

# A case of Jikoshu-Kyofu treated with cognitive behavioural therapy

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**ABSTRACT** Jikoshu-Kyofu (JKF) is a subtype of Taijin-Kyofu-Sho (TKS), a form of social anxiety first described in Japanese sufferers. Unlike the Diagnostic and Statistical Manual of Mental Disorders - 4th edition text revised definition of social anxiety disorder, TKS is characterised by a fear of offending others, whereas in the case of JKF, it is the fear of giving off a smell, thus causing offence. We describe the symptoms of JKF in a young woman who was treated with cognitive behavioural therapy (CBT). After only four sessions, the patient's anxiety ratings, as measured on the Social Phobia Inventory and Brief Social Phobia Scale, dropped considerably. This case illustrates the successful treatment of a patient with JKF-like symptoms using CBT.

*Keywords: cognitive behavioural therapy, Jikoshu-Kyofu, olfactory reference syndrome, social anxiety disorder, Taijin-Kyofu-Sho*  
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## INTRODUCTION

Jikoshu-Kyofu (JKF) is a subtype of Taijin-Kyofu-Sho (TKS), which has long been described as a Japanese culture-bound form of social anxiety. The term literally means fear (*kyofu*) of interpersonal relationships (*taijin*).<sup>(1)</sup> Classified in Appendix A of the Diagnostic and Statistical Manual of Mental Disorders - 4th edition text revised (DSM-IV TR), TKS is defined as a persistent and excessive fear of causing offence to others in social circumstances by physical characteristics such as blushing, gaze or through emission of one's body odour.<sup>(2)</sup> It was first described in Japan by Shoma Morita in the 1920s, who used Morita Therapy to treat this condition.<sup>(3)</sup> In 1989, Takahashi proposed the diagnostic criteria used today for TKS (Table I).<sup>(4)</sup> TKS has been further categorised into the following four subtypes by Suzuki et al:<sup>(5)</sup> *Sekimen-kyofu* (the phobia of blushing); *Shubo-kyofu* (the phobia of a deformed body); *Jikoshisen-kyofu* (the phobia of eye-to-eye contact); and *Jikoshu-kyofu* (the phobia of one's own foul body odour).

The JKF subtype has been described in Japanese psychiatry as early as the 1960s.<sup>(6)</sup> In the West, the equivalent of JKF is the 'olfactory reference syndrome' (ORS). Initially described by Pryse-Phillips,<sup>(7)</sup> ORS sufferers are preoccupied with the fear of their body emitting a foul odour, thus causing offence to others. These preoccupations lead to 'concrete reactions', for example, taking a shower, brushing teeth, changing clothes and using a deodorant. In the absence of formal diagnostic criteria for JKF and based on the assertion that these conditions have similar features to ORS, we append the criteria for ORS in Table II instead.<sup>(8)</sup> Some have considered ORS to be a subtype of monosymptomatic hypochondriacal psychosis,<sup>(9)</sup> while others have categorised it as a mood disorder.<sup>(10)</sup> In view of the obsession-like thinking, there are yet others who judge this to be a variant of obsessive-compulsive disorder.<sup>(11)</sup>

**Table I. Proposed diagnostic criteria for Taijin-Kyofu-Sho (TKS).<sup>(4)</sup>**

- A. At least one of the following features:**
- (1) Fear of blushing in the presence of others.
  - (2) Fear of stiffening of facial expression, of trembling of the head, hands, feet or voice, of sweating while facing others.
  - (3) Fear of physical deformities being noticed.
  - (4) Fear of emitting body odours.
  - (5) Fear of line-of-sight becoming uncontrollable.
  - (6) Fear of uncontrollable flatus in the presence of others.
- \*B. Either of the following two, because of the above fear(s):**
- (1) Fear of being looked at (noticed) by others.
  - (2) Fear of offending or embarrassing others.
- C. At most points during the course of the disorder, the person recognises that the fear is excessive or unreasonable.**
- D. The fear(s) interferes significantly with the person's normal routine, occupational (academic) functioning, social activities or relationships, or there is marked distress about having the fear(s).**
- E. The symptoms must have been present for at least one year. In individuals under 18 years of age, the duration should have been at least 6 months.**

\* It is mandatory that the patient fulfil criteria B to be diagnosed with TKS.

**Table II. Olfactory reference syndrome.<sup>(8)</sup>**

- A. A preoccupation with imagined body odour (including halitosis) that persists despite reassurance.
- B. At some point during the course of the disorder, the person recognises that the preoccupation (obsession/compulsion) is excessive or unreasonable.
- C. The symptoms cause clinically significant distress or impairment in social, occupational and/or other areas of functioning.
- D. Does not occur solely during the course of another disorder (body dysmorphic disorder, hypochondriasis, social anxiety disorder, mood disorder and obsessive-compulsive disorder).
- E. The disturbance is not due to the direct physiological effects of a substance (e.g. a drug of abuse, a medication) or a general medical condition (e.g. hyperthyroidism).

