Theoretical and Review Articles // Artículos teóricos y de revisión

Research Articles // Artículos de investigación

Notes and Editorial Information // Avisos e información editorial

ISSN 1577-7057

IJP&PT
INTERNATIONAL JOURNAL OF PSYCHOLOGY & PSYCHOLOGICAL THERAPY

IJP&PT
25 YEARS ANNIVERSARY
2001-2025

https://www.ijpsy.com

IJP&PT is included in the following indexing and documentation Centers:
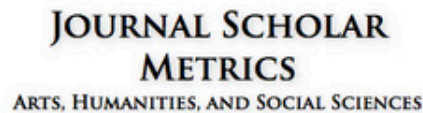
Meet Your Public: A new Internet-delivered Program Integrating Exposure Therapy and Self-compassion Writing Exercises May Lessen Fear of Public Speaking while Increasing Self-compassion

Alex-Anne Lamoureux, France Talbot

Université de Moncton, New Brunswick, Canada

ABSTRACT

Fear of public speaking (FoPS) is a prevalent condition that remains undertreated despite exposure being an efficient intervention. Internet-based exposure therapy may facilitate access to treatment, but engagement can be a challenge. Internet-based written exposure therapy combined to self-compassion training may help to improve FoPS and engagement. This study assessed the feasibility of a minimally guided internet-based written exposure and self-compassion therapy for FoPS. *Meet Your Public*. It is a 6-week program available in English and French that includes psychoeducation and writing exercises related to FoPS, exposure and self-compassion. Nineteen participants were eligible for analysis. A single group design including a 3-month follow-up was used. Feasibility outcomes included adherence, attrition, treatment acceptability and preliminary efficacy on FoPS, negative and positive self-statements pertaining to FoPS, and self-compassionate and self-uncompassionate behaviors. About two thirds of the participants completed the program and the study (63%). Most study completers reported that they would recommend the program to a friend (80%). Intent-to-treat mixed-effect models analyses revealed large improvements of FoPS (Glass' delta= 1.23) which were maintained at follow-up. Small to moderate improvements were also found from pre-treatment to post-treatment or follow-up on all other outcome measures (Glass' deltas from 0.21 to 0.68). *Meet Your Public* may be beneficial while facilitating access to treatment for FoPS. Future directions to further improve engagement and satisfaction are discussed.
Key words: fear of public speaking, social anxiety, internet intervention, written exposure therapy, self-compassion.

Novelty and Significance

What is already known about the topic?

- Fear of public speaking is a common condition that remains undertreated despite exposure being an efficient intervention.
- Internet-based exposure therapy may facilitate access to treatment, but engagement can be a challenge.
- Self-compassion is a significant predictor of social interaction and communication anxiety and may promote treatment engagement.

What this paper adds?

- A large reduction of fear of public speaking was obtained post-treatment along with a moderate increase in self-compassionate behaviors at follow-up highlighting the potential benefits of the program.
- Strategies to further increase engagement and satisfaction are suggested.

Fear of Public Speaking (FoPS) is the most common form of social anxiety with a lifetime prevalence of 3% to 5% (Furmark, 2002). Based on a national survey conducted in the United States among the general public, nearly one-fourth (24.1%) of all respondents reported at least one lifetime social fear, about twice the number of respondents with lifetime social phobia. The most common lifetime social fears were public speaking (21.2%) and speaking up in a meeting or class (19.5%) (Ruscio *et*

alii, 2008). FoPS was also found to be the most prevalent social fear among university students with a social anxiety disorder (71.4%) as well as without such a disorder (8.7%) (Tillfors & Furmark, 2007). Despite its high prevalence and the existence of effective interventions, FoPS remains undertreated (Griffiths, 2013). Among barriers to treatment figure the nature of the disorder, namely, the avoidance of social interactions as required in therapy sessions with a clinician (Wang *et alii*, 2005). As such, Internet-based therapies may not only provide a solution to facilitate access to treatment for FoPS but may also be perceived as less threatening (Goetter *et alii*, 2020). The efficacy of Internet-based CBT (iCBT) for social anxiety has been supported in several reviews and meta-analyses (e.g., Ebrahimi, Pallesen, Kenter, & Nordgreen, 2019; Guo *et alii*, 2021; Olthuis, Watt, Bailey, Hayden, & Stewart, 2015). However, to our knowledge, only two studies have assessed iCBT for FoPS. The findings suggest that while efficient, attrition can be a challenge. Botella *et alii* (2010) randomly assigned 127 participants to self-guided iCBT, in-person CBT or a waitlist. Gradual exposure was the main component of the intervention performed using a hierarchy of public speaking scenarios, each scenario requiring a presentation in front of various pre-recorded audiences. iCBT participants had two months to complete treatment while in-person CBT had two weekly sessions with their therapist over two months. Both treatment groups were as effective and superior to the waitlist. In the iCBT group, 60% of participants no longer met the cut-off score for social anxiety disorder compared with 64% for CBT. Gains were maintained at a 12-month follow-up. However, a significantly higher attrition rate was observed for iCBT (52%) compared to CBT (39%). Another study conducted a Dutch adaptation of Botella *et alii*'s (2010) iCBT program, with the addition of an email contact if participants had not started the program after seven days or during treatment, if they had not entered the program in seven days (Gallego, Emmelkamp, Kooij, & Mees, 2011). Forty-one participants were randomly assigned to iCBT or a waitlist group. Participants had six weeks to complete treatment. iCBT produced a significant and large improvement of social anxiety (Cohen's *d*= 1.13) and gains were superior to the waitlist group (between-group Cohen's *d*=.86). Dropout remained elevated (46%) with most participants dropping out before the beginning of iCBT, the main reasons being technical problems and lack of time.

Other exposure approaches may prove to be more optimal in promoting engagement including virtual reality exposure therapy (VRET). Virtual reality technology provides a computer-generated environment that creates an immersive experience (Botella, Fernández Álvarez, Guillén, Garcia Palacios, & Baños, 2017). VRET has been found to be helpful for the treatment of several anxiety disorders including social anxiety and more specifically, FoPS (Botella *et alii*, 2017; Daniels, Palaoag, & Daniels, 2020). However, despite its benefits, barriers remain regarding the adoption of VR technology by therapists, new technology adoption in clinical practice being generally slow, and choosing the software and equipment that would best meet their needs being challenging (Boeldt, McMahon, McFaul, & Greenleaf, 2019). Another option in promoting engagement in exposure therapy resides in Written Exposure Therapy (WET) developed by Sloan, Marx, Bovin, Feinstein, and Gallagher (2012) for post-traumatic stress disorder (PTSD). WET is an adaptation of Pennebaker and Beall's (1986) expressive writing paradigm. WET consists of five 30-minute weekly writing sessions and minimal therapist guidance of 10 minutes/week focusing on how well the instructions are followed. Clinicians are also the ones providing the writing instructions and keeping track of the time during the writing sessions. Efficacy studies revealed that WET produced significant and lasting

improvements with low attrition rates of 6% to 14% (Sloan, Marx, Bovin, Feinstein, & Gallagher, 2012; Sloan, Lee, Litwack, Sawyer, & Marx, 2013; Sloan, Marx, & Lee 2018; Thompson-Hollands, Marx, Lee, Resick, & Sloan, 2018). More recently, LoSavio *et alii* (2023) assessed WET's effectiveness for PTSD (*N*= 277) in Veterans Affairs clinics when delivered in-person or using videoconference. WET produced a large reduction of PTSD symptoms (Cohen's *d*= .84) and treatment outcomes did not differ between conditions. Dropout was lower for the telehealth delivery than in-person (21% vs 34% respectively). These results suggest that WET can be effective when delivered online with minimal therapist contact.

