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COGNITIVE THERAPY FOR DRIVING PHOBIA: TWO SINGLE CASE STUDIES

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Abstract Two single case studies are described of driving phobia treated with cognitive therapy. Assessment, formulation, risk and practical treatment of this common problem are reported. Self-report measures and a behavioural test evaluated results. Both cases improved significantly and reported that the treatment was acceptable. Recommendations for future research are also made.

Keywords: Cognitive, behavioural, road traffic accidents, therapy.

Introduction

Road traffic accidents are a widespread occurrence, with over 230,000 recorded occurrences in Great Britain each year (DOT, 2001). This rate of accidents is important because of the established relationship between road traffic accidents and long-term psychiatric and psychological problems. In the short term one-fifth of victims develop an acute stress reaction, with 10% going on to develop a mood disorder, 20% phobic travel anxiety and 11% develop post-traumatic stress disorder (Mayou, Bryant, & Duthie, 1993).

The physical injury, mental and emotional trauma, social, occupational and economic disruption caused by road traffic accidents far outweighs any other form of accidental injury and death, including war, in most parts of the world. The World Health Organization (WHO) has gone as far as to predict that by the year 2020 road traffic accidents will be the third leading cause of disability resulting from disease or injury. Despite this, the evidence base for the treatment of driving anxiety and driving phobia common after road traffic accidents is limited to several successful single case reports, all of which describe variants of behavioural treatment (Blanchard & Hickling, 1997; Hickling & Blanchard, 1999).

Driving anxiety is described in a variety of ways in the literature, including driving phobia, travel phobia and accident phobia. Both travel and accident phobias are not just limited to drivers of vehicles but also afflict passengers, motor bikers, cyclists and pedestrians. Diagnostically, according to both ICD-10 and DSM-IV (WHO, 1992; APA, 1994) avoidance of driving due to anxiety should be classified as a specific phobia, but this does not take into account that anxiety through driving also exists in less phobic forms. These less phobic forms have been discussed by Blanchard and Hickling (1997) who suggest that

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there exists a sub group of people who they termed ''reluctant drivers'' who, when exposed to driving stimuli, tolerate sometimes extreme anxiety for some essential driving e.g. to work or shopping but avoid other non essential car journeys.

Case reports

This paper seeks to extend the evidence base by describing the treatment of two cases of driving phobia with cognitive therapy. Both cases were seen for private treatment funded through health insurance. Assessment of each of the two cases consisted of a functional analysis in which cognitive, behavioural, psychosocial factors and previous history were examined. This confirmed that both cases were severely anxious whilst driving and that both avoided driving if at all possible. The main purpose of the assessment was to identify the cognitive and behavioural factors for the onset, development and maintenance of the driving phobia. Mental state examination and risk assessments were also carried out.

Case 1 (C1) was a 47-year-old divorced lady. Her main problem was severe anxiety when either a passenger or during driving. She avoided car journeys whenever possible. When she knew that she had to make a journey, she was anxious for several hours beforehand in anticipation of the journey. Her automatic thoughts during the course of driving were ''I will have an accident'' and ''I'm going to panic''. When passing junctions an intrusive image was also triggered of a blue car pulling out in front of her. She also had occasional nightmares of the accident. She was able to drive short distances e.g. to the local shops. When driving her safety behaviours included continuous checking of her rear view mirror, covering the brake with her foot, and maintaining an excessively tight grip of the steering wheel. She was also hypervigilant, swallowed excessively, and hyperventilated during long journeys. This problem had started 9 months prior to assessment and followed on immediately from an accident in which a blue car had pulled out in front of her from the left hand side. She had little recollection otherwise of the accident other than a loud bang and a pungent smell of smoke. She required hospital treatment for whiplash, an injured right arm and she was treated for minor cuts and bruises. The driving phobia had remained constant after the accident and she continued to have continuous pain in her right arm. She was not clinically depressed. There were no major risk issues associated with her treatment. She had no previous trauma history and had not received any previous psychological therapy.