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Subsequent observations seem to suggest that the clinical characteristics of JKF, in terms of its symptomatology, insight and pharmacotherapy response, are identical to those of ORS, except for an earlier age of onset in JKF.<sup>(12)</sup> More recently, there is a prevalent belief among researchers that TKF and its subtypes are not solely confined to Japan. For instance, it has been described in the United States,<sup>(7)</sup> Korea, Australia and Europe,<sup>(13)</sup> thus challenging the notion that JKF is a culture-bound syndrome.<sup>(12)</sup> We describe a case of social anxiety with JKF-like symptoms in a Singaporean-Chinese patient and its successful treatment by cognitive behavioural therapy (CBT).

## CASE REPORT

A 27-year-old Chinese woman presented to the psychiatric outpatient clinic of the Singapore General Hospital with a chief complaint of fear of giving off a bad smell for the past one year. She first started to think that she was giving off the smell when a passer-by coughed behind her. Her fear worsened two to three months after she moved into a new flat. Upon further questioning, she was able to recollect that she had a housekeeper who used to have severe body odour. Whenever the patient interacted with the housekeeper, she used to have an urge to cough or cover her nose. Subsequently, her anxieties would be precipitated by people covering their noses or coughing around her. She thought she emitted body odour from her axillae and back. To rectify the problem, she used an antiperspirant spray, but avoided perfume as she did not think that this would adequately mask her odour. In order to ensure that her back was covered with antiperspirant, she sprayed it into the air and then walked into the mist. She did not fear giving off bad breath, as she reasoned that she could suck a mint or use mouth wash. She had no past history or family history of psychiatric disorders.

Although the patient's husband had assured her that she was not producing any odours, the patient was not reassured by this. She worked as an accounts executive and interacted in person with many customers every day. While her work was not affected, she admitted to being vigilant of people coughing or covering their noses in her vicinity, and avoided social gatherings because she did not want to offend others. She arbitrarily estimated that the strength of her unusual belief was 50 (out of a possible 100) and could accept that there were other reasons for people touching their noses or coughing when they walked past her. There was no past or current history of medical conditions, e.g. epilepsy, and no past psychiatric history. There was also no history of excessive or increased sweating prior to the onset of her illness.

On examination of the patient's mental state, she presented as a neatly groomed young lady. There was no detectable odour or smell of perfume. She was not anxious or depressed, and was articulate and coherent in speech. She was concerned about emitting an odour, but this belief did not reach delusional proportions. There were no auditory, tactile or olfactory hallucinations. Her physical examination and electroencephalogram (EEG)

were normal. She refused magnetic resonance (MR) imaging of the brain, as she was planning to get pregnant. Since she had no physical symptoms that suggested the need for blood investigations, these were not ordered.

Our formulation was that this patient was suffering from a type of social anxiety, with a predominant fear of causing offence to others due to an overvalued idea that she was emitting a foul smell. Her initial encounter with a housekeeper who had an overpowering body odour had resulted in her coughing and covering her nose, which predisposed her to develop this fear. Thus, when a fellow pedestrian coughed behind her and appeared to touch his nose, this could have triggered memories of the housekeeper and a fear that she could be giving off a smell. Our impression was that the stranger's cough had startled her and precipitated an anxiety response. Her premorbid personality traits of self-consciousness and a desire for cleanliness also predisposed her to believe that she was responsible for causing others to cough, touch or cover their noses.

In the first session, an assessment of the patient's condition was performed. Our patient made it clear that she was against the idea of taking medications due to her desire to become pregnant. As one author had experience in using CBT in treating social anxiety disorder, and considering that the patient was fairly intelligent, articulate and amenable to considering alternative perspectives to her dysfunctional thinking, we proposed treating her with CBT, to which she agreed.

In the second session, we administered the Social Phobia Inventory (SPIN)<sup>(14)</sup> and Brief Social Phobia Scale (BSPS).<sup>(15)</sup> We explained to the patient the relationship between her thoughts, emotions and behaviour and the rationale of the therapy. She was encouraged to evaluate why people cough or touch their noses. Through 'Socratic questioning' of her false beliefs, she began to realise that there were other reasons for others' actions, apart from exposure to bad smells. For example, when the patient detects stale odours from others, she may not have an urge to cough or cover her nose (apart from her initial reaction to her former housekeeper). She was also able to reflect on alternative reasons why others coughed or cleared their throats, and was willing to consider that these had nothing to do with her. For homework, she was given an article on ORS to read. She was encouraged to do an experiment to take a baseline count of how many fellow train commuters coughed, cleared their throats, or touched their noses during the course of a train journey from home to work over a five-day period. She was then asked to apply medicated oil on herself and observe whether the frequency of others' coughing or nose-touching behaviours increased over the next five days. Our rationale was that if she was emitting an odour, masking the odour with medicated oil might reduce reactions to the smell.

