UNIVERSITY OF AMSTERDAM

UvA-DARE (Digital Academic Repository)

The effects of a Dutch version of an Internet-based treatment program for fear of public speaking: a controlled study

Gallego, M.J.; Emmelkamp, P.M.G.; van der Kooij, M.; Mees, H.

Publication date
2011
Document Version
Final published version
Published in
International journal of clinical and health psychology

Link to publication

Citation for published version (APA):
Gallego, M. J., Emmelkamp, P. M. G., van der 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*(3), 459-472. http://www.redalyc.org/articulo.oa?id=33719289003

General rights
It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations
If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: https://uba.uva.nl/en/contact, or a letter to: Library of the University of Amsterdam, Secretariat, P.O. Box 19185, 1000 GD Amsterdam, The Netherlands. You will be contacted as soon as possible.

UvA-DARE is a service provided by the library of the University of Amsterdam (https://dare.uva.nl)

Download date:05 Sept 2026

Red de Revistas Científicas de América Latina, el Caribe, España y Portugal
Sistema de Información Científica

María José Gallego, Paul Maria Gerardus Emmelkamp, Marjoke van der Kooij, Hilde Mees

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, vol. 11, núm. 3, 2011, pp. 459-472,
Asociación Española de Psicología Conductual
España

Available in: http://www.redalyc.org/articulo.oa?id=33719289003

International Journal of Clinical and Health Psychology,
ISSN (Printed Version): 1697-2600
jcsierra@ugr.es
Asociación Española de Psicología Conductual
España

How to cite | Complete issue | More information about this article | Journal's homepage

www.redalyc.org
Non-Profit Academic Project, developed under the Open Acces Initiative

© International Journal of Clinical and Health Psychology

ISSN 1697-2600 print
ISSN 2174-0852 online
2011, Vol. 11, Nº 3, pp. 459-472

The effects of a Dutch version of an Internet-based treatment program for fear of public speaking: A controlled study[1]

María José Gallego[2] (*Consorcio Hospitalario Provincial of Castellón, Spain*), Paul Maria Gerardus Emmelkamp (*University of Amsterdam, Netherlands*), Marjoke van der Kooij (*University of Amsterdam, Netherlands*), and Hilde Mees (*University of Amsterdam, Netherlands*)

ABSTRACT. The present research is a randomized controlled trial in which the effects of a Dutch version of «Talk to me», an Internet-based cognitive-behavioral treatment for fear of public speaking were investigated. Forty one participants with a formal diagnosis of social phobia were assigned at random to either «Talk to me», or a waiting list control group. The group treated by an Internet-based cognitive-behavioral treatment resulted in significant improvement from pre-test to pos-test on all social phobia measures and in social and work impairment. Talk to me was significantly more effective than the control group on a number of measures: fear and avoidance to the target behaviors, fear of public speaking and work impairment. Regarding to the effect size (Cohen-*d*) for the measures related to social phobia the Internet treatment had a high within-group ($d = 1.13$) and between-groups effect size ($d = .86$). Results achieved with the Talk to me program are comparable to results of face-to-face treatment of social phobia. Finally, it is important to emphasize that Talk to me was well accepted by the participants.

KEYWORDS. Social phobia. Fear of public speaking. Internet. Culture adaptation. Experiment.

[1] We are grateful to Mariano Alcañiz PhD for providing technical support. The research was supported by the Spanish Ministerio de Educación y Ciencia with a post-doctoral scholarship to the first author (0322-2007) and by the Royal Netherlands Academy of Arts and Sciences to the second author.

[2] Correspondence: Consorcio Hospitalario Provincial of Castellón. Avda. Doctor Clarà. 12002 Castellón (Spain). E-mail: mariajose.gallego@hospital2000.net

RESUMEN. La presente investigación es un estudio controlado en el cual los efectos de la versión holandesa de «Háblame», un tratamiento cognitivo-conductual vía Internet para el miedo a hablar en público, fueron investigados. Cuarenta y un participantes con un diagnóstico de fobia social se asignaron aleatoriamente a «Háblame» o a un grupo control lista de espera. El grupo de tratamiento cognitivo-conductual vía Internet mejoró significativamente del pre-test al pos-test en todas las medidas de fobia social y en las de interferencia en el área social y laboral. «Háblame» fue significativamente más efectivo que el grupo control en medidas de miedo y evitación a las conductas objetivo, miedo a hablar en público e interferencia en el área laboral. Por lo que respecta al tamaño del efecto (*Cohen-d*) para las medidas de fobia social el tratamiento vía Internet obtuvo un tamaño del efecto alto intragrupo (d = 1.13) y entre grupos (d = .86). Los resultados obtenidos por el programa «Háblame» son comparables a los obtenidos por el tratamiento cara a cara para la fobia social. Finalmente, es importante enfatizar que «Háblame» fue bien aceptado por los participantes.

PALABRAS CLAVE. Fobia social. Miedo a hablar en público. Internet. Adaptación cultural. Experimento.

