

# Who seeks Internet-based interventions for depression in Brazil?

## *Quem procura intervenções baseadas na Internet para a depressão no Brasil?*

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### Abstract

Specific psychological treatments for depressive disorders delivered on the Internet have shown effectiveness and presented advantages over face-to-face treatments (potentially less expensive, flexible schedules, available in remote areas). This paper aims to describe the characteristics of those who sought help from an online self-guided intervention for depression and to explore hypotheses about predictors of enrollment to the program. Based on a sample of 282 of individuals who filled in screening questionnaires, we verified that the respondents were mainly female, were on average 34.36 years old, were primarily recruited through Facebook, had been previously diagnosed by mental health professionals, presented moderate self-efficacy perception, and had moderately severe symptoms of depression. Respondents who

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reported comorbid conditions were more likely to attend enrollment interviews, and being in treatment or not did not influence attendance. Such characterization may provide strategies to reach more people and to optimize the design of interventions targeting help-seeking depressed individuals in Brazil.

**Keywords:** Depression; Online interventions; Participant characteristics; Recruitment.

## Resumo

*Alguns tratamentos para a depressão baseados na Internet se mostraram efetivos e apresentaram vantagens em relação a tratamentos presenciais (potencialmente menos caros, com horários mais flexíveis e com disponibilidade em áreas remotas). Este artigo descreve as características de indivíduos que procuraram ajuda de uma intervenção autoguiada on-line e explora hipóteses sobre preditores de adesão ao programa. Baseado em uma amostra de 282 indivíduos que preencheram questionários de triagem, verificou-se que os participantes eram majoritariamente mulheres, tinham em média 34,36 anos, foram recrutados em sua maioria pelo Facebook, apresentaram diagnóstico psiquiátrico prévio feito por algum profissional de saúde mental, apresentaram percepção de autoeficácia moderada e sintomas depressivos moderadamente severos. Os respondentes que relataram condições comórbidas apresentaram mais chances de avançar para as entrevistas diagnósticas, e estar ou não em tratamento não influenciou a chegada às entrevistas. Estas descrições podem auxiliar na identificação de estratégias para se atingir mais indivíduos e para otimizar o desenho das intervenções on-line para brasileiros que as buscam.*

**Palavras-chave:** Depressão; Intervenções on-line; Características de participantes; Recrutamento.

Although psychological treatments for several behavioral problems are supported by evidence (for a comprehensive list, see Hayes & Strunk, 2012), there are substantial gaps in delivering face-to-face treatments, and a large proportion of people with mental health problems do not receive treatment at all (Kazdin, 2017). The advantages of online and self-guided interventions over face-to-face treatments are potentially lower financial costs, greater geographical reach, treatment privacy, flexibility (treatments can be achieved anytime and anywhere, as long as Internet access is available), availability of repetition and practice, and a closer relation between treatment and clients' everyday context.

Treatment formats for health and psychological problems have been developed and tested worldwide, especially in Europe and Australia (Andersson, 2015). A report of an E-Health Taskforce of the European Federation of Psychologists' Association analyzes the pathologies and groups on which there is evidence for web and mobile-based treatments. This report examines both the fields in which there are validated treatments and the existing vacancy areas (Ebert et al., 2018). However, for the rest of the world, the situation is not clear. Although similar studies have been developed in Latin America with some prominent research efforts (e.g., for alcohol abuse and its disorders; Bedendo, Andrade, & Noto, 2018; Bedendo, Ferri, Souza, Andrade, & Noto, 2019; for tobacco cessation, Gomide, Bernardino, Richter, Martins, & Ronzani, 2016), there are still essential research gaps on some specific mental health problems like depression (Jiménez-Molina et al., 2019).

