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RESEARCH PAPER

Overcoming the Fear of Snakes: A Clinical Case Report of Cognitive Behavioral Therapy for Ophidiophobia

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ABSTRACT

The aim of this case report was to assess and treat severe ophidiophobia (specific phobia, animal type) in a 31-year-old male using Cognitive Behavioural Therapy (CBT) and to assess the changes in fear, avoidance and anxiety symptoms post intervention. Ophidiophobia is one of the most common animal-type specific phobias, characterised by intense fear and avoidance of snakes. It frequently results in substantial psychological suffering and impairment in work and daily life. A qualitative single case design was utilised. The client was tested using Clinical Interview, Mental Status Examination, Beck Anxiety Inventory (BAI), Fear Survey Schedule-II (FSS-II), Snake Phobia Questionnaire (SPQ) and Behavioural Avoidance Test (BAT). A comprehensive ten session CBT treatment was implemented including psychoeducation, relaxation training, cognitive restructuring, imaginal exposure, in-vivo exposure and relapse prevention. Assessment revealed acute anxiety, significant avoidance and high snake-related phobia. There were large reductions in anxiety symptoms, catastrophic beliefs and avoidance strategies after therapy. Functional improvement at occupational activities was also seen. Early detection and treatment of certain phobias is suggested. Future research should evaluate the long-term efficacy of CBT with bigger clinical samples and follow-up evaluations.

KEYWORDS Cognitive Behavioural Therapy, Exposure Therapy, Anxiety Disorders, Ophidiophobia, Specific Phobia

Introduction

Specific phobia is an anxiety disorder characterised by extreme fear or anxiety about a certain object or situation that is excessive to the actual danger, according to the American Psychiatric Association [APA], 2022. Exposure to the feared stimuli almost always leads to immediate anxiety and often leads to severe avoidance behaviours that interfere with social, occupational and personal functioning.

One of the most common specific types of phobia is animal-type phobias. Many cultures report ophidiophobia or fear of snakes (Craske et al., 2017). Adaptive caution around potentially dangerous creatures is explained by the fact that ophidiophobic individuals experience intense fear even in the presence of innocuous representations such as pictures, films or verbal descriptions.

Behavioural theories explain phobias as a result of classical conditioning. A scary experience with a feared object could create a conditioned association with the stimulus and danger (Watson & Rayner, 1920). Avoidance behaviours are negatively reinforced by reducing anxiety following flight from the feared stimuli thus maintaining fear (Mowrer, 1960).

Cognitive models suggest that individuals with specific phobias tend to overestimate danger and underestimate their coping capabilities, leading to persistent worry and catastrophic interpretations of harmless stimuli (Beck & Emery, 2005). Cognitive behavioural therapy (CBT), and especially exposure-based therapies, are the treatment of choice for some phobias (Barlow, 2014; Wolitzky-Taylor et al., 2008) and many studies have shown this.

This case study describes the assessment and successful treatment of a marketing executive who suffered from severe ophidiophobia, which severely impacted his quality of life and his ability to do his job.

Literature Review

Specific phobia is an anxiety condition in which a person has an intense and persistent dread of a specific object or circumstance to a degree that is out of proportion to the real risk it poses. The feared stimuli usually evokes acute anxiety and avoidance responses that interfere with social, vocational, and daily functioning (American Psychiatric Association [APA], 2022). Animal-type phobias are among the more common specific phobia subtypes.

Ophidiophobia is one of the most commonly reported animal phobias, and it's the fear of snakes. The evolutionary origin of ophidiophobia may be fear of snakes that enhances survival, however people with ophidiophobia report terror towards harmless stimuli such as photographs, movies, or words that are associated to snakes (Tierney & Connolly, 2013). This excessive dread typically leads to considerable psychological discomfort and functioning impairment (Musah et al., 2022).