Roch-Gagné and Talbot (2019) evaluated the feasibility of adapting WET for generalized anxiety and for the provision of the therapy using an online delivery. The program consists of a 6-week Internet-based WET (iWET) with minimal clinical guidance provided on an as-needed basis (*N*= 53) and standardized weekly emails offering instructions, reminders, and encouragement. A pre/post-treatment telephone contact was included to review study procedures and encourage motivation and adherence. Satisfaction with treatment was adequate. Intent-to-treat analyses revealed a significant and large post-treatment decrease in anxiety (η^2= 0.36), with gains maintained at the 3-month follow-up. Most study completers (61%) reported being mostly satisfied to satisfied and all but one indicated that they would recommend the program to a friend. Attrition was higher (57%) and adherence lower than anticipated (28%). The authors recommended the inclusion of a therapist telephone call at the beginning of the intervention to guide participants in the identification of an exposure scenario, most participants dropping out during that phase of the intervention.

The inclusion of a self-compassion component to exposure may further promote engagement in iWET. Self-compassion is comprised of three bipolar dimensions: self-kindness vs self-judgment, mindfulness vs avoidance and rumination and common humanity or seeing one's experience as part of the larger human experience vs isolation (Neff, 2003). Avoidance behaviors are common in social anxiety and FoPS (Bodie, 2010; Clark & Wells, 1995) and reported as one of the main reasons for dropping out of telehealth WET (LoSavio *et alii*, 2023). Lower levels of self-compassion have also been identified as a significant predictor of social interaction and communication anxiety (Gorinelli, Gallego, Lappalainen, & Lappalainen, 2022). In addition, a few studies suggest that self-compassion writing exercises can decrease anticipatory and social anxiety, reduce rumination or post-event processing, and increase willingness to engage in social situations among socially anxious populations (Blackie & Kocovski, 2017; Harwood & Kocovski, 2017; Stevenson, Mattiske, & Nixon, 2019).

The present study aims to evaluate the feasibility of a minimally guided internet-based written exposure and self-compassion program, *Meet Your Public*, for the management of FoPS. The exposure part of the program is an adaptation of the WET protocol (see Sloan & Marx, 2019 for a description of the original protocol). The self-compassion part of the program aims to promote self-kindness, common humanity and mindfulness and is a derivative of Leary, Tate, Adam, Batts, & Hancock' (2007) and Harwood & Kocovski' (2017) self-compassionate writing prompts and of Neff (2019) written exercises from her public website. Building on Roch-Gagné and Talbot (2019)' study, minimal clinical contact was provided by telephone at the start of therapy to assist participants in choosing an exposure scenario and by email at mid-treatment to inquire about progress. To reduce dropout, a scenario triggering a moderate level of anxiety was the focus of the written exposure session. Feasibility outcomes were

treatment adherence, attrition, treatment acceptability, and a preliminary assessment of treatment efficacy. It was hypothesized that the majority of participants would complete the program and the study and report high levels of satisfaction with the intervention. It was also hypothesized that *Meet Your Public* would be associated with significant reductions in FoPS and related self-statements. The impact of the program on secondary outcome variables was assessed on an exploratory basis.

Mᴇᴛʜᴏᴅ

Participants

Thirty-six candidates were recruited in April 2022 and September 2022 from the general population in New Brunswick, Canada, using advertisements in various medias. Thirty-six individuals applied and 25 met the eligibility criteria. Of those, 20 completed the pretest. A total of 19 participants started the intervention and were included in intent-to-treat analyses, 21% (*n*= 4) being full-time students. With one exception, all used the French version of the program. The inclusion criteria were: (1) aged 18 and over; (2) residing in New Brunswick; (3) self-reported FoPS; (4) reliable access to the Internet; (5) willing to spend at least 20 to 30 minutes per week as part of the study; (6) willing to share personal information with the research coordinator. The exclusion criteria were: (1) clinical levels of depression or suicidal ideation (defined as a total score of ≥20, or >2 on item 9 [suicidal ideation] on the Patient Health Questionnaire-9 item, PHQ-9; (2) participating in another therapy at the time of the study; (3) initiation or change of psychotropic drug use in the previous month. Participant flow is illustrated in Figure 1. Participants' sociodemographic and mental health characteristics are presented in Table 1. The study was approved by the Human Research Ethics Committee of the Université de Moncton (Moncton, New Brunswick, Canada), file number 2021-097. Informed consent was obtained electronically through the platform etherapies.ca.

Feasibility Outcome Measures

Treatment adherence: Treatment adherence was measured using the percentage of participants who completed the 6-week intervention and submitted all five of their writing tasks.
Treatment attrition: Attrition was measured by the percentage of participants who started the intervention and did not complete the post-test or follow-up.
Treatment acceptability: Acceptability was assessed post-treatment using four multiple choices or yes/no questions (adapted from Titov *et alii*, 2013): (1) 'Would you recommend the program to a friend with anxiety?' (yes/no); (2) 'Was the program worth your time?' (yes/no); (3) 'How satisfied are you with the program *Meet your Public*?' (unsatisfied/ somewhat satisfied/mostly satisfied/satisfied); (4) 'How would you rate the quality of the material?'(unsatisfactory/neutral/good/excellent). Four open-ended questions were included to inquire about how participants found the program, what was the most and least helpful, and suggestions for improvements.

Preliminary treatment efficacy

Brief self-reported questionnaires were administered online in French or English using a secure platform (etherapies.ca). Three of the measures used were translated in French by the first or second author and back translated to English by a professional translator. The translations were crossed-checked in consultation with a bilingual psychologist and discrepancies discussed and decided by consensus. Pre-treatment Cronbach's alpha values are reported and were all adequate.
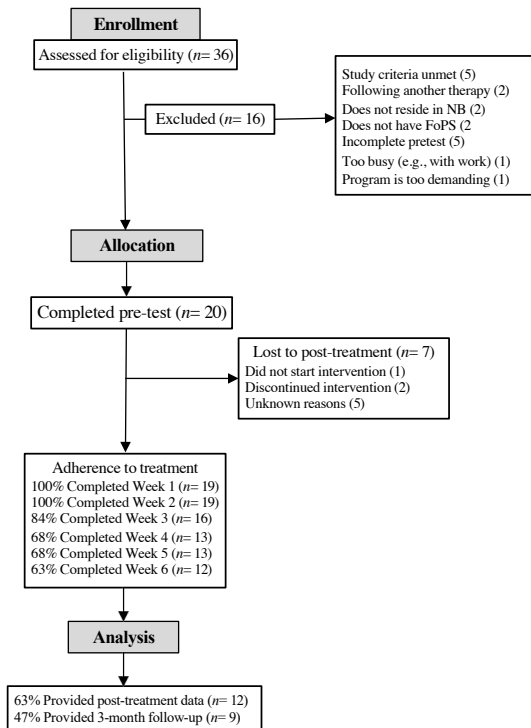
Figure 1. Participants' flow chart.