Depression is a leading cause of suicide and functional impairment. Around 15% of depressed people commit suicide, and evidence indicates that people with more depressive symptoms are less likely to seek treatment (Moritz, Schröder, Meyer, & Hauschildt, 2013). We found evidence for the feasibility of Internet-based programs and study protocols for Latin Americans (Martínez, Rojas, Martínez, Lara, & Pérez, 2018), such as the CALMA project in Argentina ("Calma", in Spanish means calmness), a mobile intervention for the prevention of suicide in adolescents and young adults (Daray, Olivera, Fedi, & Rodante, 2018); an adaptation of a Spanish web-based intervention also for children depression (Mira, Farfallini, Baños, Bretón-López, & Botella, 2016); and the Ascenso project, aimed at depressed adults, in Chile (Espinoza et al., 2016). Though a few studies in Latin America have provided evidence for the efficacy and the adequate cultural adaptation of some online treatments for depression (Flores, Cárdenas, Durán, & Rosa, 2014; Salamanca-Salabria et al., 2020), more studies at the Latin American context are recommended, given the contextual and cultural specificities of the population (Valencia & Vargas-Nieto, 2015).

Overall, the implementation and research of Internet-based interventions for depression have multiplied in the last two decades (Andersson, 2015) and some specific interventions show consistently good results (Deprexis®, Meyer et al., 2009; Twomey, O'Reilly, & Meyer, 2017; Twomey, O'Reilly, Bültmann, & Meyer, 2020). Particularly in the case of depression, low threshold online interventions can help patients by decreasing the barrier of the stigma associated with help-seeking (Schnyder, Panczak, Groth, & Schultze-Lutter, 2017). A challenge that is often shared by researchers and implementers of Internet-based interventions is how to reach participants for research, or patients in naturalistic settings, effectively. There is little knowledge about who the individuals that seek those interventions are. A large multi-centered study in Europe (Späth et al., 2017) found that individuals who seek online help for depression are often female (68.6%), were 42.9 years on average, had completed upper secondary education (51.3%), were moderately depressed (62.6%), and reported lower quality of life. Cultural specificities and characteristics might play a fundamental role in the implementation and enrollment in Internet-based interventions.

The Federal Council of Psychology in Brazil regulated web-based psychological practices with the Resolution 011/2018 (Conselho Federal de Psicologia, 2018). Brazilian psychologists have the authorization to provide online treatments using synchronous services such as Skype®, WhatsApp®, and other asynchronous text services such as e-mail, chats, messengers, and the so-called Internet-based interventions. However, the research is in its early stages, and we still know little about the population who would be interested in such interventions. Brazil, in particular, presents significant levels of illiteracy, low income, and restricted access to healthcare in general (Instituto Brasileiro de Geografia e Estatística, 2019), which can be regarded as risk factors for the development of depressive disorders (Lorant et al., 2003). These characteristics might bring particular implications to the enrollment in Internet-based treatments, which need to be addressed in order to enhance the implementation of such interventions. Thus, it is relevant to identify the characteristics of subjects who ask to participate in online interventions in Brazil, and how some of those characteristics might be related to the likelihood of starting treatment. Familiarity with these characteristics might also inform the development of Internet-based treatments that are specifically tailored to match the needs and preferences of Brazilians who seek online help for depression. As far as we know, no studies of the characteristics of potential users of Internet interventions were done in Latin America so far.

This study aims to describe the characteristics of those individuals who seek help from an online self-guided intervention for depression in Brazil and to explore potential predictors of intervention enrollment.

## Method

This study uses data from an ongoing clinical trial that aims to assess the effectiveness of Deprexis® (Lopes, Meyer, Berger, & Svacina, 2020). This Internet-based intervention helps people cope with depressive symptoms (Meyer et al., 2009). Briefly, Deprexis® (<https://br.deprexis.com/>) is established on the evidence-based principles of cognitive-behavioral therapy and consists of ten interactive content modules, plus one short review module. The content modules are psychoeducation, behavioral activation, cognitive restructuring, mindfulness and acceptance, social and communication skills, relaxation exercises, suggestions on physical activity and healthy nutrition, problem-solving methods, expressive writing, forgiveness, as well as working with dreams from a cognitive-behavioral perspective (Meyer et al., 2009). An introductory module asks for the user's primary concerns and preferences. Based on decision learning procedures, the program assigns specific modules to the user. Deprexis® can be delivered with no guidance from a therapist. In our trial, we have trained psychologists and psychology students to keep minimal regular contact with the participants by e-mail, which constitutes minimal guidance. The program tailors the content according to users' preferences. It means that whether the participants need to improve their communication skills or to relax, the answers given will lead to more exercises related to those needs. Some sections are shown, according to their importance,

to some users. The language used is colloquial and aims to be regarded as a real conversation. Deprexis® sends messages with therapeutic contents daily, to assist in everyday life (e.g., day-to-day organization, reducing large significant problems into small chunks, social interaction, awareness of unproductive automatic thoughts).