Behavioural theories use classical conditioning to explain the development of certain phobias. Watson and Rayner (1920) showed that a link between a previously neutral stimulus and fear can be formed by a fearful experience. For example, ophidiophobia may be learned by direct or indirect bad experience with a snake, leading to a long-term fear response. Mowrer's (1960) Two-Factor Theory takes this further by proposing that avoidance strategies perpetuate phobias because they are negatively reinforced in that the individual escapes from the feared stimuli, and this alleviates anxiety in the short term.

Cognitive theories stress the relevance of maladaptive beliefs in perpetuating phobic reactions. People with specific phobias have a tendency to exaggerate the threat and underestimate their ability to cope with frightening situations (Beck & Emery, 2005). Such skewed beliefs result in catastrophic interpretations and increased anxiety in the presence of the phobic trigger.

Cognitive Behavioural Therapy (CBT) is the most effective psychological treatment for specific phobias. In CBT, cognitive restructuring and exposure-based therapies are used to change maladaptive thinking and decrease avoidance behaviours (Barlow, 2014). Exposure treatment, a key element of CBT, entails a phased and systematic confrontation with the feared item and aids individuals in forming more realistic assessments of threat and enhancing their coping abilities (Öst, 1989).

Research has indicated that CBT is beneficial in lowering fear, anxiety and avoidance behaviours related with particular phobias. Wolitzky-Taylor et al. (2008) meta-analysis indicated that exposure-based CBT was very helpful for a range of phobic

illnesses. Therefore, CBT continues to be the treatment of choice for patients with ophidiophobia and other animal-type specific phobias.

Material and Methods

Research Design

This study employed a qualitative single-case study design to examine the assessment, diagnosis, case formulation, and treatment of a client presenting with severe ophidiophobia.

Participant

The participant was a 31-year-old male marketing executive referred for psychological assessment and treatment due to persistent fear and avoidance of snakes.

Assessment Measures

- Clinical Interview
- Mental Status Examination (MSE)
- Beck Anxiety Inventory (BAI)
- Fear Survey Schedule-II (FSS-II)
- Snake Phobia Questionnaire (SPQ)
- Behavioural Avoidance Test (BAT)

Procedure

The client underwent comprehensive assessment, diagnostic evaluation, case formulation, and a structured ten-session CBT intervention. Progress was monitored throughout treatment using behavioural observations and self-reported anxiety ratings.

Ethical Considerations

Informed consent was obtained prior to assessment and treatment. Confidentiality and anonymity of the client were maintained throughout the study.

Results and Discussion

Case Study

Mr H is a 31 year old single Muslim man. He was referred by his GP for psychiatric assessment and treatment for his persistent fear of snakes. He has a master's degree in business administration. He comes from a middle class background and has worked as a marketing executive for 7 years.

The client reported that he experienced extreme anxiety in response to seeing snakes, pictures of snakes, wildlife films, or even the mention of snakes. Exposure to such stimuli produced sweating, trembling, palpitations, tightness in the chest, lightheadedness, and an intense desire to run away.

The first symptoms appeared when he was about eight years old, when he stumbled upon a snake in his family garden. The event caused extreme fear and panic, though no one was physically harmed. Since the incident he has been suffering from nightmares, intrusive memories and an increasing fear of being outside.

His fear went back in time to symbolic depictions of snakes in images, films, literature and TV shows. As an adult his symptoms started to interfere with his ability to do his job. He was afraid of running into snakes, and so he often declined outdoor marketing assignments and avoided rural and wooded areas. Thus, he was stressed out at work and worried about growing in his profession.

The client reported that their symptoms had recently escalated after watching a video on social media of wildlife rescuers handling snakes. This exposure caused intense physiological arousal, and prolonged worry, which motivated him to seek medical treatment.

The history of development was normal. Developmental and birth milestones were within normal limits. He described himself as a sensitive, cautious, indoor kind of child. Educational functioning was satisfactory through school and college.

Family history revealed a supportive home without serious mental illness. However, a maternal aunt was considered to be too nervous and given to chronic worrying. No reports of substance abuse, forensic history, or serious medical problems.

The client was described as conscientious, responsible, meticulous, somewhat introverted before the illness. He was socially and professionally well-adjusted overall, but had a tendency for routine and predictability, and avoided novel circumstances.