Cognitive-behavioral treatments (CBT) have found to be effective treatments for social anxiety disorders (Olivares, Rosa-Alcazar, and Olivares-Olivares, 2009; Powers, Sigmarsson, and Emmelkamp, 2008). In spite of its efficacy CBT is not free of limitations: a) the therapist has to be present during the whole therapeutic process; b) lack of trained therapists; c) generally long waiting lists for treatment, and d) difficulty to get access to face-to-face therapy in rural areas. One technique widely used in CBT and apparently the most effective component of CBT for social anxiety is exposure in vivo (Powers *et al*., 2008). Exposure in vivo consists of confronting a feared situation gradually and systematically until anxiety has been reduced (Emmelkamp, 1982). However, exposure to social situations is often difficult to realize and does not allow preserving the patient's anonymity. Further, given that exposure to specific social situations is often rather short, the duration of exposure sessions is often not long enough to reduce anxiety. Finally, the social situations are variable and unpredictable. Internet-based therapy has helped to overcome some of these difficulties (Gallego and Emmelkamp, in press).

Lange *et al*. (2000) pioneered the design of Internet-based treatments to solve psychological problems (*e.g.* post-traumatic stress). Since then, Internet-based treatments have been developed and evaluated for a variety of disorders; we will center our attention on social phobia. The first Internet-based psychological treatment for social anxiety was developed by Andersson *et al*. (2006). Since then a few controlled studies have evaluated the effects of internet-based therapy for social anxiety (*e.g.* Berger, Hohl, and Caspar, 2009; Carlbring *et al*., 2007; Titov, Andrews, and Schewencke, 2008). In the present study we focus our attention on a specific type of social phobia, fear of public speaking (FPS). Botella *et al*. (2009) compared the acceptability of an Internet-based treatment for FPS called 'Talk to me' with the same treatment applied by a therapist and did not find significant differences between both conditions. In addition, both active

treatments were more efficacious than the waiting-list condition (Botella *et al*., 2010). Preliminary efficacy data of this program were shown in a case study (Gallego, Botella, Garcia-Palacios, Baños, and Guillen, 2008) and one single case series (Botella *et al*., 2007).

There is a need of adapting evidence-based treatments like «Talk to me» to other cultures, there are not tested Internet programs to treat FPS in Dutch. Talk to me has been adapted because there is some evidence that culturally adapted treatments improve intervention outcomes (Miranda, Azocar, Organista, Dwyer, and Areane, 2003; Sue, Zane, Nagayama, and Berger, 2009). The main hypothesis of the present experiment (Montero and León, 2007; Ramos-Álvarez, Moreno-Fernández, Valdés-Conroy, and Catena, 2008) is that the culturally adapted Dutch version of Talk to me will be more effective than a waiting-list control group. The participants in the current study were assessed by self-report measures and a behavioral avoidance test at pretest and posttest.

Method

Participants

Participants who fulfilled inclusion criteria for social phobia were offered treatment at the Ambulatorium of the University of Amsterdam (UvA). Potential participants either were referred by the University Mental Health Service, or referred themselves after having read about the study in «Psychologie Magazine», a popular Dutch magazine about psychology or «Folia», the magazine of the UvA. In addition, undergraduate psychology students scored six items related to social phobia on a scale from 1 (*no anxiety*) to 5 (*panic*). Individuals with the highest decile scores were invited to participate in the study.

Research assistants held a short screening interview by phone to find out if they met the inclusion/exclusion criteria: a) meeting DSM-IV-TR (American Psychiatry Association, 2000) criteria for social phobia; b) being afraid of speaking in public; c) not being in psychological or psychiatric treatment, and d) not suffering from alcohol or drug dependence or psychosis. The participants that met these criteria were invited for a face-to-face structured interview (Anxiety Disorders Interview Schedule) to confirm the diagnosis of the participants.

A total of 41 participants fulfilled the inclusion criteria, there were 28 women (68.3%) and 13 men (31.7%), the mean age was 39.29 (*SD* = 14.37) and the range was from 19 to 57 years old. The 43.9% (*n* = 18) of the sample had a higher education degree, 26.8% (*n* = 11) had finished high school and 29.2% (*n* = 12) primary school only.

Instruments

– *Anxiety Disorders Interview Schedule* (ADIS-IV-L; Brown, DiNardo, and Barlow, 1994). This structured interview assesses current episodes of anxiety disorders according to DSM-IV-TR (American Psychiatric Association, 2000) criteria. Apart from that it assesses mood, somatoform, and substance use disorders.