Table 1. Sociodemographic and mental health characteristics of participants.		
Variables	*n*	*%*
Sex		
Woman	10	52.6
Man	8	42.1
Age		
Mean (years)	37	
Range	19-56	
Education		
College	6	31.6
University	13	68.4
Employment		
Employed	14	73.7
Other	5	26.3
Income		
Less than 99 999 C\$	12	63.2
100 000 C\$ or more	7	36.8
Marital status		
In a relationship	11	57.9
Not in a relationship	8	42.1
Mental Health		
Previously diagnosed with a mental health disorder	3	15.8
Previously received mental health services	8	42.1
Currently taking psychotropic medication	5	26.3

Primary Outcome Measures

Public Speaking Anxiety Scale (PSAS; Bartholomay & Houlihan, 2016; French-Canadian translation by the first author). The PSAS comprises 17 items rated on a 5-point scale assessing cognitive, behavioral, and physiological symptoms ($\alpha= .80$).

Self-Statements during Public Speaking Scale (SSPS; Hofmann & DiBartolo, 2000; French-Canadian translation by the first author). The SSPS is a 10-item trait measure assessing thoughts related to FoPS. It includes two subscales: positive self-evaluation (SSPS-P) and negative self-evaluation (SSPS-N). Each subscale consists of five items rated on a 6-point scale ($\alpha= .88$ and $\alpha= .69$, respectively).

Secondary Outcome Measures

Social Phobia Inventory (SPIN; Connor *et alii*, 2000; translation by Charette, Léveillé, O'Connor, Pélissier, & St-Jean-Trudel, 2003). The SPIN is a 17-item questionnaire measuring levels of social anxiety including fear, avoidance, and physiological symptoms. Items are rated on a 5-point scale ($\alpha= .91$).

Self-Compassion Scale-Short Form (SCS-SF; Raes, Pommier, Neff, & Van Gucht, 2011; French-Canadian translation by the second author). The SCS-SF includes 12 items rated on a 6-point scale measuring the three bi-polar dimensions of self-compassion: self-kindness (self-judgment), common humanity (isolation), and mindfulness (over-identification). Two subscales, SCS-SF-P and SCS-SF-N, consisting respectively of positive items and negative items, were used to measure self-compassionate and self-uncompassionate behaviors (SCS-P and SCS-N; $\alpha= .82$ and $\alpha= .80$, respectively).

Patient Health Questionnaire-9 item (PHQ-9; Kroenke, Spitzer, & Williams, 2001, translation by MAPI Research Institute). The PHQ-9 consists of nine items assessing depressive symptoms based on the DSM-IV diagnostic criteria of major depression. Items are rated on a 4-point scale ($\alpha= .89$).

The following additional measures were also completed:

Motivation for the Treatment Program (Gallego, 2007). One item was used to assess to what extent participants were motivated to start the program using a scale from 0 (not motivated at all) to 10 (very motivated).

Impact of the writing exercises. Participants were asked post-treatment how overwhelming the writing exercises were for them on a scale from 0 (not at all) to 10 (extremely).

Design

A single group open trial including a 3-month follow-up was conducted. Primary and secondary outcome measures were administered at pre-treatment, post-treatment and at a 3-month follow-up. The primary outcome measures were also completed mid-treatment (Week 4).

Intervention

The intervention *Meet Your Public* is a minimally guided 6-week internet-based written exposure and self-compassion program for FoPS including one week of psychoeducation and five weekly sessions of 20 to 30 minutes each using writing exercises to facilitate exposure to a moderately feared public speaking situation and increase self-compassion. The program was delivered using the secure platform (etherapies.ca) and offered in French or English. Week 1 includes printable psychoeducation material from a public website on social anxiety and its treatment using exposure (anxietycanada.ca). Information on FoPS, negative thoughts, physical symptoms, avoidance, safety behaviors and the exposure process is offered as well as a case example. Self-compassion is explained based on Neff's (2003) definition and its link with FoPS described. Additional resources from Neff's public website are mentioned (videos from self-compassion. org). The treatment rationale is also provided. During Week 1, participants receive a 10-15-minute call from the research coordinator, a clinical doctorate psychology student, to offer guidance to identify a FoPS scenario eliciting a moderate level of anxiety (between 6 and 7 on a scale from 0= absence of fear, to 10= most intense level of fear). Participants are instructed to work on this scenario throughout the program. In Week 2, general instructions about the writing tasks (e.g., to write in a quiet area, not be concerned about spelling, grammar, etc.) are provided. While writing their weekly

scenario, participants are asked to adopt a distanced perspective, i.e., to write in detail about their scenario as if it had already happened, reflecting on how they feel about it that day. Participants are also prompted each week to write about one of the positive self-compassion components (self-kindness, common humanity, mindfulness) in relation with their FoPS scenario. After each writing session, participants are encouraged to experience any emotions, images or thoughts pertaining to their FoPS that may arise during the week rather than pushing them away. Sessions 2 to 6 include specific instructions regarding the writing task for each session (see Table 2 for a more detailed description of all sessions). Standardized weekly emails using participants' first name were sent using an adaptation of the protocol developed by Titov *et alii* (2013). These secure messages provided: (1) instructions for the writing tasks; (2) reminders for the completion of questionnaires and writing sessions; (3) normalization of possible exposure challenges; (4) encouragement; (5) reinforcement regarding the importance of repeated exposure. All scenarios were reviewed by the research coordinator to monitor adherence to the treatment protocol. Brief guidance was also offered by email mid-treatment in a personalized email checking on progress, discussing the role of avoidance in maintaining FoPS and the importance of repeatedly confronting one's fear, providing encouragement to keep up their efforts and reminding them to complete the self-compassion writing tasks. This required about 5 minutes per participant. Clinical guidance was provided under the supervision of the second author, a clinical psychologist.

Table 2. Content of weekly sessions.

