Received: 16 January 2022 | Revised: 23 February 2022 | Accepted: 25 February 2022

DOI: 10.1002/ccr3.5588

CASE REPORT

Clinical Case Reports Open Access WILEY

Two-year longitudinal case study of intensive exposure treatment in an adolescent girl with social anxiety disorder

Kristine Haukeli[1] | **Klara Edlund**[2,3]

[1]Child and Adolescent Psychiatry, Uppsala University Hospital, Uppsala, Sweden

[2]Musculoskeletal & Sports Injury Epidemiology Center, Department of Health Promotion Science, Sophiahemmet University, Stockholm, Sweden

[3]Unit of Intervention and Implementation Research for Worker Health, Institute of Environmental Medicine, Karolinska Institutet, Stockholm, Sweden

Correspondence
Klara Edlund, Musculoskeletal & Sports Injury Epidemiology Center, Department of Health Promotion Science, Sophiahemmet University, Sophiahemmet Högskola, Box 5605, 114 86 Stockholm, Sweden.
Emails: Klara.edlund@ki.se; klara.edlund@shh.se

Funding information
None.

Abstract

The purpose was to adapt the "Bergen 4-Day Treatment" for severe social anxiety disorder and to study the 28 months follow-up effects for a 16-year-old girl. It was delivered over three full days. At post-treatment, 48% reduction in symptoms, she no longer met the diagnostic criteria for SAD.

KEYWORDS

adolescent, cognitive-behavioral therapy, intensive exposure, social anxiety, the Bergen four day treatment

1 | INTRODUCTION

Cognitive behavior therapy (CBT) has for decades been the suggested treatment of choice for adolescents with Social Anxiety Disorder (SAD: DSM5 300.23;15),[1] and the effects have been shown to be persistent over time.[2] Despite the documented treatment effects, adolescents may find it difficult to integrate the protocol with school. There are promising data delivering intensive exposure (IE) with response prevention (ERP) for OCD using the "Bergen Four Day Treatment" (B4DT).[3] To the best of our knowledge, there are no established protocols of IE for SAD in adolescents.

The Bergen Four Day Treatment was developed by a Norwegian specialized team in psychiatry[3] and is an intensive protocol applying full day ERP during four consecutive days. During these four days, the patients take part in individual therapy intertwined group sessions with 5–6 people per group with a 1:1 therapist-to-patient ratio.[3,4] The B4DT program has shown high client satisfaction and low attrition rates.[4] Studies have shown a response rate of up to 90% post-treatment. At 12 months follow-up, 83.1% were classified as responders and 67.7% were classified as recovered.[4] The results of B4DT have shown improvement in not only OCD symptoms, but also

significant improvement of depressive symptoms and general anxiety.[4]

The overall aim of our case study was to contribute with a novel application of intensive ERP for adolescents with severe SAD. Further, the purpose was as follows: (1) to develop a new adaptation of intensive ERP for SAD, based on B4DT; (2) study changes in SAD symptoms in an adolescent girl with severe SAD; and (3) to study the long-term treatment effect over a period of 28 months. We hypothesized that an adapted version of treatment protocol (B4DT) would be an accepted treatment and result in significant symptom reduction, equal to CBT,[5] and that these effects would be maintained over time.

2 | METHOD

2.1 | Study participant

The patient was a healthy 16-year-old female high-school student with no previous history of psychiatric care or pharmacological treatment. As the patient was a minor, informed consent was received from her parents before assessment and treatment. The patient was referred by her school counselor. She had severe anxiety, predominantly in social situations, negatively affecting her academics as well as her social life and general well-being. The problems were reported to have escalated due to her transfer from a smaller to a larger school. There was a history of performing academically well with high demands on her own performance. At the time of assessment, she described previous depressive mood, but not present at the time and no suicidal ideations or substance use.

The patient's goals were to increase her social skills at school and to be more socially active. Her long-term goal was to enroll in higher education after graduating high school. Overall, the patient described high motivation for treatment although expressing concerns about how treatment would interfere with school.

Psychiatric assessment using MINI-KID was conducted confirming the DSM 5 diagnosis SAD (300.23).[1] The patient also displayed symptoms of general anxiety and panic disorder.

2.2 | Assessments

2.2.1 | Structural clinical diagnostic interview

The MINI-KID was conducted as part of the diagnostic procedure. For the initial assessment, the MINI kid was used. At the follow-up assessment, the patient was over the age of 18; therefore, the adult version (MINI version 7.0.0) was used. It has shown to have a high interrater and retest reliability.[6]

2.3 | Self-report assessment

2.3.1 | Liebowitz Social Anxiety Scale

The Self-Report Version of Liebowitz Social Anxiety Scale (LSAS-SR) was used to measure levels of anxiety and avoidance. The scale has demonstrated equally good psychometric properties as the clinician administrated scale, with good internal consistency ($\alpha = 0.95$) and a high 12-week test–retest reliability ($r = 0–85$).[7]