- *Target Behaviors* (adapted from Marks and Matthews, 1979). Participants chose two behaviors related to speaking in public as a main goal of their treatment. They rated the level of fear and avoidance in those situations on a scale from 0 (*No fear at all, I never avoid*) to 10 (S*evere fear, I always avoid*). Apart from that the participants rated the degree of belief in the negative automatic thought related to the target behavior on a scale from 0 (*I do not believe the thought at all*) to 10 (*The thought is totally true*).
- *Brief version of the Fear of Negative Evaluation Scale* (BFNE; Leary, 1983). This questionnaire measures the apprehension of being evaluated negatively by others and is composed of 12 items rated on a 1 (*Not at all characteristic of me*) to 5 (*Extremely characteristic of me*) scale. This short version of the FNE has also shown good psychometric properties (Gallego, 2010; Gallego, Botella, Quero, Baños, and Garcia-Palacios, 2007). In the present study the internal consistency was α = .90.
- *Social Avoidance and Distress Scale* (SAD; Watson and Friend, 1969). This scale comprises 28 items rated as true or false. It measures distress and avoidance related to social situations. The internal consistency of the scale was α = .94 and the test-retest reliability r = .68 (Watson and Friend, 1969). In the current study the internal consistency was α = .89.
- *Personal Report of Confidence as a Speaker* (PRCS-M; adapted from Paul, 1966). This questionnaire is composed of 30 items and it assesses FPS. The original true/false answer format was replaced by Bados (1986) with a scale ranging from 1 (*completely agree*) to 6 (*completely disagree*); higher scores representing a greater FPS. The PRCS-M had an internal consistency of .91 in a Spanish sample (Gallego, Botella, Quero, Garcia-Palacios, and Baños, 2009) and in the present study was .90.
- *Public Speaking Self-efficacy Questionnaire* (PSSEQ, adapted from Bados, 1986). This 6-item questionnaire measures the capacity to cope with different situations involving public speaking on a scale from 0 (*I can't do that at all*) to 10 (*I can definitely do that*). This instrument showed good psychometric properties including high test-retest reliability (r = .94) in a Spanish sample (Bados, 1986). The internal consistency in the current study was α = .69.
- *Self-Statements during Public Speaking* (SSPS; Hofmann and DiBartolo, 2000). This instrument assesses self-statements while speaking in public. It is composed of 10 items rated on a scale ranging from 1 (*Completely disagree*) to 5 (*Completely agree*) and consists of two subscales: *Positive self-statements* (SSPS-P) and *Negative self-statement*s (SSPS-N). Both subscales had good psychometric properties (SSPS-P α = .81; SSPS-N α = .88) (Gallego, Botella, Garcia-Palacios, Quero, and Baños, 2010). In the present study the SSPS-P had an internal consistency of α = .72 and the SSPS-N of α = .78.
- *Impromptu Speech Task* (IST; Beidel, Turner, Jacob, and Cooley, 1989). This is a behavioral test that assesses FPS. The participant has to speak at least 3 minutes in front of 3 people. He/she has 3 minutes to prepare the speech about a general topic chosen at random from a list. After the task the participant, the

therapist and an observer rate independently from each other (1) the level of anxiety on a 0 (*No fear at all*) to 10 (*Severe fear*) scale and (2) the participant's performance on a 1–7 scale (1 = *Very bad*; 7 = *Excellent*).

– *Maladjustment Scale* (adapted from Echeburua, Corral, and Fernandez-Montalvo, 2000). This scale measures the level of impairment the problem caused in patient's life and in specific areas such as work and social activities. The answer format for this items was a Likert scale ranging from 0 (*No impairment*) to 4 (*A lot of impairment*). The internal consistency for the Spanish scale was $\alpha = .94$ (Echeburua *et al*., 2000) and for the Dutch sample $\alpha = .72$.
– *Clinician Global Impression* (adapted from Guy, 1976). This measure has to be filled in by the therapist and assesses the severity of the problem on a scale from 1 to 6 (1 = *Normal*, 6 = *Very seriously disturbed*).

In addition, the following measures were completed:

– *Motivation for the treatment program* (Gallego, 2007). It is one item that assesses the motivation to start the treatment on a 0 (*No motivated at all*) to 10 (*Very motivated*) scale.
– *Satisfaction with treatment* (Gallego, 2007). This questionnaire measures how logical the treatment is, its usefulness to treat the patient's problem and other psychological problems, satisfaction and aversiveness of the program. The participant also evaluates the user-friendliness of the program. Each item is rated on a 0 to 10 scale.

Apparatus and software

The technical equipment required to run the «Talk to me» are: a Pentium II personal computer (400Hz, 256MB of RAM and graphics card of 64 MB), the peripherals (monitor, mouse, keyboard and speakers) and a modem with internet connection. The software needed to use the program was Microsoft Windows 98 or Microsoft Windows XP with Windows Media Player, and Internet Explorer 5 or 6. The video streaming technology in the Talk to me allows participants to watch and hear videos in real-time through the internet.

Treatment

Talk to me is an Internet-based treatment for FPS that was designed by Botella, Hofmann, and Moscovitch (2004) and translated into Dutch with several improvements by the authors of the present study. Talk to me was designed to direct the user through the therapeutic process; the therapist only had an assessment role. The first step in the program is filling in an assessment part. The treatment is composed of three components: psychoeducation, cognitive therapy and exposure. The system is created in organized separated blocks; the user has to finish each block before starting the next one. The program assesses periodically the user to adapt the treatment to his/her needs. The description of Talk to me and its components can be seen in Botella *et al*. (2010), in the present article we focus on the changes that were made in the program for the study conducted in the Netherlands.

