

A Randomized Trial of Internet-Delivered Treatment for Social Anxiety Disorder in High School Students

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Abstract. Internet-based cognitive behavior therapy (CBT) has been shown effective for university students with social anxiety disorder (SAD) and public speaking fears. The aim of this study was to investigate whether the promising results can be transferred to high school students suffering from this condition. A total of 19 speech-anxious high school students with SAD were randomized either into 9 weeks of Internet-delivered CBT or to a wait-list control group. Significant improvements were found on measures of social anxiety, general anxiety, and depression. Effects were maintained at 1-year follow-up. The average within- and between-group effect sizes (Cohen's *d*) for the primary social anxiety scales at posttest were 0.98 and 1.38, respectively. However, the average number of completed modules in the CBT program was low. Although compliance can be improved, the results suggest that Internet-based guided self-help is effective in the treatment of high school students with SAD. *Key words:* social anxiety disorder; public speaking; high school students; Internet; cognitive behavioral therapy.

Received 25 October, 2010; Accepted 10 January, 2011

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Public speaking is a frequent recurrent task in higher education, and public speaking skills are often in high demand also in working life. However, public speaking fear is one of the most common fears in the general population. One quarter of the adult general Swedish population (Furmark et al., 1999) and 14% of Swedish youth in the age range of 12 to 14 years report marked distress associated with this situation (Gren-Landell, Tillfors, et al., 2009). For youth with public speaking fears, it is difficult to avoid the situations they are afraid of without short- and long-term consequences for academic achievement. Nonetheless, public speaking is typically avoided or endured with

marked distress in youth with social anxiety disorder (SAD). SAD is one of the most common anxiety disorders in the Western societies, with prevalence rates of about 10% (Furmark, 2002; Mancini, Van Ameringen, Bennett, Patterson, & Watson, 2005). In most cases, SAD has been found to precede other comorbid psychiatric disorders like depression, and it has also been associated with an elevated risk for the development of secondary depression (Stein et al., 2001). Hence, SAD should be regarded as a major public health issue.

For youth with SAD that is left untreated, there are elevated risks for school dropout,

academic underachievement, and later unemployment (Rapee & Spence, 2004). The prevalence of SAD among Swedish university students does not seem to differ from the Swedish community at large (Furmark et al., 1999; Tillfors & Furmark, 2007), suggesting that persons with SAD apply for higher education as often as persons without these problems. However, students suffering from SAD frequently use dysfunctional strategies to cope with anxiety (e.g. safety behaviors and avoidance of lectures). In the short term, this brings about anxiety reductions but in the long term it could be one mechanism that leads to underachievement and school dropout (Tillfors & Furmark, 2007). Hence, this may explain the association between SAD and the lower degree of education that has been found repeatedly in epidemiological studies (Furmark, 2002; Rapee & Spence, 2004).

Despite the pervasiveness and the high prevalence rates of SAD, most youth suffering from this disorder do not receive any treatment. One reason could be that the symptoms are interpreted as signs of shyness presumed to disappear with age. In contrast, prospective studies report few spontaneous remissions in SAD (Rapee & Spence, 2004). Because the disorder can have a devastating, long-lasting impact on social activities and working life, early intervention is important. Cognitive behavior therapy (CBT) is considered to be the first-line psychological treatment for youth with SAD (e.g. Mancini et al., 2005). Current face-to-face treatments for children and youth with SAD that have been shown effective are CBT in a group format (Albano, Marten, Holt, Heimberg, & Barlow, 1995; Herbert et al., 2009) and Social Effectiveness Therapy for Children (SET-C; Beidel, Turner, & Young, 2006). However, individuals with SAD, especially those at a young age, may be reluctant to seek professional help because face-to-face therapy is perceived as anxiety provoking or embarrassing. A guided self-help program administered via the Internet is an alternative treatment approach that could prove feasible (Erwina, Turk, Heimberg, Frescoa, & Hantula, 2004).

