

AUSTRALIAN JOURNAL
OF CLINICAL AND
EXPERIMENTAL
HYPNOSIS



NOVEMBER 2002

VOLUME 30 NUMBER 2

Published by

Australian Society of Hypnosis

<i>Annual subscription rate:</i>	Australia:	Individuals	\$44.00
		Institutions and Libraries	\$55.00
	Overseas:	Individuals	\$45.00
		Institutions and Libraries	\$55.00
<i>Price per single copy: (including back copies)</i>		Individuals	\$30.00
		Institutions and Libraries	\$30.00

Subscription inquiries to the Editor Australian subscriptions include GST

**AUSTRALIAN JOURNAL OF CLINICAL AND
EXPERIMENTAL HYPNOSIS**

NOVEMBER 2002

VOLUME 30 NUMBER 2

A REVIEW OF HYPNOSIS IN THE TREATMENT OF PARASOMNIAS: NIGHTMARES, SLEEPWALKING, AND SLEEP TERROR DISORDERS <i>Gerard A. Kennedy</i>	99
HYPNOSIS IN THE TREATMENT OF CHRONIC PAIN: AN ECOSYSTEMIC APPROACH <i>Catherine Cosser</i>	156
A SINGLE SESSION OF HYPNOSIS AND EMDR IN THE TREATMENT OF CHRONIC PAIN <i>Patricia Ray and Andrew Page</i>	170
WHEN THE UNCONSCIOUS HAS BEEN LEFT IN THE WRONG HANDS <i>Annette Allman</i>	179
HYPNOSIS AS AN ADJUNCT TO HABIT REVERSAL IN THE TREATMENT OF CHRONIC FACIAL TICS <i>Trevor Mazzuchelli</i>	188
TREATING DENTAL NEEDLE PHOBIA USING HYPNOSIS <i>Michael Gow</i>	198
BOOK REVIEW	203
BOOKS AVAILABLE FOR REVIEW	207

**AUSTRALIAN JOURNAL OF
CLINICAL AND EXPERIMENTAL HYPNOSIS**

Copyright © The Australian Society of Hypnosis Limited 2002

EDITORIAL BOARD

Editor

Barry J. Evans, PhD

Associate Editors

Greg J. Coman, PhD, University of Melbourne
Kathryn M. Gow, PhD, Queensland University of Technology
Kevin McConkey, PhD, University of New South Wales
Wendy-Louise Walker, PhD, Sydney
Graham R. Wicks, MBBS, DObstRCOG, FRACGP,
Women's and Children's Hospital, Adelaide

Editorial Consultants

Peter B. Bloom, MD, Pennsylvania Hospital and University of Pennsylvania
Harold B. Crasilneck, PhD, PC, University of Texas Health Science Center,
Southwestern Medical School, Dallas, Texas
Frederick J. Evans, PhD, Carrier Foundation and UMDNJ, Rutgers Medical School
Fred H. Frankel, MD, ChB, DPM, Beth Israel Hospital and Harvard Medical School
David A. Oakley, PhD, University College, London
Campbell Perry, PhD, Concordia University, Montreal
Peter W. Sheehan, PhD, Australian Catholic University, Sydney

Editorial Assistant

Vacant

FEDERAL EXECUTIVE OF
THE AUSTRALIAN SOCIETY OF HYPNOSIS LIMITED

President: Gayre Christie, PhD

President-Elect: Barry J. Evans, PhD

Past President: James M. Auld, BDS, MSc

Federal Secretary: Robert C. Bierman, MBBS

Federal Treasurer: Greg J. Coman, PhD, MSc

Chairman — Publications: Barry J. Evans, PhD

Chairman — Board of Education: Wendy-Louise Walker, PhD

Manuscripts and editorial matter should be addressed to the Editor, Dr Barry Evans, at
PO Box 592, Heidelberg, Victoria 3084. All journal business communications and
subscriptions should be addressed to the Editor.

A REVIEW OF HYPNOSIS IN THE TREATMENT OF PARASOMNIAS: NIGHTMARE, SLEEPWALKING, AND SLEEP TERROR DISORDERS

Gerard A. Kennedy
Victoria University

Hypnosis was used to treat patients with the primary parasomnias: nightmare, sleepwalking, and sleep terror disorders. The results for the patient with nightmare disorder suggested that the effective element in decreasing the frequency of nightmares was the specific hypnotic suggestion to alter the nightmare content. The generalised effects of increased relaxation and improved sleep also contributed to therapeutic efficacy. Two other patients, with sleepwalking and sleep terror disorders, were also treated. In both the cases the effective element in decreasing the frequency of these parasomnias appeared to be the generalised effects of hypnosis. The data support the observations of other authors who have suggested the general lowering of tonic levels due to the anxiolytic effects of relaxation employed during hypnosis is responsible for reducing the incidence of these disorders. In conclusion, hypnosis is a relatively simple, non-invasive, inexpensive, and effective means of treating nightmare, sleepwalking, and sleep terror disorders.

I wish to thank Susan Hook for her optimistic encouragement and expert advice during the course of this project. I would also like to thank my fellow ASH members: John Redman, Dr John White, and Dr Allison Weber who also provided support and valuable comment on this project.

INTRODUCTION

Was it a vision, or a waking dream? Fled is that music:- Do I wake or sleep?
John Keats, 1795–1821

Parasomnias are disorders characterised by the occurrence of abnormal physiological and behavioural events in association with specific stages of sleep and/or during transitional stages of sleep (Mahowald & Rosen, 1990). In contrast to dyssomnias (disorders of initiation, maintenance and/or timing of the sleep), parasomnias do not involve abnormalities of the mechanisms, generating or timing sleep. Parasomnias involve the inappropriate activation of the autonomic nervous system or cognitive processes during various stages of sleep. Different parasomnias occur at specific stages during sleep, during transitions from one sleep stage to another, and/or at the sleep–wake or wake–sleep transitions. Most individuals suffering from parasomnias present with complaints of unusual behaviour during sleep rather than complaints of insomnia or excessive daytime sleepiness (Mahowald & Rosen, 1990). However, in some cases excessive daytime sleepiness may result from awakenings caused by parasomnia events during sleep.

Sleepwalking, nightmares, and sleep terror are the most easily identifiable parasomnias. Surveys suggest that nightmares, sleepwalking and sleep terror occur more frequently than indicated by case study reports in the literature. A survey of 1,006 households in the Los Angeles area found that 11% of the subjects experienced nightmares and 2.5% sleepwalking (Bixler, Kales, Soldatos, Kales, & Healy, 1979). Belicki and Belicki (1982) found that 443 undergraduate students reported having more than five nightmares a year. Wood and Bootzin (1990) found that 47% of 220 undergraduates who kept dream records over a two-week period reported at least one nightmare during the study. The estimated annual frequency of nightmares from this study was 23.6%, which is 2.5 times the average suggested by other retrospective studies.

It is important that parasomnias are correctly diagnosed and that effective treatment is given if the behaviours associated with sleep are potentially injurious, violent, or disruptive to the patient or other people. Parasomnias can be organised into categories based on a number of diagnostic criteria. These criteria are: (a) primary sleep phenomena, and (b) symptoms of organic systems that are manifested during sleep or associated transitional states (Mahowald & Rosen, 1990). The classification system shown in Table 1 is based on clinical phenomena. Mahowald and Rosen's (1990) clinical approach

to the classification of parasomnias differs from that of the American Psychiatric Association's Diagnostic and Statistical Manual (DSM-IV) and that of the Association of Sleep Disorders Centers (Diagnostic Classification of Sleep and Arousal Disorders). The advantage of Mahowald and Rosen's (1990) system is that it allows differential diagnosis of unusual sleep-related phenomena and also points to the therapeutic implications of diagnosis.

Table 1: Mahowald & Rosen's (1990) Classification of Parasomnias

Primary sleep parasomnias

- A.** NREM parasomnias
 1. Sleep starts
 2. Disorders of arousal (Sleep Terror & Sleepwalking Disorders (DSM-IV))
 3. Sleep drunkenness
- B.** REM parasomnias
 1. Dream anxiety attacks (Nightmare Disorder (DSM-IV))
 2. Hypnagogic hallucinations and/or sleep paralysis
 3. REM sleep behaviour disorder
- C.** Non-sleep stage specific parasomnias
 1. Bruxism
 2. Enuresis
 3. Rhythmic movement disorder
 4. Periodic movements of sleep
 5. Post-traumatic stress disorder
 6. Somniloquy (sleeptalking)

Secondary sleep parasomnias

- A.** Central nervous system
 1. Seizures
 2. Headaches
 - B.** Cardiopulmonary
 1. Sleep-related arrhythmias
 2. Nocturnal asthma
 3. Miscellaneous
 4. Sleep apnoea
 - C.** Gastrointestinal
 1. Gastroesophageal reflux
 2. Diffuse oesophageal spasm
 - D.** Miscellaneous
 1. Panic attacks
 2. Nocturnal muscle cramps
 3. Psychogenic dissociative states
-

Primary sleep parasomnias are classified on the basis of whether events occur during non-rapid-eye-movement sleep (NREM), rapid-eye-movement sleep (REM), or occur during any stage of sleep (miscellaneous). NREM and REM primary sleep parasomnias tend to occur only during these sleep stages, while miscellaneous parasomnias may occur during any stage of sleep (Mahowald & Rosen, 1990). Secondary sleep parasomnias are undesirable or troublesome motor, behavioural, or physiological events that occur during sleep. Secondary sleep parasomnias result from the activity of bodily systems and can be classified according to the organ system responsible for genesis.

Sleepwalking Disorder

During quiet sleepwalking the individual rises from bed and quietly walks about with their eyes open. The person may walk towards a stimulus such as a light or noise or may walk aimlessly from room to room. Children often walk into their parents' bedroom. The person is usually able to find their way around large obstacles. Occasionally, children and adults may perform inappropriate behaviours during quiet sleepwalking (e.g., urinating on the floor).

Sleepwalking is very common in children with about 15% (mostly boys) having episodes (cf. < 5% of adults) (Kales & Kales, 1974). The causes of sleepwalking vary according to the age of the subject (Berlin & Qayyum, 1986). A study by Klackenberg (1982) of 212 children, aged 6–16 in Sweden, found that the incidence of quiet sleepwalking was 40%. The study also indicated an annual prevalence of 6–17% with only 2–3% having more than one episode per month. In 33% of the children sleepwalking persisted for five years and in 12% it persisted for more than 10 years.

In children, sleepwalking is usually benign and self-limiting, beginning at about age seven, generally before age 10, and ceasing before age 15. Sleepwalking episodes usually last only a few minutes and rarely extend beyond 10 minutes. Sleepwalkers are difficult to communicate with and if left alone often return to bed. When awakened, they have little memory of anything that happened during the episode. Kales, Paulson, Jacobson, and Kales (1966) found that few sleepwalking incidents were related to specific traumatic events. Sleepwalking generally occurs about one or two hours after falling asleep. Sleepwalking often begins with a burst of high-voltage, slow-frequency EEG activity and is related to arousal from stage 3/4 NREM sleep (Kales et al., 1966; Broughton, 1968).

There is often a family history of sleepwalking (Vela-Bueno, Soldatos, & Julius, 1987). Kales, Soldatos, Bixler et al. (1980) found that 96% of 52 patients

referred to a sleep research centre reported one or more family member with a history of sleepwalking. A Japanese study showed that sleepwalking was more common in 37 children whose parents had also been sleepwalkers as children than in children with no family history of this disorder (Abe, Amatori, & Oda, 1984).

Sleepwalking can be caused by the use of particular medications (Nadel, 1981). Barbiturates and monamine oxidase inhibitor antidepressants suppress all REM sleep, and tricyclic antidepressants also reduce REM sleep. By altering the stages of sleep these drugs may influence the frequency of sleepwalking (Kales, Tan, Preston, & Allen, 1970; Kupfer & Bowers, 1972). Flemenbaum (1976) administered a questionnaire to 30 medical and 106 psychiatric patients to determine the frequency of frightening dreams. In both groups roughly equal numbers had dreams, but 28% of the psychiatric patients compared with 14% of the medical patients had frightening dreams. The difference between the two groups was even greater when patients who were taking psychotropic medication (antipsychotic or tricyclic antidepressants) in a single dose at bedtime were compared with medical patients. Sleepwalking, frightening dreams, confusion, and physiological arousal were significantly more frequent in psychiatric patients compared with hospitalised patients receiving no medication. Huapaya (1979) reported seven cases of sleepwalking that were apparently the result of the use of antipsychotic and antidepressant drugs in patients with longstanding psychiatric problems. Sleepwalking and sleep terror have also been reported in children and adolescents with febrile illnesses (Kales, Kales, Soldatos, Chamberlin, & Martin, 1979; Karacan, Wolff, Williams, Hirsch, & Webb, 1968).

Sleepwalkers tend to move in a confused and clumsy manner, but gradually they manifest better coordination, avoiding objects and often going to the bathroom (Kales & Kales, 1974). In most cases sleepwalkers do not suffer any harm, but occasionally may injure themselves and have been known to injure others (Hartmann, 1983; Oswald & Evans, 1985). Luchins, Sherwood, Gillin, Mendelson, and Wyatt (1978) observed a 40-year-old woman in a sleep laboratory who had been acquitted of killing her daughter while sleepwalking. The woman had been diagnosed and hospitalised for schizophrenia prior to the filicide. Four years after she was acquitted and released from hospital she was administered the same drug that she had been taking when the filicide occurred. She was observed to sleepwalk on three of the four nights she took the drug. Sleepwalking occurred during stage 4 sleep in the first half of night.

Sleep Terror Disorder

Sleep terror disorder consists of nocturnal episodes of extreme terror and panic that occur early in the sleep period in stage 3 or 4 sleep (Kales et al., 1982; Hartmann, 1984). Sleep terror has not received as much attention as nightmares because it is not as common. Broughton (1968) found that sleep terror occurred during sudden and intense arousal from slow-wave sleep with an EEG pattern similar to the awake pattern. Sleep terror episodes usually only last a few minutes and there is little or no recall of the episode. Two-thirds of sleep terror episodes occurred during the first NREM sleep period in six subjects monitored during 100 sessions (Fisher, Kahn, Edwards, & Davis, 1973). Sleep terror usually begins before the age of 10 and is usually outgrown during adolescence (Kales & Kales, 1974). Sleep terror episodes may occur as often as three times a week (Kales, Soldatos, Caldwell, Charney, et al., 1980).

Sleep terrors are distinguishable from nightmares in terms of clinical features and sleep-laboratory findings. Sleep terror includes more vocalisations, motility, and autonomic discharge and usually more fear and anxiety than nightmares. Sleep terror occurs during sleep stages 3 and 4, whereas nightmares occur during REM sleep (Hartmann, 1984; Kales et al., 1982; Vela-Bueno et al., 1987). Sleep terror and sleepwalking have similar clinical characteristics (Hartmann, Greenwald, & Brune, 1982; Kales, Cadieux, Soldatos, & Kales, 1982; Oswald & Evans, 1985; Vela-Bueno et al., 1987). Kales, Soldatos, Caldwell, Charney, and Martin (1980) investigated sleep terror and sleepwalking in 40 adults and found that sleep terror was often accompanied by sleepwalking and that the two sleep disorders seemed related to genetic and developmental factors. Halstrom (1972) traced a family history of sleep terror through three generations. When onset of these sleep disorders occurs after age 10, they are likely to persist in adulthood, episodes are more frequent, and the time of onset is often associated with major life stressors.

Mahowald and Rosen (1990) proposed a model for understanding the determinants and manifestations of partial arousals from sleep. When a period of deep NREM sleep terminates there is a transition that leads to one of three possible state changes: (a) beginning the next sleep cycle by switching to different sleep stages; (b) continued arousal until full awakening; or (c) becoming “trapped” — unable to completely get out of deep sleep, unable to arouse fully, and unable to move into the next sleep cycle.

There are three main factors that determine the occurrence of observable partial arousals. These factors are: (a) tonic sleep factors; (b) phasic sleep factors;

and (c) the behavioural response to the arousal (Mahowald & Rosen, 1990). The tonic factors that occur throughout the sleep period determine the underlying sleep pattern and arousal threshold. These include: (a) genetic; (b) developmental; (c) sleep deprivation; (d) chaotic sleep/wake scheduling; (e) drugs; and (f) psychological factors.