Case 2 (C2) was a 48-year-old married man with a 7-year history of driving phobia. He avoided car journeys whenever possible, but was still driving long distances (over 70 miles) to work out of necessity two to three times per week. His automatic thoughts were ''I will lose control of my car and crash''. His perception of the road ahead changed to being narrower and closer than the reality. This perceptual change was accompanied by an overwhelming sense of vulnerability. His safety behaviours were avoidance of driving over 40 mph, excessive gripping of the steering wheel at all times, and continuous mirror checking. He also had a tendency to brake suddenly when feeling vulnerable. The problem had started 7 years prior to assessment. He was driving on the motorway and passed a large lorry in the rain. Out of the blue he felt overwhelming anxiety. After this experience he began to feel anxious each time he drove. A year later he stopped driving on motorways altogether. In addition to this problem, he had been receiving peritoneal dialysis for 11 years due to kidney failure. He had received a transplant but this has been unsuccessful. As a consequence of kidney failure and the dialysis he was prone to fatigue and recurrent periods of

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mild to moderate depression. When seen for initial assessment he was mildly depressed but not suicidal. There were significant risks associated with his treatment due to his sudden unexpected braking. He was very concerned that he might have to give up his job due to his phobia. He had received previous psychological treatment but he had relapased 6 months later. He had no trauma history.

Single case methodology

The study followed an ABA design. The baseline period was for 4 weeks. The psychological treatment was cognitive therapy with subsequent 1 and 3-month follow-up.

Dependent measures

The main dependent measures were a behavioural test of levels of anxiety whilst driving a specified distance on a specified road. C1 was asked to rate her maximum anxiety level on a 0–8 scale (higher score indicates higher anxiety) whilst driving to the clinic for appointments and C2 was asked to rate his maximum anxiety level on a 0–8 scale (higher score indicates higher anxiety) whilst supervised with his driving on a specific stretch of motorway at 60 mph. Measures used were: Problem and Targets (Marks, 1986); Impact of Events Scale (IES) (C1 only) (Horowitz, Wilner, & Alvarez, 1979); Beck Anxiety Inventory (Beck, Epstein, Brown, & Steer, 1988); and the Work and Social Adjustment (WASA) (Marks, 1986) scales were also completed at pre-treatment, post-treatment, 1 and 3-month follow up (mfu). No follow-up data were available for C1 at 1mfu for administrative reasons.

Cognitive therapy

Recently Taylor, Deane and Podd (2000) from a cognitive perspective identified three main foci of fear amongst people with driving anxiety. These foci were danger expectancies, anxiety expectancies from unpleasant driving situations, and a fear of negative social evaluation from passengers or other drivers. The treatment procedure used to treat these two cases was based on this research. Theoretically, the driving phobia was being maintained by exaggerated danger and anxiety appraisals (social appraisal was not relevant for these two cases), safety behaviours and avoidance. These three factors were hypothesized to be preventing reappraisal of driving as relatively safe. The CT consisted of five main elements detailed below:

a) A cognitive behavioural formulation was developed collaboratively between the therapist and patient that explained the maintenance of the driving phobia i.e. danger appraisals (concern about accidents, incompetent behaviour of other drivers, concern about injury, dangerous driving conditions or unfamiliar roads and lack of control over the driving situation) and anxiety appraisals (concern about anxiety symptoms and their effects on driving);
b) The participants were then taught to recognize perceived driving danger and anxiety related thoughts and images. The participants were then encouraged to reappraise automatic thinking associated with the appraisals through guided discovery;

