz, M. (2020). A survey study of attitudes toward, and preferences for, e-therapy interventions for eating disorder psychopathology. *International Journal of Eating Disorders*, *53*, 907–916. <https://doi.org/10.1002/eat.23268>
- McLean, S. A., Caldwell, B., & Roberton, M. (2019). Reach out and recover: Intentions to seek treatment in individuals using online support for eating disorders. *International Journal of Eating Disorders*, *52*, 1137–1149.
- Mitchison, D., Mond, J., Bussey, K., Griffiths, S., Trompeter, N., Lonergan, A., ... Hay, P. (2019). DSM-5 full syndrome, other specified, and unspecified eating disorders in Australian adolescents: Prevalence and clinical significance. *Psychological Medicine*, *50*, 1–10.
- Mohler-Kuo, M., Schnyder, U., Dermota, P., Wei, W., & Milos, G. (2016). The prevalence, correlates, and help-seeking of eating disorders in Switzerland. *Psychological Medicine*, *46*, 2749–2758.
- Mond, J., Hay, P., Rodgers, B., & Owen, C. (2008). Mental health literacy and eating disorders: What do women with bulimic eating disorders think and know about bulimia nervosa and its treatment? *Journal of Mental Health*, *17*, 565–575.
- Mond, J., Hay, P. J., Rodgers, B., & Owen, C. (2006). Eating disorder examination questionnaire (EDE-Q): Norms for young adult women. *Behaviour Research and Therapy*, *44*, 53–62. <https://doi.org/10.1016/j.brat.2004.12.003>
- Phillipou, A., Meyer, D., Neill, E., Tan, E. J., Toh, W. L., Van Rheenen, T. E., & Rossell, S. L. (2020). Eating and exercise behaviors in eating disorders and the general population during the COVID-19 pandemic in Australia: Initial results from the COLLATE project. *International Journal of Eating Disorders*, *53*, 1158–1165. <https://doi.org/10.1002/eat.23317>
- Rodgers, R. F., Lombardo, C., Cerolini, S., Franko, D. L., Omori, M., Fuller-Tyszkiewicz, M., ... Guillaume, S. (2020). The impact of the COVID-19 pandemic on eating disorder risk and symptoms. *International Journal of Eating Disorders*, *53*, 1166–1170. <https://doi.org/10.1002/eat.23318>
- Taylor-Rodgers, E., & Batterham, P. J. (2014). Evaluation of an online psychoeducation intervention to promote mental health help seeking attitudes and intentions among young adults: Randomised controlled trial. *Journal of Affective Disorders*, *168*, 65–71. <https://doi.org/10.1016/j.jad.2014.06.047>
- Weissman, R. S., Bauer, S., & Thomas, J. J. (2020). Access to evidence-based care for eating disorders during the COVID-19 crisis. *International Journal of Eating Disorders*, *53*, 639–646. <https://doi.org/10.1002/eat.23279>
- Weissman, R. S., & Rosselli, F. (2017). Reducing the burden of suffering from eating disorders: Unmet treatment needs, cost of illness, and the quest for cost-effectiveness. *Behaviour Research and Therapy*, *88*, 49–64. <https://doi.org/10.1016/j.brat.2016.09.006>
- Wilksch, S. M., O'Shea, A., Taylor, C. B., Wilfley, D., Jacobi, C., & Wade, T. D. (2017). Online prevention of disordered eating in at-risk young-adult women: A two-country pragmatic randomized controlled trial. *Psychological Medicine*, *48*, 1–11.
- Zabinski, M. F., Pung, M. A., Wilfley, D. E., Eppstein, D. L., Winzelberg, A. J., Celio, A., & Taylor, C. B. (2001). Reducing risk factors for eating disorders: Targeting at-risk women with a computerized psychoeducational program. *International Journal of Eating Disorders*, *29*, 401–408. <https://doi.org/10.1002/eat.1036>

## SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of this article.

**How to cite this article:** Linardon J, Rosato J, Messer M. Break Binge Eating: Reach, engagement, and user profile of an Internet-based psychoeducational and self-help platform for eating disorders. *Int J Eat Disord*. 2020;1–10. <https://doi.org/10.1002/eat.23356>