The most important tonic factors appear to be genetic and developmental. Partial arousals are most common in young children because deep sleep is deeper and longer than it is in older children. Phasic sleep factors (intermittent occurrence during the sleep cycle) can also cause the disruption of sleep (Mahowald & Rosen, 1990). In some individuals who are predisposed to partial arousals due to one of the tonic sleep factors listed above, a partial arousal can be precipitated by any strategically timed phasic sleep factor. Phasic sleep factors include both endogenous and exogenous factors. Endogenous factors may be both spontaneous and pathologic in nature. Pathologic phasic factors are: (a) obstructive sleep apnoea; (b) gastroesophageal reflux; (c) seizures; (d) fever; (e) periodic movements; and (f) psychological. Exogenous factors are: (a) stimulation such as auditory, tactile or visual; and (b) drugs.

In many individuals arousals appear to be spontaneous. This is evidenced by the fact that sleepwalking can be induced in children by standing them up during slow wave sleep (Broughton, 1968; Kales et al., 1966). Similarly, sleep terror can be triggered in susceptible individuals by auditory stimulation during slow wave sleep. Both these observations suggest that these behaviours are not the result of ongoing complex mental activity during sleep (Fisher, Byrne, Edwards, & Kahn, 1970; Fisher, Kahn, Edwards, Davis, & Fine, 1973). The behavioural response to the arousal is the clinically observed behaviour that occurs during the partial arousal, and will be determined by developmental or psychological factors, as well as by drugs. Tonic sleep factors, phasic sleep factors, and the behavioural response to the arousal interact to determine the frequency, duration, and severity of the partial arousal.

Mahowald and Rosen's (1990) model allows a framework for understanding the factors contributing to partial arousals and in addition may point to the preferred treatment when the diagnosis has been confirmed. Differential diagnosis of partial arousals excludes nocturnal seizures, anxiety dreams (nightmares), behaviour disorders and dissociated states (Schenk, Milner, Hurwitz, Bundlie, & Mahowald 1989). Individuals with these conditions may show unusual nocturnal behaviour that is indistinguishable from the disorders of partial arousal. The important factor in the differential diagnosis of unusual nocturnal behaviour is a detailed history that in most cases allows the correct

diagnosis to be established. In obtaining a detailed history the important facts include: (a) the timing of the event during the sleep cycle; (b) a detailed description of the event; (c) the level of consciousness before during and after the arousal; (d) daytime symptoms of sleepiness; (e) injury associated with the arousal; (f) memory for the event; and (g) personal/family history of partial arousal disorder (Mahowald & Rosen, 1990).

In the treatment of partial arousals it is important to confirm that a correct diagnosis has been made. Patients, particularly children, should be given reassurance that in most cases the arousal is benign and self-limiting in nature. Patients should be given practical advice about basic safety precautions that can be taken. For example, the bedroom should be cleared of obstacles and any windows should be locked or otherwise secured. In some cases it may be advisable to fit deadlocks or alarms to outside doors. Patients should be warned that sleep deprivation should be avoided because it may precipitate partial arousals. They should also be instructed to make the sleep/wake cycle as regular as possible. People living with the patient should be advised not to intervene during arousals as this may prolong the event. In most cases the sufferer is best left alone and any observer should just ensure that no injury occurs.

In cases where the arousals are dangerous or disruptive to the patient or to others, and no obvious precipitant can be identified, symptomatic treatment is needed. Two successful interventions for partial arousals have been described: pharmacological therapy (benzodiazepines and tricyclic antidepressants) (Fisher, Kahn, & Edwards, 1973; Guilleminault, 1989; Kavey, Whyte, Resor & Gidro-Frank, 1987); and hypnosis with relaxation and mental imagery (Gardner & Olness, 1981; Pesikoff & Davis, 1971; Reid, Ahmed, & Levie, 1981). Valium, which tends to suppress slow-wave sleep, has been shown to reduce the incidence of sleep terror episodes (Kales et al., 1982). The main problem with drug therapy for partial arousals is the long-term nature of the disorder and the adverse effects chronic drug usage may have on learning and behaviour (Weissbluth, 1984). Teaching patients relaxation and mental imagery offers an alternative and allows the use of self-regulation techniques to control previously uncontrolled nighttime behaviours. The mechanism(s) resulting in reduced frequency of partial arousals after pharmacological and/or hypnotic treatment are not well understood. It is possible that these treatments change underlying tonic sleep factors resulting in a higher arousal threshold and fewer arousals. It is also possible that the treatments (particularly hypnosis) cause a change in the behavioural response to the arousal.

Nightmare Disorder (Dream Anxiety Attacks)

Dream anxiety attacks are frightening dreams (nightmares) that are accompanied by moderate levels of autonomic activity (tachycardia, tachypnea, diaphoresis) and arousal (Association of Sleep Disorders Centers, 1979). In comparison to sleep terror, the level of autonomic activation is considerably less and recollection of the dream content is usually fairly complete. Dream anxiety attacks do not occur at sleep onset and are not associated with feelings of oppression or paralysis as may be experienced with sleep paralysis and hypnogogic hallucinations.

Fisher Byrne et al. (1970) recorded EEG, electroculogram (EOG), heart rate, conversations with subjects, other vocalisations, and ratings of anxiety of 38 subjects with nightmare disorder. Subjects were allowed to sleep undisturbed each night until spontaneously awakening with anxiety. Subjects were interviewed on awakening to examine the nature of the nightmare experience. Three types of nightmares were identified. Fifty major stage 4 nightmares (sleep terror) were observed in 7 subjects, 22 REM anxiety dreams in 11 subjects, and 7 subjects awoke spontaneously during stage 2 sleep.

Hartmann, Russ, Oldfield, Sivan, and Cooper (1987) found that 12 subjects remembered having nightmares before they were five years old and that the frequency decreased between the ages of 7 to 11 years. Generally, nightmares do not become a matter of concern unless they are recurrent, disrupt sleep and are anxiogenic (Erman, 1987).

Nightmares always occur during REM (dream sleep) and more often in the latter half of the sleep period (Hartmann, 1984). Therefore, drugs that influence REM sleep may influence the occurrence of nightmares. In addition to EEG activity during nightmares, the underlying biological processes probably involve changes in the levels of brain neurotransmitters. Parkinson's patients frequently report nightmares and vivid dreams. L-Dopa, a form of the neurotransmitter dopamine, counteracts the symptoms of Parkinson's disease. Patients who are more susceptible to nightmares report increased frequency of nightmares after small doses of L-Dopa (Hartmann, Skoff, Russ, & Oldfield, 1978; Hartmann et al., 1987).

During a nightmare there are signs of intense anxiety, evidenced by sweating, dilated pupils, and difficulty breathing. Dunn and Barrett (1988) found that scores on the Manifest Anxiety Scale of 79 college students who experienced frequent nightmares were not significantly different from the scores of students who did not experience nightmares. Individuals who

experience nightmares are more easily aroused and usually recall the content, which is more lengthy and detailed than in sleep terror. Nightmares with frightening or unpleasant content usually occur during REM sleep (Kales & Kales, 1974). Major life events have been associated with the onset of nightmares and mental stress increases the frequency of attacks (Celucci & Lawrence, 1978b; Garfield, 1987; Kales, Soldatos, Bixler et al., 1980).

Earlier studies have shown that subjects who suffer frequent nightmares in REM sleep showed many schizophrenic characteristics (Hartmann, 1965; Hartmann & Russ, 1979). Psychiatric interviews revealed considerable psychopathology in them and in their family histories. The mean scores of eight men were two standard deviations above normal on the MMPI depression scale, and the scores of 12 women were two standard deviations above normal on the psychopathic deviate and mania scales. In Hersen's (1971) study, hospital patients with psychotic disorders were divided into groups according to the frequency of reported nightmares. Patients with more manifest anxiety and concern about death reported more frequent nightmares. Jones (1951) reported that more frequent nightmare attacks tended to accompany the development of hysteria and insanity, but his observations were based on patients confined to psychiatric institutions.

Hartmann et al. (1987) compared 12 lifelong nightmare sufferers with 12 subjects who had vivid dreams, but no nightmares. Subjects who suffered nightmares scored significantly higher on the psychosis scale of the MMPI. These subjects were also more likely to have relatives who experienced nightmares and who required psychiatric admissions. In general, nightmare sufferers were more sensitive and open people, tended to show some features of the schizophrenic spectrum of disorders, and were more artistic with more manifest creative tendencies and interests (Belicki & Belicki, 1986; Hartmann, Falke, Russ, & Oldfield, 1981; Hartmann, Russ, Van Der Kolk, Falke, & Oldfield, 1981).

Studies have found that fear of death is often present in nightmares. In Feldman and Hersen's (1967) study 5% of the subjects experienced nightmares frequently, and 86% had at least one nightmare per year. Women scored higher than men on a 10-item Death Scale, but subjects of both sexes with more frequent nightmares expressed significantly more concern about death. Feelings of helplessness and being threatened were common themes reported by those experiencing frequent nightmares. Women reported these themes twice as often as men. The final stage of women's nightmare experiences was often escape from danger by awakening (Feldman & Hyman, 1968).

Lester (1968) examined fear of death as a feature of nightmares by asking 304 college students to estimate the frequency of dreams and nightmares and to complete a Fear of Death Scale. Subjects with the poorest memory for dreams reported fear of death less often. Lester (1968) suggested that type of question asked and subject's memory of dreams overstated the prominence of fear of death in the nightmares of frequent sufferers. In a later study of 170 students, the frequency of nightmares was found to be associated more with fears of others dying rather than fear of one's own death (Lester, 1969).

Surveys of war veterans indicate that combat personnel report nightmares more frequently than non-combat personnel (Kramer & Kinney, 1988; Kramer, Schoen, & Kinney, 1987). A study of 529 World War II and Korean War combat veterans in a mixed medical and psychiatric outpatient clinic showed that 32% had frequent nightmares, a higher rate than expected from general population data (Van Der Kolk, Blitz, Burr, Sherry, & Hartmann, 1984). The nightmares of veterans were found to occur earlier in sleep, usually reflected actual events, and were more commonly associated with gross bodily movement. The MMPI profiles were abnormally high and Rorschach protocols revealed evidence of thought disorder in many veterans.

Some research has suggested that anxiety is associated with nightmares (Celucci & Lawrence, 1978b). Haynes and Mooney (1975) explored the sleep patterns, anxiety levels, and physiological arousal of college students experiencing nightmares in three questionnaire studies. In the first study, 248 students who experienced nightmares did not differ in sleep patterns from students who had no nightmares. The second study examined the relationship between anxiety and the frequency of nightmares. It was found that scores on the Manifest Anxiety Scale were positively related to the frequency of nightmares. This suggested that anxiety influenced the frequency of nightmares. It was hypothesised that nightmares may have an anxiety-reducing role, facilitating the extinction of anxiety and physical arousal. To test this hypothesis, implosive therapy was used with four female students who experienced frequent nightmares. Haynes and Mooney (1975) found that the therapy reduced the frequency and intensity of nightmares experienced by the four subjects.

Psychological factors have been given a major role in the development and persistence of nightmares (Kales, Soldatos, Caldwell, Charney, et al., 1980). Behavioural therapy has been shown to be beneficial for some adults who suffer recurrent nightmares (Geer & Silverman, 1967; Schindler, 1980; Shorkey & Himle, 1974;). Similarly, systematic desensitisation has been shown to

reduce the frequency and intensity of nightmare experiences (Celucci & Lawrence, 1978a). Miller and DiPilato (1983) studied 32 nightmare sufferers randomly assigned to a relaxation group, a systematic desensitisation group and a waiting list group (control). In both treatment groups there was a significant decrease in the frequency, but not the intensity of nightmares. Subsequent treatment of the waiting list group also significantly reduced the frequency of nightmare attacks.

Pharmacotherapy has been shown to be effective in reducing the frequency and intensity of some parasomnias. This effect probably operates via drug effects in altering sleep phases and REM sleep (Hartmann, 1966, 1984). Nightmares occur during REM sleep, thus anti-anxiety agents such as diazepam (Valium) and antidepressants that suppress REM sleep have helped patients with frequent nightmares (Erman, 1987, Kales et al., 1970). However, drug withdrawal may lead to REM-rebound and temporarily increase the occurrence of nightmares (Kales, Soldatos, & Kales, 1987). Beta-adrenergic blocker drugs like propranolol, prescribed for some heart patients, may increase the frequency of nightmares. Reserpine, a drug that prevents the intraneuronal storage of the neurotransmitters dopamine and norepinephrine, also increases the frequency of nightmares (Hartmann, 1966, 1984).

Conclusions

In general, parasomnias such as nightmares, sleep terror and sleepwalking are better understood than they were when Jones (1951) described them. Increased understanding of parasomnias has largely been due to objective studies that have been performed using polysomnography. Polysomnographic studies have allowed the behavioural disturbances observed in parasomnias to be correlated with the underlying physiological states. However, clinical understanding of sleep-associated phenomena remains relatively poor because often those suffering from these conditions do not come to the attention of relevant medical authorities.

Hypnosis and the Treatment of Nightmare Disorder

In the literature on sleep there are numerous references to theories about the function of dreams (e.g., Bootzin, Kihlstrom, & Schacter, 1990; Ellman & Antrobus, 1991; Hobson, 1988). However, there is very little literature on nightmares (Hartmann, 1984), and even less on recurring nightmares. Repetitive nightmares may occur frequently with either the same or differing

themes. Recurrent nightmares have been reported and discussed as a definitive feature of PTSD (Ross, Ball, Sullivan & Caroff, 1989). There are fewer reports of repetitive nightmares featuring in non-traumatic conditions such as the anxiety and depressive disorders. The only diagnosis other than PTSD for which nightmares are considered a diagnostic feature is Nightmare Disorder (DSM-IV, 1994).

The lack of attention that recurrent nightmares have received may be due to the tendency for clinicians to view nightmares as secondary symptoms of other underlying psychopathology. Given that this is the case, the underlying disorder becomes the focus of treatment rather than the nightmares (Eccles, Wilde, & Marshall, 1988). Psychoanalytic practitioners may also view nightmares as a useful source of information to aid in diagnosing and understanding the patient's psychopathology. In cases where nightmares cause severe sleep disturbance, patients may be prescribed sedative medications. There are very few accounts of psychotherapy being routinely used to directly address recurrent nightmares (Brylowski, 1990; Halliday, 1982; Kellner, Neidhardt, Krakow, & Pathak, 1992; Miller & DiPilato, 1983).

The focus on nightmares as symptomatic of underlying psychopathology (which may be correct in some cases) has probably led to needlessly prolonged distress in some patients. Recurrent nightmares can cause fatigue from loss of sleep due to fear, and anxiety and depression may increase as a result of the effect nightmares have on the patient's waking life. Patients may see the continuation of nightmares as evidence that psychotherapy is not proving to be effective and this, in turn, can lead to further demoralisation (Frank & Frank, 1991).

Hypnosis is one direct method that has been effectively employed to allow patients to either terminate or control recurrent nightmares (Kingsbury, 1993). There are a number of possible mechanisms via which the hypnotic treatment of recurrent nightmares may have some impact on other related problems in the cluster of "symptoms" that make up the diagnosed psychopathology. For example, the successful treatment of any aspect of what patients believe are related problems may lead to increased expectation that the overall therapy will be helpful in addressing other problem areas. Furthermore, the successful treatment of a problem may have an impact on other important areas of functioning. A treatment that leads to the termination or control of recurrent nightmares may lead to significantly improved sleep and hence higher daytime levels of energy and concentration. A further benefit of treating nightmares directly is that this conforms to the patient's view of what the problem really

is. Most patients are not able to understand that each symptom may be part of a set caused by some central psychopathology or condition. The reflection of the patient's understanding has been held as an essential factor in demonstrating empathy and establishing a therapeutic relationship (Rogers, 1957).