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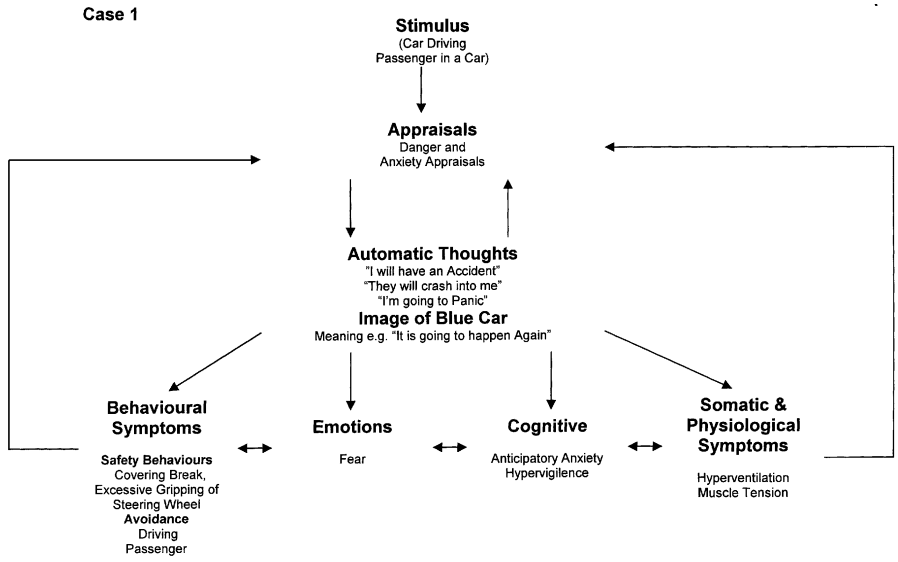


Figure 1. Cognitive behavioural conceptualization for driving phobia

c) Home work was then devised that involved testing out the validity of alternative thoughts through carrying out driving experiments, whilst gradually learning to drop their safety behaviours;
d) Careful assessment of individual safety behaviours in order that the behavioural experiements devised were appropriate, safe and within the law;
e) Other interventions were introduced when the formulation indicated that they would be of value to the individual patient. C1 required three sessions of image transformation. This consisted of visualizing the image in the clinic setting and manipulating it. When driving she was instructed to be mindful of the car image if it was activated and not attempt to block it out. Due to her hyperventilation during longer journeys she was also taught breathing control. C2's treatment was also adapted in that the therapist accompanied him with the behavioural experiments to ensure as far as possible that they were carried out safely due to the possible risk of causing an accident through sudden unexpected braking (Figure 1 shows the formulation developed for C1 as an illustration).

Results

Both C1 and C2 improved rapidly with CT. C1 needed nine clinic based treatment sessions taking seven hours. C2 needed five sessions taking six hours, five hours of which were therapist-accompanied sessions. The self-report measures of outcome e.g. behavioural test and anxiety ratings, problem and targets; BAI, IES and WASA supported this overall high level of improvement in both cases (see Figure 2, Tables 1 and 2). At discharge, although C2 seemed to be doing well on the behavioural test, the other measures indicated less improvement. The patient at this point had carried out little in the way of behavioural

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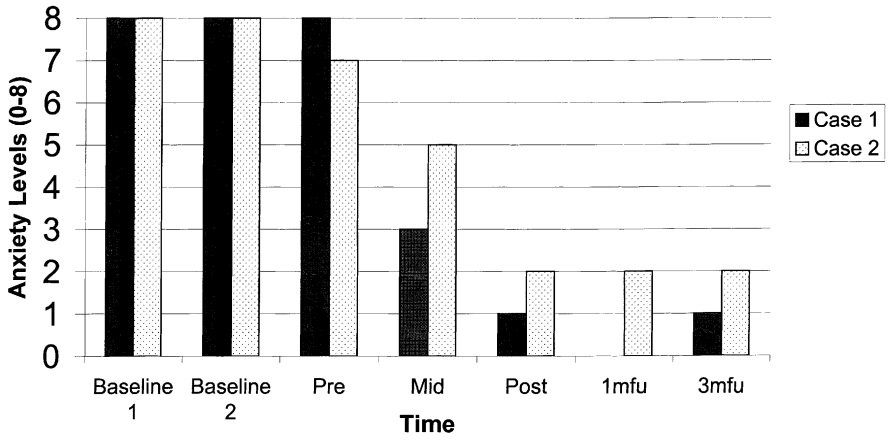


Figure 2

Table 1. Case 1 – Treatment outcome scores pre-treatment, end of treatment, 1mfu and 3-month follow-up