The LSAS-SR contains two subscales, fear/anxiety and avoidance, with a total of 24 items, depicting different social situations. For the subscale *anxiety/fear*, the rating is from 0 (no fear) to 3 (severe fear). For the subscale *avoidance*, the numeral on the scale correlates with the percentage of avoidance 1 = occasionally (10%); 2 = often (33%–67%); and 3 = usually (67%–100%).[7] The total score of both subscales range between 0 and 144. Cutoff values for the total score LSAS-SR are suggested to be 30 when used as a screening for SAD and where a score of 60 or higher indicates a generalized social anxiety.[8]

2.3.2 | The children's global assessment scale

The children's global assessment scale (C-GAS)[9] is a clinician-rated scale, assessing areas of functioning in the child's life, spanning from family life, social relations, and school functioning during the month prior to the evaluation. The scoring is 0–100, with stepwise values of 10 points per step. A cutoff value of 70 clearly differentiates normal functioning from more severe problems.[10] C-GAS has been shown to be a reliable and valid instrument.[11]

2.3.3 | Global assessment of functioning

The Global Assessment of Functioning (GAF) is a reliable clinician-rated scale measuring the extent to how mental illness affects an individual's global functioning.[12] GAF has a moderate interrater reliability.[11] GAF is scored in stepwise values 0–100, 1–10 indicating the lowest level of functioning to 90–100 equally to very well. The evaluation assess mental health, social, and occupational functioning. Normal function is coded as 70–100.

2.4 | Response and remission rate

Response to treatment has been defined as a reduction in LSAS-SR of >28[13] and remission at <35. Remission was also defined as no longer meeting the diagnostic criteria of SAD according to DSM-5.[13]

2.5 | Parent's involvement

Parents were included and active participants during the entire assessment phase and in the treatment planning. They received a separate session for psychoeducation and a written report as well as updates on treatment by phone at the end of the treatment.

2.6 | Patient's informed consent

The patient, now of age, received oral and written information about the case study, including how her medical and personal information would be handled. A written informed consent form was signed by the patient where it was clearly stated that she was free to withdraw her consent for publishing her data at any time and that her withdrawal would not affect her care in any way. The case study was approved by the chief-of-staff of the department the Child and adolescent psychiatric department, Uppsala University Hospital. All data used in this study were obtained, with the patient informed consent and approval. Further, the patient has read and approved the present manuscript.

2.7 | Therapist training

The therapist was a resident physician in child and adolescent psychiatry with CBT-training as a part of the specialist program (KH). The treatment was developed, planned, and delivered in collaboration with a senior clinical psychologist specialized in CBT (KE).

2.8 | Treatment approach

The treatment protocol was an adapted version of the B4DT, including interventions from the Clark and Wells' protocol for SAD as well as exposure treatment, for an adolescent with SAD.[14,15]

2.9 | Treatment plan

The treatment consisted of three parts: Part 1: two 1-h sessions of psychoeducation; Part 2: 3 days of 5-h sessions with intensive exposure in vivo; and Part 3: follow-up session for long-term maintenance plan along with post-treatment assessments. A 1 h long-term follow-up session was conducted 28 months post-treatment. The treatment was delivered in 18 h.

2.10 | Intervention

The initial two sessions addressed the cognitive model for SAD[15] and individualized according to the patient's clinical presentation. Thereafter, the patient performed self-monitoring (2 sessions). Functional analyses were made, along with a hierarchy of avoided anxiety provoking situations. This was the base for the 3-day intensive exposure intervention. Cognitive restructuring and identifying automatic thoughts and emotions were introduced in office, and applied in practice during the in vivo exposures.

The three days of intervention out of office are composed of continuous therapist-guided exposures based on the conceptualization described above. The exposure situations were performed in vivo, in the city center and in situations entailing social interactions. At the end of each day of exposure, the patient summed up her day by writing a letter to an imagined friend. The rationale for this was to ensure the patients apprehension of the interventions. The following week the patient was instructed to keep working on her exposure on her own.

At the one-week post-treatment follow-up, she reported her exposures and assessment of LSAS-SR and C-GAS was carried out.

3 | RESULTS

3.1 | Pre-treatment status

The pre-treatment assessment yielded a C-GAS score of 59 indicating noticeable problems, obvious to individuals observing the child in a dysfunctional setting (a score >70 indicates normal functioning/doing well). The LSAS-SR pre-treatment rating showed a score of 107, with subscores of 52 and 55 for fear/anxiety and avoidance, respectively. Research has shown a mean score for clients with SAD to be 74,5 (23.31 SD) on LSAS-SR[8],a level of 107 indicates more severe SAD.

3.2 | Treatment outcome

The total time spent in treatment was 18 h, including a one-hour education for the parents and the one-week follow-up and booster session.