Although Internet-based CBT of SAD has been shown effective in adults (e.g. Andersson et al., 2006; Berger, Hohl, & Caspar, 2009; Carlbring, Gunnarsdottir, et al., 2007; Titov, Andrews, Schwencke, Drobny, & Einstein,

2008; Furmark et al., 2009), specifically in university students (Tillfors et al., 2008), research relating to Internet-delivered self-help for adolescents suffering from SAD is sparse. We are only aware of one case study using online CBT to treat an adolescent female with SAD (Spence et al., 2008). The outcome was promising, but Internet-delivered CBT for adolescents with SAD needs to be tested in a randomized controlled trial (RCT). Thus, the main objective of the present study was to evaluate whether the positive results from our Internet-delivered CBT program for university students (Tillfors et al., 2008) could transfer to high school students diagnosed with SAD. This was tested within the context of an RCT, with participants randomized to Internet treatment or a wait-list control condition.

Method

Recruitment and selection

All participants were high school students in central Sweden, recruited via regional newspaper articles, school staff, as well as advertisements in the high schools during fall 2007 and spring 2008. The regional ethical committee approved the study. A webpage was created, which included general information about SAD and CBT, ethical issues, and Internet security as well as information about the team behind the study. The participants filled out an application form and completed an online screening consisting of the Social Phobia Screening Questionnaire for Children up to 18 Years Old (SPSQ-C; Gren-Landell, Björklind, et al., 2009), the self-rated version of the Montgomery–Åsberg Depression Rating Scale (MADRS-S; Svanborg & Åsberg, 1994), as well as additional questions regarding current and past treatments.

To be included in the study, the students had to meet the following criteria: (1) fulfill the criteria of the *Diagnostic and Statistical Manual of Mental Disorders* (4th edition (DSM-IV-TR; American Psychiatric Association, 2000) for SAD according to the SPSQ-C; (2) being afraid of giving a public speech; (3) scoring less than 30 on the MADRS-S Depression scale and less than 4 on the suicide item of this scale (to prevent the inclusion of youth in strong need of specialist consultation); (4) not undergoing any other psychological treatment during the study period and

having no history of earlier CBT; and (5) if on prescribed drugs for anxiety/depression, dosage had to be constant for 3 months before the start of the treatment, and the patient had to agree to keep the dosage constant throughout the study. Any individual who failed to meet the inclusion criteria was sent with advice, via e-mail, on where to seek more appropriate help.

Participants who fulfilled these inclusion criteria were contacted via telephone and interviewed using a short version of the Structured Clinical Interview for DSM-IV (SCID; First, Gibbon, Spitzer, & Williams, 1998) to confirm the SAD diagnosis (F module only). Written informed consent was obtained. Figure 1 illustrates the participant flow and dropout rate through each stage of the study. Of the 30 high school students who applied, 21 fulfilled the initial inclusion criteria and 19 were randomized in pairs into either an Internet-delivered CBT self-help program ($n = 10$) or a wait-list control group ($n = 9$).

Participants, attrition rate, and intention to treat

Participants ranged in age from 15 to 21 years ($M = 16.5$, $SD = 1.6$). However, it is important to note that only one participant was 21 years old. Only two male high school students were included, one in each group. During the study period, one student in the treatment group began a face-to-face psychotherapy and was, therefore, excluded in the statistical analyses. The wait-list group received treatment after the postmeasures had been collected. Three more students in this group began another psychological ($n = 2$) or pharmacological ($n = 1$) treatment and were excluded in the statistical analyses. Follow-up measures were not collected from these participants. Follow-up measures were completed by the remaining 15 students.

The students were requested to complete one module per week, and e-mail reminders were sent out if they did not do so. Posttest measures were administered after 9 weeks regardless of the number of modules the participants completed. The average number of modules finished in time was 2.9 (range, 1–6) in the treatment group. All participants were offered the remaining modules after the posttest measures had been collected,

although students had to work with these on their own.

According to the intention-to-treat principle (e.g. Newell, 1992; Nich & Carroll, 2002), posttest as well as 1-year follow-up measurements were collected from all of the participants except for those four students (treatment group: $n = 1$; wait-list group: $n = 3$) who had started another treatment during the Internet self-help program. All participants answered the computerized questionnaires at posttest, but at 1-year follow-up posttest scores were used for two students who did not answer (i.e. last observation carried forward). Between posttest and follow-up, one student began another psychological treatment and was, therefore, excluded from the statistical analyses.