Cognitive therapy. Before each exposure session the program encourages the user to detect the automatic negative thoughts. In the adapted version of Talk to me we have improved this part; we have added several examples of typical automatic negative thoughts and possible alternative thoughts.

Exposure. Depending on the assessment the system creates a different exposure hierarchy composed of several scenarios. Each scenario consists of videos of real audiences in public speaking situations (Gallego *et al*., 2008). In the Dutch version of Talk to me we have adapted the scenarios to the Dutch culture, for instance, the scenario of the oral exam was omitted because it is not common to take this type of exams in Holland. The scenarios in the Dutch «Talk to me» are:

- The class: there are two scenarios; one is a class of 8 people and the other of 20 people.
- The conference: this scenario is composed of 50 people in an assembly hall.
- The work meeting: in this scenario the user has to present a project in front of his/ her colleagues and the boss.
- The job interview: there are 8 different scenarios: a man interviewer, a woman, two men, two women, a man and a woman, three men, three women and 5 people (men and women).
- A supper with colleagues: the user and some colleagues are seated around a restaurant table and they talk about different issues.

Procedure

Three Dutch psychologist and a Spanish one worked together to translate and adapt «Talk to me» and instruments into Dutch along the lines of González-Castro Barrera, and Holleran (2010) to adapt evidence-based treatments to other cultures. Participants who met the inclusion criteria and signed the informed consent were randomized to: a) an Internet-based self-administered treatment program for FPS (n = 24); or b) a waiting list control group (n = 17). The randomization was done using simple randomizing. The assessment in the waiting list control group was conducted after 6 weeks from the pre-test. In the treatment group the participants had 6 weeks to complete the treatment and they were assessed again after this time. The participants that had not started the program after 7 days were contacted by e-mail to encourage them to start. During the treatment the therapist contacted them by e-mail when they had not entered the program in the last 7 days.

Results

Drop-out data

A total of 17 participants dropped out of the study, 6 (35.29%) from the waiting-list and 11 (45.80%) from the Internet-based program. Most of the participants that dropped out from the Internet-based condition did not start the program, 7 (63.6%) out of 11, another one (9.1%) dropped out during the psychoeducation, two (18.2%) at the end of the psychoeducation and one (9.1%) during the exposure component. A higher percentage of drop-outs were men (drop outs: 41.2% *vs.* completers: 25%), unmarried or

living without a partner (52.9% vs. 29.2%) and with a lower level of education (university degree 35.3% vs. 50%). The following reasons to give up the program were provided: technical problems (44.4%), lack of time (33.3%), not feeling « present» in the exposure situations (11.1%) or not anxious in the exposure situations (11.1%).

Pre-treatment comparisons

Group differences on pre-treatment clinical measures and demographic data were analyzed with Student's t-test and chi-squared test. Results did not show differences between the Internet-based condition and the waiting-list control group for any variable.

Pre-post comparisons between the two experimental conditions

Means and standard deviations of the two experimental conditions at pre-treatment and post-treatment are presented in Table 1. Given that assumptions were met, (M)ANOVAs were carried out. The results of MANOVAs and the ANOVAs are displayed in Table 2.

TABLE 1. Mean and standard deviation of the variables related to social phobia for completers.

			Pre-test		*Post-test*		*Effect size*
		N	*M*	*SD*	*M*	*SD*	
Fear (TB1)	SA	13	7.31	1.38	5.23	2.28	B: 1.06
	WL	9	8.22	1.09	7.44	1.88	W: 1.10
Avoidance (TB1)	SA	13	6.38	2.99	2.31	1.93	B: 1.54
	WL	8	7.00	3.30	6.25	3.06	W: 1.62
Belief (TB1)	SA	13	7.62	2.50	4.00	2.97	B: 1.60
	WL	9	8.22	.67	7.67	1.32	W: 1.32
Fear (TB2)	SA	13	7.08	1.44	4.08	2.60	B: 1.27
	WL	8	7.13	1.25	7.13	2.17	W: 1.43
Avoidance (TB2)	SA	13	5.77	3.03	2.31	2.53	B: 1.81
	WL	8	7.13	2.17	6.50	2.07	W: 1.24
Belief (TB2)	SA	13	7.62	1.61	4.15	2.23	B: 1.50
	WL	8	8.00	.93	7.38	2.07	W: 1.78
BFNE	SA	12	39.41	9.69	34.75	7.44	B: .39
	WL	11	41.00	9.72	38.09	9.32	W: .54
SAD	SA	10	9.80	5.14	12.30	2.26	B: .32
	WL	10	8.20	5.94	11.40	3.20	W: .63
PRCS	SA	13	133.92	20.37	106.38	20.99	B: 1.05
	WL	11	132.09	23.57	127.36	18.81	W: 1.33
PSSEQ	SA	12	33.67	8.13	43.00	8.94	B: .61
	WL	8	31.75	8.78	37.50	9.18	W: 1.09
SSPS-P	SA	13	11.69	4.48	15.23	5.04	B: .84
	WL	10	9.30	4.62	11.10	4.77	W: .74
SSPS-N	SA	13	12.76	3.75	6.77	4.07	B: .87
	WL	9	14.56	5.22	11.56	6.54	W: 1.53
Anxiety (IST) P	SA	13	6.08	1.89	4.46	2.11	B: .41
	WL	11	5.82	1.78	5.27	1.79	W: .81
Anxiety (IST) T	SA	13	5.31	2.21	2.46	1.71	B: .66
	WL	11	4.55	1.86	3.64	1.86	W: 1.44
Anxiety (IST) O	SA	12	5.00	2.41	2.75	1.36	B: .58

TABLE 1. Mean and standard deviation of the variables related to social phobia for completers *(cont.)*.