The proposed use of hypnosis as a treatment for recurrent nightmares may be questioned, given that its differential effectiveness in altering dreams has not been clearly established. However, there are a number of factors that suggest that hypnosis may be useful for treating recurrent nightmares (Kingsbury, 1993). In the hypnotic state, the nightmare content is more involving for the patient than under normal psychotherapy. Therefore, the patient has greater access to the emotional state the nightmare produces and this appears to be therapeutically useful (Gilligan, 1988). Furthermore, the hypnotic induction may mark a separate state from normal consciousness and may heighten the expectation that this state has the power to effect direct changes in what may otherwise be seemingly non-volitional behaviour (Combs & Freedman, 1990; van der Hart, 1993). Research and theory support the link between hypnosis and dreams via proposed dissociative mechanisms (Gabel, 1989, 1990). Finally, the available literature indicates that hypnosis can be effectively used to either terminate or control the content of recurrent nightmares (Kingsbury, 1993; Marks, 1978; Moss, 1973; Seif, 1985; Tart, 1966).

A variety of interventions have been shown to alter dreams and their content (Arkin & Antrobus, 1991; Walker & Johnson, 1974). However, there has been very little research on the effect hypnosis has on subsequent dreaming. Research that has been carried out may provide some ideas for therapeutic interventions, but in general its clinical significance has been limited. Much of the earlier research examining the effects of hypnosis on dreams has been carried out on populations of university students rather than on patients suffering recurrent nightmares. The main aim of these studies has been to determine whether or not specific dream content can be produced via hypnosis.

Tart and Dick (1970) studied the conscious control of dreaming in 13 highly hypnotisable subjects during two nights in the laboratory. Before subjects went to sleep each night they were hypnotised and instructed to dream about a stimulus narrative in every stage 1-REM dream of the night. A second stimulus narrative was used for the other night in a counterbalanced order. Dream reports were obtained from stage 1-REM awakenings. With the exception of one subject, all subjects showed some effects, with two to four elements of the stimulus narratives reported as appearing in dreams. Thematic

analysis of subjects dream reports showed that eight of the 13 subjects reported at least one dream in which the stimulus narrative was a dominant organiser of content. The number of stimulus narrative elements appearing in the dream reports was positively correlated with hypnotisability. The correlations were positive for factors of hypnotisability characterising ability to function in an altered state of consciousness and negative for compulsive, inhibitory aspects of hypnotisability. Hypnosis was helpful, but not necessary to achieve deliberate control of dream content. Such control has important therapeutic ramifications, particularly in assisting those with recurrent nightmares to control or diminish the effects.

Barber, Walker, and Hahn (1973) examined the effects of hypnotic induction and types of suggestion on sleep mentation in 73 subjects. Just prior to sleep each night, half the subjects were exposed to a hypnotic induction and half were not, and all subjects were given either authoritative, permissive, or no suggestions to think and dream that night on a specific topic. Subjects reported their thoughts and dreams when awakened at sleep onset and during REM and NREM periods. The content of the dreams were affected by an interaction between hypnotic induction and types of suggestions, and the hypnotic induction increased the number of nocturnal thoughts that pertained to the specific topic. The findings of this study suggest, as did the findings of the earlier study by Tart and Dick (1970), that hypnosis can be used to effectively alter dreams and therefore might be useful for altering nightmare content.

A study by Belicki & Belicki (1986) examined the relationships between nightmare frequency and hypnotic ability, vividness of visual imagery and tendency to become absorbed in fantasy-like experiences. The subjects were 841 undergraduate university students who participated in group tests of hypnotisability, after which they estimated the number of nightmares that they had experienced in the previous year. In addition, 406 of the subjects completed Mark's Vividness of Visual Imagery Questionnaire, and Rotenberg and Bower's Absorption Scale. A total of 76% of the subjects reported experiencing at least one nightmare in the previous year and 8.3% reported experiencing one or more nightmares per month. Individuals with frequent nightmares scored higher on hypnotisability, vividness of visual imagery, and absorption.

Some research has focused on the relationship between nightmare frequency and psychopathology. Belicki and Belicki's (1986) study examined the relationship of nightmares with more general personality (or cognitive) styles. Hartmann, Russ, Van der Kolk, et al. (1981) observed increased creativity in

nightmare sufferers. Other studies have associated hypnotic ability with “fear-proneness.” Positive correlations have been observed between hypnotic ability and phobias (Frankel & Orne, 1976) and post-traumatic stress disorder (Stutman & Bliss, 1985). Increased frequency of nightmares in highly hypnotisable subjects may be an indication of predisposition towards fear-based syndromes. However, it is not clear how relevant these observations are in relation to people in the general population who suffer nightmares. Belicki, Altray, and Hill (1985) observed that nightmares are not always anxiety dreams, but can be primarily characterised by other dysphoric emotions, such as grief. Hartmann (1984) argued that patients with PTSD are quite different from those who present with nightmares that do not stem from a known traumatic incident.

The main source of information about the hypnotic treatment of recurrent nightmares are the few available published case studies and anecdotal clinical notes. The problem with case studies and clinical notes is that the amount of information given is often limited and may not be very useful. In most of these reports only rarely is there any attempt to present a number of similar cases in a coherent fashion and generalisations made are, more often than not, poorly transferable from one case to another. Nevertheless, case studies and clinical notes are heuristically valuable in that they do suggest possible hypnotic treatment strategies.

Clinical Studies of the Hypnotic Treatment of Nightmare Disorder

The available clinical literature suggests there are a number of different strategies for treating recurrent nightmares that replay the patient's actual experiences (these strategies would be equally applicable to nightmares based on real non-traumatic or imagined experiences). These types of nightmares can be indicative of traumatic experiences in recent adult life. This type of recurrent nightmare has been more frequently reported in the literature, probably due to the clear traumatic aetiology. One reported strategy involves transforming the nightmare while the patient is reliving or replaying it under hypnosis (Eichelman, 1985; Gilligan, 1988). In this technique new elements may be introduced into the nightmare or frightening elements in the nightmare may be altered to appear more benign. Regardless of whether a new element is introduced separately, or made by changing something that occurs within the nightmare, the goal of this strategy is to change the patient's reality so that it can be coped with more easily.

The reported case studies indicate that this technique can be used to achieve the desired goal in a stable manner even though it alters a reality that the patient may know to be factual. In such cases a helpful friend or parent may be introduced into a nightmare to provide support, or a threatening weapon may be transformed into some harmless object. Some therapists may be concerned about the fact the technique involves altering the patient's recall of a factual event rather than helping the patient to gain mastery over the nightmare content. However, this strategy has been reported to be highly effective in practice. Erikson (1959), in work on revivification of nightmares, alluded to the fact that the technique was designed not to alter the true memory occurring within the nightmare but to add fantasy elements that help the patient cope with the frightening nightmare content.

Another strategy that has been reported in the literature involves having the patient re-expose themselves to the content of the nightmare, but in a manner that allows them to acquire mastery of the nightmare content. The patient can be taught how to interrupt the nightmare, first in the treatment setting under hypnosis and then later at home (Gorton, 1988). A further method is based on desensitisation or flooding where there is repeated exposure to the nightmare while the person is hypnotised. A variation of this technique allows the patient to have more felt control by having them place the nightmare on a television or movie screen. In this method the hypnotised patient has control of the

imagery via an imaginary remote-control. A further variation re-exposes the patient to the nightmare in progressively less involving contexts (Kingsbury, 1988). Bishay (1985), who used a non-hypnotic treatment, and Kingsbury (1988, 1992) a hypnotic treatment for nightmares both suggested that gaining felt self-efficacy was an important therapeutic factor in eliminating recurrent nightmares.

Helping the patient to solve a nightmare in some manner is another way to eliminate recurrent nightmares. In this context, the recurrent nightmare can be viewed as an unfinished story that is interrupted at some point by the patient waking. Waking may be the only way the patient can escape from extremely frightening nightmares. The patient can be guided past the usual point of waking in the nightmare while in the hypnotic state and helped to discover the benign or successful ending. Thus, the patient is assisted by the hypnotherapist to complete the nightmare in a manner that is not fear inducing (Kingsbury, 1993). This method appears to fit within the beliefs of many patients who view themselves as escaping their nightmares before some horrible event befalls them. The completion of the otherwise unfinished nightmare can be a method of utilising the patient's beliefs and reframing them to allow a sense of felt mastery (Watzlawick, 1978).

Some methods of treating recurrent nightmares are based on psychoanalysis but use hypnosis as a means of helping the patients retrieve and process material from nightmare episodes. In such treatments the patient may be asked to experience the nightmare under hypnosis and then the material discovered is dealt with in regular therapy. Arluck (1964) successfully treated a woman with nightmare disorder using hypnoanalysis. Similarly, Moss (1973) used hypnosymbolism analysis to facilitate a male inmate with nightmare disorder re-dreaming his nightmares. The material uncovered during these psychotherapy sessions was then used to make his nightmare more benign. Gorton (1988) treated a 57-year-old woman who presented with obsessional worries, insomnia and lifelong nightmares. Gorton (1988) employed a combination of psychodynamic psychotherapy, paradoxical re-experiencing of the nightmares, and posthypnotic suggestion to treat the woman over a period of 10 months. According to Gorton (1988) the treatment allowed the patient to take control of her symptoms by means of the paradoxical use of trance within a narcissistic transference that led to the emergence of central issues related to early childhood trauma and a series of losses of self-objects. Finally, it was stated that an underlying ambivalent relationship with these lost self-objects and a wish/fear dilemma with regard to death itself was then amenable to psychotherapeutic

intervention. The critical factor was having the patient practise self-hypnosis at home to re-experience nightmares and understand the content.

The major criticism of methods that employ a combination of analytical or psychoanalytical therapy with hypnosis to treat nightmare disorder is that they may take a long time to give the patient any relief from the frightening nightmares. This is apparent from Gorton's (1988) report that stated the therapy was conducted over a 10-month period. Other hypnotic methods of relieving nightmare sufferers reported above may be helpful even after one session. Therefore, a case could be made for using hypnosis for the direct treatment of nightmare disorder within any given psychological approach to therapy for other related and/or causal issues.

Miller and DiPilato (1983) found that relaxation was just as effective as systematic desensitisation and that both were superior to wait-list control condition in reducing nightmares. Their data suggests that therapies aimed at anxiety reduction in general are effective in reducing the frequency of nightmares. This suggests that reduction of arousal may be an important element in reducing the occurrence of nightmares, and that nightmares are not necessarily enmeshed in a web of psychopathology. Therefore, hypnosis can be employed in promoting a more relaxed sleep within the context of a given therapeutic regimen. Korth (1964) used hypnosis with suggestions of restful, relaxed sleep and confidence to effectively treat a woman experiencing nightmares about examinations.

Cooperman and Schafer (1983) reported treating a 56-year-old female with nightmare disorder. The patient reported the content of her nightmares centred on the loss of her family. Hypnotic fantasy visits with her deceased husband and children were successfully used to alleviate the nightmares. Eichelman (1985) used hypnosis with two Vietnam veterans who had PTSD with recurring nightmares. In his work, hypnosis was used to modify the content and outcome of the nightmares so that they took on a more benign character. The two veterans reported a significant reduction in the intensity and frequency of their nightmares.

Jencks and Brazza (1986) used hypnosis with adult subjects to promote self-confrontation in order to resolve nightmare content. Similarly, Kingsbury (1993) employed hypnosis with three adult female patients. Two subjects (35 and 44 years old) had no psychopathology while the third 26-year-old patient was suffering from depression with suicidal ideation. In the treatments, hypnosis was used to view the traumatic event in the nightmare as an observer and thereby reinterpret the result in a more realistic manner. Marks (1978)

treated a woman with nightmare disorder by employing hypnotic suggestions for the rehearsal of the nightmare in the waking state. Seif (1985) used hypnosis to treat a man who was suffering nightmare disorder. The man was constrained by his life situation and a high degree of conformity to what others wanted him to do. The hypnotic treatment included suggestions that the man was free to be himself and that he did not have to please anyone.

In summary, the use of hypnosis to treat nightmare disorder in reported studies appears to be in most cases successful in that nightmares are either eliminated totally or at least altered to some extent so that patients learn to cope better with the content. A variety of strategies have been reported with some authors suggesting that the therapeutic element might centre around reduced arousal. Other authors have suggested that cognitive elements may be important because patients suffering from nightmares can reinterpret or directly alter nightmare content so that it can be coped with. Finally, the use of hypnosis as an aid to uncovering material or reinterpreting material within the context of more traditional psychotherapeutic approaches also has its advocates. In examining the literature it is clear that perhaps the best approach to alleviating nightmare disorder in the short-term is an individualised and direct approach using hypnosis. In the longer term, patients with nightmare disorder that is treated directly with hypnosis may still require ongoing psychotherapy to assist with other symptomatology that may or may not be causally related to nightmare disorder. The short-term alleviation of frightening nightmares via hypnosis may help the patient to gain confidence and function at a higher level and this, in turn, may help produce therapeutic gains.

Hypnotic Treatment of Sleepwalking and Sleep Terror Disorders

Broughton's (1968) studies of parasomnias suggested that non-specific and chronic repressed mental conflict associated with anxiety may result in physiological changes that alter the individual's arousal response during sleep and at the transitions to and from sleep. Broughton proposed that sleepwalking and sleep terror are primarily disorders of arousal rather than disorders of sleep per se and that they may be triggered by external stimuli. Fisher, Kahn, Edwards and Davis (1973) have shown that this hypothesis was correct, because they were able to demonstrate that night terror can be triggered in sleeping patients by sounding a buzzer.

Clinical Studies of the Hypnotic Treatment of Sleepwalking and Sleep Terror Disorders

Koe (1989) noted that Broughton's work on parasomnias suggested a possible alternative application for using hypnosis in the treatment of sleep terror. Koe hypothesised that limiting the perception of external stimulation at night through posthypnotic suggestion might reduce the occurrence of sleep terror episodes. In Koe's case study of the hypnotic treatment of sleep terror disorder, the patient was a 16-year-old boy who had proved resistant to other forms of treatment. Tranquillisers such as diazepam, behaviour modification, and psychotherapy all had little or no effect on the intensity and frequency of the patient's sleep terror episodes. The patient's mother reported that there were only two nights when he had not experienced sleep terror since the age of seven. The sleep terror episodes usually began each night with repetitive, terrified, screaming and involved leaping out of bed and running around the room. The patient was often observed to have more than one episode per night and sometimes became violent, breaking his mother's nose on one occasion, smashing a window while trying to run through it on another occasion, and frequently destroying objects in his room. The patient's diagnosis of sleep terror disorder was confirmed in a sleep research laboratory. The patient was able to state that his night terror was a fear of dying in his sleep but was not able to say how he came to have this fear.

The patient was highly embarrassed by his condition, and thus according to Koe (1989), highly motivated to change. In treating this patient, Koe used systematic relaxation as a hypnotic induction and his patient achieved a depth of 7 on the Long Stanford Scale of Hypnotic Depth, indicating a deep state of hypnosis. While the patient was hypnotised, he was given the suggestion that he was in a deep sleep, deep sleep — in the stage of sleep in which he normally experienced sleep terror. He was then told that a sleep terror episode was beginning. Koe observed that the patient's respiration rate accelerated and he began to toss and turn, but remained in a supine position, giving the appearance being asleep. After several minutes of increased autonomic activity had passed, Koe tapped his pencil on his desk. The patient responded to this stimulus by screaming and immediately jumping up and running into the wall of the room. This episode of sleep terror induced under hypnosis lasted about 15 seconds.

The manner in which Koe's patient responded to the pencil tap suggested that external sounds might be triggering his sleep terror episodes. When the

patient returned on the following week, Koe again hypnotised him and gave the posthypnotic suggestion that he would gradually become less and less aware of outside sounds and sensations while asleep. During the subsequent week only three episodes of sleep terror were reported and only one further episode in the following two weeks.

Koe (1989) wished to confirm that the posthypnotic suggestions were in fact causal in the reduction of the frequency of the sleep terror episodes. In order to achieve this aim he asked the subject for permission to again hypnotise him and remove the suggestions. However, the patient would not permit the removal of the posthypnotic suggestions because he was so pleased with the treatment's effect. Therefore, Koe was unable to determine whether or not the sleep terror episodes could be made to resume and thus was not able to establish the validity of the hypnotic treatment. A follow-up three months later found that the patient was no longer experiencing sleep terror and that he remained very pleased with the effect of the hypnotic treatment.

