

A Graded Exposure Intervention for Distressing Visual Hallucinations in Schizophrenia

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Background: Distressing visual hallucinations (VH) are frequently present in schizophrenia. Despite their prevalence, limited research exists regarding effective clinical interventions. Cognitive models of VH state that distress results from threat appraisals of the hallucination. **Method:** This individual case study describes the use of a graded exposure approach following the discovery of phobic anxiety associated with visual hallucinatory content. Treatment involved 20 sessions of individual cognitive behaviour therapy (CBT), of which 12 sessions focused on graded exposure. **Results:** A reduction in frequency of visions and associated distress was reported and these changes were maintained at a 3-month follow-up. **Conclusions:** The findings are consistent with the cognitive model of VH. Through exposure to the hallucinatory content, the client re-appraised her VH as non-threatening, and her fear of them reduced. This reduction in anxiety led to a decrease in the occurrence of the VH.

Keywords: Cognitive behaviour therapy, phobia, psychosis, schizophrenia, visual hallucination.

Introduction

The experience of visual hallucinations (VH), or visions, in schizophrenia is fairly common and can be highly distressing and disruptive (Gauntlett-Gilbert and Kuipers, 2005). A significant factor relevant to the distress caused by any hallucination is the person's appraisal of it (Garety, Kuipers, Fowler, Freeman and Bebbington, 2001). According to cognitive models of VH (Morrison, 2001), distress results from an individual appraising the hallucination as posing a threat to his/her physical or psychological well-being. In support of this model, Gauntlett-Gilbert and Kuipers (2005) found an association between fearful appraisals of visions and increased levels of distress in their sample of patients. Therefore, focusing on appraisals of visions in therapy is likely to be beneficial. This report describes how a client's fearful appraisal of the content of her visions informed an exposure-based intervention.

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Method

Assessment

Susan (a pseudonym) is a 50-year-old female with a diagnosis of schizophrenia. She was referred for CBT to help her manage distressing visual and auditory hallucinations. At assessment, Susan reported seeing snakes and insects approximately five times a day, for a few minutes each time. Her visions appeared in varying dimensions from life-size to giant, were in colour, and were normally mobile. She occasionally had feelings that these creatures were crawling over her and penetrating her body. She also experienced auditory hallucinations three to four times a day independently of the visions. She heard three main voices that varied in tone and content, from critical to supportive. Susan reported that the VH of snakes and insects caused her the most distress. Although she reported in sessions that she understood the VH to be symptoms of schizophrenia, at the time of experiencing the visions she feared that she might be physically harmed by them, mirroring her fear of real snakes and insects.

Measures. The outcome measures used were the Clinical Outcomes for Routine Evaluation Outcome Measure (CORE-OM; Evans et al., 2000) and the Psychotic Symptom Rating Scales (PSYRATS; Haddock, McCarron, Tarrier and Farragher, 1999). The CORE-OM measures global distress and the PSYRATS was used to assess the VH.

Background history. Susan described a difficult childhood. Her biological mother died when Susan was an infant. She was physically and sexually abused during childhood and adolescence and spent most of her teenage years in care. She experienced her first psychotic episode at age 23 and was admitted to hospital, after which she received treatment from community services, requiring hospital admission approximately every 2 years. She has no history of drug or alcohol misuse.

Formulation

Susan's VH of snakes and insects frequently appeared when she was feeling stressed, but were also triggered by the sight of real insects in her bedroom. Although she was able to distinguish between visions and real snakes and insects, her immediate affective response to either was the same i.e. fear. Susan described having a general fear of snakes and insects and believed they could do her harm. Her main behavioural response to seeing either real insects or VH was escape, leaving the area where the feared creatures were perceived. Although this safety-behaviour provided her with short-term respite, it maintained her fear by preventing her from experiencing her visions (and real insects) as non-threatening. Another response was to shout and swear at the visions, which increased her arousal level and left her feeling powerless and frustrated. A CBT formulation was developed together with Susan (Figure 1).

Intervention

Therapy initially focused on the snake visions, as prioritized by Susan. Learning about her fear of real snakes led the therapist to consider an exposure approach, as used in CBT for phobias. In addition to habituation of anxiety, this approach would allow Susan to evaluate her threat appraisals.