Assessment

Clinical Consultation

Severity of symptoms, onset, maintaining factors, psychosocial functioning and treatment goals were evaluated through a full clinical interview. The interview validated a long-standing pattern of fear and avoidance, particularly with regard to snakes.

Mental status Examination

The client was well-dressed and well-groomed. He maintained enough eye contact, but seemed clearly uncomfortable when discussing his experiences with snakes. The speech was spontaneous, coherent and purposeful. Affect was congruent with mood being apprehensive.

Thought content identified current fear-relevant thoughts about snakes. No suicidal ideation, obsessions, delusions, or hallucinations. No impact on insight, memory, focus or judgement.

Formal Assessment

Beck Anxiety Inventory (BAI)

The client obtained a score of 31, indicating severe anxiety.

Table 1
Beck Anxiety Inventory Results

Measure	Raw Score	T-Score	Interpretation
BAI	31	70	Severe Anxiety

The findings indicated significant physiological anxiety symptoms including trembling, sweating, dizziness, and palpitations.

Table 2
Fear Survey Schedule-II Results

Subscale	Raw Score	T-Score	Interpretation
Animal Fears	78	85	Extremely High
Situational Fears	40	65	Moderate
Social Fears	28	55	Mild

Results suggested that anxiety was highly stimulus-specific rather than generalized.

Table 3
Snake Phobia Questionnaire Results

Measure	Raw Score	T-Score	Interpretation
SPQ	26	82	Markedly Elevated

The client endorsed numerous items reflecting avoidance, distress, and catastrophic beliefs regarding snakes.

Behavioral Avoidance Test (BAT)

The Behavioral Avoidance Test revealed severe avoidance.

- Fear rating (SUDS): 90/100
- Unable to view real snake photographs beyond two seconds
- Refused exposure to live snake videos
- Demonstrated visible sweating, trembling, and increased respiration

The results of the assessments consistently showed extreme animal-specific fear, avoidance behaviour, and physiological hyperarousal. Clinically significant anxiety related to snake-related stimuli was validated by elevated scores on the BAI, FSS-II, and SPQ.

The client's incapacity to withstand direct exposure was confirmed behaviourally by the BAT. The diagnosis of Specific Phobia (Animal Type) was supported by the convergence of psychometric results, behavioural observations, and clinical interview data.

Diagnosis

The client satisfied the following diagnostic requirements according to DSM-5-TR criteria (APA, 2022): DSM-5-TR Code: F40.218 Specific Phobia, Animal Type (Ophidiophobia)

Case Formulation

The Four Ps Model and Cognitive Behavioural Theory were used to conceptualise the situation. Anxiety tendencies among the extended family, a cautious personality

style, and a sensitive temperament were predisposing variables. The encounter with a snake as a child, which created a conditioned fear response, was the trigger.

Avoidance behaviours, catastrophic thinking, attentional bias toward threat, and physiological hyperarousal were all contributing variables. Avoidance sustained the fear response through negative reinforcement and inhibited remedial learning (Mowrer, 1960).

Strong treatment motivation, good insight, supportive family relationships, the lack of co-occurring psychopathology, and steady vocational functioning were all protective variables.

Treatment

A CBT treatment program consisting of ten sessions was put into place. Psychoeducation about anxiety, fear conditioning, and the phobia maintenance cycle was the main focus of the first sessions. To control physiological arousal, the client learnt grounding strategies, progressive muscle relaxation, and diaphragmatic breathing.

Maladaptive cognitions were the focus of later sessions. Catastrophic beliefs like "A snake will attack me" and "I cannot cope with this fear" were contested and replaced with reasonable alternatives through cognitive restructuring.

A graded fear hierarchy was created, starting with hearing the term "snake" and moving on to seeing pictures, films, documentaries, and finally live snakes in a safe environment.

Before moving on to in-vivo exposure, imaginal exposure was carried out. Subjective Units of Distress Scale (SUDS) scores were used to track anxiety levels during exposure sessions. Habituation and cognitive correction of ideas related to threat were aided by repeated exposure.