According to Hurwitz, Mahowald, Schenck, Schutler, and Bundlie (1991) hypnosis is an underrated modality of therapy for individuals suffering automatised, embarrassing, and occasionally dangerous behaviours associated with sleepwalking and sleep terror. Hurwitz (1986) and Hurwitz and Mahowald (1988) reported the successful use of hypnosis for the treatment of individuals with sleepwalking and sleep terror disorders. A fuller report of subjects from these two studies and additional subjects is provided in Hurwitz et al.'s (1991) paper. In this study hypnosis was introduced as a method of enhancing self-control. Hypnotic trance was usually induced with the commonly used technique of suggesting eye closure during upward gaze and subsequent relaxation and sensations of floating. Patients were then asked to visualise themselves in a pleasant, comfortable scene where they would find a screen on which they could watch a time-lapse film of themselves sleeping quietly and peacefully through an entire night. The initial induction in the office was often recorded on audiocassette, lasted about 20 minutes, and constituted instruction for self-hypnosis. Posthypnotic suggestions included suggestions for security and anxiety reduction (e.g., "Your unconscious mind even during sleep can be aware that you are safe and secure"), restful sleep with minimal movement, and the instruction that suggestions be reiterated during self-hypnotic practice at home. The patients were instructed to practise self-hypnosis twice each day, and that one of these sessions should be carried out just prior to retiring at night. Follow-up sessions were scheduled for reinforcement of the hypnotic treatment and subjects were encouraged to

report their experiences by telephone. Patients were treated during one or up to six sessions at varying intervals over a period of time.

There were a total of 27 patients (19 men and 8 women) aged between 18 and 51 years old. Eight had a primary diagnosis of sleepwalking disorder and four sleep terror disorder. The other 15 patients were diagnosed with both sleepwalking and sleep terror disorders. Twenty-two of the patients reported bruises and lacerations as a result of frequent nocturnal arousals. The frequency of episodes ranged from one to 45 per month. Past psychiatric conditions were noted in 45% of the patients. Three patients had a history of depression, four had histories of drug and alcohol abuse but were in longstanding remission, one patient had a history of generalised anxiety disorder, six phobic disorders, two adjustment disorder, and two attention deficit disorder. However, at the time of treatment only one patient had an active DSM-III axis-I psychiatric disorder. This patient had panic disorder and she was later found to have a prolapsed mitral valve. Thirteen of the patients had no psychiatric history and showed no signs of psychiatric disorder at the time of the study. Eighteen patients had a family history of parasomnia disorders. Polysomnographic studies on 17 of the patients revealed no evidence of seizure, REM sleep behaviour disorder, or other disorders that might present as sleep terror/sleepwalking parasomnias. Eight of these patients showed a high number of arousals from sleep during the sleep study. The number of arousals shown by these individuals was in excess of what might have been expected as a first night effect in the sleep laboratory.

The hypnotically based treatment was helpful in 20 of the 27 patients with sleepwalking and sleep terror disorders. The patients were followed up at substantial intervals to determine the effectiveness of the treatment. Five patients reported complete remission, but most emphasised the benefit derived from increased control of frenzied and ambulatory behaviours rather than the complete elimination of the arousals. They were often aware of having awakened, occasionally at the bedside, but perceived immediate awareness of the arousals and returned to sleep. Six of the subjects did not continue to use self-hypnosis. The wives of two of these patients reported that they knew that if their husbands did use self-hypnosis when under stress it reduced their aberrant nocturnal behaviour markedly.

Dillahunt (1971) treated an adult male with sleepwalking disorder. The treatment consisted of hypnosis with suggestions for calm sleep. Dillahunt (1973) also reported a successful single session treatment of a middle-aged female sleepwalker. He used hypnotic suggestions that somnambulism, like

hypnotic trance, is subject to self-regulation. Taboada (1975) treated a 7-year-old boy suffering acute onset of sleep terrors with one hypnotherapeutic session that resulted in a complete remission that was maintained for 18 months. Eliseo (1975) reported the amelioration of sleepwalking in a 19-year-old man after seven sessions of hypnotherapy. He used suggestions for sleeping calmly and immediate wakefulness if the patient's feet should touch the floor during sleep.

Reid (1975) described the successful treatment of four of six 17–21-year-old military trainees with serious sleepwalking using Dillahunts' (1973) technique. Follow-up was limited to the brief period of their military training, but the four trainees reported no further sleepwalking during this period. Later, Reid, et al. (1981) conducted a blind crossover study designed to evaluate specialised hypnotherapy for the treatment of severe sleepwalking disorder. The subjects were free from significant psychiatric illness. It was hypothesised that subjects suffering from otherwise uncomplicated sleepwalking disorder would show a decline in sleepwalking episodes following a course of hypnotherapy designed to impart arousal cues that were inconsistent with sleepwalking behaviour. Furthermore, it was also proposed that improvement would be greater using the specialised hypnotic treatment than simple hypnotherapy that involved suggestion alone.

Subjects were randomly assigned to either active (7 males and 2 females) or a suggestion only group (3 males and 1 female). Groups were unequal because a lottery-like assignment procedure was employed. The design was a single-blind, rater-blind, modified crossover procedure. Every subject in the active group improved at the end of the three-week study period. In the suggestion-only group two subjects improved dramatically but the other two showed no improvement. The two subjects that showed improvement elected to crossover into the active treatment, but showed no further improvement. One subject from the active group elected to crossover into the suggestion-only treatment in order to make further gains, but his symptoms remained the same. At a three month follow-up, only one subject from the active group showed pre-treatment levels of sleepwalking. The two subjects from the suggestion-only group also remained stable with fewer sleepwalking episodes reported compared with the pre-treatment period. The results indicated that a relatively simple, non-invasive, inexpensive procedure could be used to alleviate sleepwalking disorder in adults. In conclusion, a few subjects reported waking beside the bed early in the treatment phase. However, it was more usual for the therapeutic result to generalise through some mechanism that is not clear

so that there was no sleepwalking and subsequent awakening.

Gutnik and Reid (1982) stated that 50% of the sleepwalking cases they treated responded to hypnotic treatment in a positive manner. They used hypnosis to treat adults with sleepwalking disorder and employed suggestions for calm sleep and alertness if the patient's feet touched the floor during sleep. Reid, Haffke, and Chu (1984) treated five adults 28–56 years old with intractable sleepwalking disorder. However, in this group of subjects, hypnosis and psychotherapy were not effective, but some subjects responded to treatment with diazepam.

Pai (1946) reported his experiences of treating 1,853 wartime neurotic male patients at the Maudsley Hospital in London. Sleepwalking and other unusual nocturnal activities were observed in 117 of these men. Most were differentially diagnosed with sleepwalking that was elaborated to include anxiety, hysterical dissociation, post-infective, and hysteromalingering states. Treatment for many included resolution of stressors and time-limited heavy sedation. Hypnosis was used to aid understanding and treat those with hysterical–dissociative underpinnings. Pai (1946) reported that hypnosis was helpful in resolving sleepwalking in some of his patients.

Kramer (1988) used hypnosis to treat sleep terror disorder in a 10-year-old boy. The boy experienced his first night terror episode at the age of four. The onset of his sleep terror episodes was usually about 20 minutes after falling asleep and their frequency was on average four times per week. Six months prior to the onset of the sleep terror episodes the boy had reportedly watched a horror movie about werewolves after which the content of his sleep terror became feelings and vague images that he was turning into a werewolf. At the time he presented for treatment the frequency of his sleep terror episodes had dropped to about two each week. The content at this time was vaguely related to images of being physically mutilated or hurt by someone. He was amnesic for each sleep terror episode.

The boy was treated using hypnosis and was able to enter a deep trance rapidly. The induction consisted of a finger lowering technique, in which the middle two fingers were raised and he was asked to watch his fingers as they “go to sleep.” On completion of the induction, he was given an explanation of the nature of sleep, stage by stage. The regularity and continual movement of cycles of sleep were emphasised. He was also given direct suggestions for not dropping too quickly into an extremely deep stage of sleep. A follow-up session was planned and took place one week later. In the interim, he had one night terror episode of comparatively low intensity to those experienced

previously. The suggestions for dropping off to sleep gradually and having rotating cycles of sleep were reinforced in the second session and he had not had a recurrence at the two-year follow-up. Continued psychotherapy was recommended for the patient, but the hypnotic treatment had allowed a rapid resolution of the sleep terror episodes and the patient was able to get more restful sleep.

Taboada (1975) treated a 7-year-old boy with persistent sleep terror disorder and found that hypnosis was successful in alleviating the symptoms. Taboada used guided imagery to desensitise the boy to the content of the sleep terror. Gardner and Olness (1981) treated an 11-year-old boy for sleepwalking disorder using hypnotic suggestions for calm sleep. The treatment was successful and sleepwalking episodes were largely eliminated. Gardner and Olness (1981) treated sleepwalking and sleep terror disorders in children using hypnosis and also taught self-hypnosis techniques to the children. Mason (1987) used hypnosis to promote calm sleep in a 5-year-old girl with sleep terror. Guilleminault (1987) reported the successful treatment of three adolescents, two whose parasomnias responded to the adjunctive use of hypnosis. He suggested that children and adolescents with sleepwalking and sleep terror disorders should be treated with a combination of psychotherapy, hypnosis, and relaxation techniques. Kohen, Mahowald, and Rosen (1992) used imipramine briefly, in conjunction with hypnosis to establish symptom control in four children aged 8-11 years old with sleep terror disorder. A further seven children 21 months to 16 years old with sleep terror were treated using hypnosis without concurrent medication. In general, hypnosis was successful in decreasing the intensity and frequency of the sleep terror episodes.

In a large study, Guilleminault, Moscovitch and Leger (1995) treated 28 adolescent and adult patients with sleepwalking disorder with associated violence and a further 12 patients with sleepwalking disorder without violence. All patients had been sleepwalking since childhood. Patient's age, timing of sleepwalking, sleep state preceding sleepwalking episodes, and associated sleep pathologies were similar in both groups. Increased levels of daytime stress were associated with more frequent sleepwalking episodes. Temporal lobe lesions were found only in the violent group. The treatment included pharmacological agents, psychotherapy, hypnosis and treatment for sleep apnoea in some cases. It was concluded that pharmacotherapy was the main factor responsible for

reduced frequency of sleepwalking episodes and also of reduced sleep associated violence. However, subjects that discontinued pharmacotherapy, but maintained psychotherapy and hypnotic treatment also showed less frequent episodes of sleepwalking and nocturnal violence.

Nugent, Carden, and Montgomery (1984) reported that hypnosis was successfully used to treat sleepwalking in adult subjects. Treatment included suggestions for calm sleep and alertness should the patient's feet touch the floor during the sleep state. Reid and Gutnik (1980) employed hypnosis to suggest calm relaxed sleep. This technique proved beneficial to the male patient who had otherwise intractable sleepwalking. Zach (1990) used hypnosis to successfully treat adult subjects with sleepwalking disorder. Schenck and Mahowald (1995) treated two females aged 17 and 46 years for pre-menstrual sleep terror and injurious sleepwalking disorders using hypnosis. Both patients responded positively to calming hypnosis applied just prior to bedtime although the 46-year-old woman was also given clonazepam (.25 mg).

In summary, the available studies of hypnosis as a treatment for sleepwalking and night terror episodes show that in most cases hypnosis can be used directly to either completely alleviate or reduce the frequency and intensity of these problematic behaviours. Further studies are required because it is not clear which aspect of hypnosis is important in successful treatments of sleepwalking and sleep terror. Some authors have suggested that the general lowering of tonic levels due to the anxiolytic effects of relaxation employed during hypnosis might reduce the incidence of these disorders. However, others suggest that the individualised use of hypnosis with suggested imagery and cognitive strategies may reinforce the acceptance of the modality as well as its efficacy in altering behaviour. Although it is not clear how hypnosis exerts an effect on sleepwalking and sleep terror episodes, it nevertheless represents a relatively simple, non-invasive, inexpensive, and effective means of treating these potentially dangerous disorders.

Aims of the Study

The aim of the case studies reported here was to apply hypnotic treatments based on ideas derived from the literature to patients with accurately diagnosed primary parasomnias and to follow up the treatments to assess efficacy.

METHOD

Subjects

Subjects were selected on an opportunistic basis from among patients presenting at an insomnia clinic at a major public hospital in Melbourne. During the period allocated for the study three patients presented with clearly diagnosable primary parasomnias.

Procedure

Patients were interviewed and a detailed history of their past and present sleep difficulties was obtained during the first session. In all cases, additional information was obtained from the physicians' referral letters. Each patient was requested to keep a sleep diary and complete a sleep log over the following two-week period. The information obtained from the sleep diary and logs was subsequently used to clarify the diagnoses. Patients were also asked to have other people living with them to record any unusual nocturnal behaviour that occurred during the pre-treatment, treatment, and post-treatment periods. However, two of the patients were living alone at the time of the study. In two female patients the original presenting sleep difficulty was confirmed. One of these two female patients had nightmare disorder and the other patient sleepwalking disorder. The 30-year-old patient with sleepwalking disorder had an overnight polysomnographic sleep study. However, on the particular night that the patient was examined she did not show any behaviour consistent with sleepwalking behaviour. The 37-year-old patient with nightmare disorder was not examined in the sleep laboratory because her symptoms were consistent with the diagnosis of nightmare disorder. The third patient was a 33-year-old male who reported symptoms consistent with sleep terror disorder. This diagnosis was confirmed by an overnight diagnostic polysomnographic sleep study and visual observation in the laboratory and was consistent with his reported history. The treatment protocols for each patient were based on ideas derived from the available literature detailing the use of hypnosis for the treatment of the primary parasomnias; nightmare, sleepwalking, and sleep terror disorders.

RESULTS

CASE STUDY 1: THE HYPNOTIC TREATMENT OF NIGHTMARE DISORDER

Patient

SB was a 37-year-old female keyboard operator.

Initial Interview and Patient History

During this initial interview the patient reported a history of recurring nightmares with the theme of being chased by a masked man who intended killing her. The nightmares had begun two years previously and coincided with a separation from her husband. The frequency of the nightmares was three to four nights per week. The patient who now lived alone found it difficult to return to sleep after experiencing the nightmares and as a result was suffering from excessive daytime tiredness. The daytime tiredness was affecting her work performance and also her social life. The patient had undertaken psychotherapy to determine the cause of the nightmares, but this had not been helpful in alleviating the nightmare condition. The patient was referred for treatment by her physician after requesting medication for insomnia. The patient had no other medical conditions and was reported to be in good health by her physician.

The nature of the nightmare the patients reported was as follows: She hears a noise and realises that someone, a man, is breaking into her flat. She flees out the back door of the flat, but the man who is large and dressed in all black clothing chases her. She can see that the man is carrying a large knife and is terrified that he is going to kill her. She never sees the man's face because he is wearing a black stocking mask. The nightmare always begins the same way and she runs but cannot get away from the man. Eventually, she is exhausted and cannot run any further, her heart is pounding as the man approaches threateningly with the knife raised. At this point she screams but no one is there to help her. She really feels that she is going to be killed and awakens frightened and shaking. After several minutes she turns on the light and checks all the doors and windows to make sure that they are locked. Her hearing is hypersensitive and she finds it difficult to return to sleep after the nightmare episode even though she is aware that it was just a dream and that her flat is secure.

During the interview the patient presented as a pleasant woman who was embarrassed by her condition. She had no memory of having nightmares as a child and believed that her present circumstances were the causal factor. These circumstances revolved mainly around the fact that she was recently separated from her husband of 10 years and that for the first time in her life she was living alone. She expressed concerns about security and recounted examples of crimes committed against women who were living alone that had been reported in the local newspapers. In following up on these concerns, she was able to rationalise that such events were random, and that she was living in a group of flats that were very secure. The patient had no history of psychopathology and there were no indications of psychopathology evident during the initial interview. The presenting problem was recurring nightmares and insomnia due to the sleep disturbance caused by the nightmares. The content of the nightmares did not seem to be causing any daytime problems, apart from the fact that she was sensitive to issues of personal security to a degree that could have been characterised as over concern. The patient was requested to keep a sleep diary and complete a sleep log over the following two weeks.

Treatment Program

Session 1 (2 Weeks Later)

The frequency of nightmare episodes was confirmed by the diary and sleep log that were completed during the two weeks since the last session. Nightmares had occurred on three nights during one week and four nights the following week. The theme of the nightmares was almost identical on each occasion and was consistent with the nightmare the patient outlined during the initial interview.