From the ten different kinds of content, at least six are presented to users. They can choose whether or not to complete all sections. Within 90 days, the user can access the contents as much as wanted, although the recommendation is to use the program for at least half an hour twice a week. The program can be used with mobile and desktop devices, and it is possible to use it together or without psychotherapy. When other treatments, as psychotherapy, are being held at the same time, users can authorize therapists to check their progress and development. As it is part of a research study, participants get their vouchers for free. Deprexis® is currently used in the German care system. Previous trials in German-speaking countries (Berger, Hammerli, Gubser, Andresson, & Caspar, 2011; Bücken, Bierbrodt, Hand, Wittekind, & Moritz, 2018; Johansson et al., 2012; Klein et al., 2016; Meyer et al., 2009; Meyer et al., 2015; Moritz et al., 2013; Zwerenz et al., 2017) and in English-speaking countries (Beevers, Pearson, Hoffman, Foulser, & Schumake, 2017) demonstrated Deprexis® effectiveness, which is summarized in meta-analyses (Twomey et al., 2017; Twomey et al., 2020).

## Participants

Participants were volunteers who were looking for help with depressive symptoms on the Internet. They have completed the screening questionnaires as part of the selection process for a randomized clinical trial to test the effectiveness of Deprexis® in Brazil. Participants were recruited online (see Procedures). All participants of this study have signed an informed consent form prior to the first screening. They filled out the sociodemographic questionnaire, with which we assessed age, gender, location in Brazil, Internet access, and how they heard about the project. We also asked them whether they have ever been diagnosed with depression, whether they are in treatment, or have other relevant psychological or psychiatric symptoms. After that, they answered the Patient Health Questionnaire (PHQ-9) and the General Self-Efficacy Scale (GSES).

In order to be invited for the interview, participants should: (a) be diagnosed with a depressive disorder (Major Depression Disorder or dysthymia) according to the definitions of the Diagnostic and Statistical Manual of Mental Disorders (DSM 5) (American Psychiatric Association, 2013) or present depressive symptoms defined with a score of at least 10 on the PHQ-9; (b) be at least 18 years old; (c) have regular access to the Internet; (d) be Brazilian. Participants may be undergoing any other Treatment as Usual (TAU) to deal with their depressive symptoms.

## Instruments

*Sociodemographic questionnaire:* The demographic variables assessed were age, gender, nationality, location in Brazil, Internet access, how they heard about the project, whether they have ever been diagnosed with depression, whether they are in treatment or have other relevant psychological or psychiatric symptoms.

*Patient Health Questionnaire (PHQ-9, Santos et al., 2013; Spitzer et al., 1999):* The PHQ-9 consists of nine questions that assess the presence of each symptom of an episode of major depression, as described in the DSM 5 (American Psychiatric Association, 2013). The nine symptoms are depressed mood, anhedonia (loss of interest or pleasure in doing things), sleeping problems, changes in appetite or weight, tiredness or lack of energy, feelings of guilt or uselessness, concentration problems, slowness or restlessness, and suicidal thoughts. Brazilian psychiatrists translated the PHQ-9 into Portuguese, and one of the authors of the original instrument translated it back on a previously published study (Fraguas et al., 2006). The frequency of each symptom in the last two weeks is assessed on a Likert scale ranging from 0 (never) to 3 (almost every day).