Relapse prevention, self-monitoring, coping mechanisms, and sustaining treatment gains were the key topics of the last sessions.

Discussion

The current example adds to the body of research findings on development and maintenance of specific phobias. Watson and Rayner (1920) explain the client's symptoms in terms of classical conditioning principles, suggesting that a previous frightening experience with a snake led to a conditioned fear response.

The persistence of symptoms (Mowrer, 1960) is in line with Mowrer's Two-Factor Theory, which holds that avoidance behaviour maintains fear through negative reinforcement. Each episode of avoidance prevented extinction of fear but gave temporary relief from worry.

Cognitive theory also explains the client's catastrophic thinking about danger and inability to cope. The client overestimated the threat and underestimated personal coping capabilities. This is in accordance with Beck's cognitive model (Beck & Emery, 2005).

The results of the assessment showed congruence between behavioural observations, clinical interview data, and self-report measures. Severe symptomatology

and functional impairment were indicated by elevated scores on measures related to anxiety and phobias.

Empirical data supporting CBT's efficacy for specific phobias is supported by the favourable treatment outcome (Barlow, 2014). By promoting habituation and corrective learning events, exposure therapy functioned as the main change mechanism. Cognitive restructuring encouraged realistic assessments of threat and further decreased maladaptive beliefs.

The client reported notable decreases in avoidance and anxiety by the end of treatment. He resumed previously avoided outdoor job tasks, tolerated exposure exercises, and successfully viewed snake-related stimuli.

The current example shows that when clients exhibit sufficient motivation and therapeutic engagement, structured CBT therapies can effectively treat even persistent phobic symptoms.

Conclusion

This case study demonstrates how cognitive behavioural therapy can effectively cure severe ophidiophobia. Significant dread, avoidance, and occupational impairment related to snake-related stimuli were established by a thorough evaluation. Anxiety and avoidance behaviour significantly decreased as a result of a systematic CBT intervention that included psychoeducation, relaxation training, cognitive restructuring, and graded exposure. Gains from treatment extended to daily activities and occupational functioning.

The findings highlight the significance of exposure-based approaches in achieving long-term behaviour change, and add to the growing evidence that cognitive behavioural therapy (CBT) is the most effective treatment for specific phobias. A specific phobia is a mental disorder that can be improved with early detection and timely care, preventing long-term impairment and improving the quality of life for people who suffer from it.

Recommendations

The results of the present case study suggest that Cognitive Behavioural Therapy (CBT) with the use of graded exposure techniques should be considered as a first line intervention for the treatment of ophidiophobia and other animal type specific phobias. Previous research has repeatedly established the effectiveness of exposure-based CBT in reducing fear responses, avoidance behaviours and associated functional impairment (Barlow, 2014; Öst, 1989).

Prompt examination and intervention is recommended for persons presenting with symptoms of phobia. Untreated particular phobias may lead to prolonged psychological suffering and occupational constraints. Early therapy intervention can prevent the reinforcement of avoidance behaviours and assist the development of adaptive coping skills (Mowrer, 1960).

Treatment programs should include psychoeducation about the nature of anxiety, fear conditioning and cognitive distortions to increase clients' awareness of their symptoms and treatment adherence (Beck & Emery, 2005). Clinicians are urged to use

standardised measures, such as the Beck Anxiety Inventory and the Snake Phobia Questionnaire, to monitor treatment progress and outcomes.

Future studies should include follow-up assessments and bigger clinical samples to examine the long-term effects of CBT for ophidiophobia. Further research may also compare CBT with newer treatments like virtual reality exposure therapy and other technology-assisted exposure treatments to establish their comparative effectiveness for the treatment of specific phobias (Wolitzky-Taylor et al., 2008).

Finally, public awareness campaigns and community-based mental health programs should be developed to educate people about evidence-based treatments for specific phobias and to remove stigma related to obtaining psychological therapy for anxiety-related diseases.

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