Rationale for the use of hypnosis Given that she was suffering from insomnia due to inability to sleep soundly after having been awakened by recurring nightmares and that her physician had not recommended sedative medication, it was suggested that hypnosis might be a useful treatment. It was proposed that hypnosis might allow the patient to have control over her own dream content and that hypnosis could also be used to promote sleeping calmly and soundly each night.

Explanation of hypnosis Hypnosis was explained as a state of consciousness different from the normal waking state. It was also explained that the role of the hypnotherapist was to assist the patient to enter hypnosis,

to guide the patient while under hypnosis, and to ensure that the patient was safely brought out of hypnosis.

Assessment of hypnotisability There were no contraindications for hypnosis. The Creative Imagination Scale (Wilson & Barber, 1973) was used to introduce the patient to hypnotic phenomena and indicated that she was highly hypnotisable.

Session 2 (1 Week Later)

The patient reported experiencing only two nightmares during the intervening week. The theme of these three nightmares was the same as that reported previously.

Hypnosis The induction and deepening procedure were tape-recorded and the patient was instructed to play the tape each night just prior to bedtime. The induction consisted of the Spiegel eye-roll technique followed by suggestions for progressive relaxation of all the muscles in the body and sensations of floating. When the patient achieved a deep level of trance, it was suggested to her that since it was her nightmare she could control the outcome in any way she wished. It was suggested that she could bring other people into the nightmare to help her or that she could use her intelligence to either escape or trap the man who was chasing her. For example, it was suggested that if she ran in a different direction from the one in which she usually ran that she would come to a deserted carnival (like Luna Park) with a hall of mirrors (cf. Kingsbury, 1993). If she lured the man into the hall of mirrors he would be confused by all the images of her and she could escape, locking the door behind her.

It was then suggested that she replay her nightmare as if it was on a TV screen and make a change to the ending that allowed her to have complete control. At the end of the session the patient was asked to report what changes she had made to the nightmare ending. She reported that she enjoyed changing the ending of the dream and that she had lured the pursuer to a hall of mirrors at Luna Park and had locked him inside. She then reported that she had called the police and that he had been taken away and locked up.

The patient was instructed to use the techniques on the tape recording as a guide for practising self-hypnosis.

Session 3 (1 Week Later)

The patient reported that for the first few nights after the hypnosis session she

had no nightmares and felt a lot more relaxed both during the day and at night. However, as the week went by she experienced the nightmare on one night. The nightmare was not as intense as it had been before and she noted that she had a feeling of control and that she was able to change the nightmare so that the man who chased her was not able to catch her. The patient listened to the taped hypnosis session each night and reported no further nightmares during that week.

Hypnosis A further session of hypnosis was tape-recorded. The induction and deepening procedure used was essentially the same as that used in the previous session. However, suggestions for coping with any difficulties and setbacks in the progress of treatment implementation were included towards the end of the tape.

Session 4 (1 Week Later)

The patient reported that she had experienced no further nightmares with the theme that had troubled her for the past two years. However, she reported having some dreams that made her anxious but that she was able to cope with these by employing similar techniques to the ones she had used to make the original nightmare harmless.

Hypnosis A similar session of hypnosis was carried out to the last one except that there were suggestions for general wellbeing and coping with difficulties made towards the end of the session. This session was also tape-recorded. The patient was encouraged to practise self-hypnosis each day and to use the tapes of the hypnosis sessions. This was the last scheduled treatment session and it was mutually agreed that there was no need for any further sessions at this stage. It was agreed that the patient would contact the clinic again if she found that her nightmares returned.

Treatment Follow-Up

During the three months after treatment ended, follow-up telephone calls were made every two weeks. The patient reported that she had not experienced any nightmares with the original theme during this period. Nevertheless, she did have some dreams with frightening themes, but the intensity of these was much less than the original nightmare. The patient reported that she had continued to use the hypnosis tapes and practise self-hypnosis and that this was also helping her to feel more relaxed and cope better with her life situation and work-related stress.

CASE STUDY 2: THE HYPNOTIC TREATMENT OF SLEEPWALKING DISORDER

Patient

CH was a 30-year-old female solicitor.

Initial Interview and Patient History

The patient sought advice from her physician regarding her sleepwalking behaviour. She was given a medical examination and was found to be in excellent physical health. She was subsequently referred to the insomnia clinic for further investigation. The physician's referral letter gave no indications of any other medical or psychiatric conditions and concluded that the patients might have parasomnia. Sedative medication was suggested, but the patient was unwilling to take medication at that stage.

During this interview the patient presented as a well-groomed, pleasant, and intelligent young woman. There were no indications of psychopathology and no psychological concerns or issues which might have been contributory to the patient's episodes of nocturnal arousal. The patient was referred for an overnight diagnostic test in the sleep laboratory. The subsequent report indicated that on the test night the patient had a normal night's sleep and no sleepwalking behaviour was observed. Further nights of testing could have been performed but this was unwarranted at this stage because the diagnosis was consistent with sleepwalking disorder. An examination of the patient and her overnight sleep record by a respiratory medicine specialist revealed no respiratory conditions that might have been responsible for triggering the sleepwalking episodes.

The patient reported having had sleepwalking episodes for as long as she could remember. Her parents also confirmed that she had usually had at least one or two episodes of sleepwalking each week throughout her childhood. The patient was not disturbed by her sleepwalking because she rarely ventured far from her bed and usually had no memory of the episodes in the morning. In most instances she returned to bed and went quietly back to sleep. Sometimes she thrashed about while in bed rather than leaving the bed and wandering around. The patient noted that she tended to experience more episodes of sleepwalking when she had been mentally or physically activated or aroused just prior to going to bed.

The patient was involved in basketball and karate and often trained or

played in the evening. When she returned on these nights, she retired to bed soon after arriving home. On these nights she often had episodes of sleepwalking. Similarly, when she worked in the evening preparing material for the next day she often experienced sleepwalking episodes on these nights. The episodes were brief (1–5 minutes) and usually occurred only once per night and on average three times per week. The patient had never previously been concerned by her sleepwalking because she had no associated nightmares or sleep terror, no memory of the events, and had never harmed herself or anyone else during the episodes. The reason the patient gave for presenting at this stage of her life was that her partner's sleep was being disturbed by her sitting up in bed and moving around or getting out of bed and walking around the room. A recent event where she thrashed about in bed had resulted in her partner sustaining a black-eye. Her partner was understanding of her condition and was used to her nocturnal wandering, but the patient felt that she should try to do something about the behaviour because of the injury she had caused her partner.

The patient was informed that hypnosis might be a helpful in minimising her episodes of sleepwalking. The patient agreed that she would be willing to try this in preference to taking sedative medication. The patient was asked, with the assistance of her partner, to keep a sleep diary and sleep log during the two weeks that followed.

Treatment Program

Session 1 (2 Weeks Later)

The data from the sleep diary and sleep logs confirmed that during the 14-day period the patient was observed to sleepwalk or thrash about in bed on six nights. On the nights when sleepwalking episodes occurred there was a positive correlation with the level of physical and/or mental activity the patient engaged in prior to retiring in the evening. The patient had previously noted that her sleepwalking was worse on nights that she played sport or worked in the evenings.

Rationale for the use of hypnosis Given that the patient showed no other symptomatology, that she was seeking treatment of her sleepwalking disorder for the sake of her partner's sleep, and that she was unwilling to consider sedative medication, hypnosis was suggested as a treatment for her condition.

Explanation of hypnosis Hypnosis was explained as a state of consciousness different from that of the normal waking state. It was further explained that the role of the hypnotherapist was to assist the patient to enter hypnosis, to guide the patient while under hypnosis and to ensure that the patient was safely brought out of hypnosis.

Assessment of hypnotisability There were no contraindications for hypnosis and the Creative Imagination Scale (Wilson & Barber, 1973) indicated that the patient was moderately to highly hypnotisable.

Session 2 (1 Week Later)

The patient reported that she had one sleepwalking episode during the week. This episode was noted by her partner and she was amnesic for the event.

Hypnosis The induction and deepening procedure were tape-recorded and the patient was instructed to use the tape each night just prior to bedtime. The induction consisted of progressive muscular relaxation with suggestions for slipping more and more deeply into a hypnotic trance. When a deep level of trance was achieved, suggestions were given for sleeping very calmly and that if she should get out of bed as soon as her feet touched the floor she would wake up immediately and be fully alert but return to bed and quickly return to sleep (cf.. Eliseo, 1975; Hurwitz et al., 1991; Reid, 1975). The patient was also encouraged to use self-hypnosis in the evening to assist her to be more relaxed prior to retiring.

The patient was instructed, if possible, to avoid vigorous sporting activity (karate and basketball) late in the evenings as it was noted previously that there was a positive correlation between the level of activity in the evening and sleepwalking episodes. If the patient could not avoid playing sport or working late in the evening she was instructed to allow herself sufficient time to relax before going to bed. During this time it was suggested that she might use the recorded tape from the hypnosis session, practise self-hypnosis, or sit quietly and listen to some relaxing music.

Session 3 (1 Week Later)

The patient reported that she had not experienced any episodes of sleepwalking during the intervening week. This was also confirmed by her partner, who was not disturbed by her activity on any night.

Hypnosis The induction and deepening procedure used in this session was similar to that used in the previous session.

Session 4 (1 Week Later)

The patient reported no nocturnal arousal during the week and again this was confirmed by her partner.

Hypnosis The induction and deepening procedure was identical to that used in the previous sessions except that additional suggestions for calm, deeply relaxed sleep were added towards the end of the tape-recorded session. This was the last treatment session scheduled and as the patient had experienced very few sleepwalking episodes since the treatment began it was agreed that no further sessions were required at this stage.

Treatment Follow-Up

The patient was followed-up over a five-month period by telephone calls every three weeks. During this period there was a marked decrease in the frequency of sleepwalking episodes from three per week to about one episode every three weeks. The patient also reported that when she did not allow herself sufficient time to relax in the evening after sport or work activities before retiring she was more likely to sleepwalk or move about in bed. The patient reported that if she used the hypnosis tapes, self-hypnosis or relaxed for some time after playing sport or working in the evening she generally did not have a sleepwalking episode.

CASE STUDY 3: THE HYPNOTIC TREATMENT OF SLEEP TERROR DISORDER

Patient

GS was 33-year-old male secondary school teacher.

Initial Interview and Patient History

The patient was referred by his physician for episodes of nocturnal arousal. The physician's referral letter stated that the patient complained of waking in

terror on one or two nights per week and that a physical examination had not revealed any medical condition that might account for these episodes of arousal. The physician noted that the patient appeared to be highly distressed by the recent breakdown of his marriage and the subsequent separation from his wife and children.

The patient presented as an agitated individual with little insight into the problems that were troubling him with regard to his marital separation, issues related to his parents, his present career and earlier professional sporting career. In addition, he was overly focused on various somatic complaints, that he believed stemmed from his sleep disturbance. The patient was referred on for counselling for his relationship difficulties because it was not possible to address these issues fully within the context of the insomnia clinic.

The patient reported a history of sleep terror episodes that had begun at about the age of 12. His parents were able to confirm that the sleep terror episodes had begun when he was 12 years old and that on average he experienced one to two episodes each week, with some weeks where there were none. At the time he presented for treatment he was experiencing one to two sleep terror episodes per week. These episodes were described as occasions where he screamed out in a terrified manner and often jumped up from his bed and ran into another room. Sometimes if he woke shortly after an episode he had a vague feeling that someone was coming into his room to harm him, but otherwise he had no recall of the episodes. When he was 16 years old during one of these sleep terror episodes he had jumped through his bedroom window, shattering the glass and landing on the front lawn. During this incident he sustained only minor cuts and abrasions but was fearful of hurting himself more severely in the future. Attempts to calm him during episodes of nocturnal arousal, either by his parents or his wife while they were living together, were met with resistance and if he woke on these occasions he was confused and disoriented. In the more recent months since he separated from his wife he had experienced one or two episodes of the arousals each week. After most episodes of sleep terror the patient reported waking usually confused and disoriented and then having difficulty returning to sleep. What had prompted him to seek help was the fact that he had smashed an internal glass door at his parents' house while experiencing a sleep terror episode.

The patient was referred for overnight diagnostic testing and observation in the sleep laboratory. The results of the tests and observation of the patient confirmed the diagnosis of sleep terror disorder. During the diagnostic test the patient aroused with terrified screaming early in the night from stage 3/4

sleep. Attempts by the sleep laboratory technicians to calm the patient were met with resistance and when he finally woke he was confused and distressed. At this point, which was early in the night, the patient wanted to leave, but was eventually convinced to stay for the rest of the night. Sleep during the rest of the night was characterised by frequent awakenings but no further sleep terror episodes. Subsequent examination of the patient's sleep record and a physical examination by a respiratory specialist revealed no respiratory anomalies that might have triggered the sleep terror episodes.

The patient was requested to complete a sleep diary and sleep log during the two weeks until the next session.

Treatment Program

Session 1 (2 Weeks Later)

The sleep diary and log showed that the patient had experienced four sleep terror episodes that he was aware of during the two-week period since the initial interview.

Rationale for the use of hypnosis The patient's diagnosis of night terror was confirmed by the diagnostic tests and observations conducted in the sleep laboratory. Medical examination by the attending respiratory medicine specialist revealed no respiratory events that might be acting as triggers for the sleep terror episodes. The patient was unwilling to take medication that had been suggested by the respiratory physician and therefore hypnosis was suggested as treatment that might allow him to sleep more calmly and soundly each night.

Explanation of hypnosis Hypnosis was explained as a state of consciousness different from the normal waking state. It was also explained that the role of the hypnotherapist was to assist the patient to enter hypnosis, to guide the patient while under hypnosis and to ensure that the patient was brought safely out of hypnosis.

Assessment of hypnotisability There were no contraindications for hypnosis and the Creative Imagination Scale (Wilson & Barber, 1973) indicated that the patient was low to moderately hypnotisable.

Session 2 (1 Week Later)

The patient reported being aware of experiencing two sleep terror episodes during the week. After each event the patient awoke in a confused state and had considerable difficulty returning to sleep.

Hypnosis The induction and deepening procedure were tape-recorded and the patient was instructed to play the tape each night just prior to bedtime. The induction procedure consisted of progressive muscular relaxation with suggestions for sinking deeper and deeper into a hypnotic trance. Despite showing only a low to moderate degree of hypnotisability on the Creative Imagination Scale the patient achieved a deep level of trance. Suggestions were given for sleeping very calmly and not dropping into deep sleep too quickly. It was further suggested that the patient would cycle through all the stages of sleep very calmly. It was also suggested that if he should find his feet on the floor he would wake immediately, be fully alert and return to bed and fall asleep rapidly (cf. Kramer, 1988). The patient was also instructed to use the techniques worked through in the tape recording to practise self-hypnosis each day.

Session 3 (2 Weeks Later)

The patient reported that he was aware of experiencing one episode of sleep terror after which he awakened and was not able to return to sleep.

Hypnosis A further session of hypnosis was recorded which reiterated the same suggestions as were given in session two. The induction and deepening procedure used was essentially the same as that used in the previous session. Suggestions for coping with any difficulties and setbacks in the progress of treatment implementation were included towards the end of the tape.

Session 4 (1 Week Later)

The patient reported no experiences of sleep terror that he was aware of during the last week.

Hypnosis This session followed the same format as the previous session with reinforcement of the suggestions for calm sleep, not dropping into deep sleep too quickly and for alertness if his feet touched the floor.

Session 5 (1 Week Later)

The patient reported no episodes of sleep terror that he was aware of during the week.

Hypnosis The hypnosis session followed essentially the same format as that of the last session.

Treatment Follow-Up

The patient was followed up at intervals of three weeks over a six-month period. The follow-up indicated that the intensity and the frequency of sleep terror episodes dropped dramatically. The pre-treatment level had been one to two episodes per week. During the follow-up period frequency of sleep terror episodes was approximately one every three weeks. The patient reported that he tended to experience episodes when he was agitated about his marital situation or work, particularly if he did not use the hypnosis tape or self-hypnosis techniques that he had been taught.

DISCUSSION

Hypnotic Treatment of Nightmare Disorder

Nightmares are frightening dreams accompanied by moderate levels of autonomic activity and arousal and in contrast with sleep terror, the level of autonomic activation observed in nightmares is lower and usually results in a complete awakening. Recall of nightmare content is usually reasonably complete. Studies indicate that many people remember having nightmares at an early age, but that the frequency of nightmares declines between the ages of 7 to 11 years old (Hartmann et al., 1987). Nightmares usually do not become a matter of concern unless they are recurrent, disrupt sleep, or are anxiogenic (Erman, 1987).