Item 9 asks about suicidal ideation (“Over the last two weeks, how often have you had thoughts that you would be better off dead or of hurting yourself?”). The cutoff score considered was 10, as mostly used among Brazilian researchers (Lima-Osório, Vilela-Mendes, Crippa, & Loureiro, 2009; Morilha et al., 2015).

*General Self-Efficacy Scale* (GSES) (Schwarzer & Jerusalem, 1995; Sbicigo, Bandeira, & Dell’Aglia, 2012): The GSES assesses general perceived self-efficacy. The ten statements involve the respondents’ perception of their problem-solving skills in general, as, e.g., “I can solve most problems if I invest the necessary effort.” Participants choose from a 4-point Likert scale: “not true about me,” “hardly true about me,” “moderately true about me,” and “totally true about me.” Scale scores range from 0 to 30 and, the higher the score, the greater the belief in perceived overall self-efficacy (i.e., participants consider themselves able to complete tasks and achieve their goals). When scores are low, it means the participant sees him or herself as having little or no control over their decisions. The Brazilian version of the scale has a good Cronbach’s alpha internal consistency index of 0.85 (Sbicigo et al., 2012). The original scale was validated with Cronbach’s alpha internal consistency between 0.79 and 0.93 (Schwarzer & Born, 1997) and it has been translated into more than 25 languages. Its psychometric properties have been consistent across 14 cultures and 13 languages. The scale was shown to be one-dimensional and homogeneous.

## Procedures

The Ethics Committee from *Universidade Católica de Petrópolis* approved the research procedures (CAAE: 68709517.1.0000.5281, in 06/22/2017). A website (<https://sites.google.com/view/ficabem/>), a page on Facebook (<https://www.facebook.com/p.ficabem/>), an Instagram profile (<https://www.instagram.com/p.ficabem/>), and a Twitter (<https://twitter.com/pficabem>) account (all can be found with the username @p.ficabem) were set up to advertise the treatment opportunity, to provide the necessary information about both, research and online intervention, as well as to encourage participation. The link of the website was published on the main social networks and e-mail lists of associations of mental health professionals in Brazil. The trial was mentioned on traditional media, like two local newspapers and a national appearance on television news. More recently, we promoted the website using Google Ads.

Before getting access to Deprexis®, the screened participants, that is, the ones that met the inclusion criteria, were invited to a diagnostic interview based on the Adult DSM 5 Cross-Cutting Symptom Measure (American Psychiatric Association, 2013). This semi-structured diagnostic interview includes critical questions for the main psychiatric symptoms, as described in the DSM 5. The interview assesses mental health domains that are important across psychiatric diagnoses. The adult version of the measure consists of 23 questions that evaluate 13 psychiatric domains, including depression, suicidal ideation, mania, anxiety, anger, somatic symptoms, psychosis, sleep problems, memory, repetitive thoughts and behaviors, dissociation, personality functioning, and substance use. Psychology students in their last years, under supervision, held the interview on video or audio using applications such as Skype or WhatsApp. The interview works as a second screening in which we evaluated comorbid conditions and suicide risk. Candidates that present comorbid symptoms which are not the primary medical concern, are accepted. When the candidates present comorbidities that are the primary focus of medical attention, such as bipolar disorder, schizophrenia, alcohol abuse, severe psychotic symptoms, and high risk of suicide, they are excluded from the trial and referred to local mental health services.

