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# **Social Skills Training Encourages a Patient with Social Anxiety Disorder to Undertake Challenging Behavioral Experiments**

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## **Authors' contributions**

*This work was carried out in collaboration between all authors. Author NY served as Kana's primary therapist and drafted the manuscript. Author ES supervised treatment and reviewed the manuscript. Both authors read and approved the final manuscript.*

**Case Study**

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## **ABSTRACT**

**Introductions:** Cognitive models of social anxiety disorder (SAD), such as that developed by Clark & Wells, conceptualize the attention to, and misinterpretation of, internal information as a key maintaining factor. Social skills training (SST), a frequently used cognitive therapy (CT) technique for various mental disorders, is often justified according to a skills-deficit model of SAD, which assumes that anxiety arises from inadequate social interaction skills. However, the evidence largely suggests little to no skills deficit in this patient group, indicating that SST is not necessarily a technique to be used in CT for most SAD patients. In this study, we present a patient with SAD who negatively perceived her social skills abilities, and who benefitted from SST. We also discuss the role of brief SST in CT treatment.

**Presentation of Case:** The patient was a Japanese female with excessive fear of social interactions who negatively perceived her own social skills. Cognitive therapy mainly consisted of case formulation, behavioral experiments, and opinion surveying based on the Clark & Wells model. As the patient felt too anxious to attempt behavioral experiments, due to her negative perception of her own social skills, SST was briefly employed in the course of CT.

**Discussion and Conclusion:** As the patient's actual social skills abilities were never

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formally assessed, it is impossible to know if she had any social skills deficits prior to treatment, and, if so, if they were improved by the SST provided. However, SST encouraged the patient to try challenging tasks, notably behavioral experiments and homework centering on feared social situations. Although SST should not necessarily be included in CT for SAD patients, SST can help patients to decrease their excessive fear of being negatively perceived due to poor social skills, making it easier for them to try challenging behavioral experiments in feared social situations.

*Keywords: Social anxiety disorder; social phobia; cognitive therapy; social skills training; case study.*

## **ABBREVIATIONS**

*SAD: social anxiety disorder, CT: cognitive therapy, SST: social skills training, LSAS: Liebowitz Social Anxiety Scale, WHOQOL-BREF: World Health Organization Quality of Life Instrument (Short Version).*

## **1. INTRODUCTION**

Social anxiety disorder (SAD; also known as social phobia) is an isolating anxiety disorder in which sufferers are overly concerned with how they appear to others. They fear saying or doing something that is embarrassing, and this often includes exhibiting physical symptoms, such as blushing, sweating or trembling. Cognitive therapy (CT), often presented as the generic term of cognitive behavioral therapy, is the most thoroughly studied non-pharmacological approach to the treatment of SAD. Its efficacy has been demonstrated in a large number of studies [1]. It is a time-limited, present-focused approach to psychotherapy that teaches patients the cognitive and behavioral competencies needed to function adaptively in both their inter- and intrapersonal worlds. It is a joint effort of the therapist and the patient, who form a collaborative team to address the patient's concerns.

Cognitive models of SAD (e.g., [2-3]) conceptualize the attention to, and misinterpretation of, internal information as a key maintaining factor. Clark and Wells (1995) proposed that when SAD patients become concerned about how they are coming across to others, they shift their attention away from others towards detailed self-monitoring. This self-monitoring heightens their attention to internal information, causing them to make erroneous negative inferences about how they are perceived by others.

