



Overcoming the Trauma of Your Motor Vehicle Accident

Case Study: Mary

■ *The day had begun like any other. Mary was on her way to work early in the morning. She had many things on her mind that morning, the morning her accident occurred. The first thing she saw was a huge shadow that came over her; her next memory was the sound of squealing brakes. Then there was a huge impact. Mary awakened in a daze. She was unsure how long she had been lying there. She saw that the contents of her purse had been scattered around the car. Mary's next memory was of someone talking to her. He didn't make sense. She didn't know who he was or why he was there. It was hard to see. She could taste blood dripping into her mouth. The taste of the blood made her sick to her stomach. She remembers hearing someone say, "Are you all right? Are you all right?" She drifted in and out of awareness for a while, and then she heard a police officer say, "Just lie still. We'll have you out of there soon."*

Then it dawned on her. She'd been in a terrible crash, and she was hurt! After that, it was a blur. Mary moved in and out of awareness. She next remembered being at a hospital, with doctors asking a lot of questions and ordering tests. She was scared about what would happen next. All she could think was, "I could have died!" "I didn't do anything wrong!" "How could this have happened to me?" ■

Background Information and Purpose of This Program

This therapist manual accompanies the client workbook *Overcoming the Trauma of Your Motor Vehicle Accident*. The treatment and the manuals are designed for use by a therapist who is familiar with cognitive-behavioral therapy (CBT).

Posttraumatic Stress Disorder and Motor Vehicle Accidents

Posttraumatic stress disorder (PTSD) is one of the major consequences of motor vehicle accidents (MVAs) in which personal injury occurs.

Based on the studies to date, we estimate that PTSD occurs in 10% to 45% of survivors of MVAs involving personal injury. The largest study (Ehlers, Mayou, & Bryant, 1998) of about 890 consecutive patients treated in an emergency department after an MVA found that 25% met the criteria for PTSD 3 months after the accident. Given the more than 3 million individuals injured in the United States each year (U.S. National Highway Traffic Safety Administration, 2001), our best estimate is that there are about 750,000 new cases of PTSD following MVAs in the United States alone each year. Follow-up studies (e.g., Blanchard, Hickling, et al. 1996) indicate that about 50% of acute cases of PTSD remit, at least in part, by 5 months after the accident, and a further 16% remit by the 1-year point. The remaining one third of cases (approximately 250,000) become chronic and show very, very gradual improvement over the next 5 to 6 years (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995).

Even with this widespread prevalence of MVA-associated trauma, psychological assessment and treatment of the survivors of car accidents has not received the attention that it deserved until the last 5 to 10 years. Ongoing research has come largely from a number of research centers in England and Canada, as well as from our group in Albany, the Center for Stress and Anxiety Disorders, and the MVA Research Project.

Diagnostic Criteria for Posttraumatic Stress Disorder

Following are the diagnostic criteria for PTSD, according to the American Psychiatric Association *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition (1994).

- A. The person has been exposed to a traumatic event in which both of the following were present:
 - (1) The person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others.

- (2) The person's response involved intense fear, helplessness, or horror. *Note:* In children, this may be expressed instead by disorganized or agitated behavior.
- B. The traumatic event is persistently reexperienced in one (or more) of the following ways:
- (1) Recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions. *Note:* In young children, repetitive play may occur in which themes or aspects of the trauma are expressed.
 - (2) Recurrent distressing dreams of the event. *Note:* In children, there may be frightening dreams without recognizable content.
 - (3) Acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur upon awakening or when intoxicated). *Note:* In young children, trauma-specific reenactment may occur.
 - (4) Intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event.
 - (5) Physiological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event.
- C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) of the following:
- (1) Efforts to avoid thoughts, feelings, or conversations associated with the trauma
 - (2) Efforts to avoid activities, places, or people that arouse recollections of the trauma
 - (3) Inability to recall an important aspect of the trauma
 - (4) Markedly diminished interest or participation in significant activities
 - (5) Feeling of detachment or estrangement from others
 - (6) Restricted range of affect (e.g., unable to have loving feelings)
 - (7) Sense of foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)

- D. Persistent symptoms of increased arousal (not present before the trauma), as indicated by two (or more) of the following:
 - (1) Difficulty falling or staying asleep
 - (2) Irritability or outbursts of anger
 - (3) Difficulty concentrating
 - (4) Hypervigilance
 - (5) Exaggerated startle response
- E. Duration of the disturbance (symptoms in Criteria B, C, and D) is more than 1 month.
- F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Specify if:

Acute: if duration of symptoms is less than 3 months.