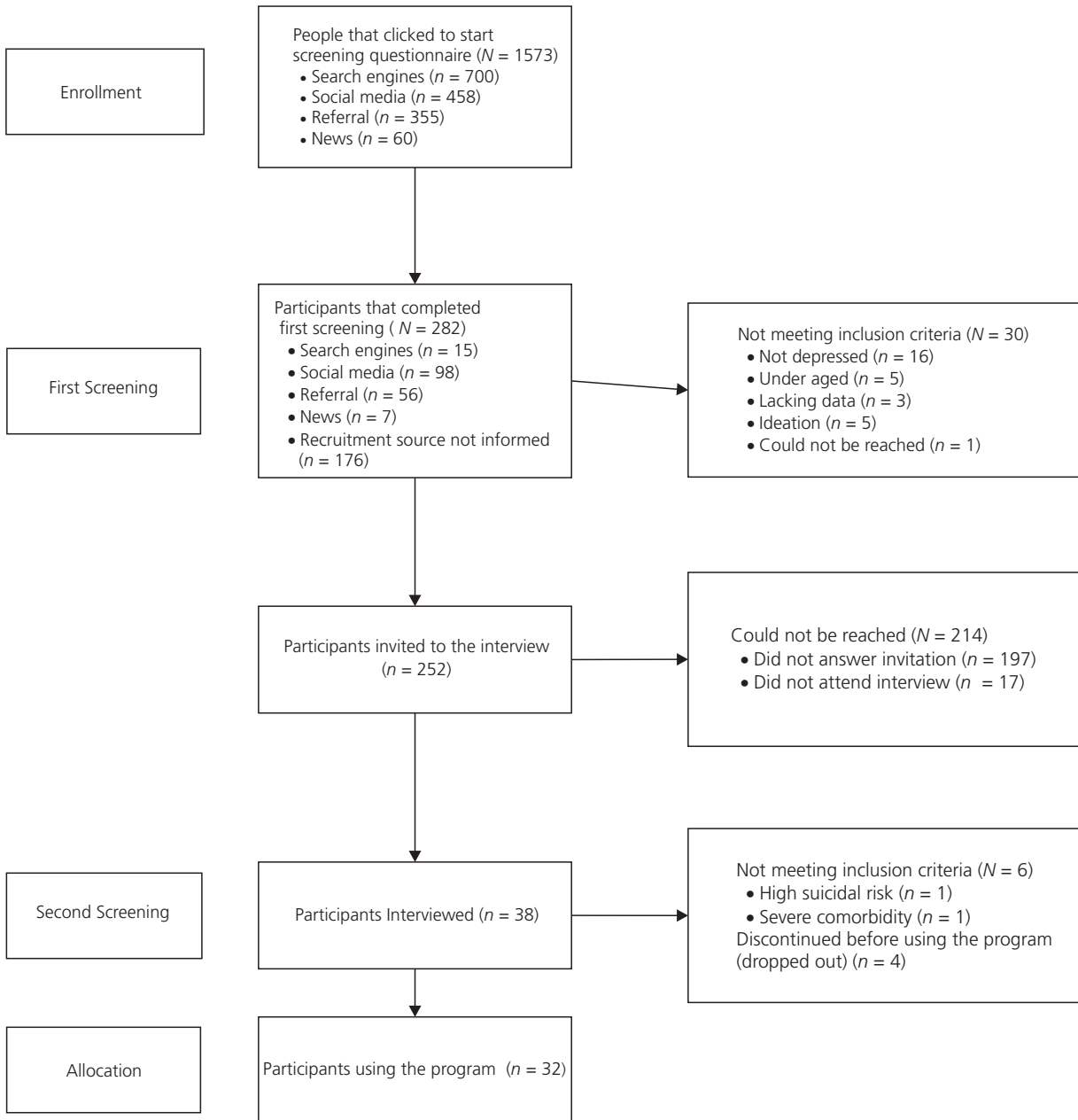
## Data analysis

We collected and analyzed data from the participants screened between August 2018 and July 2019. We first conducted a descriptive analysis to characterize the sample of participants that seek help in this study. Then, in the sub-sample of participants who met the criteria to participate in the research and were

invited to enroll in a diagnostic interview, we ran a logistic regression including several baseline variables as predictors of the likelihood of them to attend the interview. Notably, we included as potential predictors in the same model: (i) gender, (ii) level of self-efficacy, (iii) severity of depressive symptoms, (iv) being currently enrolled in psychotherapy or pharmacological treatment, (v) having comorbidities, and (vi) being previously diagnosed with depression by a health professional. The dichotomous variables were coded to 0 or 1. No forward or backward strategy was used for selecting the predictors.

## Results

The number of participants who completed the screening questionnaires ( $N = 282$ ) is much lower than the number of individuals that started it, but did not finish ( $N = 1573$ ). Figure 1 shows the flow of the participants.