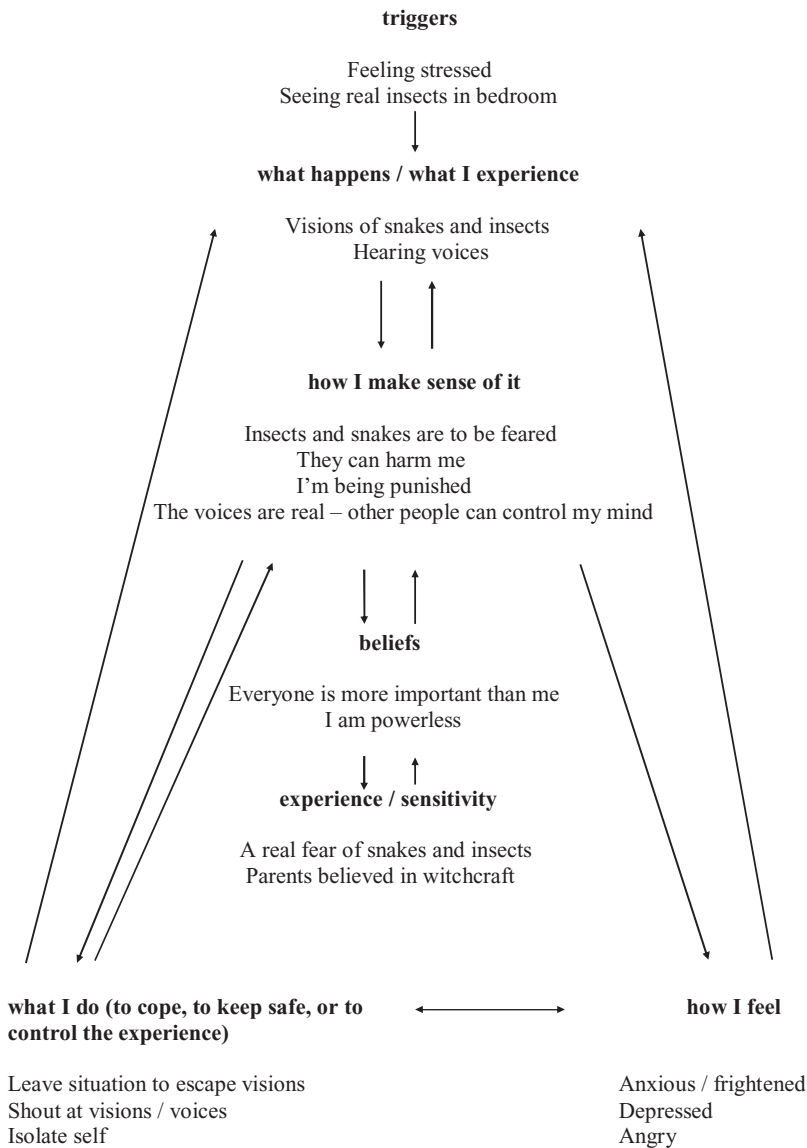


Figure 1. Formulation of Susan’s experiences, based on Morrison’s (2001) model of positive psychotic symptoms

After providing the rationale for this approach and discussing the process, including the expectation of a momentary increase in anxiety, Susan agreed to begin. We devised a hierarchy of feared situations and started the process of exposure, first by talking about snakes and Susan’s fear of them. The next step involved looking at an illustrated book, each page showing a colour photograph of a different species of snake. Although Susan displayed some initial reluctance, she was able to observe the image with encouragement. Susan reported her anxiety

on first seeing the image as 8/10 (10 being the most anxious). After staying with the image, her anxiety gradually subsided, eventually settling at 2/10 after approximately 4 minutes.

Subsequent sessions followed a similar pattern in which Susan, on seeing the new image, would typically describe her anxiety as 8/10. After 3–4 minutes of observing the picture, with the therapist encouraging her to describe features of the snake and to comment on her emotions, Susan's reported anxiety typically subsided to 2 or 3/10, which was a level she deemed acceptable. Exposure was gradually increased over the weeks with Susan progressing to holding the book herself and then touching the feared image with her hand. She was encouraged to continue this work at home between sessions. She also kept a diary of snake visions and rated her anxiety between sessions. Gradually the number of snake visions reduced to approximately four a week and those that appeared were perceived as less distressing. She also described feeling less fearful of snakes in general.