On her third session, the patient reported no difference in the frequency of fellow commuters' coughing/nose-touching behaviours regardless of whether she had applied medicated oil or not. She independently observed (without our instruction) that her superior coughed during a meeting with her despite her

(the patient) having taken a shower. She reported a subjective decrease in anxiety of 50% compared to that before the start of therapy. When asked to interpret her observations, she concluded that there was no reason to suppose that she was giving out any smell. Discussion of homework exercises took up the rest of the session. The patient was asked not to use antiperspirants and was instructed to rate the frequency of coughing/nose-touching responses of commuters on the train and among her colleagues (she had to rate her colleagues' reactions on days she used and did not use antiperspirant).

During the fourth session, the patient reported no difference in the coughing/throat-clearing/nose-touching behaviours of fellow commuters and colleagues. Even when someone coughed or cleared his/her throat near her, she was able to ignore it and not blame herself for causing these actions. The experiments enabled her to disprove any correlation between her fear of releasing foul smells and the reactions of others around her. For homework, she agreed to rate and re-rate the responses of fellow commuters before and after rubbing her fingers with chopped garlic (she was allowed to rinse her fingers but not use soap). On the fifth visit, she reported no increase in negative behaviours by fellow commuters and colleagues to the smell of garlic on her fingers. Her SPIN ratings dropped from 46 (before therapy) to 19 (after therapy), a decrease of 59% and her BSPS scores dropped from 42 (before therapy) to 6 (after therapy), a decrease of 86%. She reported vast improvement and declined to attend further therapy, citing work commitments. Six months after the cessation of therapy, she continued to be well, with no recurrence of symptoms.

## DISCUSSION

Several interesting features of this case merit discussion. In the differential diagnosis, we considered whether the patient could be having other anxiety disorders, e.g. an obsessive-compulsive disorder or a generalised anxiety disorder, or body dysmorphic disorder, depression, an organic brain condition or even a genuine physical disorder. Although olfactory hallucinations occur during the aura of temporal lobe epilepsy, there were no features e.g. altered perceptual experiences, cognitive abnormalities or mood changes, suggestive of this condition. The patient's EEG was also normal. Although she refused to give consent for MR imaging of the brain, there were no symptoms suggestive of organicity. Considering that she improved with psychological treatment alone, the presence of an organic brain condition was less likely.

The patient's mood and affect were euthymic. There were no symptoms to suggest a depressive illness. Notwithstanding the fear of emitting an odour, she was calm, slept well and did not report any physical or psychological symptoms suggestive of a generalised anxiety disorder, hypochondriasis or body dysmorphic disorder. She did not have a history of excessive perspiration, which could predispose her to developing a real fear of body odour. Although her anxiety and reassurance-seeking behaviour

were reminiscent of an obsessive-compulsive disorder, she did not engage in repetitive washing, bathing or cleaning rituals. Instead, she avoided socialising outside of work for fear of offending others.

Overlaps between JKF and ORS have been described in the literature. Suzuki et al<sup>(12)</sup> considered ORS to be a delusional condition, whereas others have argued that its wide spectrum stretches from that of social anxiety to delusional disorder (somatic type).<sup>(7)</sup> Although some may question our use of the SPIN and BSPS, which may not be specifically designed for JKF but for the assessment of the severity of typical social anxiety disorder symptoms, we found that these scales were able to adequately capture the distress of JKF and to detect improvement. We discovered the TKS scale only after completing our treatment of the patient; hence, we were unable to use it for this patient.

In conclusion, this case illustrates the phenomenology and treatment of a patient presenting with JKF-like symptoms. Although this is the first case encountered by us, we suspect that its prevalence may not be that rare. We are aware that some JKF cases may be more difficult to treat than others.<sup>(12)</sup> Reasons for our patient's improvement with CBT were the acute onset, short duration of illness and the lack of comorbidity. Her cooperation with CBT and her willingness to examine evidence that suggested people's negative behaviours, were in part, attributed to her, allowed her to disprove and discard such notions. Since most anxiety disorders have a tendency toward chronicity, we need to continue to follow up on her progress so as to detect possible relapses, and re-institute treatment, if necessary.

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