			Pre-test		*Post-test*		*Effect size*
		N	*M*	*SD*	*M*	*SD*	
Performance (IST) P	SA	13	3.31	1.38	4.46	1.13	B: .35
	WL	11	3.18	.75	4.00	1.48	W: .91
Performance (IST) T	SA	13	4.15	1.28	5.38	1.33	B: .57
	WL	11	4.64	.92	4.73	.91	W: .94
Performance (IST) O	SA	12	4.33	1.15	5.17	1.12	B: .40
	WL	11	4.73	1.42	4.73	1.10	W: .74
Social Impairment	SA	11	1.36	.67	.64	1.03	B: .11
	WL	8	1.00	1.07	.75	.89	W: .83
Work impairment	SA	11	2.55	.82	1.18	.98	B: .94
	WL	8	2.13	1.25	2.25	1.28	W: .52
Global impairment	SA	11	1.36	.92	.64	.81	B: .54
	WL	8	1.25	.71	1.13	.99	W: .55
Clinician global impression	SA	13	1.85	.90	.62	.87	B: .97
	WL	7	1.86	.90	1.43	.79	W:1.40

Note: TB: Target Behavior; B: between-groups effect size Cohen-*d* at post-treatment; W: within-groups effect size Cohen-*d* for treatment group; BFNE: Brief version of the Fear of Negative Evaluation Scale; SAD: Social Avoidance and Distress Scale; PRCS: Personal Report of Confidence as a Speaker; PSSEQ: Public Speaking Self-efficacy Questionnaire*;* SSPS: Self-Statements During Public Speaking; IST: Impromptu speech task; P: Participant; T: Therapist; O: Observer.

TABLE 2. MANOVAs and ANOVAs pre-post for the completers.

	Moment effect					Interaction effect				
Measure	Wilks' Lambda	*F*	*P*	ηp^2	PO	Wilks' Lambda	*F*	*p*	ηp^2	PO
Fear (TB1) Fear (TB2)	.62	5.63	.013*	.39	.79	.55	7.47	.004**	.45	.90
Avoidance (TB1) Avoidance (TB2)	.52	8.30	.003**	.48	.93	.70	3.95	.038*	.31	.63
Belief (TB2) Belief (TB1)	.56	7.20	.005**	.44	.89	.72	3.51	.052	.28	.58
BFNE SAD	.65	4.26	.033*	.35	.66	.96	.32	.730	.04	.09
PRCS	.49	22.99	.000***	.51	1	.66	11.49	.003**	.34	.90
PSSEQ SSPS-P SSPS-N	.25	14.15	.000***	.75	1	.81	1.07	.392	.19	.23
Anxiety (IST) P Anxiety (IST) T Anxiety (IST) O	.45	7.62	.002**	.55	.96	.73	2.40	.100	.28	.51
Performance (IST) P Performance (IST) T Performance (IST) O	.49	6.60	.003**	.51	.93	.74	2.25	.116	.26	.48
Social Impairment	.78	4.80	.043*	.22	.54	.94	1.14	.300	.30	.17
Work Impairment	.65	9.00	.008**	.35	.81	.57	13.00	.002**	.43	.92
Global Impairment	.80	4.38	.052	.21	.51	.89	2.19	.157	.11	.29
Clinician global impression	.62	11.26	.004**	.39	.89	.87	2.63	.122	.13	.34

Note: ηp^2*:* Eta squared; PO: Observed power; TB: Target Behavior; BFNE: Brief version of the Fear of Negative Evaluation Scale; SAD: Social Avoidance and Distress Scale; PRCS: Personal Report of Confidence as a Speaker; PSSEQ: Public Speaking Self-efficacy Questionnaire*;* SSPS: Self-Statements During Public Speaking; IST: Impromptu speech task; P: Participant; T: Therapist; O: Observer; * $p < .05$; ** $p < .01$; *** $p < .001$.

Measures directly related to social phobia

To test if there are significant differences between both experimental conditions at post-treatment MANOVAs were performed for each cluster of variables that were related. The clusters of dependent variables analyzed were the following: fear to the target behaviors, avoidance to the target behaviors, belief in the catastrophic thought related to the target behaviors, social phobia measures (BFNE, SAD), cognitive measures for FPS (PSSEQ, SSPS-P, SSPS-N), anxiety in the IST (informed by the participant, the therapist and an observer) and performance in the IST (informed by the participant and the therapist). Experimental condition was used as an independent variable.