6 **Figure 1.** Flowchart for the study by the time of the analysis.

From the 282 subjects that sought the Internet-based program, social media attracted the most significant number of participants ( $n = 98$ ). Friends, teachers, or psychologists referred the study to 56 respondents. Newspaper and TV articles related to the trial attracted 7 participants, and search engines (mainly Google) attracted 15 participants; 106 participants did not provide information in that sense. No significant differences for age, gender, or depressive symptoms severity were found for recruitment source. The majority of participants were female (76.24% or  $n = 215$ ) and were, on average, 34.36 years old ( $SD = 12.27$ ), with ages ranging from 18 to 68. Table 1 presents the participants' sociodemographic data.

Table 1  
Socio-demographic characteristics of the sample ( $N = 282$ )

Variable	<i>M</i>	( <i>SD</i> )	<i>n</i>	(%)
Age	34.36	(12.27)		
18-25			61	(21.63)
26-35			56	(19.86)
36-45			54	(19.15)
46-55			35	(12.41)
56-65			13	(4.61)
Over 66			1	(0.35)
Missing data			62	(21.99)
Gender				
Female			215	(76.24)
Male			65	(23.04)
Other			2	(0.70)
Region in Brazil				
Southeast			216	(77.41)
South			20	(7.16)
Midwest			9	(3.22)
North			7	(2.50)
Northeast			27	(9.67)
Missing data			3	(0.01)
Recruitment				
Referral			56	(31.81)
Social media			98	(55.68)
News			7	(3.97)
Search engines			15	(8.52)
Missing data			176	(0.62)

Note: M: Mean; SD: Standard Deviation.

Over half (55.3%) of the sample had been previously diagnosed with a depressive disorder by a health professional, and 44.0% was currently in another treatment (either psychotherapy or pharmacotherapy). Furthermore, 55.0% of the participants reported having other psychological symptoms along with depression (mainly anxiety-related problems, such as general anxiety disorder, panic, and social anxiety). The participants scored, on average, 18.21 on the PHQ-9 ( $SD = 5.74$ ), which is considered moderately severe.

Table 2 shows the distribution of participants according to their clinical characteristics. A high number (47.0% of the sample) was severely depressed, and 56.38% reported some degree of suicidal ideation, according to item number 9 on the PHQ-9. The mean score on that item was 1.06 ( $SD = 1.13$ ). Participants scored, on average, 13.51 on the self-efficacy measure ( $SD = 6.92$ ), which means moderate levels of self-efficacy (from 11 to 20). Of the total sample, 89.40% of subjects ( $n = 252$ ) fulfilled the criteria to participate in the study and were invited to the diagnostic interview. Of them, 13.50% were interviewed ( $n = 38$ ).

Table 2  
Clinical characteristics of the sample (N=282)

Variable	M	(SD)	n	(%)
Previously diagnosed with a depressive disorder				
Yes			156	(55.31)
No			126	(44.68)
Receiving TAU				
Yes			124	(43.97)
No			158	(56.02)
Comorbidity				
Yes			156	(55.31)
No			126	(44.68)
PHQ-9 score	18.21	(5.74)		
Severity of depressive symptoms				
Low			25	(8.86)
Moderate			48	(17.02)
Moderately severe			76	(26.95)
Severe			133	(47.16)
GSES score	13.51	(6.92)		
Perception of self-efficacy				
High			41	(14.53)
Moderate			141	(50.00)
Low			100	(35.46)

Note: GSES = Self-Efficacy Scale; PHQ-9 = Patient Health Questionnaire-9 to measure depressive symptoms; TAU = Treatment as Usual; M: Mean; SD: Standard Deviation.

Based on the sub-sample of participants who were invited to the interview ( $n = 252$ ), we ran a logistic regression to predict the likelihood of participants attending the interview. In the model, we used gender, previous diagnosis of depression, being in a concurrent treatment, having comorbidities (mostly anxious symptoms), perception of self-efficacy (as measured by GSES), and severity of depressive symptoms (as measured by the PHQ-9). The results of this analysis showed only significant effects of having comorbidities on the likelihood of interview attendance,  $B = 0.93$ ,  $SE = 0.44$ ,  $Wald(1) = 4.52$ ,  $p = 0.03$ ,  $Exp(B) = 2.54$ . The odds ratio suggests that subjects with comorbidities had a 2.54 times greater likelihood of attending the interview. As presented in Table 3, the effects of the other baseline variables were not significant.