Session	Content
1	Psychoeducation on social anxiety: the relationship between thoughts, emotions, sensations and behaviors, the causes of FoPS, avoidance behaviors, the rationale of exposure, and the definition of self-compassion (links to optional videos). Examples of exposure situations related to FoPS are provided. Identification of a moderately anxiety-provoking FoPS scenario to work on during the program.
2	WET component. Instructions to write a detailed scenario about one's FoPS scenario as if the situation had already occurred and as thought about it that day ("For your first writing session, imagine that your fearful situation, the one that you identified last week, has already happened no matter if it is the case or not"). Participants were encouraged to provide as many details as they could ("For example, you might write about what you saw [e.g., people attending, the room you are in, the lighting] what you heard [e.g., the clock ticking, people whispering or moving around, microphone/technological sounds], what you smelled [e.g., coffee, perfume] and sensed [palpitations, transpiration]"). Instructions to pay attention to sensations, emotions, and thoughts before, during and after the scenario ("For example, you might have had the thought [I'll say something stupid, I'll get nervous, and others will notice] and you might have had the feeling of being frozen with fear, you might have felt sad or embarrassed"). Self-compassion component. "Now, I would like you to take a few minutes to write about what a close, compassionate imaginary friend would say to you if you were to share your text with this friend".
3	WET component. As in the previous session, instructions to provide a detailed scenario while describing one's emotions and thoughts in depth (e.g., fear, sadness, shame, [I will search for my words], [People will think I am stupid]). Self-compassion component. "Next, take a few minutes to write a paragraph expressing kindness toward yourself in the same way you might express kindness for someone close to you who would have experienced a similar situation".
4	WET component. Additional instructions to write about how one's FoPS scenario has changed one's life (e.g., "how one perceives one's life, the meaning of life, one's interactions with others"). Self-compassion component. "Next, I would like you to list some of the ways in which other people have experienced fears similar to yours".
5	WET component. Same exposure instructions as Week 4. Self-Compassion component. "Bring awareness to the painful emotions that arose due to your self-judgment or difficult circumstances. Write about how you felt: sad, ashamed, frightened, stressed, and so on. As you write, try to be accepting and non-judgmental of your experience, not belittling it nor making it overly dramatic. Take for example: [This is stressful] or [This is a moment of suffering]".
6	WET component. Same exposure instructions as Week 3 and 4. In addition, suggestion to wrap up one's scenario by proposing a positive alternative as a conclusion to one's feared scenario, writing on how one's FoPS relates to one's current life and future. Self-compassion component. "When wrapping up, remember to show kindness toward yourself as you would for a close friend. You may want to ask yourself: [What do I need to hear right now to express kindness to myself?], [Is there a phrase that speaks to me? (e.g., May I be kind to myself or May I be safe or May I be strong)]".

Safety Protocol

Participants' depressive state was monitored weekly using the PHQ-9. If scores increased from pre-treatment by more than five points and if a total score of 15 and above was obtained, participants were contacted by email to provide instructions on how to contact crisis services if necessary. Those whose total PHQ-9 score increased over 20, or who scored '3' to item 9, were telephoned by the second author to assess the situation and establish a management plan.

Data Analysis

A total of 19 participants were included in the analyses. Scores were normally distributed. One outlier on the PHQ-9 at pre-treatment was excluded. Fisher's exact tests and paired *t*-tests were used to compare pre-treatment differences between study completers and non-completers, as well as between treatment completers and non-completers. Multiple imputations of missing data were performed as they are recommended as an acceptable and useful solution to increasing statistical power in studies with small sample sizes including when dropout is elevated (Olsen, Stechuchak, Edinger, Ulmer, & Woolson, 2012). This was found to be especially pertinent for samples ranging from 10 to less than 50 cases (Cheema, 2014). Little's test indicated they were missing completely at random (χ^2 (28)= 30.898, *p*= .322). Missing data are therefore assumed to be missing at random, an assumption which is acceptable to perform multiple imputations (Schafer & Graham, 2002). A maximum of 52.6% of cases had missing data on post-treatment or follow-up on primary or secondary outcome measures. Therefore, 53 imputations were specified as recommended by Manly and Wells (2015). Multiple imputations were conducted separately for the primary and secondary outcome measures. Pre-treatment scores were added as auxiliary variables to improve estimates. Intent-to-treat linear mixed effect model analyses were conducted followed by post hoc comparisons to assess the differences in primary outcome measures between T1 (pre-treatment), W4 (Week 4), T2 (post-treatment), and T3 (3-months follow-up). For secondary outcome variables, changes between T1, T2 and T3 were assessed. For all variables, a heterogeneous first order autoregressive model provided the best fit to the data according to the Akaike Information Criterion (Vrieze, 2012). Glass' delta was used to calculate within-group effect sizes based on estimated means and pooled standard deviations. All analyses were performed using SPSS, version 27.

RESULTS

As shown in Figure 1, nearly two thirds of participants (*n*= 12; 63%) completed the 6-week program. On average, 3.8 of the five writing sessions were completed. Not all participants who completed the exposure writing exercises also completed the self-compassionate ones, with a rate of completion varying from 67% to 92%. An attrition rate of (37%) was obtained post-treatment while half (53%) of the participants did not complete the 3-month follow-up. Only one participant gave a reason for dropping out (too busy).

Study and treatment completers, versus non-completers, were compared at pre-treatment in terms of sociodemographic and mental health characteristics as well as outcome measures using Fisher's exact tests and *t*-tests. No significant differences

were found between study completers and non-completers. Only income significantly differed between treatment completers and non-completers (Fisher's exact test, *p*= .017). Significantly more treatment non-completers had an income ≤99 999C$. Although non-significant findings were obtained for the other variables, small to large effect sizes were noted for some of them. Namely, more treatment completers were in a relationship compared to treatment non-completers (phi value= .454, *p*= .048). Both treatment and study completers had lower scores on the SSPS-P than non-completers (*d*s= .67 and .47 respectively). However, treatment completers had higher scores on the SCS-SF-P (*d*= .84) and lower scores on the PHQ-9 (*d*= .70) compared to treatment non-completers.

Regarding treatment acceptability, pre-treatment motivation was good (*M*= 7.7, *SD*= 1.8). Most study completers (80%) reported that the program was worth their time and that they would recommend it to a friend. Most also rated the quality of the material good to excellent (80%). Half of the study completers were mostly satisfied to satisfied with the intervention while one participant mentioned being unsatisfied. This participant did not appreciate, among others, the repetitive nature of the writing tasks. The writing tasks were not perceived as being too overwhelming, with scores of 5 and lower on the 10-point scale. Answers to open-ended questions revealed that overall, participants found the program easy to follow, useful, interesting, and reported a positive experience (*n*= 8). Treatment components found the most useful included psychoeducation, taking a distanced perspective (writing about the situation as if it had happened and as they perceive it now) and self-compassionate prompts. In relation with what was found less helpful, a few participants (*n*= 3) mentioned the repetitive nature of the writing exercises. To improve the program, several mentioned having the option to vary their scenario or to explore different aspects of the scenario (*n*= 6). One participant specifically appreciated the self-guided format, while another would have liked more support.

Observed and estimated means for the outcome measures are shown in Table 3. Pooled results from mixed linear model analyses of the primary outcome measures for T1 to T3 (pre-treatment, Week 4, post-treatment, and follow-up) revealed a significant

Table 3. Ms and SDs for the observed and estimated marginal M and effect sizes (Glass' deltas).