Outcome measures

The following SAD questionnaires constituted the main outcome measures: the SPSQ-C (Gren-Landell, Björklind, et al., 2009) and the Liebowitz Social Anxiety Scale self-report version (LSAS-SR; Liebowitz, 1987; Baker, Heinrich, Kim, & Hofmann, 2002). The eight-item SPSQ-C and the 24-item LSAS-SR (Social Fear subscale) showed good internal consistency, with, respectively, alphas of .68 and .92. As secondary outcome measures, we included the Beck Anxiety Inventory (BAI; Beck, Epstein, Brown, & Steer, 1988), the MADRS-S (Svanborg & Åsberg, 1994), and the Quality of Life Inventory (QOLI; Frisch, Cornell, Villanueva, & Retzlaff, 1992). All these measures have shown adequate psychometric properties, and they were administered via the Internet (cf. Carlbring, Brunt, et al., 2007) at pre- and posttreatment as well as at 1-year follow-up. The questionnaires, except for the SPSQ-C, were originally developed for adults. Therefore, three high school students (one male and two females) in a pilot group went through all the adult questionnaires to check whether the questions were appropriate and easy to understand for their age group. The pilot group had no problems understanding the questionnaires except for a few words, for which a separate explanation was added. This was not deemed to influence the reliability or validity of the questionnaires. Questions dealing with treatment satisfaction were included in the posttest measures and at 1-year follow-up (see Table 3).