Table 3  
Results from the logistic regression predicting the likelihood of participants attending the interview

Predictor	$\beta$	S.E.	Wald	df	Significance	Odds ratio
Gender (male/female)	-0.044	0.509	0.008	1	0.931	0.957
Previously diagnosed with a depressive disorder	-0.321	0.446	518	1	0.472	0.725
Receiving TAU	0.309	0.427	0.524	1	0.469	1.362
Comorbidity	0.934	0.439	4.520	1	0.034	2.544
Perception of self-efficacy	0.011	0.029	0.138	1	0.711	1.011
Severity of depressive symptoms	-0.043	0.039	1.196	1	0.274	0.958
Intercept	-1.507	0.932	2.617	1	0.106	0.222

Note: df = Degrees of Freedom; S.E. = Standard Error; TAU = Treatment as Usual.

## Discussion

This study describes the characteristics of individuals interested in an online intervention to treat depression in Brazil. The results show that the majority of respondents who answered the screening



questionnaires were women, ranging from 18 to 45 years old (34.36 on average), diagnosed with depression, already in other treatment formats, presenting comorbidities, severe levels of depression, and a moderate self-efficacy perception. This description might help future researchers to develop Internet-based interventions and strategies to recruit patients and participants for future studies in Brazil and Latin America. These results must be read with caution because all sociodemographic and clinical data were gathered using self-report questionnaires. The characteristics presented here are in line with a similar study with individuals who seek help on the Internet (Späth et al., 2017), except for the depressive symptom severity. Our Brazilian sample was much more severely depressed than the European sample. A difference between the two studies is that they limited the participation for individuals with moderate depressive symptoms (i.e., up to 14 points on PHQ-9). The higher proportion of females, also found in other studies (Alaoui et al., 2015; Reinwand, Schultz, Crutzen, Kremers, & Vries, 2015;), is likely due to the higher prevalence of depression in females in general (Albert, 2015; Kuehner, 2017).

Other studies based on Deprexis® were either clinical trials to examine the effectiveness, program description, or program comparison to different online interventions. We could compare our results to a few experiments that mentioned the participants' characteristics. We found similar results concerning female prevalence and age (Meyer et al., 2009; Kenter, Cuijpers, Beekman, & van Straten, 2016). One of the trials presented more than 50% of the sample as being in treatment (TAU), and that early dropouts were only 4.8% of the ones that completed the initial questionnaire (Meyer et al., 2009).

We assumed that attending the diagnostic interviews represents a higher level of motivation to seek help. The majority of participants attending the screening interviews reported psychiatric comorbidities, and this factor was a predictor of remaining in the study. As the sample is small, this tendency should be tested in new studies to help researchers make decisions about the inclusion of comorbidity in trials for depression treatments. Most respondents that reported any kind of comorbidity (74.66%) suffered from panic, social anxiety, and general anxiety symptoms. These disorders have in common a tendency from individuals to avoid social situations and to withdraw from others. The Internet may offer a unique potential to reach clients with such social avoidance tendencies, as it provides a "haven" of treatment that can be reached without leaving one's home. In line with this hypothesis, a recent study showed that, a recent study showed that Deprexis was particularly effective for clients with comorbid social phobia (Probst et al., 2019).

Most of the comorbidities found in this study were related to anxiety. Another study found that symptoms of anxiety predicted completing face-to-face treatment for depression (Lopes, Gonçalves, Sinai, & Machado, 2015). Since negative symptoms such as lack of activity and anhedonia characterize Major Depression Disorder, depressed clients with no comorbid anxiety could have less motivation for engaging in treatment. Another possibility is that the high levels of distress that go along with anxiety can be responsible for the urgency in seeking help. On the other hand, depression is, in itself, cause to treatment discontinuity. If anxious comorbidities in depressed participants favor adherence to online treatments, a significant part of the population impaired by depression could get help from online interventions aiming at the disorder.