Variable	Observed M (SD)				Estimated M (SD)				Effect sizes (based on estimated M)				
	T1	W4	T2	T3	T1	W4	T2	T3	Pre-Post	Pre-Mid	Mid-Post	Post-FU	Pre-FU
PSAS	65.16 (8.63)	61.54 (10.99)	56.10 (10.11)	54.21 (11.94)	65.16 (8.17)	61.53 (11.83)	55.09 (7.83)	54.37 (6.97)	1.23	0.44	0.54	0.09	1.32
SSPS-P	9.90 (6.15)	11.85 (6.43)	13.21 (5.98)	15.36 (4.88)	10.53 (5.26)	11.58 (6.60)	12.43 (4.66)	14.10 (3.41)	0.36	0.20	0.13	0.36	0.68
SSPS-N	10.53 (4.81)	10.20 (5.98)	9.00 (6.22)	7.23 (5.90)	10.53 (4.62)	10.09 (6.34)	8.65 (4.51)	8.18 (3.87)	0.41	0.10	0.23	0.10	0.51
PHQ-9	6.44 (4.91)	–	5.29 (5.75)	5.85 (4.61)	7.21 (5.47)	–	5.19 (4.08)	6.04 (2.24)	0.37	–	–	0.21	0.21
SCS-SF-P	17.84 (5.34)	–	18.96 (5.34)	20.33 (5.40)	17.84 (5.38)	–	18.59 (3.58)	20.47 (2.82)	0.14	–	–	0.53	0.49
SCS-SF-N	18.79 (5.75)	–	16.39 (7.12)	17.04 (5.36)	18.79 (5.90)	–	17.19 (4.83)	17.47 (2.77)	0.27	–	–	0.06	0.22
SPIN	37.95 (10.82)	–	35.67 (9.88)	33.00 (9.46)	37.95 (10.88)	–	35.55 (7.53)	32.93 (5.96)	0.22	–	–	0.35	0.46

Notes: FU= Follow-Up; PHQ-9= Patient Health Questionnaire-9 item; PSAS= Public Speaking Anxiety Scale; SCS-SF-N= Self-Compassion Scale Short Form Negative subscale; SCS-SF-P= Self-Compassion Scale Short Form Positive subscale; SPIN= Social Phobia Inventory; SSPS-N= Self-Statements during Public Speaking Scale-Negative subscale; SSPS-P= Self-Statement during Public Speaking Scale-Positive subscale.

time effect on the PSAS ($F_{3, 45.48}$= 9.85, p <.001) and SSPS-P ($F_{3, 29.82}$= 3.17, p= .039), but not on the SSPS-N ($F_{3, 47.38}$= 1.60, p= .201). Pooled pairwise comparisons showed that PSAS scores significantly improved from pre-treatment to post-treatment (p <.001) with a large effect size and that treatment gains were maintained at follow-up (p= .629). The estimated mean score on the PSAS diminished from severe to moderate. While there was no significant change from pre-treatment to post-treatment on the SSPS-P based on pooled results, there was a significant and moderate improvement from pre-treatment to follow-up (p= .012). Although there was no significant time effect on the SSPS-N, a small to moderate decrease was found from pre-treatment to post-treatment with no further improvement at follow- up. In terms of changes from pre-treatment to mid-treatment, pooled results revealed a tendency toward significance on the PSAS (p= .059) with a moderate effect size, but there was no significant change on the SSPS-P (p= .524) and SSPS-N (p= .661). Similar time effects were obtained using complete cases with the addition of a significant improvement from mid-treatment to follow-up on the PSAS (p= .017) and the SSPS-P (p= .010) as well as significant gains from post-treatment to follow-up on the SSPS-P (p= .042).

Pooled results pertaining to secondary outcomes measures revealed a significant time effect on the SCS-SF-P ($F_{2, 28.83}$= 3.52, p= .043) which was not observed using complete cases ($F_{2, 18.80}$= 1.40, p= .272). Based on pooled results, a significant and moderate improvement from post-treatment to follow-up was found (p= .021, Glass' delta= .53) as well as from pre-treatment to follow-up (p= .047, Glass' delta= .49). Both pooled and complete cases results revealed no significant time effects on the SCS-SF-N, SPIN and PHQ-9 (all ps >.05). However, based on the estimated means, small to moderate effect sizes were observed between several time points. Namely, there was a small improvement on the SPIN from pre-treatment to post-treatment with an additional small improvement from post-treatment to follow-up. The decrease from pre-treatment to follow-up on this measure was of moderate size. Comparable effect sizes were found based on the observed means.

DISCUSSION

This study evaluated the feasibility of a guided 6-week internet-based written exposure and self-compassion program, *Meet Your Public*, for FoSP. The program uptake was adequate considering that recruitment was conducted over two months. Interestingly, a similar proportion of men and women participated in the study, whereas Internet therapy studies typically include more women (Olthuis *et alii*, 2015). The reason is unclear, and this finding remains to be replicated. Motivation for treatment was adequate. The quality of the material was highly rated. None of the participants found the task too overwhelming. Treatment satisfaction rates among study completers varied but most of them reported that they would recommend the program to a friend and that it was worth their time. The possibility remains that participants who dropped out may have done so because of being dissatisfied. Nevertheless, several study completers gave positive feedback on the program.

About a third of participants found the repetitive nature of the task less helpful. To improve the program, several mentioned having the option to change or explore diverse aspects of their scenario (n= 6). Participants were asked to choose a FoPS event that was moderately anxiety provoking to decrease the risk of dropping out. Some participants may, however, have experienced a sufficient decrease in anxiety to move

on to more fearful aspects of their initial scenario or another scenario. Mid-treatment gains would concur with this hypothesis. In previous iCBT programs for FoPS (Botella *et alii*, 2009; Gallego *et alii*, 2011), participants worked on more than one scenario but changing them too quickly can interfere with outcomes (Fracalanza, Koerner, & Antony, 2014). WET, as developed by Sloan and Max (2019) relies on one scenario, people's worst traumatic event, but the protocol goes beyond exposure by asking people to reflect on how their symptoms impact their life (Sloan & Marx, 2019). We expected that this addition as well as self-compassionate writing would complement exposure, would make the writing exercises less repetitive, more engaging. It may be best for some people to write about the same event across all sessions, and for others, to write about different events (Sloan, Marx, & Epstein, 2005). A therapist telephone call mid-treatment to assess progress would help to make this determination thereby allowing the use of a more tailored approach. This is an avenue for future research.

Treatment adherence was satisfactory and superior to the average adherence rate reported in a recent meta-analysis including mostly guided iCBT for anxiety disorders (56%, Pauley, Cuijpers, Papola, Miguel, & Karyotaki, 2023). Botella *et alii* (2010) and Gallego *et alii* (2011), who focused more specifically on iCBT for FoPS, did not report treatment adherence. In relation with the use of iWET, lower adherence (28% versus 63%) and higher attrition (57% versus 37%) were obtained by Roch-Gagné and Talbot (2019) in their iWET study for generalized anxiety. Attrition in the present study was also lower than in previous studies of self-guided iCBT for FoPS (52%; Botella *et alii*, 2010; 46%; Gallego *et alii*, 2011), but higher than telehealth WET (21%) for PTSD. While it was hypothesized that a majority of participants would terminate the study, which was not supported, these results are overall encouraging. The inclusion of a telephone contact during Week 1, as recommended by Roch-Gagné and Talbot (2019), may have been useful. This aligns with previous research on social anxiety suggesting that clinical guidance using communication means other than emails is associated with better adherence (Calbring *et alii*, 2007; Musiat, Johnson, Atkinson, Wilksch, & Wade, 2022; Wolitzky-Taylor & LeBeau, 2023). Working on an exposure triggering a moderate as opposed to an intense level of anxiety may also have played a role as well as the added self-compassionate writing exercises. This remains to be further assessed in studies with direct comparisons. In addition, in the present study, a higher proportion of treatment completers reported being in a relationship, which may facilitate engagement, perhaps because of perceived social support (Al-Asadi, Klein, & Meyer, 2014). Among other variables that may have played a role in treatment or study completion, higher levels of positive self-statements pertaining to FoPS may lower engagement in both the treatment and study as well as scores on the PHQ-9. Regarding depressive symptoms, no significant impact on dropout was reported in telehealth WET (LoSavio *et alii*, 2023). This is something to continue to monitor.