The MANOVA for the fear to the target behaviors and the avoidance to the target behaviors revealed a significant time effect and interaction effect (see Table 2). However, MANOVAs for the belief in the catastrophic thought related to the target behaviors, social phobia measures, cognitive measures for FPS, anxiety and performance in the IST obtained a significant time effect, but did not show an interaction effect (see Table 2).

The variable PRCS was analyzed independently by ANOVA; both the time effect and the interaction effect were significant.

The between-groups effect size for the measures directly related to social phobia ranged from $d = 1.81$ to $d = .32$ and the mean was $d = .86$. With regard to within-groups effect size the mean was $d = 1.13$, the highest value was $d = 1.78$ and the lowest value $d = .54$. The effect size for each variable is presented in Table 1.

Impairment measures and clinician global impression

Pre- and posttreatment impairment measures (work, social and global) and clinical global impression were analyzed with ANOVAs. ANOVAs showed a significant time effect on the social and work impairment and on the clinician global impression; this effect was not significant for global impairment (see Table 2). The interaction effect was only significant for work impariment (see Table 2).

The between-groups effect size for the impairment measures and the clinical global impression ranged from $d = .97$ to $d = .11$, the mean was $d = .64$. The within-groups effect size ranged from $d = 1.52$ to $d = .55$ and the mean was $d = 1.08$. (see Table 1).

Diagnosis

As shown in Table 3 in the SA group, 30.8% no longer met the social phobia criteria at posttest and the percentage of participants with a diagnosis of generalized social phobia decreased from 61.5% to 23.1%. In the WL, all participants fulfilled social phobia criteria at the posttest, although the percentage of participants with a diagnosis of generalized social phobia decreased from 50% to 25%.

TABLE 3. Diagnosis of completers using DSM-IV-TR criteria.

		Pretest	*%*	*Posttest*	*%*
SA	No SP	0	0	4	30.8
	SP	5	38.5	6	46.2
	Generalized SP	8	61.5	3	23.1
WL	No SP	0	0	0	0
	SP	4	50	6	75
	Generalized SP	4	50	2	25

Note: SA, self-administered; WL, waiting list; SP, social phobia.

Treatment acceptance

Before starting the program the participants assigned to the Talk to me program were very motivated to work on it (M = 8.96; SD = 0.91). With regard to the *Satisfaction with treatment* (Gallego, 2007), means and standard deviations for its items are shown in Table 4. Generally, participants who completed treatment were quite satisfied. The participants also gave their opinion about the utility of each component of the program, the most useful component was the psychoeducation (M = 8.00; SD = 2.68), the following one was the cognitive discussion (M = 7.54; SD = 2.15) followed by the exposure section (M = 5.85; SD = 3.24). Regarding to the exposure component the most useful scenario was the meeting (M = 7.77; SD = 3.96) followed by the informal dinner (M = 7.31; SD = 4.29), the congress (M = 7.00; SD = 3.58), the job interview (M = 6.69; SD = 3.47) and the class (M = 6.54; SD = 3.43).

TABLE 4. Means and standard deviations of the Satisfaction with treatment (Gallego, 2007) items.

	M	*SD*
Logic	7.77	1.74
Satisfaction	6.38	2.57
Recommendation to others	6.46	2.22
Utility for the patient	7.38	2.18
Utility for other problems	7.38	2.18
Aversiveness	1.00	1.58
User-friendly	7.08	2.10

Discussion

The results from the present study support the efficacy of the Dutch adapted version of «Talk to me», an Internet-based treatment for FPS combined with minimal therapist contact via e-mail. Measures directly related to FPS like fear and avoidance to the target behaviors, and a FPS self-report (PRCS) showed significant differences within-groups and between-groups. However, the belief in the catastrophic thought related to the target behaviors, social phobia measures (BFNE, SAD), cognitive measures

for FPS (PSSEQ, SSPS-P, SSPS-N), and anxiety and performance in the IST revealed significant differences between pre and post-test, but did not show significant differences between-groups, the absence of differences could be related to the small sample size. The Internet-based treatment had a large within-groups (d = 1.13) and between groups (d = .86) effect size (Cohen-d) for the measures related to social phobia. In the Talk to me group 30.8% no longer met social phobia criteria, the percentage of participants with a diagnosis of generalized social phobia decreasing from 61.5% to 23.1%. In the WL all participants still fulfilled criteria for social phobia, but the percentage of participants with a diagnosis of generalized social phobia decreased from 50% to 25%.

Participants were quite satisfied with the treatment. This program was accepted in Dutch and Spanish social phobics (Botella *et al*., 2010). Participants found the psychoeducation and challenging of negative thoughts very useful. The exposure sessions to the virtual public speaking situations were considered moderately useful. This might be related to the fact that some participants did not prepare the exposure beforehand. Alternatively, some participants did not feel present in the virtual situation.

The efficacy of «Talk to me» has now been tested in two randomized controlled trials, the present study and Botella *et al*. (2010). Future studies should focus on the effectiveness or clinical utility. The Talk to me program has now been validated in two different countries, but both studies were conducted in a university setting. Given that this program was adapted into Dutch following the recommendations of González-Castro *et al*. (2010), the results validate the cultural modifications made. There is a clear need of studies in routine clinical practice to investigate the generalisability of the effects achieved. Finally, studies should investigate the cost-effectiveness of the «Talk to me».