The use of social skills training (SST), a frequently used CT technique for various mental disorders, is often justified based on a skills-deficit model of SAD, which assumes that anxiety arises from inadequate social interaction skills. In an observational study, Stopa and Clark confirmed that patients with SAD may appear less outgoing and warm [4]. Traditionally, this has been seen as a result of a social skills deficit. In contrast, Clark and Wells suggest that most SAD patients have an adequate capacity to learn social skills; their apparent social performance deficits are simply the observable side of their safety-seeking behaviors [2]. Examples of such behaviors include avoiding eye contact, rehearsing sentences before speaking, speaking only briefly, memorizing what one has to say, self-monitoring, and not talking about oneself. An alternative explanation is that patients with SAD are evaluated less positively because they have a general deficit in social skills development. However, at least among adults with SAD, the evidence largely suggests little to no skills deficit in this patient group (e.g. [5-6]); thus, SST should not necessarily be

included in CT treatment for SAD patients. The present case study presents a patient with SAD who was unwilling to attempt behavioral experiments due to her negative perception of her social skills; brief SST encouraged this patient to attempt more challenging behavioral experiments. And, we also discuss the role of brief SST within the context of CT treatment in this case.

## **2. PRESENTATION OF CASE**

### **2.1 Patient Profile and Main Presenting Problem**

The patient, Kana (not her real name), was a 44-year-old unmarried Japanese woman. She lived at home with her parents because she did not have enough money to live independently. Because of her social anxiety, she had resigned from her job at a nursery school and had been unemployed for the month preceding her initial visit to our hospital. Kana reported fearing and avoiding situations such as asking others questions, stating her opinion, talking with others, joining discussions, and making eye contact. Kana stated that “even if I try really hard to ask a question, I am always scolded about prioritizing my questions, or about the contents of my questions.” Kana felt that she lacked the social skills to prioritize her questions. Kana presented with comorbid depressive symptoms, including feelings of hopelessness, loss of energy, and sleep disturbance. She wanted to be able to work full time; a concrete goal was to be able to state opinions and ask questions of other people without feeling too anxious.

### **2.2 History**

Kana vaguely remembered suffering from social anxiety since before the age of 10, and had only a few experiences of playing with her classmates since elementary school. She reported always trying to gauge others’ feelings and never having a close friend. Kana studied piano from elementary school through university and after graduation began work as a music teacher; however, she quit her job soon after because of her social anxiety. After that, she changed jobs frequently. In every new job, she would soon encounter something that she did not understand, but that she could not ask her co-workers about. She was also unable to refuse when asked to do impossible tasks by her co-workers. As a result, she made many mistakes, became overworked, and was criticized heavily by her co-workers until she quit.

Kana had been taking selective serotonin reuptake inhibitors (SSRIs) for over ten years, which remained at a stable dose throughout CT treatment. Her depression had improved slightly during the course of SSRI treatment, but her fear of social interaction had not significantly changed during this ten-year period.

### **2.3 Assessments**

Kana was diagnosed with SAD and major depressive disorder in partial remission by an experienced psychiatrist in our hospital, using the Structured Clinical Interview for Axis I Disorders (SCID-I) [7]. She had no childhood developmental concerns or other comorbid Axis I or II disorders.

The severity of Kana’s SAD was assessed using the Liebowitz Social Anxiety Scale (LSAS) [8], a 24-item scale that assesses fear and avoidance of a range of social-interactive and

performance situations. A total score of 50 or above indicates mild social anxiety, and 80 or above indicates severe social anxiety. Kana's subjective perception of her quality of life (QOL) was assessed using the short version of the World Health Organization Quality of Life Instrument (WHOQOL-BREF) [9]. The WHOQOL-BREF has 26 items, all of which are scored on a Likert-type scale from 1 to 5; higher total scores denote better QOL.

Before beginning CT treatment, Kana had an LSAS score of 81 points, indicating severe social anxiety. She also had an average score of 2.96 points per item on the WHOQOL-BREF, indicating QOL approximately equal to average scores for Japanese persons with mental disorders such as schizophrenia ( $M = 2.69$ ,  $SD = 0.73$ ) [10] and major depressive disorder ( $M = 2.81$ ,  $SD = 0.65$ ) [11].