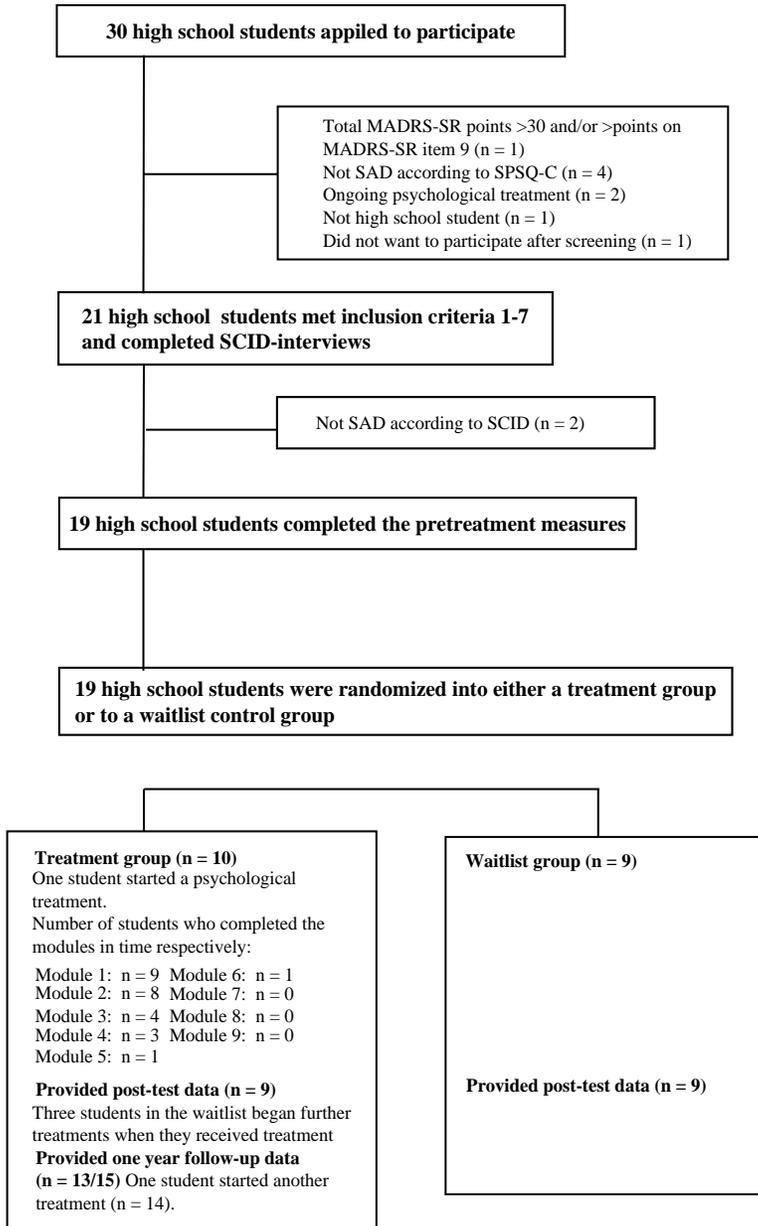


Figure 1. Participant flow and dropout at each stage of the study. MADRS-S, Montgomery-Åsberg Depression Rating Scale; SAD, social anxiety disorder; SPSQ-C, Social Phobia Screening Questionnaire for Children up to 18 Years Old; SCID, Structured Clinical Interview for DSM-IV.

Material and treatment

All the participants had to have access to a computer with an Internet connection, an e-mail program, and the ability to print out files in PDF format. Moreover, they were recommended to get a free online e-mail service that automatically encrypts messages in 2048

bits. The main treatment component was a self-help manual, which consisted of nine modules adapted for use via the World Wide Web. The adult version of the written program has been released as a self-help book in Sweden (Furmark, Holmström, Sparthan, Carlbring, & Andersson, 2006). In the present

study, the self-help manual was similar to the self-help manual tested by Tillfors and co-workers (2008) for university students but slightly modified to better suit high school students. This modification was done after we had consulted the three high school students, as mentioned previously, who read and commented on all nine modules. With the slight modifications, the treatment material was said to be usable. The text consisted of 189 pages and was based on established CBT principles for SAD (Clark & Wells, 1995; Rodebaugh, Holaway, & Heimberg, 2004). An overview of the nine modules is given in Table 1.

Each module consisted of information, exercises, and a couple of essay questions. Each treatment week, participants were asked to summarize in their own words a central section of the module in question, describe the outcome of the exercises done, and answer an interactive multiple-choice quiz. The rationale behind the homework assignments was to promote learning and enable the Internet therapists to decide whether the participants had assimilated the information and completed their homework assignments. In general, therapist feedback on the homework assignment was given within 36 hr after the

participant had sent his or her answers via e-mail. When the homework was completed, the next module was made accessible. Alternatively, instruction on what needed to be completed in order to proceed to the next module was sent to the participant. If the Internet therapist, despite issuing several reminders, had not heard from the participant in more than 2 weeks, the participant was called and asked about the reason behind the delay as well as present mood status. There were four Internet therapists involved in the present study; two were licensed clinical psychologists and two were clinical psychology students in their last semester of the 5-year master's degree program.

Statistical analyses

Independent-samples *t* tests were used to compare the treatment group and the wait-list control group with regard to initial differences at pretest. Treatment effects (i.e. pre- and posttest measures) were analyzed with mixed between-within analyses of variance (ANOVAs). To compare all the treated participants over the three time frames (pre-, post-, and 1-year follow-up), one-way repeated measures ANOVAs followed by post hoc tests when appropriate were used. Pearson

Table 1. *Content and extent of the nine modules*

Module	Content	No. pages
1	Introduction and psychoeducation: education about SAD and the treatment principles; construing an anxiety hierarchy	19
2	Clark and Wells's cognitive model for SAD: starting identifying and register negative automatic thoughts (NAT)	20
3	Cognitive restructuring I: continuing working with NAT (evidence for and against and alternative thoughts); working with construing treatment goals	30
4	Cognitive restructuring II: continuing working with NAT and beginning working with behavior experiments	23
5	Exposure I: education about exposure and starting doing exposure; construing a more detailed anxiety hierarchy	21
6	Shift of focus: education and behavior experiments about self-focus attention	19
7	Exposure II: continuing working with exposure	20
8	Social skills: focus on social communication skills as, for example, assertiveness training	19
9	Relapse prevention	22
	The total number of pages	189

SAD = Social anxiety disorder; *NAT* = Negative automatic thoughts.

correlations were used to investigate the association between the number of modules completed and improvement. Within-group as well as between-group effect sizes were calculated based on the pooled standard deviation and were expressed as Cohen's *d* (Cohen, 1988). We used a reliable change index in accordance with Jacobson & Truax (1991) to determine the proportion of participants showing improvement on the social anxiety measures at posttest and 1-year follow-up. All analyses were done in SPSS version 18.0.1 (SPSS Inc., Chicago, IL, USA).