The function and consequences of using avoidance/escape as a coping strategy were considered and alternative behavioural strategies discussed. A rationale was suggested for acknowledging and staying with the vision, rather than leaving the room. This new approach provided Susan with a new experience of being able to tolerate previously distressing VH, thus disempowering the snake visions. Significantly, she described feeling a greater sense of control.

When Susan's fear of snakes had diminished to an acceptable level for her, we switched attention to insect visions. The same strategy of graded exposure was employed, yielding similarly successful results. The remaining sessions focused on her experience of hearing voices, covering coping strategies, appraisals and dealing with negative and critical voice content. Final sessions consisted of summarizing the work and developing a therapy blueprint.

Results

Therapy concluded after 20 sessions, at which point Susan described feeling more in control and less fearful of snakes and insects. She reported experiencing significantly fewer VH and described being much less distressed by their occasional appearance. Susan's total score on the PSYRATS reduced from 32 pre-therapy to 7 post-therapy, and this improvement was maintained at follow-up 3 months later (score = 9). General psychological well-being also improved (CORE-OM scores = 53 pre-therapy, 9 post-therapy, 14 at follow-up). Although her voices were not the main focus of therapy, Susan reported a decrease in their frequency, which was maintained at 3-month follow-up. Susan also described feeling more confident about coping with future setbacks.

Discussion

This case study presents the course and positive outcome of a cognitive-behavioural intervention for distressing visual hallucinations experienced by a client with schizophrenia. The discovery of phobic symptoms associated with the hallucinatory content guided the therapy towards a graded exposure approach. The decision to adopt this intervention was influenced by the known efficacy of exposure in treating phobias (Carey, 2011), together with the importance of appraisals in determining affective and behavioural response to VH (Gauntlett-Gilbert and Kuipers, 2005). Susan's appraisal of her visions as threatening and harmful led to her emotional response of fear. This led to her use of safety behaviours of

avoidance and escape, which maintained the sense of threat by preventing disconfirmation of the fearful appraisals. Focusing on overcoming a phobia that was directly related to the hallucinatory content reduced the distress associated with the VH. Through the process of exposure to images of snakes and insects, her fear of these creatures reduced. Susan was then able to re-appraise her VH as non-threatening, thus reducing her anxiety in response to them and increasing her sense of control. Although this mechanism of change is consistent with the formulation, the precise emotional and cognitive mechanisms underlying successful exposure approaches are unclear (Carey, 2011). Pertinent to this case, Mineka and Thomas (1999) (cited in Carey, 2011) suggest that disconfirming a low sense of perceived control is one of the critical cognitive changes that occurs in exposure treatments. In addition to a reduction in her threat appraisal and resulting emotional arousal, the frequency of Susan's VH also reduced. This is consistent with Morrison's (2001) suggestion that hallucinations are maintained by a "catastrophic misinterpretation" of their perceived threat and that hallucinations can diminish once the perceived threat is removed. A reduction in her fear of snakes and insects led to a lessening of anticipatory anxiety and hypervigilance, with fewer VH experienced as a result (Morrison, 2001). In addition, all aspects of therapy, including the work on managing voices, seemed to increase Susan's sense of control and power over her experiences, reducing her distress and the occurrence of hallucinations.

This single case study highlights the importance of appraisal of visual content, together with the resulting emotion and behaviour, in the maintenance of distressing psychotic hallucinations. How clients relate to their VH experiences can inform the therapeutic intervention, and a graded exposure approach to the hallucinatory content may be beneficial. As we know, an intervention that induces anxiety in a client, such as graded exposure, must be delivered carefully within a trusting therapeutic relationship. This is particularly relevant when working with people with distressing symptoms of psychosis. Indeed, the intervention with this client progressed slowly and spanned 20 sessions.

To conclude, despite the prevalence of VH in people with schizophrenia, there remains a paucity of research exploring aetiology and interventions for this experience. The use of exposure approaches for VH might provide a fruitful avenue for further exploration.

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