In the present study, the case of SB presented a classic example of an individual suffering from nightmare disorder. This patient was troubled by recurrent nightmares over a period of two years. Nightmares are often caused by traumatic events in the life of the individual. These events can be real traumatic events, as in the case of war veterans where nightmares have been discussed as a definitive feature of PTSD (Ross et al., 1989). There are fewer reports of repetitive nightmares featuring in non-traumatic conditions such as the anxiety and depressive disorders. However, many people experience transient nightmares in association with life events that cause high levels of stress (Celucci & Lawrence, 1978b; Garfield, 1987; Kales, Soldatos, Caldwell, et al., 1980). Individuals under conditions of acute stress (e.g., examinations) may experience nightmares, but these usually abate when the acute stress is

resolved. However, in some individuals nightmares may continue over a more extended period of time and come to constitute nightmare disorder. Whether the threatening situation that caused the nightmares to begin was real or was simply perceived as real makes little difference. For the patient SB in this study the anxiety resulting from having to live alone after the separation from her husband, coupled with her tendency towards over-concern about issues of personal security, led to the development of recurrent nightmares. Psychological factors are believed to play a major role in the development and persistence of nightmares (Kales, Soldatos, Caldwell, et al., 1980) and research has suggested that anxiety is associated with nightmares (Celucci & Lawrence, 1978b).

The fear that resulted from the recurrent nightmares in SB's case led to secondary symptoms that were centred around sleep deprivation. SB was unable to return to sleep on three to four nights per week and experienced chronic insomnia. The insomnia caused by SB's persistent fear following the nightmare episodes resulted in considerable daytime somnambulism. Daytime tiredness was interfering with SB's work performance, social life and probably reduced her ability to cope with her general life situation. It was the inability to sleep following nightmare episodes rather than the nightmares themselves that led SB to seek medical treatment.

Nightmares can be treated with sedative hypnotic drugs derived from the benzodiazepines and brand names include medications such as Normison and Valium. However, drug treatment is only warranted if the nightmares cause severe sleep disturbance. In the case of SB her sleep disturbance was judged by her physician not to be severe enough to warrant treatment with sedative hypnotic drugs. In cases such as that of SB, where nightmares are chronic but do not severely disrupt the patient's daytime performance, the prescription of sedative hypnotic drugs cannot be justified. Although sedative drugs can relieve the suffering caused by recurrent nightmares they can exacerbate daytime somnambulism due to the hangover effects. In addition, short-term usage is recommended and longer term use often results in chronic dependency.

There is a tendency for clinicians to focus on nightmares as symptomatic of underlying psychopathology, which in many cases is a correct assumption to make. There are a variety of reasons why clinicians focus on treating other symptomatology rather than directly addressing nightmares. One reason is that historically, dreams have been viewed as a valuable source of information in psychoanalytic approaches to the treatment of psychopathology. Prior to seeking medical treatment, SB underwent a lengthy course of psychotherapy

in which the content of her nightmares was explored in relation to her childhood and her marital separation. However, psychotherapy did not alleviate the suffering that the nightmares were causing SB. The focus on nightmares as symptomatic of underlying psychopathology can in fact needlessly prolong patients' distress. Distress can be worsened by fatigue due to sleep loss, and anxiety and depression can increase as a result of nightmare themes intruding into a patient's waking cognitions. Patients may interpret the persistence of nightmares as evidence that psychotherapy is ineffective and be further demoralised (Frank & Frank, 1991). In SB's case these factors, particularly sleep deprivation, were affecting her ability to cope with daily tasks at work and home.

Behavioural therapies, systematic desensitisation and relaxation training have been shown to be effective in reducing the intensity and frequency of recurrent nightmares (Celucci & Lawrence, 1978a; Geer & Silverman, 1967; Miller and DiPilato, 1983; Schindler, 1980; Shorkey & Himle, 1974). Hypnosis has also been used to directly treat nightmare disorder in children and adults (Kingsbury, 1993; Marks, 1978; Moss, 1973; Seif, 1985; Tart, 1966). A number of mechanisms through which hypnotic treatment may exert an effect have been outlined. Under hypnosis, nightmare content is more involving for the patient than under normal psychotherapy, giving the patient greater access to the emotional state associated with the nightmare which is therapeutically useful (Gilligan, 1988). The hypnotic induction marks a separate state from normal consciousness and heightens the expectation that it has the power to change what seems to be non-volitional behaviour (Combs & Freedman, 1990; van der Hart, 1993). Research and theory support a link between hypnosis and dreams via proposed dissociative mechanisms (Gabel, 1989, 1990). Finally, the available clinical literature indicates that hypnosis can be effectively used to either terminate or control the content of recurrent nightmares (Kingsbury, 1993; Marks, 1978; Moss, 1973; Seif, 1985; Tart, 1966).

With respect to the hypnotic treatment used in the case of SB there are several elements mentioned above which were central to treatment. The technique used to treat SB was based on one reported by Kingsbury (1993). In this technique the patient (SB) was hypnotised and instructed that if she wished she could change any detail of her nightmare. For example, she could include other people who would help her in the nightmare in some way, or she could use her intelligence to fool the person chasing her and therefore gain the advantage. After giving SB examples of how she could make changes

to the nightmare, she was asked to replay the nightmare on a movie or TV screen which she could control. This method was employed so that SB would be somewhat removed from the nightmare and thus feel safe and in control of the situation. The patient was told that she could make changes to the nightmare content as she viewed it on the screen. She was given the following example to illustrate the kind of changes she could make to have control over the outcome of the nightmare. "You run in a different direction to the one in which you usually run when being chased and eventually end up in a place like Luna Park with a hall of mirrors. Inside the hall of mirrors the man that is chasing you is confused by all the images of you and this allows you to escape. When you escape you lock the man inside the hall of mirrors and know you are safe from harm." Later SB reported that she had enjoyed making changes based on the above story which resulted in a safe ending for her nightmare. Subsequently, in her own home she was asked to use the tape-recordings of the hypnosis session and to practise altering the nightmare content. She was also encouraged to do the same thing under self-hypnosis. The technique adapted from Kingsbury (1993) engages the patient to make cognitive changes to the nightmare by editing it in a way that makes it less threatening. The technique uses the projection of the nightmare on some kind of screen as a way of safely distancing the patient from it so it is viewed from an observer's perspective and in a controlled manner. In replaying the dream, there is also the element of looking at the dream from an observer's viewpoint rather than as a participant. This may afford the patient more insight into the fact that they can actually have control over some or all of the elements in the nightmare. Having felt control has been reported to be an important factor in having mastery over nightmares (Watzlawick, 1978; Gorton, 1988).

In the present study SB was able to make changes to her nightmare under hypnosis so that it was transformed in a manner that allowed her to feel safe. The generalisation of the changes from the hypnotic session to her home setting was relatively rapid, with few nightmares experienced at the level of intensity she had previously reported. It appeared that once the patient gained insight into the fact she had the power to change the nightmare outcome, the apparent hold of the nightmare was broken.

There were also other non-specific benefits of hypnosis and the acquisition of self-hypnosis which are difficult to quantify, given that this was a case study. These benefits seemed to flow from the fact that, associated with the hypnosis and self-hypnosis were effects which were best described as generalised relaxation effects. That is, the patient felt more relaxed both during the day and

at night. These effects could also have been due to the fact that, concomitant with the decline in nightmare frequency, there was also an improvement in sleep and consequently energy levels. Increased levels of energy and concentration probably allowed SB to cope more effectively with the challenges of the altered circumstances of her life and work-related pressures. The effects of relaxation should not be underestimated in the hypnotic treatment as relaxation processes without trance have been shown to be effective in decreasing the intensity and frequency of nightmares (Miller & DiPilato, 1983). However, the advantage of hypnotic treatment over simple relaxation techniques is that additional cognitive processes designed to alter nightmare content and outcome can also be simultaneously introduced to allow the patient to have some degree of control almost immediately. The effect of giving a person who has suffered very frightening nightmares even a small degree of control should not be underestimated. In SB's case it was apparent after the first therapeutic session of hypnosis that she had gained a sense that she could control nightmare content and outcome. This small gain for a long-suffering patient like SB can be a major boost for their morale and can increase self-confidence, which may in turn lead to further therapeutic gain.

In summary, hypnotic treatments designed to treat recurrent nightmares are best conceptualised in terms of the specific and the general effects hypnosis has on the patient. Specific effects are those that result from direct hypnotic suggestion/instruction to the patient involving transforming the nightmare (Eichelman, 1985; Gilligan, 1988), changing the ending of the nightmare, interrupting the nightmare (Gorton, 1988), acquiring mastery of the nightmare, exposure in less involving contexts (desensitisation) (Kingsbury, 1993), using controlled imagery (Kingsbury, 1993), solving the nightmare (Kingsbury, 1993), and reframing the nightmare and incorporating it in some way (Watzlawick, 1978). General effects of hypnosis which may not necessarily stem from direct instruction include: increased feelings of relaxation, unconscious processing of material, improved cognitive function, improved sleep and the secondary effects which might flow from this.

In conclusion, involving the patient in directly editing or making cognitive changes to projected imagery of recurrent nightmare scripts can play an important role in hypnotic techniques designed to treat nightmare disorder. The inclusion of cognitive processing is not necessary because non-specific hypnotic relaxation techniques are also effective. However, generalised techniques without specific focus may take longer to be effective. Techniques

designed to focus specifically on the content and make changes seem to allow very rapid treatment of the nightmare disorder. In addition, once a patient has these skills they can be deployed to deal with other anxiety provoking dreams or nightmares which may arise at some future time. In the case of SB, she found that she was able to use the general technique of editing the nightmare to change other anxiety provoking dreams. Therefore, based on the literature and the results of the case study of SB, direct hypnotic treatment employing techniques designed to quickly alter nightmare content is a highly appropriate approach to the treatment of nightmare disorder. A further factor which appeared to be critical was having the patient practise hypnosis/self-hypnosis at home to re-experience nightmares and learn to make the content more benign.

Hypnotic Treatment of Sleepwalking and Sleep Terror Disorders

It is important that parasomnias like sleepwalking and sleep terror disorders are correctly diagnosed and that effective treatment is given if the associated behaviours are potentially injurious, violent or disruptive to either the patient or other individuals. Sleepwalkers are usually difficult to communicate with and if left alone often return to bed. When awakened, they have little memory of anything that happened during the episode. Kales et al., (1966) found that few sleepwalking incidents were related to specific traumatic events. Sleepwalking generally occurs about an hour or two after falling asleep. In most cases, sleepwalking begins with a burst of high voltage, slow frequency EEG activity, and is related to arousal from stage 3/4 NREM sleep (Broughton, 1968; Kales et al., 1966).

In the case of CH the primary diagnosis was sleepwalking disorder. This patient had a long history of sleepwalking behaviour which began in childhood. The patient sought medical treatment for her sleepwalking disorder because it was disrupting her partner's sleep. The patient herself was not aware of sleepwalking on most occasions and this is entirely consistent with the diagnosis of sleepwalking disorder. The patient CH was offered medical treatment for her sleepwalking in the form of sedative medication, but she was not willing to commence drug therapy. The main problems with drug therapy for sleepwalking are the long-term nature of the disorder and the adverse effects chronic drug usage may have on behaviour and learning (Weissbluth, 1984).

Studies have shown that patients with sleepwalking disorder can learn to self-regulate previously uncontrolled nocturnal behaviours by teaching them techniques such as relaxation and mental imagery and self-hypnosis. Reid et al. (1981) compared hypnosis designed to impart arousal cues inconsistent with sleepwalking behaviour to non-specific hypnotic treatment. They found that both treatments were effective, but that the specialised technique was superior. Reid et al.'s study showed that a relatively simple, non-invasive, inexpensive procedure could be used to alleviate sleepwalking disorder in adults. They found that a few subjects reported waking beside the bed early in the treatment phase, which was consistent with what was expected in accordance with the posthypnotic suggestions. Nevertheless, it was more usual for the therapeutic result to generalise through some mechanism which was not clear so that there was no sleepwalking and subsequent awakening.

The hypnotic treatment employed with the patient CH incorporated three main ideas which have been reported in the literature: relaxation, posthypnotic suggestions for calm sound sleep, and for alertness if the feet touched the floor during the night. The hypnotic treatment was designed to promote relaxation in CH in the evenings before she retired to bed. CH had previously reported that there was a positive correlation of her arousal level in the evening and with the frequency of her sleepwalking episodes. When CH played sport or worked late in the evening the likelihood of her having a sleepwalking episode was increased. Therefore, it was also suggested that she avoid playing sport or working too late in the evenings, or if she could not avoid these activities that she take time to relax before retiring to bed. Methods of relaxing included using taped hypnosis sessions, practising self-hypnosis, or simply listening to some relaxing music. The second part of the hypnotic treatment incorporated posthypnotic suggestions for calm, sound sleep and alertness if the feet touched the floor during the night.

In line with what other researcher (e.g. Reid et al., 1981) have reported, in the case of CH the most effective element in the hypnotic treatment was not the posthypnotic suggestions for alertness if the feet touched the floor during sleep but the reduced levels of tonic arousal produced via the relaxation elements included in hypnosis sessions, the taped hypnosis sessions, and in self-hypnosis/relaxation practised in vivo. This conclusion was partly based on the feedback CH gave about the correlation between high levels of mental and/or physical activity and episodes of sleepwalking. CH, who was heavily into sport, found that on evenings when she played sport late there was an increased likelihood of sleepwalking. Similarly, when CH worked late at her office or at

home on demanding mental tasks there was also an increased chance of her sleepwalking. Mahowald and Rosen's (1990) model of factors which are likely to influence the frequency and intensity of parasomnias like sleepwalking includes tonic arousal. Therefore, treatments which are likely to alter the level of tonic arousal (i.e., lower it) are more likely to be helpful in stopping sleepwalking. There was probably no specific factor which was central to the decrease in the frequency of sleepwalking episodes. The factors most likely to have decreased the level of sleepwalking are twofold: First, the instruction to reduce activity in the evening and make sure that CH was sufficiently relaxed before going to bed (behavioural change); and second, the use of hypnosis tapes and self-hypnosis in the evening prior to bedtime to lower tonic arousal levels. Thus, the main effect from the hypnotic treatment was probably increased relaxation.

Sleep terror disorder is best described as nocturnal episodes of extreme terror and panic which occur early in sleep when the person is in stage 3/4 deep NREM sleep (Hartmann, 1984; Kales et al., 1982). Sleep terror disorder is not as common as nightmare disorder. Episodes of sleep terror usually last only a few minutes and the subject has little or no recall of the event. Sleep terror disorder can be distinguished from nightmare disorder by clinical features and sleep-laboratory findings. Sleep terror and sleepwalking have similar clinical characteristics and many individuals experience both (Hartmann et al., 1982; Kales et al., 1982; Oswald & Evans, 1985; Vela-Bueno et al., 1987). Sleep terror disorder frequently begins before the age of 10 and usually abates during adolescence (Kales & Kales, 1974).

In the present study the patient GS showed a history of symptomatology which was consistent with a diagnosis of sleep terror. This diagnosis was subsequently confirmed by an overnight polysomnographic sleep study. During the early part of the night when the patient was in deep NREM sleep he aroused in a state of extreme terror. The attempts made by the sleep laboratory technicians to comfort GS were met with resistance which is a typical reaction of patients experiencing a sleep terror episode. Eventually, when GS awoke he was confused, disorientated, and had to be convinced to remain in the sleep laboratory for the rest of the night. The patient had no detailed recall of the mental processes that had led to this episode of sleep terror. However, he was able to state that he had a vague feeling that someone was entering the room to get him.

Sleep terror can be triggered in susceptible individuals by auditory stimulation during slow wave sleep (Fisher, Kahn, Edwards, & Davis, 1970;

Fisher, Kahn, Edwards, Davis, & Fine, 1973). In many individuals and in the majority of children arousals appear to be spontaneous. This is evidenced by the fact that sleepwalking can be induced readily in children by standing them up during slow wave sleep (Broughton, 1968; Kales et al., 1966; Broughton, 1968). Similarly, sleep terror can be triggered in susceptible individuals by auditory stimulation during slow wave sleep. Both these observations suggest that these behaviours are not the result of ongoing complex mental activity during sleep (Fisher, Byrne, Edwards & Kahn, 1970; Fisher, Kahn, Edwards, Davis, & Fine, 1973).