Results

Group differences before treatment

No significant differences were found between the treatment group and the wait-list group for any of the pretest measures, $t_s(16) = 0.07-0.83$, $p_s = .45-.95$ (two-tailed). Hence, the randomization procedure seemed to have been efficient.

Main outcome analyses

Mixed ANOVAs yielded significant interaction effects (Group \times Time) for all outcome measures except for quality of life (see Table 2), supporting differential improvement in treated relative to untreated subjects. With the exception of the LSAS-SR, the within-subject (time) effect was driven by improvement in the treatment group and not by deterioration in the wait-list group during the 9 weeks.

At follow-up after 1 year, improvements on the social anxiety measures (LSAS-SR Fear and SPSQ-C) and on the depression measure (MADRS-S) were maintained for both treated groups, although they were not further improved. The only exception in the pattern of improvement was that the scores of general anxiety (BAI) at follow-up no longer differed from the pretest scores ($p = .45$). Means (\pm *SD*) at 1-year follow-up were as follows: LSAS-SR Fear, 16.7 (\pm 7.6); LSAS-SR Avoidance, 17.4 (\pm 8.8); SPSQ-C, 12.8

Table 2. Outcome measures at pretest and posttest for the treatment group ($n = 9$) and the wait-list control group ($n = 9$)

Assessment	Treatment ^a	Wait list ^a	$F(1, 16)$	Effect size	
				Within	Between
LSAS-SR Fear			I: 17.10***	0.91	1.48
Pretreatment	23.8 (11.8)	27.3 (13.8)	W: 3.18*		
Posttreatment	14.6 (8.2)	31.0 (13.4)	B: 3.39*		
LSAS-SR Avoidance			I: 13.11***	0.55	1.13
Pretreatment	21.4 (13.6)	23.4 (14.9)	W: 0.01		
Posttreatment	15.0 (9.1)	30.0 (16.4)	B: 1.86		
SPSQ-C			I: 5.26**	1.06	1.28
Pretreatment	14.8 (2.2)	15.7 (2.8)	W: 3.11*		
Posttreatment	12.2 (2.7)	16.0 (3.2)	B: 4.22**		
MADRS-S			I: 6.07**	1.12	1.39
Pretreatment	14.1 (8.6)	17.2 (9.0)	W: 8.52***		
Posttreatment	6.2 (5.0)	16.6 (9.3)	B: 3.78*		
BAI			I: 8.03***	0.97	1.47
Pretreatment	17.6 (8.4)	20.9 (8.7)	W: 7.08**		
Posttreatment	10.4 (6.3)	21.1 (8.1)	B: 4.01*		
QOLI			I: 1.40	0.57	0.49
Pretreatment	1.4 (1.2)	1.4 (1.5)	W: 1.22		
Posttreatment	2.0 (0.9)	1.4 (1.5)	B: 1.12		

Note. *I*, interaction effect; *W*, within-subjects effect; *B*, between-subject effect; LSAS-SR, Liebowitz Social Anxiety Scale self-report version; SPSQ-C, Social Phobia Screening Questionnaire for Children up to 18 Years Old; MADRS-S, Montgomery-Åsberg Depression Rating Scale self-report version; BAI, Beck Anxiety Inventory; QOLI, Quality of Life Inventory.

* $p < .10$. ** $p < .05$. *** $p < .01$.

^a Values represent mean \pm standard deviation.

Table 3. *Participants' evaluation at posttest measures and 1-year follow-up*

Question	After treatment (<i>n</i> = 15)	One-year follow-up (<i>n</i> = 14)
Overall, how satisfied are you with your treatment?		
Very satisfied	3 (20.0%)	2 (14.3%)
Mostly satisfied	10 (66.7%)	10 (71.4%)
Neutral/somewhat dissatisfied	2 (13.3%)	2 (14.3%)
Very dissatisfied	0 (0%)	0 (0.0%)
Participant's own overall impression of improvements		
Very much improved	2 (13.3%)	3 (21.4%)
Much improved	5 (33.3%)	3 (21.4%)
Minimally improved	8 (53.3%)	7 (50.0%)
Not improved	0 (0.0%)	1 (7.1%)
Have you ever read the modules after the 9-week treatment period? ^a		
Yes	Yes	3 (25.0%)
No	No	9 (75.0%)

^a*n* = 12.