In the Spanish controlled study (Botella *et al*., 2010) the «Talk to me» program without any contact with the patient during the treatment had a drop-out rate of 50%. In the present study we added e-mail contact to increase the treatment adherence when the participants did not start the program and when they did not enter the program in the last 7 days, but this hardly improved treatment adherence; the drop-out rate for the present study was 45.8 %. A higher percentage of women, participants living with a partner or married, and people with a higher level of education completed the program. In contrast, Melville, Casey and Kavanagh (2010) did not find any variable associated with dropout of Internet-based treatments. Efforts should be made to improve the compliance given the relatively high attrition rate. Presumably more personalized phone calls are needed to enhance treatment adherence in Internet-based psychological treatments (Carlbring *et al*., 2007; Titov, Andrews, Choi, Schwencke, and Johnston, 2009). Another issue that may have influenced the dropout rate was the limited time to complete the treatment. In the Botella *et al*. (2010) study participants had 2 months to complete the treatment, in the present study they had only 6 weeks. Further studies are needed to investigate the optimal time limits.

The present study is not exempt from limitations. The sample is rather small, most of the participants were female (68.3%) and the level of education was higher than the general population, but this applies to nearly all internet-based treatment studies (Gallego and Emmelkamp, in press). Another methodological limitation is the lack of follow-up.

To sum up, this study supports the cultural adaptation to validate evidence-based treatments in other cultures (Sue *et al*., 2009). The mixture of new technologies and self-help has shown its usefulness in social phobia and other psychological disorders (Gallego and Emmelkamp, in press), but future studies are needed to enhance treatment compliance, to disseminate these programs in routine clinical care and to compare the Internet program with a face-to-face treatment in non Spanish samples.

References

American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorder*. Washington, DC: APA.

Andersson, G., Carlbring, P., Holmström, A., Spartan, L., Furmark, T., Nilsson-Ihrfelt, E., Buhrmen, M., and Ekselius, L. (2006). Internet-based self-help with therapist feedback and in-vivo group exposure for social phobia: A randomised controlled trial. *Journal of Consulting and Clinical Psychology, 74,* 677-686.

Bados, A. (1986). *Análisis de componentes de un tratamiento cognitivo-somático-conductual del miedo a hablar en público*. Unpublished doctoral dissertation, University of Barcelona, Barcelona.

Beidel, D.C., Turner, S.M., Jacob, R.G., and Cooley, M.R. (1989). Assessment of social phobia: Reliability of an impromptu speech task. *Journal of Anxiety Disorders, 3*, 149-158.

Berger, T., Hohl, E., and Caspar, F. (2009). Internet-based treatment for social phobia: A randomized controlled trial. *Journal of Clinical Psychology, 65*, 1021-1035.

Botella, C. Gallego, M.J., Garcia-Palacios, A. Baños, R.M., Quero, S., and Alcañiz, M. (2009). The acceptability of an Internet-based self-help treatment of fear of public speaking. *British Journal of Guidance and Counselling, 37*, 297-311.

Botella, C. Gallego, M.J., Garcia-Palacios, A., Guillen, V., Baños, R.M., Quero, S., and Alcañiz, M. (2010). An Internet-based self-help treatment for fear of public speaking: A controlled trial. *Cyberpsychology, Behavior Social Networking*, *13*, 407-421.

Botella, C., Guillen, V., Baños, R.M., Garcia-Palacios, A., Gallego, M.J., and Alcañiz, M. (2007). Telepsychology and self-help: The treatment of fear of public speaking. *Cognitive and Behavioral Practice, 14*: 46-57.

Botella, Hofmann, S.G., and Moscovitch, D.A. (2004). A self-applied, Internet-based intervention for fear of public speaking. *Journal of Clinical Psychology, 60*, 821-830.

Brown, T.A., DiNardo, P., and Barlow, D.H. (1994). *Anxiety Disorders Interview Schedule for DSM-IV (ADS-IV). Adult and Lifetime version. Clinician Manual*. San Antonio: Psychological Corporation.

Carlbring, P., Gunnarsdóttir, M., Hedensjö, L., Andersson, G., Ekselius, L., and Furmark, T. (2007). Treatment of social phobia: Randomised trial of internet-delivered cognitive-behavioural therapy with telephone support. *The British Journal of Psychiatry: The Journal of Mental Science, 190*, 123-128.

Echeburua, E., Corral, P., and Fernandez-Montalvo, J. (2000). Escala de inadaptación: Propiedades psicométricas en contextos clínicos. Análisis en contextos clínicos. *Análisis y Modificación de Conducta, 26*, 325-338.

Emmelkamp, P.M.G. (1982). *Phobic and obsessive-compulsive disorder: Theory, research and practice*. New York, NY: Plenum.

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

Gallego, M.J. (2010). Brief version of the Fear of Negative Evaluation Scale – straightforward items (BFNE S): Psychometric properties in the Spanish population. *Spanish Journal of Psychology, 13*, 981-989.