Although the perception of self-efficacy did not predict attending the interview, it is interesting to note that the sample had, on average, moderate levels of self-efficacy. More studies should assess if the levels of perceived self-efficacy influence help-seeking behavior in depression.

As being in another treatment or not is irrelevant as an influence in interview attendance, we could assume that help-seeking is not restricted to the ones that could not get help by any other means. Online interventions can be an alternate choice for support, working along with treatment as usual. Future studies could analyze the effects of baseline patients' characteristics on the intervention effects. Other characteristics should also be studied as variables, such as literacy level, level of education, Internet literacy, income, and sociodemographic status.

Additional research is needed to identify how the intervention could match these general characteristics of the sample to improve their implementation and enrollment rates, as well as shed light on the reasons for participants not proceeding to the screening interviews. A large study about Deprexis® in Germany presented a 26,66% withdrawal before screening interviews (Meyer et al., 2015). Studies in Europe about different kinds of online interventions seem to follow the same pattern (Carrard et al., 2010). In this study, we considered patients that answered the first screening questionnaires, were invited to the screening interview and did not attend it. Therefore, the comparison with other studies relates more to enrollment than to dropout rates. An online randomized controlled trial intervention to reduce depression and sickness absence invited 3,566 initial participants to engage the trial, and 3,340 of them did not respond to the invitation (Beiwinkel, Eibing, Tell, Siegmund-Schultze, & Rössler, 2017). In general, the adherence to Internet interventions is frequently reported to be quite low. When studying significant online interventions for depression, more adherence came from older participants with higher depression symptoms (Beiwinkel et al., 2017; Fuhr et al., 2018).

Strategies for reducing dropout during treatment are well known. Regular contact, like phone calls, e-mails, or text messages, increased engagement, but even then, dropout numbers were still high (Webb, Rosso, & Rauch, 2017). Another study showed that a chatbot (robots interacting with people on chats), used on a messaging application, helped minimize the high dropout rate of self-guided internet-delivered interventions (So et al., 2020). Therefore, it seems that regular contact is one of the keys to keeping participants from discontinuing the intervention or dropping out of the trial. On the pre-treatment stage, keeping regular contact with the candidates did not increase the interest in attending the interview. Thinking that candidates might not be interested in attending the interview because of a lack of knowledge of what such programs are like, we did show samples of the program to candidates. This strategy did not have a substantial impact either. Moreover, while dealing with research, an additional possibility could be rewarding the participants somehow, "under ethics committees advice", which showed to be efficient in some studies (Cappa, Laut, Porfiri, & Giustiniano, 2018; Hidi, 2016).

While discussing the results of a randomized controlled trial, it was suggested that the focus of future research should be the identification of variables related to both premature dropout and treatment withdrawal at follow-up (Salamanca-Salabria et al., 2020). We agree with that position. Variables include intervention design, characteristics of the population related not only to the reasons to start an online intervention, but also to personal characteristics that can act as predictors of enrollment or dropout. Research about online interventions in Latin America is vital to test such interventions in a different context. Populations can benefit from available, affordable, successful health tools where help is most needed.

The Internet contains a vast amount of correct and helpful information and incorrect, misleading and harmful information as well. Thus, it can be used to help but it can also be applied to harm people in need. In our view, psychologists have a social responsibility to use the Internet in an ethical and responsible manner, providing sound information, secure and evidence-based programs available to the ones who need them.

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## Contributors

R. T. LOPES supervised the study conception and led the data collection and the writing and revisions of the paper. M. A. SVACINA planned the study, collected data and wrote the first draft and reviewed the manuscript. J. M. GÓMEZ-PENEDO and A. ROUSSOS ran the statistical analysis, interpreted the results and reviewed the manuscript. B. MEYER reviewed the manuscript. T. BERGER sponsored the study and reviewed the manuscripts.

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