(± 2.5); MADRS-S, 11.1 (± 7.0); BAI, 15.3 (± 7.4); QOLI, 2.1 (± 1.2). The subsample sizes for each trial were 14. In addition, we also analyzed our follow-up data without the two students who did not answer. The pattern of improvement was the same except for the scores of depressive symptoms (MADRS-S), where the *p* value showed a tendency toward significance (*p* = .06).

Effect sizes

Within-group as well as between-group effect sizes (Cohen's *d*) are shown in Table 2. The average within-group effect sizes on the social anxiety measures (LSAS-SR Fear and SPSQ-C) for the treatment group (*n* = 9) was *d* = 0.98 at posttest and *d* = 0.80 at follow-up (*n* = 14). The average between-group effect size on the social anxiety measures (LSAS-SR Fear and SPSQ-C) at posttest was *d* = 1.38. The strongest between-group effect size (*d* = 1.48) was found on the LSAS-SR Fear. However, because scores on this measure worsened in the wait-list group after 9 weeks, we considered the between-group effect size for SPSQ-C (*d* = 1.28) to be the most reliable.

Reliable change

At posttest (*n* = 15), the number of participants showing reliable change on the social anxiety measures were as follows: nine (60%) for the SPSQ-C and eight (53%) for LSAS-SR Fear. At 1-year follow-up (*n* = 14), the corresponding figures were as follows: SPSQ-C, eight (57%); LSAS-SR Fear, seven (50%).

Treatment satisfaction

The participants' evaluations of the treatment at posttest and 1-year follow-up are presented in Table 3. Notably, 87% reported that they were mostly or very satisfied at posttest. At 1-year follow-up, the corresponding figure was 86%.

Number of modules completed in relation to treatment outcome

Because none of the high school students completed all nine modules within the 9-week time frame, the association between number of completed modules and degree of improvement (minimal or no improvement/much or very much improved) was examined by Pearson correlation. Only a tendency to a significant positive correlation between number of completed modules and improvement at posttest was found (*r* = .46, *p* < .10).

Discussion

Our results suggest that Internet-based guided self-help CBT is efficient in the treatment of high school students suffering from SAD and social fears mainly circumscribed to "speaking fears." Hence, Internet-delivered self-help with minimal therapist guidance could be given not only to adults but also to adolescents with SAD as well. Effect sizes in the present study were in the range of those reported in CBT trials of adults suffering from SAD (e.g. Andersson et al., 2006; Fedoroff & Taylor, 2001). Significant improvement was noted,

even though the average number of completed number of modules was low ($M = 2.9$). Hence, psychoeducation and cognitive restructuring (i.e. early treatment components) may be sufficient to set the stage for self-exposure in the school environment.

The present treatment program also reduced comorbid depressive symptoms among the participants, consistent with previous studies in adults with SAD (e.g. Andersson et al., 2006; Rodebaugh et al., 2004; Tillfors et al., 2008). The fact that different psychiatric disorders share one or several common maintaining processes (e.g. overt avoidance, safety behaviors, interpretation bias, and selective attention) could explain why treatment of one disorder like SAD also has an effect on comorbid syndromes like depression (Harvey, Watkins, Mansell, & Shafran, 2004; Rapee & Spence, 2004). However, even if the social anxiety and the depressive symptoms significantly decreased after treatment, the social avoidance and quality of life measures did not. Notably, the high school students showed the same level of social avoidance before treatment as adults with SAD did after they had received the Internet program in the study by Andersson et al. (2006). Students in the current study also scored quite high on the quality of life measure already at pretest. This is consistent with the notion that more severe symptoms and impairment occur as time passes without treatment (Rapee & Spence, 2004); that is, youth show a less severe symptom pattern than adults with SAD. Lack of improvement on these scales might reflect a ceiling effect or may indicate that the measures are relatively insensitive to change. However, some caution should be taken with this interpretation because these results also might reflect power problems as a result of the small sample.