Chronic: if duration of symptoms is 3 months or more.

Specify if:

With delayed onset: if onset of symptoms is at least 6 months after the stressor.

Development of This Treatment Program

This CBT program was developed over several years as an ancillary part of our initial descriptive follow-up studies of individuals who had been involved in MVAs. That descriptive research was summarized in Blanchard and Hickling (2004).

Our first step was to review the records of clients in our follow-up study who had been treated by two therapists (including the first author, EJH) as part of the clinical responsibility to the participants. The techniques and procedures used were retrieved from clinician records, and assessment data were obtained from the research records. Over an average of 10.5 sessions, there was a 47% decrease in scores, as measured on a structured interview to assess PTSD.

Next, we created a 10-session structured treatment plan that primarily consisted of CBT. Each of the authors used this treatment with a new sample of 10 MVA survivors. This uncontrolled trial (Hickling & Blanchard, 1997) revealed a 67% reduction in PTSD symptom scores at the end of treatment, which improved to 73% at 3-month follow-up. Nine of the 10 clients were improved in terms of diagnosis.

Finally, we (Hickling & Blanchard, 1999) tested our supportive psychotherapy treatment on a new sample of eight clients who had been involved in an MVA. This treatment led to a 46% reduction in PTSD symptom scores.

With the final piece of pilot work completed, we were ready for our National Institute of Mental Health–sponsored randomized controlled trial comparing 10 sessions (flexibly applied to 8–12 sessions) of structured treatment, 10 sessions of supportive psychotherapy, and an assessment/wait list control condition.

This program was developed at the Center for Stress and Anxiety Disorders at the State University of New York, Albany, over the past 15 years. The initial idea for the investigation of PTSD after MVAs came from clients seen in clinical practice. The initial investigations were concerned with psychological disorders that follow car crashes and why some people seem to do quite well following this trauma, while others have significant problems.

The treatment program was a natural evolution of the assessment studies. Initial investigations were case studies that applied CBT approaches to PTSD for this population. Once we found a combination of interventions that targeted each symptom cluster of PTSD, we were able to win additional grant support to conduct empirical studies looking at the clinical effectiveness of these interventions. This treatment proved very successful when applied in a flexible, manual-based format (Blanchard & Hickling, 2004).

Over 15 years of working with MVA survivors, we have continued to look for greater flexibility and application of our treatment. One goal was to share our treatment approach with skilled clinicians who could benefit from the knowledge gained for this trauma population.

The treatment program, in addition to attending to the PTSD that can often follow a car crash, addresses travel anxiety, which is a fairly common problem for most survivors of an MVA. Additionally, other anxiety disorders and even mood disorders have been found to improve in many individuals after the manual-based treatment. Additional issues, such as anger management, existential concerns about the meaning of life, and facing one's mortality, are also common problems that have been included as part of the treatment approach.

Research on This Treatment Program

Assessment Studies

Our own research (Blanchard & Hickling, 1997, 2004) initially focused on individuals who were physically injured in their accidents and sought medical attention. We considered these clients survivors of serious MVAs. In this way, we excluded individuals who had smaller, "fender bender" accidents, although we understand that they, too, can have noticeable psychological effects. In our research efforts, we wanted to focus on individuals who would most likely be seen in a doctor's office.

The Albany MVA Project studied a large number of individuals who had PTSD after an MVA. The first study followed individuals who had PTSD 1 to 4 months after the MVA. The second study followed them up to 1 year after their accident, and some were followed even longer. These individuals did not receive psychological treatment, and they represent what we believe is the natural history of recovery following an MVA.

By the 6-month follow-up point, 55% of the clients studied showed some remission of symptoms. More than half showed full recovery, while the remaining survivors with PTSD showed some improvement. In contrast, 45% showed no change in symptoms, retaining the diagnosis of PTSD over the first 6-month period.

The second study looked at the results of 1-year follow-up of the MVA survivors. After the first 6 months, the degree of remission had essentially begun to plateau, with only 16% showing some remission by the

1-year point. Then, over the next year, there was very little additional change. The number of people who still met the full criteria for PTSD stayed at about 30%.