## 2.4 Treatment

Cognitive therapy treatment consisted of 16 weekly (50–90 min) individual sessions based on the Clark and Wells model [2]. Sessions were audiotaped, and Kana was encouraged to listen to these recordings as homework. Follow-up sessions took place 3 and 6 months after the 16-session course of treatment. Therapy was conducted both in- and outside of the treatment room, and between-session homework was designed in collaboration with the patient. In order to reduce Kana's self-consciousness, summarize discussions, and spur insight, notes were made on a whiteboard during all sessions.

The therapist initially targeted Kana's depressive symptoms to increase her daily activity; for the first three sessions, the therapist encouraged her to schedule and follow-through with daily activities. Kana was gradually able to increase her daily activities (e.g., take a walk, go for a drive, read a book at a cafe) and was able to sleep better. The therapist then targeted Kana's social anxiety.

The therapist and Kana first developed an individualized cognitive-behavioral model of Kana's SAD (case formulation) in Session 4. We then conducted role-play behavioral experiments, practicing using and not using safety behaviors when asking questions (Session 5). Through case formulation and manipulating her self-focused attention and safety behaviors, Kana realized that her safety behaviors (e.g., avoiding eye contact, monitoring heart palpitation) were actually *increasing* her self-focused attention and *reducing* her awareness of social cues (e.g., others' responses). She also became aware that her self-monitoring of somatic sensations and negative self-images (e.g., looking embarrassed) increased the perceived intensity of her anxiety symptoms.

In Session 6, we discussed her self-image using video feedback. Through watching her true, observable self, Kana discovered that she had a distorted negative self-image, one in which she blinked excessively and had trembling hands. Moreover, she realized that her safety behaviors, such as avoiding eye contact, made her appear even more anxious than she actually felt.

In Session 7, Kana practiced maintaining an external focus and shifting her attention. After practicing attention training, such as while she was walking with her dog, Kana became able to make eye contact with others.

However, despite this progress, Kana felt very anxious about social interactions due to her perceived social skills deficit regarding how to share her thoughts and how to prioritize questions. This skills deficit was noted in therapy, where the patient sometimes asked

rambling questions. Therefore, SST was briefly employed before starting the behavioral experiments outside the treatment room. In Session 8, the therapist first encouraged Kana to verbally summarize what she had taken away from her sessions, and taught her about the importance of taking note of important matters as needed. If Kana had a lot of questions she wanted to ask, the therapist taught her to list her questions then sort them according to priority, using the following guide. This guide was based on a prioritization procedure of time management originally developed for adult patients with Asperger's syndrome [12].

- Urgent:* A problem needs to be solved or information needs to be clarified immediately; if not, there is a distinct threat to my health, safety, or property.
- Crucial:* A problem needs to be solved or information needs to be clarified as soon as possible; if not, it causes no immediate problem, but answering this question would benefit me in a meaningful way.
- Postpone:* If this question is left unanswered, it causes no problem, but answering it would make me feel better.

After receiving brief SST, Kana realized that she had many mistaken assumptions, and that sharing one's understanding of situations is very important to avoid damaging assumptions. After learning to prioritize her questions, she reported gaining the confidence to start behavioral experiments in real social situations outside the treatment room.

During Sessions 9, 10, and 11, Kana performed behavioral experiments to test her negative assumptions. For example, she asked her general practitioner some questions using the prioritization guide, spontaneously addressed strangers while out walking her dog (chatting about casual topics, such as the weather or their dogs), and questioned a receptionist who worked in the city office. These behavioral experiments provided her with evidence that disproved her negative assumptions (e.g., "My behaviors embarrass others") about how others would respond to her if she addressed them.

In Session 12, the therapist and Kana discussed her problematic pre- and post-event processing. Kana was encouraged to identify particular ways in which she thinks and behaves before and after feared social events, and to consider the advantages and disadvantages of her pre- and post-event processing. She noticed that she always thinks only of negative aspects, and that, as a result, negative self-images come to mind very often during pre- and post-event processing. She also realized that it is a waste of time to dwell on the past. She started to convince herself that she should "find a positive aspect" and that she had done "enough thinking, already."