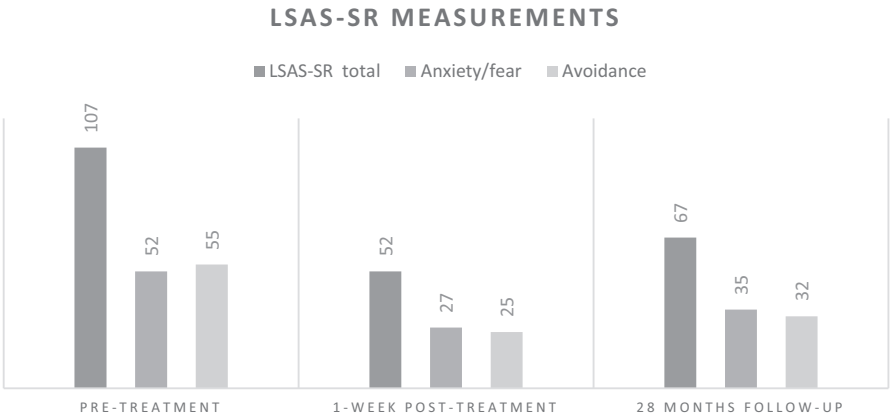

FIGURE 1 Displays the changes in the LSAS-SR from the pre-treatment measurements to 1 week post-treatment to 28th month follow-up

3.3 | Follow-up one-week post-treatment

Following the 3-day exposure, a follow-up session was delivered for the patient to discuss and reflect on her achievements. Giving class presentations in school was her most feared situation and the last intervention of the exposure treatment successfully completed. The patient managed to achieve all her treatment goals within the 3-day treatment program.

The total LSAS-SR score was 52 with sub-scores of fear/anxiety at 27 and avoidance at 25. This is a reduction of the total score by 48% (Figure 1) and her C-GAS score was 70, indicating normal functioning.

3.4 | 28 months post-treatment follow-up

The patient's social context was largely unchanged at the 28 months post-treatment follow-up. She was a senior in high-school and was planning to apply for higher education, and to move to a larger city. Pre-treatment the patient rated this highly unlikely due to anxiety.

During the first year after treatment, before the outbreak of the COVID-19 pandemic, she was able to follow her maintenance program. In March 2020, schools went on remote learning. Despite lacking opportunities for in vivo exposures at school and in social settings, she has managed to maintain skills obtained in treatment over a 28-month period.

At the 28-month follow-up, the LSAS-SR total score was 67, with sub-scores of 35 on anxiety/fear and 32 on avoidance. A reduction of the total score of 37% indicates adequate and sustainable treatment outcome (Figure 1).

As the patient turned 18 years in-between treatment and the 28th month follow-up, the functional assessment was done using the GAF score. Her GAF score was 80 reflecting normal functioning. The clinical interview (MINI) indicated that the patient no longer met the criteria for any DSM 5 diagnosis.

4 | DISCUSSION

This case study presented a treatment protocol for SAD including condensed CBT with intensive interventions with in vivo exposure based on an adaptation of the Norwegian B4DT. The treatment was highly accepted by the patient and required no more time than the conventional therapy. A standard treatment of CBT for SAD, according to the NICE guidelines, ranges between 12 and 20 h.[5]

At 28th month follow-up, the patient is classified as a treatment responder with >28% reduction of LSAS-SR-scores and the patient no longer met the criteria for SAD or any other DSM 5 diagnosis. She presented normal levels of functioning. We concluded that the response to treatment was good and persistent over time and that the treatment was well accepted by the patient.

This case study shows promising results that a concentrated format of CBT with an intensive exposure therapy for SAD, based on the B4DT, to be suitable for further exploration for treatment of adolescents. The protocol is more compatible for youth as a short-term adjunct to their everyday life with school and extracurricular activities.

The limitation of this study is that it is a single case study and further studies are needed to observe the replicability of these results on a group level. The patient in this study had severe SAD; however, she did not meet any other diagnostic criteria at the time of the study. SAD has a high level of comorbid psychiatric disorders, and further studies should take this into account and consider wider inclusion criteria.

ACKNOWLEDGEMENTS

None.

CONFLICT OF INTEREST

The authors, Drs. Edlund and Haukeli, declare that they have no competing interests.

AUTHOR CONTRIBUTIONS

Dr. Edlund contributed to the conceptualization and methodology of the study including designing the adopted treatment protocol. Dr. Haukeli contributed to the clinical assessment and the implementation of the treatment protocol including delivering all steps of the treatment sessions and follow-ups. Dr. Edlund was the clinical supervisor in CBT. The analysis was carried out by both authors, and the manuscript was prepared, critically reviewed, finalized, and approved by both authors.

ETHICAL APPROVAL

All data used in this study were obtained, with the patient informed consent and approval. Further, the patient has read and approved the present manuscript.

CONSENT

The patient and her parents have given their written informed consent.

DATA AVAILABILITY STATEMENT

Data used during the current study are not publicly available due to collection of sensitive personal information.

ORCID

Klara Edlund https://orcid.org/0000-0002-2614-5174

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How to cite this article: Haukeli K, Edlund K. Two-year longitudinal case study of intensive exposure treatment in an adolescent girl with social anxiety disorder. *Clin Case Rep*. 2022;10:e05588. doi:10.1002/ccr3.5588