Preliminary efficacy results show that the *Meet Your Public* program may reduce public speaking anxiety. With a few exceptions, the pooled results were comparable to the ones obtained using complete cases. On average, participants presented elevated pre-treatment levels of public speaking anxiety, which reduced to a moderate level post-treatment. Such a moderate level corresponds to what has been reported among the general population (Bartholomay & Houlihan, 2016). The program was also associated with significant and moderate improvements in positive self-statements pertaining to FoPS, but compared to symptoms of public speaking anxiety, there was a more gradual change from pre-treatment to follow-up. Negative self-statements improved to a lesser

extent. But, as for the PSAS, follow-up scores decreased to a level comparable to the one observed among the general population (Hofmann & Dibartolo, 2000). In many participants, the program was associated with a moderate decrease on the PSAS after two writing sessions, with an additional moderate decrease from mid-treatment to post-treatment. These findings suggest that participants who did not complete treatment may have stopped because they had sufficiently engaged with the intervention to get the intended benefits, which is referred to as effective engagement (Yardley *et alii*, 2016). While pre-treatment motivation was assessed and found to be adequate, it would also be informative to assess participants' values and motives to follow this minimally guided exposure treatment in consideration of the unpleasantness associated with exposure.

In relation to secondary outcomes, no significant time effects were found based on both pooled and complete cases results except for self-compassionate behaviors which significantly improved following the program as indicated by the pooled results. Despite these non-significant results, which may be related to the limited sample size, small to moderate effect sizes were obtained based on estimated means with similar findings using the observed means. No significant change of social anxiety was noted during treatment, which may be explained by the fact that FoPS was specifically targeted. However, albeit not significant, a moderate effect size was found between pre-treatment and follow-up on the SPIN which may suggest a gradual generalization of treatment gains over time. More substantial changes in broader social anxiety may require more extensive intervention as it consists of more than a public speaking fear (Ebrahimi *et alii*, 2019). Based on effect sizes, both self-compassionate and self-uncompassionate behaviors improved but following a different pattern. Self-compassionate behaviors improved during follow-up while self-uncompassionate behaviors improved during treatment. Increases in self-compassionate behaviors may take longer to occur. Different effect sizes were also found for these two components suggesting that different interventions may be required to impact all aspects of self-compassion. This remains to be further studied along with the relative contribution of self-compassion to iWET. Regarding the lack of change of depressive symptoms, participants already presented mild levels at pre-treatment leaving limited room for improvement.

The present study has several limitations. Being a feasibility study, it has a small sample and no control group. The absence of a control group does not allow to draw conclusions regarding the efficacy of the program, the causality of the observed improvements. However, a meta-analysis of waitlist control groups in RCTs for social anxiety disorder showed that the effect of time alone was negligible (Steinert, Stadter, Stark, & Leichsenring, 2017). In addition, within-group treatment effect sizes were large while they were small for the waitlists. Another limitation is that the generalization of the findings is limited. All participants had a post-secondary education, most were employed, and spoke French. As well, participants were recruited in the general population and no diagnostic interview was used which can also limit the generalization of the findings. However, participants showed on average elevated levels of public speaking anxiety. Another limitation of the present study is that potential confounding variables such as life events were not assessed or controlled for. It would be informative in future studies to assess both positive and negative life events and among the latter, socially stressful life events, more specifically using a checklist of such events (e.g., see Erwin, Heimberg, Marx, & Franklin, 2006). In relation to the treatment components, it is unclear to what extent the psychoeducational module may have contributed to the outcomes compared to the written exposure modules. Psychoeducation alone has been shown to significantly

impact depression and psychological distress (Donker, Griffiths, Cuijpers, & Christensen, 2009). It may have promoted positive treatment expectancies which have been identified as a significant predictor of change in exposure treatments for specific phobia (Areas *et alii*, 2023). Future studies could assess treatment expectancies pre/post psychoeducation and include, in addition to a control group, a group receiving the exposure phase only. Differences between the groups in the primary and secondary outcome measures could then be observed. Similarly, an additional limitation resides in the unknown contribution of the exposure versus self-compassionate writing exercises which would require dismantling studies. Most participants completed the self-compassion tasks, but not all of them did. The impact of a mid-treatment reminder email was short-lived. Self-compassion may not be as credible of an intervention as CBT and may require a stronger treatment rationale (Stevenson *et alii*, 2019).

This study assessed the feasibility of a minimally guided internet-based written exposure and self-compassion program for FoPS. It is believed that the intervention is feasible with a few modifications to further improve treatment satisfaction and attrition. These include a therapist's telephone call mid-treatment as opposed to an email, the use of a tailored approach by having the possibility to modify one's scenario mid- treatment based on progress and the provision of additional psychoeducation on self-compassion and its relationship with FoPS. Considering its briefness, limited amount of clinical contact, and the preliminary study findings, *Meet Your Public* has the potential of increasing access to treatment at reasonable costs in terms of human resources.

REFERENCES

Al-Asadi AM, Klein B, & Meyer D (2014). Posttreatment attrition and its predictors, attrition bias, and treatment efficacy of the anxiety online programs. *Journal of Medical Internet Research*, *16*, e232. Doi: 10.2196/jmir.3513

Anxiety Canada (2025). *Social Anxiety Disorder.* https://www.anxietycanada.com/disorders/social-anxiety-disorder/

Areas M, Babi AM, Fernández-Álvarez J, Roussos A, Botella C, García-Palacios A, Baños R, Quero S, Breton JM, & Gómez Penedo JM (2023). Therapeutic alliance and treatment expectations: Predicting outcomes in exposure treatments for specific phobia. *Cognitive Therapy and Research*, *47*, 222-231. Doi.org/10.1007/s10608-022-10343-8

Bartholomay EM & Houlihan DD (2016). Public Speaking Anxiety Scale: Preliminary psychometric data and scale validation. *Personality and Individual Differences*, *94*, 211-215. Doi: 10.1016/j.paid.2016.01.026

Blackie RA & Kocovski NL (2017). Forgive and let go: Effect of self-compassion on post-event processing in social anxiety. *Mindfulness*, *9*, 654-663. Doi:10.1007/S12671- 017-0808-9

Bodie GD (2010). A Racing Heart, Rattling Knees, and Ruminative Thoughts: Defining, Explaining, and Treating Public Speaking Anxiety, *Communication Education*, *59*, 70-105. Doi: 10.1080/03634520903443849