In Sessions 13 and 14, we carried out a questionnaire survey to test Kana's negative predictions about how others would react to a feared situation. Ten people were asked what they would think of someone who caused an accident, such as spilling coffee on someone else's shirt. The survey results disproved Kana's belief that, if such a thing were to occur, other people would think she was stupid and that she had deliberately caused the accident.

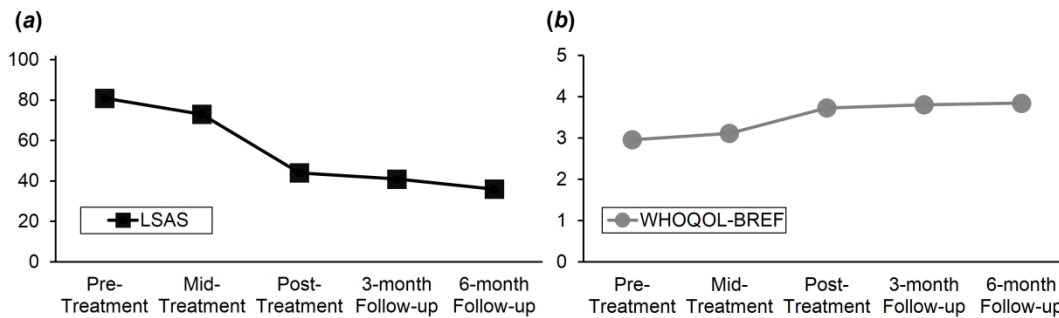
In Session 15, we dealt with an early traumatic memory linked to Kana's recurrent negative self-image in social situations. This memory was of being strongly criticized by her parents for getting something wrong when she was 10 years old. In our rescripting work together, Kana's adult self was able to take a compassionate stance and offer new information to her younger herself. She made compassionate statements such as "You were not totally wrong," "Parents generally criticize their children to provide discipline, this does not just happen to

you,” and “Even if you lack confidence in your behavior, other people do not always think that you are stupid.”

In Session 16, we reviewed the overall treatment, and planned some strategies for relapse prevention.

### 2.5 Treatment Outcome

Through CT treatment, Kana realized that conversations can be entertaining, that having conversations is not as hard as she had expected, and that conversations (especially in the workplace) allow people to share their understanding with each other, which can avoid damaging assumptions. Soon after completing the 16 sessions, Kana began working as a piano instructor, and was able to ask questions, state her opinion, talk with others, join a discussion, and make eye contact in her workplace as needed. She was still employed as of her 6-month follow-up, and reported that she was able to work without excessive anxiety. Outcome measures during the course of therapy, and follow-ups are presented in Fig. 1 (a) and (b). After 16 sessions, Kana’s total LSAS scores decreased from 81 to 44, on par with healthy Japanese levels (M = 42.4, SD = 27.5) [13] and her total WHOQOL-BREF scores increased from 2.96 to 3.73, which are also comparable to Japanese age- and gender-matched general population scores (M = 3.32, SD = 0.41) [14]. Kana no longer met the diagnostic criteria for SAD at post-treatment assessment (Criterion D [Avoidance] and Criterion E [Interference with occupational functioning]).



**Fig. 1. (a) Total scores for Liebowitz Social Anxiety Scale (LSAS) and (b) mean item scores for the World Health Organization Quality of Life Instrument (Short Version) (WHOQOL-BREF)**

### 3. DISCUSSION

This case study presented an example of a patient with SAD who negatively perceived her social skills abilities, and the role of brief SST in her CT treatment. The authors believe that her overall improvement was due mainly to standard CT treatment, not through the addition of brief SST.