The induction and deepening procedure used to treat GS consisted of progressive muscular relaxation with suggestions for sinking deeper and deeper into a hypnotic trance. When the patient was in trance he was given suggestions for sleeping calmly and not dropping too quickly into deep sleep. It was also suggested that he would cycle through all the stages of sleep very calmly. Finally it was suggested that he would wake and be alert should his feet touch the floor during the night and that after this he would return to bed and fall asleep rapidly. These suggestions were modelled on suggestions used by Kramer (1988) in his case study report of hypnotic treatment of a 10-year-old boy with persistent sleep terror disorder. The patient GS was assessed as low to moderately hypnotisable using the Creative Imagination Scale. However, GS was able to achieve a deep level of trance during the formal induction for treatment of his sleep terror disorder. During the subsequent weeks GS reported that the frequency of his sleep terror episodes declined so that during the follow-up period he reported very few such episodes. There were no occasions where GS reported being awakened during a night terror episode. This observation is further supported by the fact that on the few occasions where he did experience sleep terror after the commencement of the hypnotic treatment program, when he awakened during the episode he was confused and disorientated. Therefore, posthypnotic suggestions for alertness if his feet touched the floor during a sleep terror episode were not the effective element in the hypnotic treatment program. Over the period of treatment sleep terror episodes declined markedly in frequency and also to some extent in intensity. Patients in Hurwitz et al.'s (1991) study were given similar posthypnotic suggestions for calm sleep and wakefulness if their feet touched the floor during a sleep terror episode. However, these authors reported that there was a generalised effect with less intense and frequent sleep terror episodes reported. Few patients actually reported being alerted during an episode. Some patients reported complete remission, but most emphasised

the benefit derived from increased control of frenzied and ambulatory behaviours rather than the complete elimination of the arousals. Six of the subjects did not continue to use self-hypnosis. The wives of two of these patients reported that if their husbands used self-hypnosis when under stress it reduced their aberrant nocturnal behaviours markedly. The patient GS reported that he was more likely to experience sleep terror episodes when he did not use the taped hypnosis sessions or self-hypnosis.

When onset of these sleep disorders occurs after age 10, they are likely to persist in adulthood, episodes are more frequent, the time of their onset is often associated with major life stress events, and they seem to be related to psychological factors. The patient GS was distressed by psychological factors which seemed to mostly stem from his background and current marital problems. Since the breakdown of his marriage he had reported more frequent episodes of night terror. The patient's psychological problems in combination with his poor sleep habits and insomnia were probably interacting to cause increased arousal during the night. Mahowald and Rosen (1990) proposed a model for understanding the determinants and manifestations of sleep terror. Their model suggests that at the end of a period of deep NREM sleep the individual suffering sleep terror may become "caught" — unable to completely get out of deep sleep, unable to arouse fully, and unable to move into the next sleep cycle. Factors which determine the occurrence of partial arousals are: (a) tonic sleep factors; (b) phasic sleep factors; and (c) the behavioural response to the arousal (Mahowald & Rosen, 1990). The tonic factors which occur throughout the sleep period determine the individual's underlying sleep pattern and arousal threshold. In the case of GS three factors which may have increased his level of tonic arousal were sleep deprivation, chaotic sleep/wake scheduling, and psychological problems.

The mechanism underlying the decrease in the intensity and frequency of sleep terror episodes after hypnotic treatment is not well understood. However, it is possible that the main factor contributing to the success of hypnotic treatments is a change in underlying tonic sleep factors resulting in a higher arousal threshold and hence fewer arousals. Therefore, the non-specific general factors in hypnosis which led to the patient being more relaxed may be important. In other studies (e.g., Hurwitz et al., 1991) the hypnotic treatment effect was reported to generalise so that patients had few and/or less intense sleep terror episodes. In the present study there was no evidence that specific posthypnotic suggestions had any effect on sleep terror as the patient did not report being alerted when experiencing a sleep terror episode. In fact GS

noted that when he did not use the hypnosis tapes or practise self-hypnosis he was more likely to have sleep terror episodes. Research has shown that relaxation training can decrease the occurrence of sleep terror episodes. Therefore, the elements of hypnosis that lower tonic arousal during sleep may be important therapeutic elements in the treatment.

In conclusion, studies of sleepwalking and sleep terror episodes employing hypnotically based treatments indicate that in many cases this form of treatment may be used directly to either eliminate or reduce the intensity and frequency of these problematic behaviours. Further studies of hypnotic treatments for these disorders are required because it is not clear which aspect of hypnosis is important in successful treatments of sleepwalking and sleep terror. The present cases studies of CH and GS support the observations of other authors (e.g. Hurwitz, 1991) that suggest the general lowering of tonic levels due to the anxiolytic effects of relaxation employed during hypnosis might reduce the incidence of these disorders. However, other authors (e.g., Kingsbury, 1993; Koe, 1989) have suggested that the individualised use of hypnosis with suggested imagery and cognitive strategies may reinforce the acceptance of the modality as well as its efficacy in altering sleepwalking and sleep terror behaviours. Although it is not really clear how hypnosis exerts an effect on sleepwalking and sleep terror episodes, it is nevertheless a relatively simple, non-invasive, inexpensive, and effective means of treating these potentially dangerous disorders.

REFERENCES

- Abe, K., Amatoni, M., & Oda, N. (1984). Sleepwalking and recurrent sleeptalking in the children of childhood sleepwalkers. *American Journal of Psychiatry*, *141*, 800–801.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Arkin, A. M., & Antrobus, J. S. (1991). The effects of external stimuli applied prior to and during sleep on sleep experience. In S. J. Ellman & J. S. Antrobus (Eds.), *The mind in sleep: Psychology and psychopharmacology*. New York: Wiley.
- Arluck, E. (1964). *Hypnoanalysis: A case study*. New York: Random House.
- Association of Sleep Disorders Centers, Sleep Disorders Classification Committee, H. P. Roffwarg (Chairman). (1979). Diagnostic Classification of Sleep and Arousal Disorders (1st ed.). *Sleep*, *2*, 99–121.
- Barber, T. X., Walker, P. C., & Hahn, K. W. (1973). Effects of hypnotic induction and suggestions on nocturnal dreaming and thinking. *Journal of Abnormal Psychology*, *82*, 414–427.
- Belicki, D., & Belicki, K. (1982). Nightmares in a university population. *Sleep Research*, *11*, 116.
- Belicki, K., Altray, H., & Hill, C. (1985). Varieties of nightmare experience. *Association for the Study of Dreams Newsletter*, *2*, 1–3.
- Belicki, K. & Belicki, D. (1986). Predispositions for nightmares: A study of hypnotic ability, vividness of imagery, and absorption. *Journal of Clinical Psychology*, *42*, 714–718.
- Berlin, R. M. & Qayyum, U. (1986). Sleepwalking: Diagnosis and treatment through the life cycle. *Psychosomatics*, *27*, 755–781.
- Bishay, N. (1985). Therapeutic manipulation of nightmares and the management of neuroses. *British Journal of Psychiatry*, *147*, 67–70.
- Bixler, E. O., Kales, A., Soldatos, C. R., Kales, J. D., & Healy, S. (1979). Prevalence of sleep disorders in the Los Angeles metropolitan area. *American Journal of Psychiatry*, *136*, 1257–1262.
- Bootzin, R. R., Kihlstrom, J. F., & Schacter, D. L. (Eds.). (1990). *Sleep and cognition*. Washington, DC: American Psychological Association.
- Broughton, R. J. (1968). Sleep disorders: Disorders of arousal. *Science*, *159*, 1070–1078.
- Brylowski, A. (1990). Nightmares in crisis: Applications of lucid dreaming techniques. *Psychiatric Journal of the University of Ottawa*, *15*, 79–84.
- Celucci, A. J., & Lawrence, P. S. (1978a). The efficacy of systematic desensitization in reducing nightmares. *Journal of Behavioral Therapy and Experimental Psychiatry*, *9*, 109–114.
- Celucci, A. J., & Lawrence, P. S. (1978b). Individual differences in self-reported sleep variable correlations among nightmare sufferers. *Journal of Clinical Psychology*, *34*, 721–725.
- Combs, G., & Freedman, J. (1990). *Symbol, story and ceremony: Using metaphor in individual and family therapy*. New York: Norton.
- Cooperman, S., & Schafer, D. (1983). Hypnotherapy over the telephone. *American Journal of Hypnosis*, *25*, 277–279.

- Dillahun, D. (1971). Sleepwalking. In *A Handbook of therapeutic suggestions*. American Society of Clinical Hypnosis — Education and Research Foundation.
- Dillahun D (1973) Sleepwalking. In American Society of Clinical Hypnosis Education and Research Foundation (Ed.), *A syllabus on hypnosis and a handbook of therapeutic suggestions*. Des Plaines, IL: American Society of Clinical Hypnosis.
- Dunn, K. K., & Barrett, D. (1988). Characteristics of nightmare subjects and their nightmares. *Psychiatric Journal of the University of Ottawa*, 13, 91–193.
- Eccles, A., Wilde, A., & Marshall, W. L. (1988). In vivo desensitization in the treatment of recurrent nightmares. *Journal of Behavior Therapy and Experimental Psychiatry*, 19, 285–288.
- Eichelman, B. (1985). Hypnotic change in combat dreams of two veterans with posttraumatic stress disorder. *American Journal of Psychiatry*, 142, 112–114.
- Eliseo, T. (1975). The hypnotic treatment of sleepwalking in an adult. *American Journal of Clinical Hypnosis*, 17, 272–276.
- Ellman, S. J., & Antrobus, J. S. (Eds.). (1991). *The mind in sleep: Psychology and psychopharmacology*. New York: Wiley.
- Erikson, M. H. (1959). Further clinical techniques of hypnosis: Utilization techniques. *American Journal of Clinical Hypnosis*, 2, 3–21.
- Erman, M. K. (1987). Dream anxiety attacks (nightmares). *Psychiatric Clinics of North America*, 10, 667–674.
- Feldman, M. J. & Herson, M. (1967). Attitudes toward death in nightmare subjects. *Journal of Abnormal Psychology*, 72, 421–425.
- Feldman, M. J., & Hyman, E. (1968). Content analysis of nightmare reports. *Psychophysiology*, 5, 221.
- Fisher, C., Byrne, J., Edwards, A., & Kahn, E. (1970). A psychophysiological study of nightmares. *Journal of the American Psychoanalytic Association*, 18, 747–782.
- Fisher, C., Kahn, E., & Edwards, A. (1973). The psychophysiological study of nightmares and night terrors. *Archives of General Psychiatry*, 28, 252–259.
- Fisher, C., Kahn, E., Edwards, E., & Davis, D. M. (1973). A psychophysiological study of nightmares and night terrors: The suppression of stage 4 night terrors with diazepam. *Archives of General Psychiatry*, 28, 252–259.
- Fisher, C., Kahn, E., Edwards, E., Davis, D. M., & Fine, J. (1973). A psychophysiological study of nightmares and night terrors: III. Mental content and recall of stage 4 night terrors. *Journal of Nervous and Mental Disease*, 157, 75–98.
- Flemenbaum, A. (1976). Pavor nocturnus: A combination of a single daily tricyclic or neuroleptic dosage. *American Journal of Psychiatry*, 133, 570–572.
- Frank, J. D., & Frank, J. B. (1991). *Persuasion and healing: A comparative study of psychotherapy*. Baltimore: Johns Hopkins University Press.
- Frankel, F., & Orne, M. (1976). Hypnotizability and phobic behavior. *Archives of General Psychiatry*, 33, 1259–1261.
- Gabel, S. (1989). Dreams as a possible reflection of a dissociated self-monitoring system. *Journal of Nervous and Mental Disease*, 177, 560–568.

- Gabel, S. (1990). Dreams and dissociation theory: Speculations on beneficial aspects of their linkage. *Dissociation*, 3, 38–47.
- Gardner, G., & Olness, K. (1981). *Hypnosis and hypnotherapy with children*. New York: Grune & Stratton.
- Garfield, P. (1987). Nightmares in the sexually abused teenager. *Psychiatric Journal of the University of Ottawa*, 12, 93–97.
- Geer, J. H., & Silverman, I. (1967). Treatment of a recurrent nightmare by behaviour-modification procedures: A case study. *Journal of Abnormal Psychology*, 72, 188–190.
- Gilligan, S. G., (1988). Symptom phenomena as trance phenomena. In J. K. Zeig & S. R. Lankton (Eds.), *Developing Ericksonian therapy: State of the art* (pp. 327–352). New York: Brunner/Mazel.
- Gorton, G. E. (1988). Lifelong nightmares: An eclectic treatment approach. *American Journal of Psychotherapy*, 42, 610–618.
- Guilleminault, C. (1987). Obstructive sleep apnoea in children. In C. Guilleminault (Ed.), *Sleep and its disorders in children* (pp. 213–224). New York: Raven Press.
- Guilleminault, C. (1989). Sleepwalking and night terrors. In M. H. Kryger, T. Roth, & W. C. Dement (Eds.), *Principles and practice of sleep medicine* (pp. 379–384). Philadelphia: Saunders.
- Guilleminault, C., Moscovitch, A., & Leger, D. (1995). Injury, violence and nocturnal wanderings. *American Journal of Forensic Psychiatry*, 16, 33–46.
- Gutnik, B., & Reid, W. (1982). Adult somnambulism: Two treatment approaches. *Nebraska Medical Journal*, 67, 309–312.
- Halliday, G. (1982). Direct alteration of a traumatic nightmare. *Perceptual and Motor Skills*, 54, 413–414.
- Halstrom, T. (1972). Night terror in adults through three generations. *Acta Psychiatrica Scandinavica*, 48, 350–352.
- Hartmann, E. (1965). The D-state: A review and discussion of studies on the psychological state concomitant with dreaming. *New England Journal of Medicine*, 273, 30–35, 87–92.
- Hartmann, E. (1966). Reserpine: Its effects on the sleep–dream cycle in man. *Psychopharmacologia*, 9, 242–247.
- Hartmann, E. (1983). Two case reports: Night terrors with sleepwalking: A potentially lethal disorder. *Journal of Nervous and Mental Disease*, 171, 503–505.
- Hartmann, E. (1984). *The nightmare: The psychology and biology of terrifying dreams*. New York: Basic Books.
- Hartman, E., Falke, R., Russ, D., & Oldfield, M. (1981). Who has nightmares? Persons with lifelong nightmares compared with vivid dreamers and non-vivid dreamers. *Sleep Research*, 10, 171.
- Hartmann, E., Greenwald, D., & Brune, P. (1982). Night terrors–sleepwalking: Personality characteristics. *Sleep Research*, 11, 121.
- Hartmann, E., & Russ, D. (1979). Frequent nightmares and the vulnerability to schizophrenia: The personality of the nightmare sufferer. *Psychopharmacology Bulletin*, 15, 10–12.