Our findings showed that the majority of MVA survivors who have acute PTSD show noticeable, spontaneous improvement over the first 6 to 8 months. Approximately one third show complete recovery with no intervention. Thereafter, there is very gradual remission, with about 65% showing some improvement at 12 months. Other researchers have noted continued, gradual improvement as far as 6 years post-trauma in their retrospective study of a large sample of mixed trauma survivors with PTSD (i.e., survivors of trauma other than exclusively MVAs).

It is important to remember that improvement in PTSD symptoms is not the same as absence of symptoms. In these clients, improvement means that the symptoms decreased, not that they disappeared totally.

Treatment Studies

Our treatment study looked at 78 MVA survivors who had chronic PTSD at least 6 months after their accident. They were divided into three groups. Those in the first group received CBT, those in the second group received supportive psychotherapy, and those in the third group were assessed over time as part of a wait list control group. Those who received CBT showed the greatest improvement, with 76.2% no longer meeting the diagnostic criteria for PTSD, as compared with only 47.6% in the supportive treatment group, and 23.8% in the wait list control group. In the CBT group, 82% of participants showed a reduction in the symptoms of major depression versus only 28% in the supportive psychotherapy group and 30% in the wait list control group. Similar results were found for generalized anxiety disorder, with 75% of the CBT group showing improvement versus 18% and 37% in the supportive psychotherapy group and the wait list control group, respectively.

At 1-year follow-up, our data showed that there continued to be a statistically significant advantage of CBT on a categorical diagnosis (PTSD or not) and on the Clinician Administered PTSD Scale (CAPS) scores compared with the group that received supportive psychotherapy. At

2-year follow-up, while there continued to be arithmetic differences favoring CBT treatment for PTSD over supportive psychotherapy, significant differences were found only for the scores on the PTSD Checklist (PCL) and the Impact of Events Scale.

Comorbidity

In addition to PTSD, there is a high likelihood that injured MVA survivors will have two comorbid conditions: travel anxiety and major depressive disorder. We believe that there should be initial and ongoing assessment of these two conditions during treatment.

The good news from our research (Blanchard, Hickling, Devineni, Veazey, Galovski, Mundy, et al., 2003) is that there is a high likelihood of improvement of major depression and travel anxiety with our CBT program for PTSD.

Travel Anxiety

It is very common for individuals to have difficulty with travel behavior after an MVA. Between 72% and 93% of those who have been in a serious MVA will have psychological difficulty when they are either a passenger or a driver in an automobile following their MVA.

Depression

Clinical depression is a common comorbid condition that frequently accompanies PTSD or Acute Stress Disorder (ASD) following an MVA. About 53% of the people in our study who had PTSD also had major depression.

Outline of the Treatment Program

For treatment purposes, we divided the 17 symptoms of PTSD into four clusters, rather than the three imposed by the DSM-IV classification. Then we introduced treatment techniques to target each of the clusters. In fact,

several factor analytic studies have supported the four-factor structure for PTSD. The clusters are as follows:

- Reexperiencing the trauma
- Avoidance
- Numbing and estrangement
- Hyperarousal

As a rough approximation, we use the CBT techniques indicated in table 1.1 to counter the symptoms of PTSD as shown.

Table 1.2 shows an outline of the components of treatment.

The treatment program is described in this manual and in the workbook for *Overcoming the Trauma of Your Motor Vehicle Accident* as a 10-session program. For some clients, seven or eight sessions may be enough. In our controlled research, we used a flexible, manual-based approach that included 8 to 12 sessions, based on therapist judgment. Overall, the controlled research had a mean of 10 sessions. (We also had a number of participants who had made progress in 12 sessions, but who needed more treatment to achieve a higher level of functioning). You, as the therapist, will need to use your clinical experience and judgment, which is aided by the ongoing structured reassessments provided as a part of this treat-

Table 1.1 How Treatment Techniques Target PTSD Symptom Clusters

| Technique | Targeted Symptom Cluster |
|---|---|
| Relaxation training | Hyperarousal |
| Writing and reading an MVA description | Reexperiencing and avoidance |
| Graduated imaginal and in vivo exposure | Avoidance and reexperiencing |
| Cognitive therapy techniques | Avoidance (to help cope with arousal from exposure and anxiety from intrusive memories) |
| Pleasant Events scheduling | Numbing and estrangement |
| Psychoeducation about MVAs and PTSD | All clusters |