High school students in the present study completed, on average, only 2.9 of nine modules during the 9-week treatment period, and none of the students finished all nine modules in time. This problem has also been noticed in our Internet-delivered self-help programs for adults with SAD (Andersson et al., 2006; Tillfors et al., 2008); however, it was not as obvious as in the current study. For example, among university students, 51% of the participants completed all nine modules, and the average numbers of modules

finished in time was 6.5 (Tillfors et al., 2008). However, despite the low completion rate, effect sizes were comparable to those obtained in our previous Internet treatment studies in adults (e.g. Andersson et al., 2006; Tillfors et al., 2008). The current effect sizes are also comparable to face-to-face CBT treatments as seen, for example, in a meta-analysis by Fedoroff and Taylor (2001), who reported effect sizes of $d = 1.31$ for exposure therapy, $d = 0.78$ for cognitive restructuring, and $d = 0.94$ for integrated CBT. In a recently published Internet self-help trial, we assessed weekly treatment gains using the LSAS-SR measure, and noticed that more than 50% of the change at posttreatment had been achieved already after the first 4 weeks (Furmark et al., 2009). Information about components that are central for obtaining therapeutic effects like cognitive restructuring, behavior experiments, exposure, modifying safety behaviors, and shifting of focus is provided early in the treatment period. In the current study, the majority of the participants had begun to work with some of these components (see Table 1), probably leading to improvement despite limited exposure to the program. Important to note, however, is that the average within-group effect size at follow-up for the primary outcome measures decreased relatively from $d = 0.98$ to $d = 0.80$, suggesting that full completion could be important for obtaining robust long-term effects. Further support for the importance of full completion comes from the obtained correlation of .46 between modules completed and youth's own experience of improvement. The size of this correlation could be interpreted as relatively high considering the small sample size. This should be tested empirically in future research. Future studies should also explore means to enhance compliance. For example, adding a brief weekly telephone contact markedly increased the number of full completers to 93% in a previous Internet CBT trial (Carlbring, Gunnarsdottir, et al., 2007). Short message service reminders could also be used. Also important to mention in connection with this topic is that of the five participants who were dropouts and who sought additional treatment, four were part of the wait-list group. An interpretation of this could be that the time until treatment is delivered has importance.

Small sample size and limited statistical power are obvious limitations of the present study, and there are other issues that merit discussion as well. First, we used a passive wait-list control group, which does not control for all threats to internal validity. Although the treatment group improved significantly in comparison to the wait list group, suggesting that symptom improvement could be attributed to the treatment per se rather than confounding factors like repeated assessment or spontaneous remission over time, we could not rule out possible placebo effects. For that we need an active control group. Second, the outcome measures were administrated solely via the Internet. However, studies suggest that the reliability and validity remain intact when questionnaires are administrated via the Internet (Carlbring, Brunt, et al., 2007; Thorndike et al., 2009). Third, our diagnostic procedure included a SCID interview conducted over the telephone instead of an in-person SCID diagnosis of SAD. Thus, even if SCID telephone interviews have shown excellent agreement with live interviews (Crippa et al., 2008), we could not control for other comorbid disorders except for depression. Finally, generalizability of our results could be limited. Because all participants were high school students, mainly from the Örebro area, the present findings may not be valid for other schools or for adolescents without high school education. Moreover, all but two participants were females. Additional studies are needed before we can conclude that results hold also for male adolescents with SAD.

Conclusion

This study gives preliminary support for the efficacy of Internet-delivered self-help CBT with limited guidance from e-therapists in treating adolescents suffering from SAD and public speaking fears. However, more research is required, for example, to examine treatment specificity by comparing this Internet program with active control groups and placebo. Moreover, effectiveness studies are needed to evaluate the treatment in naturalistic settings. The self-help program could be further developed in many ways, for example by shortening the modules and/or including more interactive components. Last, parts of the program could be useful in face-to-face

treatments for youth, and parts of the modules could be the basic building blocks when developing preventive programs for youth suffering from social anxiety.

Acknowledgements

This study was supported by the Swedish Council for Working life and Social Research.

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