As the patient’s social skills abilities were never formally assessed, it is impossible to know if she had any social skills deficits prior to treatment and, if so, if they were improved through the SST provided. However, the patient certainly lacked confidence in her social skills, perceiving them as being so poor that she could not gather sufficient courage to perform

behavioral experiments in real-world social situations. Brief SST improved her confidence and perception of her own social skills abilities, allowing her to undertake challenging behavioral experiments and homework in feared social situations. However, as observable from this case, therapists may also benefit from first using standard CT techniques such as video feedback and manipulation of safety behaviors to modify patients' negative perceptions about their social skills, before performing behavioral experiments in real world situations.

As previously mentioned, poor social skills abilities or poor social performance does not necessarily reflect skills deficits in most SAD patients; there is strong evidence that socially anxious individuals tend to appraise their own social skills abilities and performance in social situations more negatively than do non-anxious individuals [4,5]. This would suggest that effective CT treatments, even without SST, would improve patients' perceptions of their social skills abilities. However, although it was unknown whether Kana had any initial social skills deficits, SST was almost certainly helpful for her. There is also considerable evidence that including brief SST in CT would benefit other patients with SAD. Therapists might also keep in mind that the etiology of impaired social performance in SAD likely differs across individuals [15]. While most SAD patients may have the capacity for adequate performance while the ability to exercise that capacity is impaired by excessive anxiety, some patients may lack the capacity to perform effectively, and still others may have concurrent excessive anxiety and skills deficits. Furthermore, it is understandable that SAD could result in skills deficits: because SAD often has a very early onset, with many cases beginning in childhood or early adolescence, the resulting negative spiral of avoiding social situations may lead patients to fail in developing necessary social skills. If a patient has a poor communication style or lacks social skills, these behaviors may elicit more negative responses from others in both day-to-day life and in behavioral experiments. In order to avoid eliciting such excessive negative responses, SST may play a complementary role in behavioral experiments for some SAD patients, making it easier to undertake behavioral experiments. Indeed, Herbert et al. reported significantly greater improvements in SAD patients who received cognitive behavioral group therapy plus SST as compared with those who received cognitive behavioral group therapy alone [16]. Nevertheless, further research is needed to develop ways of assessing each individual's specific skills deficits and also to match treatment techniques to each patient's specific deficit (e.g., providing SST only for patient with social skills deficits).

One notable point in this case study is in the cultural difference in the meaning of eye contact, one of the tools we used to maintain external focus in Kana's CT treatment. In East Asian cultures, eye contact when speaking with others is considered less important than in Western cultures [17]. As a result, East Asian people make less eye contact than Westerners during business negotiations [18] or when thinking of answers to questions [19,20]. This cultural difference may be partly explained by the fact that avoidance of eye contact is a sign of respect or deference within East Asian culture, while making eye contact has a nearly opposite association in Western cultures, indicating respect, interest, and attention to one's communication partner [21]. Therefore, therapists working with East Asian patients with SAD need not focus on being able to make eye contact during social situations. However, self-focused attention is a maintaining factor of SAD in both East Asian and Western cultures; for example, with Kana, avoiding eye contact increased her self-focused attention and made it difficult for her to maintain an external focus. For her, learning to maintain eye contact was helpful in decreasing excessive self-focused attention. Thus, in CT treatment with East Asian SAD patients, therapists should not focus on making eye contact as a communication skill, but as a useful behavioral manipulation to prevent excessive self-

focused attention. If an East Asian SAD patient expresses a strong fear of making eye contact, his or her therapist could instead encourage the patient to look at or near the mouth in order to maintain an external focus.

#### **4. CONCLUSION**

If patients with SAD negatively perceive their social skills abilities to the extent that they cannot try behavioral experiments, brief SST may be a useful technique in improving their confidence and perception of their own social skills abilities, making it easier for them to try challenging behavioral experiments in feared social situations.

#### **CONSENT**

All authors declare that written informed consent was obtained from the patient for publication of this case report.

#### **ETHICAL APPROVAL**

All authors hereby declare that all experiments have been examined and approved by the appropriate ethics committee and have therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki.

#### **COMPETING INTERESTS**

The authors declare that no competing interests exist.

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