Table 1.2 Treatment Components and Timeline

| | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Weeks 7-9 | Week 10 |
|--|--|--------|--------|--------|--------|---|-----------|---------|
| Intervention | Provide psychoeducation, practice relaxation, write an MVA description (week 1), meet with the spouse or partner | | | | | | | |
| | Rate travel situations with SUDS; read the MVA description three to four times per day; practice 11-, 8-, and 4-muscle-group relaxation exercises; begin or use coping self-statements; build and apply the travel hierarchy (use as needed) | | | | | | | |
| | Begin cognitive reappraisal, continue the relaxation exercises, practice relaxation, introduce relaxation-by-recall, continue to read the MVA description, begin and continue imaginal and in vivo exposure to the travel hierarchy, continue with coping statements | | | | | | | |
| | | | | | | Review all skills or tools learned up to this point; explore issues of mortality, anger, depression, or isolation (as needed) | | |
| Entire treatment typically takes 8 to 12 weeks | | | | | | | | |

ment, to determine when your client has achieved the treatment goals. An outline of the treatment sessions follows. (It is assumed, at this point, that you have met with the client at least once, agreed on the diagnosis, and either had the client purchase the workbook, or given the client the assessment forms to complete before the initial meeting for treatment).

Session 1. Provide psychoeducation. Review the client self-assessment from the PTSD Checklist for the symptoms of PTSD. Explain that PTSD is a normal reaction to abnormal circumstances. Describe symptom clusters and the techniques that will be used to help. Begin relaxation training. Assign a written description of the client’s MVA as homework.

Session 2. Review the homework. Review the client's understanding of PTSD (avoidance or continuation of anxiety, as well as the need for exposure-based intervention). Review the client's written description of the MVA, and incorporate it into the next homework assignment. Continue relaxation training. Arrange a time to meet with the client's spouse or partner, if possible.

Session 3. Review the homework. Have the client read their MVA description aloud. Discuss negative self-talk. Begin work on mastery and coping self-statements. Meet with the client's spouse or partner, if scheduled. Continue relaxation training. Introduce travel hierarchy.

Session 4. Review the homework. Introduce cognitive reappraisal. Discuss the driving hierarchy. Continue relaxation training.

Session 5. Review the homework. Introduce relaxation-by-recall. Discuss driving, cognitive techniques and their application, imaginal exposure as needed, and in vivo exposure. Ask the client to complete assessment instruments as a midtreatment measure.

Session 6. Review the homework. Introduce cue-conditioned relaxation. Continue working with CBT and the exposure model.

Session 7. Review the homework. Introduce numbing, pleasant event scheduling, existential concerns, anger, and depression and isolation.

Session 8. Review the homework. Flexibly apply interventions, as indicated.

Session 9. Review the homework. Flexibly apply interventions, as indicated.

Session 10. Review the homework. This is the termination session, unless the decision has been made to continue treatment. Review the reassessment instruments and treatment interventions.

Structure of the Sessions

Sessions are based on a 50- to 60-minute treatment period. On some occasions, you may need to adjust the content of the session and the rate at which you present the material, depending on how rapidly or slowly the client is able to use or understand the material. Typically, sessions begin with a review of the homework assigned the week before. This will allow the therapist to make a decision about how ready the client is for the next step in treatment. During most of the sessions, new material is introduced in a planned fashion. As much as possible, the client should be engaged in a dialogue to make sure that he or she grasps the material and is able to use it in the fashion desired.

The first six sessions are typically fairly structured to ensure that material is presented that addresses the core symptoms of PTSD after an MVA. The remaining sessions are then approached more flexibly, to address the individual needs of each client with PTSD as he or she is adjusting to the aftermath of a traumatic crash. Therefore, with some clients, it may be necessary to spend additional time on issues of numbing, estrangement, anger, or mortality.

The use of assessment tools that address the symptoms of PTSD, depression, and travel anxiety is considered an integral part of the treatment. These tools allow the client and the therapist to stay focused on the symptoms of PTSD and to discuss the improvements or lack of improvements in a timely and targeted fashion.