Clinical measure	Pre	Post	1mfu	3mfu
Main problem (0–8) (Marks, 1986)				
Fear of having a car accident resulting in anxiety and not driving	7	2	no data	0
Targets (0–8) (Marks, 1986)				
Drive by car a long journey ×1 per month	7	0	no	0
Drive into Town Centre ×4 per week	7	0	data	0
Beck Anxiety Inventory (Beck et al., 1988) BAI 0–63	29	12	no data	6
Impact of Events Scale (Horowitz et al., 1979) IES 0–75	57	18	no data	9
Work and Social Adjustment (Marks, 1986) WASA (0–40)	30	3	no data	0

experiments without being accompanied. This was addressed during the follow up period as homework and he quickly improved on the other measures. C1's confidence returned with her social life returning to normal. She was able to travel as a passenger without anxiety and during the follow up period she did not experience any recurrent nightmares. C2 was able to continue to get to work with minimal anxiety, an important consideration, given his continued physical problems.

Discussion

This study of two single case studies is relevant because the cases treated were typical clinically of the types of driving phobia problems that are often referred for psychological

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Table 2. Case 2 – Treatment outcome scores pre-treatment, end of treatment, 1mfu and 3-month follow-up

Clinical measure	Pre	Post	1mfu	3mfu
Main problem (0–8) (Marks, 1986) Fear of lose of control when driving leading to panic and not driving	7	7	3	2
Targets (0–8) (Marks, 1986) Drive on the motorway daily to work at speeds up to 70 mph	8	8	2	2
Beck Anxiety Inventory (Beck et al., 1988) BAI 0–63	19	26	11	9
Work and Social Adjustment (Marks, 1986) WASA (0–40)	25	11	8	4

treatment. CT was effective for these two cases with clear increases in driving frequency, reduced anxiety, and a subsequent reduction in hypervigilance and anticipatory anxiety. At the end of treatment both cases were able to travel without restriction with only occasional and minimal anxiety. There was also a significant reduction in occupational and social handicap in both cases. The treatment was also acceptable to both participants.

Whilst relatively rapid improvements were seen with these two cases the question is raised as to whether or not CT improves the outcome of driving phobia over exposure alone (EA) or exposure with anxiety management (EAM) in terms of a better or a more rapid response to treatment. This study was not designed to answer these questions directly. Instead, the purpose was to test the efficacy of CT as a treatment intervention in its own right, rather than comparatively. The motivation for this research was to develop an intervention that specifically addressed the key features of driving phobia e.g. faulty appraisals, safety behaviours and avoidance, through using a scientific single case design. The results of the research were used to inform and improve the researcher's clinical practice and then, through this paper, disseminate the work to others who might wish to carry out further research into the psychological treatment of driving phobia.

Psychological treatment with either cognitive or behavioural therapy of driving anxious people raises a number of ethico-legal issues for therapists. (These are discussed in more detail in the extended report available from the author). A minimum requirement, for example, is that therapists who use their own cars must ensure that their insurance companies are aware that they are using their vehicles for work purposes – including an explanation of the therapeutic nature of the car use. Likewise, the patient should be advised to do the same if the therapist is going to accompany them with supervised therapeutic activities. Risk assessment should also be carried out to ensure ''Fitness'' to be on the road and that by driving they were not going to be a hazard to other drivers e.g. sudden unexpected braking or swerving.

Despite the scientific approach taken in this study, it does have a number of limitations. Whilst unlikely, the first of these limitations is that the results could have been due to non-specific treatment factors such as the therapeutic relationship. The outcome measures were also mainly self-report and the CT was multi component with cognitive and behavi-

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oural interventions used. It is therefore possible that any one of these was the effective therapeutic agent. Further controlled research is therefore needed that addresses the relative efficacy of CT, EA and EAM, with dismantling experiments to identify the effective therapeutic ingredient. In this way the limitations of this study can be addressed and evidence based interventions reliably given to the significant number of people whose daily lives are handicapped by anxiety about driving and driving phobia.

Conclusion

In conclusion, this paper has demonstrated successful treatment of driving phobia using CT. This is the first published report of this intervention being applied to driving phobia. Finally, the importance of therapists being cognisant of ethico-legal issues has also been outlined. Further research is now indicated for this distressing and handicapping phobic problem.

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