Gallego, M.J., Botella, C., Garcia-Palacios, A., Baños, R.M., and Guillen, V. (2008). A self-help treatment via the Internet for fear of public speaking: A single case study. *Behavioral Psychology, 16*, 323-340.

Gallego, M.J., Botella, C., Garcia-Palacios, A., Quero, S., and Baños, R.M. (2010). La escala de autoverbalizaciones durante la situación de hablar en público (SSPS): propiedades psicométricas en una muestra española de fóbicos sociales. *Behavioral Psychology, 18, 343-363*.

Gallego, M.J., Botella, C., Quero, S., Baños, R.M., and Garcia-Palacios, A. (2007). Psychometric properties of the Brief version of the Fear of Negative Evaluation Scale (BFNE) in a clinical sample. *Revista de Psicopatología y Psicología Clínica, 12*, 163-176.

Gallego, M.J., Botella, C., Quero, S., Garcia-Palacios, A., and Baños, R.M. (2009). Validación del «Cuestionario de Confianza para Hablar en Público» en muestra clínica española. *Behavioral Psychology, 17*, 413-431.

Gallego, M.J. and Emmelkamp, P.M.G. (in press). Effectiveness of Internet Psychological Treatments in Mental Health Disorders. In L. L'Abate and D. Kaisers (Eds.), *Handbook of Technology in Psychology, Psychiatry, and Neurology: Theory, Research, and Practice*. Hauppauge, NY: Nova Science Publishers, Inc.

González-Castro, F., Barrera, M., and Holleran, L.K. (2010). Issues and challenges in the design of culturally adapted evidence-based interventions. *Annual Review of Clinical Psychology, 6*, 213-239.

Guy, W. (1976). ECDEU *Assessment Manual for Psychopharmacology*. Rockville, MD: National Institute for Mental Health.

Hofmann, S.G. and DiBartolo, P.M. (2000). An instrument to assess self-statements during public speaking: Scale development and preliminary psychometric properties. *Behavior Therapy*, *31*, 499-515.

Lange, A., Schrieken, B., van de Ven, J.P., Bredeweg, B., Emmelkamp, P.M.G., van der Kolk, J., Lydsdottir, L., Massaro, M., and Reuvers, A. (2000). «Interapy»: the effects of a short protocolled treatment of posttraumatic stress and pathological grief through the Internet. *Behavioural and Cognitive Psychotherapy, 28*, 175-192.

Leary, M.R. (1983). A brief version of the Fear of Negative Evaluation Scale. *Personality and Social Psychology Bulletin, 9*, 371-375.

Marks, I.M. and Matthews, A.M. (1979). Brief standard self-rating for phobic patients. *Behaviour Research and Therapy*, *17*, 263-267.

Melville, K.M., Casey, L.M., and Kavanagh, D.J. (2010). Dropout from internet-based treatment for psychological disorders. *British Journal of Clinical Psychology, 49*, 455-471.

Miranda, J., Azocar, F., Organista, K., Dwyer, E., and Areane, P. (2003). Treatment of depression among improverished primary care patients from ethnic minority groups. *Psychiatric Services, 54*, 219-25.

Montero, I. and León, O. G. (2007). A guide for naming research studies in Psychology. *International Journal of Clinical and Health Psychology, 7*, 847-862.

Olivares, J., Rosa-Alcazar, A.I., and Olivares-Olivares, P.J. (2009). Transmisión de información cualificada frente a tratamiento psicológico estructurado de adolescentes con fobia social generalizada. *International Journal of Clinical and Health Psychology, 9*, 241-258.

Paul, G.L. (1966). *Insight vs. desensitization in psychotherapy*. Standford, CA: Standford University Press.

Powers, M.B., Sigmarsson, S.R., and Emmelkamp, P.M.G. (2008). A meta-analytic review of psychological treatments for social anxiety disorder. *International Journal of Cognitive Therapy, 1*, 94-113.

Ramos-Álvarez, M. M., Moreno-Fernández, M. M., Valdés-Conroy, B., and Catena, A. (2008). Criteria of the peer review process for publication of experimental and quasi-experimental research in Psychology: A guide for creating research papers. *International Journal of Clinical and Health Psychology, 8*, 751-764.

Sue, S., Zane, N., Nagayama, G.C., and Berger, L.K. (2009). The case for cultural competency in psychotherapeutic interventions. *Annual Review of Psychology, 60*, 525-548.

Titov, N., Andrews, G., Choi, I., Schwencke, G., and Johnston, L. (2009). Randomized controlled trial of web-based treatment social phobia without clinical guidance. *Australian and New Zealand Journal of Psychiatry, 42*, 913-919.

Titov, N., Andrews, G., and Schwencke, G. (2008). Shyness 2: Treating social phobia online: Replication and extension. *Australian and New Zealand Journal of Psychiatry, 42*, 595-605.

Watson, D. and Friend, R. (1969). Measurement of social evaluative anxiety. *Journal of Consulting and Clinical Psychology, 33*, 448-457.

Received December 11, 2010
Accepted April 4, 2011