Boeldt D, McMahon E, McFaul M, & Greenleaf W (2019). Using virtual reality exposure therapy to enhance treatment of anxiety disorders: Identifying areas of clinical adoption and potential obstacles. *Frontiers in Psychiatry*, *773*. Doi: 10.3389/fpsyt.2019.00773

Botella C, Fernández-Álvarez J, Guillén V, Garcia-Palacios A, & Banos R (2017). Recent progress in virtual reality exposure therapy for phobias: A systematic review. *Current Psychiatry Reports*, *19*, 1-13. Doi: 10.1007/s11920-017-0788-4

Botella C, Gallego MJ, Garcia-Palacios A, Baños RM, Quero S, & Alcañiz M (2009). The acceptability of an Internet-based self-help treatment for fear of public speaking. *British Journal of Guidance & Counselling*, *37*, 297-311. Doi: 10.1080/03069880902957023

Botella C, Gallego MJ, Garcia-Palacios A, Guillen V, Baños RM, Quero S, & Alcañiz M (2010). An Internet-Based Self-Help Treatment for Fear of Public Speaking: A Controlled Trial. *Cyberpsychology, Behavior, and Social Networking*, *13*, 407-421. Doi: 10.1089=cyber.2009.0224

Carlbring P, Gunnarsdóttir M, Hedensjö L, Andersson G, Ekselius L, & Furmark T (2007). Treatment of social phobia: randomised trial of internet-delivered cognitive- behavioural therapy with telephone support. *British Journal*

    of Psychiatry, *190*, 123–128. Doi:10.1192/bjp.bp.105.020107

Charette J, Léveillé C, O'Connor KP, Pélissier MC, & St-Jean-Trudel E (2003). *SPIN - Version Française*. Montréal, QC: Centre de Recherche Fernand Séguin

Cheema JR (2014). Some general guidelines for choosing missing data handling methods in educational research. *Journal of Modern Applied Statistical Methods 13*, 53–75. Doi: 10.22237/jmasm/1414814520

Clark DM & Wells A (1995). A cognitive model of social phobia. In RG Heimberg, MR Liebowitz, DA Hope & FR Schneier (Eds.), *Social phobia: Diagnosis, Assessment, and Treatment*, (pp. 69–93). The Guilford Press.

Connor KM, Davidson JR, Churchill LE, Sherwood A, Foa E, & Weisler RH (2000). Psychometric properties of the Social Phobia Inventory (SPIN). New self-rating scale. *The British journal of psychiatry: the journal of mental science*, *176*, 379–386. Doi:10.1192/bjp.176.4.379

Daniels MM, Palaoag T, & Daniels M (2020). *Efficacy of virtual reality in reducing fear of public speaking: A systematic review*. International Conference on Information Technology and Digital Applications, 803, 012003. Doi 10.1088/1757-899X/803/1/012003

Donker T, Griffiths KM, Cuijpers P, & Christensen H (2009). Psychoeducation for depression, anxiety and psychological distress: A meta-analysis. *BMC Medicine, 16*, 7:79 Doi: 10.1186/1741-7015-7-79. PMID: 20015347; PMCID: PMC2805686.

Ebrahimi OV, Pallesen S, Kenter RMF, & Nordgreen T (2019). Psychological interventions for the fear of public speaking: a meta-analysis. *Frontiers in Psychology*, *10*, 488, Doi: 10.3389/fpsyg.2019.00488

Erwin BA, Heimberg RG, Marx BP, & Franklin ME (2006). Traumatic and socially stressful life events among persons with social anxiety disorder. *Journal of Anxiety Disorders, 20*, 896-914. Doi: 10.1016/j.janxdis.2005.05.006

Fracalanza K, Koerner N, & Antony M (2014). Testing a procedural variant of written imaginal exposure for generalized anxiety disorder. *Journal of Anxiety Disorders*, 28, 559-569. Doi: 10.1016/j.janxdis.2014.05.011

Furmark T (2002). Social phobia: Overview of community surveys. *Acta Psychiatrica Scandinavica*, *105*, 84-93. Doi: 10.1034/j.1600-0447.2002.1r103.x

Gallego MJ (2007). *An Internet-Based Self-Help Treatment for Fear of Public Speaking: A Controlled Trial*. (Unpublished doctoral dissertation), Universitat Jaume I, Castellon.

Gallego MJ, Gerardus Emmelkamp PM, Kooij M, & Mees H (2011). The effects of a Dutch version of an Internet-based treatment program for fear of public speaking: A controlled study. *International Journal of Clinical and Health Psychology, 11*, 459-472. ISSN 2174-0852

Goetter EM, Frumkin MR, Palitz SA, Swee MB, Baker AW, Bui E, & Simon NM (2020). Barriers to mental health treatment among individuals with social anxiety disorder and generalized anxiety disorder. *Psychological services, 17*, 5-12. Doi: 10.1037%2Fser00002

Gorinelli S, Gallego A, Lappalainen P, & Lappalainen R (2022). Psychological Processes in the Social Interaction and Communication Anxiety of University Students: The Role of Self-Compassion and Psychological Flexibility. *International Journal of Psychology & Psychological Therapy, 22*, 5-19.

Griffiths KM (2013). Towards a framework for increasing help-seeking for social anxiety disorder. Australian & *New Zealand Journal of Psychiatry, 47*, 899-903. Doi:10.1177/0004867413493335

Guo S, Deng W, Wang H, Liu J, Liu X, Yang X, He C, Zhang Q, Liu B, Dong X, Yang Z, Li Z, & Li X (2021). The efficacy of internet-based cognitive behavioural therapy for social anxiety disorder: A systematic review and meta-analysis. *Clinical Psychology & Psychotherapy, 28*, 656-668. Doi: 10.1002/cpp.2528

Harwood EM & Kocovski NL (2017). Self-compassion induction reduces anticipatory anxiety among socially anxious students. *Mindfulness*, *8*, 1544-1551. Doi: 10.1007/s12671-017-0721-2

Hofmann SG & Dibartolo PM (2000). An instrument to assess self-statements during public speaking: scale development and preliminary psychometric properties. *Behavior therapy, 31*, 499–515. Doi: 10.1016/s0005-7894(00)80027-1

Kroenke K, Spitzer RL, & Williams JBW (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of General Internal Medicine, 16*, 606–613. Doi: 10.1046/j.1525-1497.2001.016009606.x

Leary MR, Tate EN, Adams CE, Batts AA, & Hancock J (2007). Self-compassion and reactions to unpleasant self-relevant events: The implications of treating oneself kindly. *Journal of Personality and Social Psychology*, *92*, 887–904. Doi: 10.1037/0022-3514.92.5.887

LoSavio ST, Worley CB, Aajmain ST, Rosen CS, Wiltsey Stirman S, & Sloan DM (2023). Effectiveness of written exposure therapy for posttraumatic stress disorder in the Department of Veterans Affairs Healthcare System. *Psychological trauma: theory, research, practice and policy, 15*, 748-756. Doi: 10.1037/tra0001148

Manly CA & Wells RS (2015). Reporting the use of multiple imputation for missing data in higher education research. *Research in Higher Education, 56*, 397-409. Doi: 10.1007/s11162-014-9344-9

Musiat P, Johnson C, Atkinson M, Wilksch S, & Wade T (2022). Impact of guidance on intervention adherence in computerised interventions for mental health problems: A meta-analysis. *Psychological Medicine, 52*, 229-240. Doi:10.1017/S0033291721004621

Neff K (2003). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity, 2*, 85-101. Doi: 10.1080/15298860390129863

Neff K (2024). *Self-compassion*. https://self-compassion.org/videos-featuring-dr-kristin-neff/

Olthuis JV, Watt MC, Bailey K, Hayden JA, & Stewart SH (2015). Therapist- supported Internet cognitive behavioural therapy for anxiety disorders in adults. *The Cochrane database of systematic reviews*, (3), CD011565. Doi: 10.1002/14651858.CD011565

Olsen MK, Stechuchak KM, Edinger JD, Ulmer CS, & Woolson RF (2012). Move over LOCF: principled methods for handling missing data in sleep disorder trials. *Sleep medicine*, 13, 123-132. Doi: 10.1016/j.sleep.2011.09.007

Pauley D, Cuijpers P, Papola D, Miguel C, Karyotaki E (2023). Two decades of digital interventions for anxiety disorders: a systematic review and meta-analysis of treatment effectiveness. *Psychological Medicine, 53*, 567–579. Doi: 10.1017/ S0033291721001999

Pennebaker JW & Beall SK (1986). Confronting a traumatic event: Toward an understanding of inhibition and disease. *Journal of Abnormal Psychology, 95*, 274-281. Doi: 10.1037/0021-843X.95.3.274

Raes F, Pommier E, Neff KD, & Van Gucht D (2011). Construction and factorial validation of a short form of the Self-Compassion Scale. *Clinical psychology & psychotherapy*, 18, 250-255. Doi: 10.1002/cpp.702

Roch-Gagné M & Talbot F (2019). A Feasibility Open Trial of a Brief Internet-Delivered Written Exposure Therapy for Worry. *Behavioural and Cognitive Psychotherapy*, 47, 462-477. Doi: 10.1017/S1352465818000693

Ruscio AM, Brown TA, Chiu WT, Sareen J, Stein MB, & Kessler RC (2008). Social fears and social phobia in the USA: Results from the National Comorbidity Survey Replication. *Psychological Medicine, 38*, 15-28. Doi: 10.1017/S0033291707001699.

Schafer JL & Graham JW (2002). Missing data: our view of the state of the art. *Psychological Methods*, 7, 147-177.

Sloan DM, Lee DJ, Litwack SD, Sawyer AT, & Marx BP (2013). Written Exposure Therapy for Veterans Diagnosed with PTSD: A Pilot Study. *Journal of Traumatic Stress*, 26, 776-779. Doi: 10.1002/jts.21858

Sloan DM & Marx BP (2019). *Written exposure therapy for PTSD: A brief treatment approach for mental health professionals*. American Psychological Association. Doi: 10.1037/0000139-000

Sloan DM, Marx BP, Bovin MJ, Feinstein BA, & Gallagher MW (2012). Written exposure as an intervention for PTSD: A randomized clinical trial with motor vehicle accident survivors. *Behaviour Research and Therapy, 50*, 627-635. Doi: 10.1016/j.brat.2012.07.001

Sloan DM, Marx BP, & Epstein EM (2005). Further Examination of the Exposure Model Underlying the Efficacy of Written Emotional Disclosure. *Journal of Consulting and Clinical Psychology, 73*, 549-554. Doi: 10.1037/0022-006X.73.3.549

Sloan DM, Marx BP, & Lee DJ (2018). Written Exposure Therapy vs Cognitive Processing Therapy -Reply. *JAMA Psychiatry, 75*, 757-759. Doi:10.1001/jamapsychiatry.2018.0813

Stein DJ, Lim CCW, Roest AM, de Jonge P, Aguilar-Gaxiola S, Al-Hamzawi A, Alonso J, Benjet C, Bromet EJ, Bruffaerts R, de Girolamo G, Florescu S, Gureje O, Haro JM, Harris MG, He Y, Hinkov H, Horiguchi I, Hu C, Karam A, Karam EG, Lee S, Lepine JP, Navarro-Mateu F, Pennell BE, Piazza M, Posada-Villa J, ten Have M, Torres Y, Viana MC, Wojtyniak B, Xavier M, Kessler RC, & Scott KM (2017). The cross-national epidemiology of social anxiety disorder: Data from the World Mental Health Survey Initiative. *BMC Medicine, 15*, 143. Doi: 10.1186/s12916-017-0889-2

Steinert C, Stadter K, Stark R, & Leichsenring F (2017). The effects of waiting for treatment: A meta-analysis of waitlist control groups in randomized controlled trials for social anxiety disorder. *Clinical Psychology & Psychotherapy, 24*, 649-660. Doi: 10.1002/cpp.2032

Stevenson J, Mattiske JK, & Nixon RDV (2019). The effect of a brief online self- compassion versus cognitive restructuring intervention on trait social anxiety. *Behaviour Research and Therapy*, 123, 103492. Doi: 10.1016/j.brat.2019.103492

Tillfors M & Furmark T (2007). Social phobia in Swedish university students: prevalence, subgroups and avoidant behavior. *Social Psychiatry Psychiatric Epidemiology, 42*, 79-86. Doi: 10.1007/s00127-006-0143-2. Epub 2006 Dec 11. PMID: 17160591.

Titov N, Dear BF, Johnston L, Lorian C, Zou J, Wootton B, Spence J, McEvoy PM, & Rapee RM (2013). Improving adherence and clinical outcomes in self-guided internet treatment for anxiety and depression: Randomised controlled trial. *PloS One, 8*, e62873. Doi: 10.1371/journal.pone.0062873

Thompson-Hollands J, Marx BP, Lee DJ, Resick PA, & Sloan DM (2018). Long-Term Treatment Gains of a Brief Exposure-Based Treatment for PTSD. *Depression and Anxiety*, *35*, 985-991. Doi: 10.1002/da.22825

Vrieze SI (2012). Model selection and psychological theory: a discussion of the differences between the akaike information criterion (AIC) and the bayesian information criterion (BIC). *Psychological Methods 17*, 228–243. Doi:10.1037/a0027127

Wang PS, Berglund P, Olfson M, Pincus HA, Wells KB, & Kessler RC (2005). Failure and Delay in Initial Treatment Contact After First Onset of Mental Disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry. 62*, 603-613. Doi: 10.1001/archpsyc.62.6.603

Wolitzky-Taylor K & LeBeau R (2023). Recent advances in the understanding and psychological treatment of social anxiety disorder. *Faculty Reviews*, *12*, 8. Doi:10.12703/r/12-8

Yardley L, Spring BJ, Riper H, Morrison LG, Crane DH, Curtis K, Merchant GC, Naughton F, & Blandford A (2016). Understanding and promoting effective engagement with digital behavior change interventions. *American Journal of Preventive Medicine*, *51*, 833-842. Doi: 10.1016/j.amepre.2016.06.015