- Hartmann, E., Russ, D., Oldfield, M., Sivan, I., & Cooper, S. (1987). Who has nightmares? The personality of the lifelong nightmare sufferers. *Archives of General Psychiatry, 44*, 49–56.
- Hartmann, E., Russ, D., Van Der Kolk, B., Falke, R., & Oldfield, M. (1981). A preliminary study of the personality of the nightmare sufferer: Relationship to schizophrenia and creativity. *American Journal of Psychiatry, 138*, 794–797.
- Hartmann, E., Skoff, B., Russ, D., & Oldfield, M. (1978). The biochemistry of the nightmare: Possible involvement of dopamine. *Sleep Research, 7*, 186.
- Haynes, S. N., & Mooney, D. K. (1975). Nightmares: Etiological, theoretical and behavioral treatment considerations. *Psychological Record, 25*, 225–236.
- Hersen, M. (1971). Personality characteristics of nightmare sufferers. *Journal of Nervous and Mental Diseases, 153*, 27–31.
- Hobson, J. A. (1988). *The dreaming brain*. New York: Basic Books.
- Huapaya, L. V. M. (1979). Seven cases of somnambulism induced by drugs. *American Journal of Psychiatry, 136*, 985–986.
- Hurwitz, T. (1986). Treatment of somnambulism and pavor nocturnus in adults with hypnosis. *Sleep Research, 15*, 131.
- Hurwitz, T., & Mahowald, M. (1988). Further experience with hypnosis in the treatment of somnambulism/pavor nocturnus in adults. *Sleep Research, 17*, 190.
- Hurwitz, T. D., Mahowald, M. W., Schenck, C. H., Schutler, J. L., & Bundlie, S. R. (1991). A retrospective outcome study and review of hypnosis as treatment of adults with sleepwalking and sleep terror. *Journal of Nervous and Mental Disease, 179*, 228–233.
- Jencks, B., & Brazza, G. (1986). *Hypnotic self-confrontation to resolve unpleasant dreams*. Paper presented at the 28th Annual Scientific meeting of the American Society of Clinical Hypnosis, Seattle, WA.
- Jones, E. (1951). *On the nightmare*. New York: Liveright.
- Kales, A., & Kales, J. D. (1974). Sleep disorders: Recent findings in diagnosis and treatment of disturbed sleep. *New England Journal of Medicine, 290*, 487–499.
- Kales, A., Paulson, M. J., Jacobson, A., & Kales, J. D. (1966). Somnambulism: Psychophysiological correlates. *Archives of General Psychiatry, 14*, 586–594.
- Kales, A., Soldatos, C. R., Bixler, E. O., Ladda, R. L., Charney, D. S., Weber, G., & Schweitzer, P. K. (1980). Hereditary factors in sleepwalking and night terrors. *British Journal of Psychiatry, 137*, 111–118.
- Kales, A., Soldatos, C. R., Caldwell, A. B., Charney, D. S., Kales, J. D., Markel, D., & Cadieux, R. (1980). Nightmares: Clinical characteristics and personality patterns. *American Journal of Psychiatry, 139*, 1197–1201.
- Kales, A., Soldatos, C. R., Caldwell, A. B., Kales, J. D., Humphrey, F. J., Charney, D. S., & Schweitzer, P. K. (1980). Somnambulism: Characteristics and personality patterns. *Archives of General Psychiatry, 37*, 1406–1410.
- Kales, A., Soldatos, C. R., & Kales, J. D. (1987). Sleep disorders: Insomnia, sleepwalking, night terrors, nightmares and enuresis. *Annals of Internal Medicine, 106*, 582–592.

- Kales, A., Tan, T. L., Preston, T. A., & Allen, C. (1970). Stage 4 sleep: Studies of hypnotic, tranquillizing and antidepressant drugs. *Psychophysiology*, 7, 342–343.
- Kales, J. D., Cadieux, R. J., Soldatos, C. R., & Kales, A. (1982). Psychotherapy with night-terror patients. *American Journal of Psychotherapy*, 36, 399–407.
- Kales, J. D., Kales, A., Soldatos, C. R., Chamberlin, K., & Martin, E. D. (1979). Sleepwalking and night terrors related to febrile illness. *American Journal of Psychiatry*, 136, 1214–1215.
- Kales, J. D., Soldatos, C. R., Caldwell, A. B., Charney, D. S., & Martin, E. D. (1980). Nightmares: Clinical characteristics and personality patterns. *Archives of General Psychiatry*, 37, 1413–1417.
- Karacan, I., Wolff, S. M., Williams, R. L., Hirsch, C. J., & Webb, W. B. (1968). The effects of fever on sleep and dream patterns. *Psychosomatics*, 9, 331–339.
- Kavey, N. B., Whyte, J., Resor, S., & Gidro-Frank, S. (1987). Classification and treatment of somnambulism. *Sleep Research*, 16, 368.
- Kellner, R., Neidhardt, J., Krakow, B., & Pathak, D. (1992). Changes in chronic nightmares after one session of desensitization or rehearsal instructions. *American Journal of Psychiatry*, 149, 659–663.
- Kingsbury, S. J. (1988). Hypnosis in the treatment of posttraumatic stress disorder: An isomorphic intervention. *American Journal of Clinical Hypnosis*, 31, 81–90.
- Kingsbury, S. J. (1992). Strategic psychotherapy for trauma: Hypnosis and trauma in context. *Journal of Traumatic Stress*, 51, 85–96.
- Kingsbury, S. J. (1993). Brief hypnotic treatment of repetitive nightmares. *American Journal of Clinical Hypnosis*, 35, 161–169.
- Klackenberg, G. (1982). Somnambulism in childhood — prevalence, course and behavioral correlations. *Acta Paediatrica Scandinavica*, 71, 495–499.
- Koe, G. G. (1989). Hypnotic treatment of sleep terror disorder: A case report. *American Journal of Clinical Hypnosis*, 32, 36–40.
- Kohen, D. P., Mahowald, M. W., & Rosen, G. M. (1992). Sleep terror disorder in children: The role of self-hypnosis in management. *American Journal of Clinical Hypnosis*, 34, 233–244.
- Korth, L. (1964). *The healing sleep*. Rustington, England: Heath Science Press.
- Kramer, M., & Kinney, L. (1988). Sleep patterns in trauma victims with disturbed dreaming. *Psychiatric Journal of the University of Ottawa*, 13, 12–16.
- Kramer, M., Schoen, L. S., & Kinney, D. (1987). Nightmares in Vietnam veterans. *Journal of American Academy of Psychoanalysis*, 15, 67–81.
- Kramer, R. L. (1988). The treatment of childhood night terrors through the use of hypnosis: A case study: Brief communication. *International Journal of Clinical and Experimental Hypnosis*, 37, 283–284.
- Kupfer, D. J., & Bowers, M. B., Jr. (1972). REM sleep and central monoamine oxidase inhibition. *Psychopharmacologia*, 27, 183–190.
- Lester, D. (1968). The fear of death of those who have nightmares. *Journal of Psychology*, 69, 245–247.

- Lester, D. (1969). Fear of death and nightmare experiences. *Psychological Reports*, 25, 437–438.
- Luchins, D. J., Sherwood, P. M., Gillin, J. C., Mendelson, W. B., & Wyatt, R. J. (1978). Filicide during psychotropic-induced somnambulism: A case report. *American Journal of Psychiatry*, 135, 1404–1406.
- Mahowald, M. W., & Rosen, G. M. (1990). Parasomnias in children. *Pediatrician*, 17, 21–31.
- Marks, I. (1978). Rehearsal relief of a nightmare. *British Journal of Psychiatry*, 133, 461–465.
- Marshall, J. R. (1975). The treatment of night terrors associated with the posttraumatic stress syndrome. *American Journal of Psychiatry*, 132, 293–295.
- Mason, R. O. (1987). Educational uses of hypnotism: A reply to Prof. Lightner Witmer's editorial in *Pediatrics* for January 1, 1987. *Pediatrics*, 3, 97–105.
- Miller, W. R., & DiPilato, M. (1983). Treatment of nightmares via relaxation and desensitization: A controlled evaluation. *Journal of Consulting and Clinical Psychology*, 51, 870–877.
- Moss, C. (1973). Treatment of a recurrent nightmare by hypnosymbolism. *American Journal of Clinical Hypnosis*, 16, 23–30.
- Nadel, C. (1981). Somnambulism, bed-time medication and overeating. *British Journal of Psychiatry*, 139, 79.
- Nugent, W. R., Carden, N. A., & Montgomery, D. J. (1984). Utilizing the creative unconscious in the treatment of hypodermic phobias and sleep disturbance. *American Journal of Clinical Hypnosis*, 26, 201–205.
- Oswald, I., & Evans, J. (1985). On serious violence during sleep-walking. *British Journal of Psychiatry*, 147, 688–691.
- Pai, M. (1946). Sleep-walking and sleep activities. *British Journal of Psychiatry*, 92, 756–765.
- Pesikoff, R. B., & Davis, P. C. (1971). Treatment of pavor nocturnus and somnambulism in children. *American Journal of Psychiatry*, 128, 778–781.
- Reid, W. (1975). Treatment of somnambulism in military trainees. *American Journal of Psychotherapy*, 29, 101–106.
- Reid, W., Ahmed, I., & Levie, C. (1981). Treatment of sleepwalking: A controlled study. *American Journal of Psychotherapy*, 35, 27–37.
- Reid, W., & Gutnik, B. (1980). Case report: Treatment of intractable sleepwalking. *Psychiatric Journal of the University of Ottawa*, 5, 86–88.
- Reid, W. H., Haffke, E. A., & Chu, C. C. (1984). Diazepam in intractable sleepwalking: A pilot study. *Hillside Journal of Clinical Psychiatry*, 6, 49–55.
- Rogers, C. R. (1957). The necessary and sufficient conditions of therapeutic personality change. *Journal of Consulting Psychology*, 21, 95–103.
- Ross, R. J., Ball, W. A., Sullivan, K. A., & Caroff, S. N. (1989). Sleep disturbance as the hallmark of posttraumatic stress disorder. *American Journal of Psychiatry*, 146, 697–707.
- Schenck, C. H., & Mahowald, M. W. (1995). Two cases of premenstrual sleep terrors and injurious sleepwalking. *Journal of Psychosomatic Obstetric Gynaecology*, 16, 79–84.

- Schenck, C.H., Milner, D., Hurwitz, T.D., Bundlie, S.R., & Mahowald, M.W. (1989). A polysomnographic and clinical report of sleep related injury in 100 adult patients. *American Journal of Psychiatry*, *146*, 1166–1173.
- Schindler, F. E. (1980) Treatment by systematic desensitization of a recurring nightmare of a real life trauma. *Journal of Behavioral Therapy and Experimental Psychiatry*, *11*, 53–54.
- Seif, B. (1985). Clinical hypnosis and recurring nightmares: A case report. *American Journal of Clinical Hypnosis*, *27*, 166–168.
- Shorkey, C., & Himle, D. P. (1974). Systematic desensitization treatment of a recurring nightmare and related insomnia. *Journal of Behavioral Therapy and Experimental Psychiatry*, *5*, 97–98.
- Stutman, R., & Bliss, E. (1985). Posttraumatic stress disorder, hypnotizability, and imagery. *American Journal of Psychiatry*, *142*, 741–743.
- Taboada, E. L. (1975). Night terrors in a child treated with hypnosis. *American Journal of Clinical Hypnosis*, *17*, 270–271.
- Tart, C. T. (1966). Some effects of post-hypnotic suggestion on the process of dreaming. *International Journal of Clinical and Experimental Hypnosis*, *14*, 30–46.
- Tart, C. T., & Dick, L. (1970). Conscious control of dreaming: I. The posthypnotic dream. *Journal of Abnormal Psychology*, *76*, 304–315.
- van der Hart, O. (1993). *Rituals in psychotherapy: Transition and continuity*. New York: Irvington.
- Van Der Kolk, B., Blitz, R., Burr, W., Sherry, S., & Hartmann, E. (1984). Nightmares and trauma: A comparison of nightmares after combat with lifelong nightmare veterans. *American Journal of Psychiatry*, *141*, 187–190.
- Vela-Bueno, A., Soldatos, C. R., & Julius, D. A. (1987). Parasomnias: Sleepwalking, night terrors and nightmares. *Psychiatric Annals* *17*, 460–465.
- Walker, P. C., & Johnson, R. F. Q. (1974) The dream influence of presleep suggestions on dream content: Evidence and methodological problems. *Psychological Bulletin*, *81*, 362–370.
- Watzlawick, P. (1978). *The language of change: Elements of therapeutic communication*. New York: Norton.
- Weissbluth, M. (1984). Is drug treatment of night terrors warranted? *American Journal of Disabled Children*, *138*, 1086.
- Wilson, S. C., & Barber, T. X. (1973). The creative imagination scale as a measure of hypnotic responsiveness: Applications to experimental and clinical hypnosis. *The American Journal of Clinical Hypnosis*. *20*, 235–243.
- Wood, J. M., & Bootzin, R. R. (1990) The prevalence of nightmares and their independence from anxiety. *Journal of Abnormal Psychology*, *99*, 64–68.
- Zach, G. A. (1990). Hypnosis, Part II: Theories and structure. *Compendium*, *11*, 360–364.

HYPNOSIS IN THE TREATMENT OF CHRONIC PAIN: AN ECOSYSTEMIC APPROACH

Catherine Cosser
Psychologist

Pain is easily one of the most common health problems today. According to Bishop (1994), up to 80% of all visits to physicians involve pain-related complaints. This paper illustrates the use of hypnosis in the treatment of chronic low back pain. The use of hypnosis is described in terms of ecosystemic thinking and three case studies are used to illustrate this approach. The data from the case histories suggest that this way of thinking could lead to new possibilities for the application of hypnosis in the treatment of chronic low back pain.

In a study into the socioeconomic costs of back pain in the U.K., Maniadakis and Gray (2000) found that, although back pain may not be a life-threatening condition, it constitutes a major public health problem in Western industrialised societies. In the United States as many as 80% of the population are affected by low back pain symptoms at some time in their life and the cost of back pain to the U.S. health system economy in 1999 was \$25 billion in direct medical costs (Macfarlane, Thomas, Croft, Papageorgiou, Jayson, & Silman, 1999).

Chronic low back pain also has implications for the individual who suffers from it and for the person's family. Banks and Kerns (1996) stated that chronic pain is psychologically different from acute or occasionally recurrent pain in meaningful ways. Chronic pain amounts to quantitatively more aversive stimulation than acute pain and is therefore likely to be more stressful psychologically.

Roy (1986) suggested that a well-functioning family can, in a reasonably short period of time, become almost totally dysfunctional when one of its members assumes the role of a chronic pain patient. The impacts can be many, including heightened psychological distress in the spouses of chronic pain

sufferers; compromised and less satisfactory sex life; changes in roles resulting in additional responsibilities for other family members, especially the spouse; changes in communication patterns; and a heightened level of general marital distress (Roy, 1989).

Hypnotic analgesia has been employed previously to assist in pain management. Applications reported in the literature include fibromyalgia pain, burn patients, and the reduction of pain and nausea in cancer patients receiving bone marrow transplants (see Holroyd, 1996).

One issue raised in the literature on hypnotic pain control is a search for the mechanism(s) responsible for its functioning. Theories to explain the phenomenon include dissociation theory (Miller & Bowers, 1983), neodissociation theory (Hilgard, 1973), role theory (Hilgard, 1973), psychoanalytic ego theory (Hilgard, 1973), trance logic (Perry & Laurence, 1983), and the mediating effects of various neurochemicals, including norepinephrine and endorphins (Jackson & Middleton, 1978; Kihlstrom, 1985).

An alternative approach to those which seek to find an explanatory mechanism internal to the hypnotic subject is situated in the ecosystemic paradigm, which emphasises the process between all participants and the way in which the meaning of behaviour is generated in order to influence experiences of reality (Fourie & Lifschitz, 1989). Within an ecosystemic conceptualisation, hypnosis is a concept, not an entity; hypnotic behaviours are not caused; hypnotic behaviours exist within a domain of consensus; hypnotic induction is a punctuating ritual; hypnotic responsiveness is contextually specified; and hypnotic depth is a culturally shaped subjective experience. From an ecosystemic point of view, hypnosis can be defined as a “a concept that describes a situation in which all participants expect the subject to perform behaviors in such a way and of such a nature that they are understood by everybody to be hypnotic” (Fourie, 1988, p. 144). From an ecosystemic perspective, hypnosis is applied because such application is attributed with certain meanings by clients and families, attributions that are then capitalised on in order to perturb existing ideas in which the particular problem is seen as embedded (Fourie, 1995).

The current study examined the effect that hypnosis, approached from an ecosystemic perspective, may have on the chronic low back pain sufferer and his/her family system. Although some successes have been reported using hypnosis for pain conditions, none of these studies, with the exception of one by Bassett (1992), have approached the use of hypnosis with chronic pain

patients from an ecosystemic perspective. This study proposes that such an approach is vital because the experience of chronic pain is so individual and has to be considered in terms of the context in which it is embedded.

The present study made use of the case study approach which, it is argued, is best suited to understanding the way in which the subject under investigation is defined or established through the set of meanings that participants will assign to their own experiences (Hamel, 1993).

The study did not investigate the etiology of participants' pain. In practice it is frequently impossible to know which sources of pain are physical and which psychological (Capra, 1983). Studies that have attempted to categorise physiological or psychological disorders, which could be construed as the cause of the pain, have generally failed. The advantage of using an ecosystemic approach is that it does not emphasise the origin of the subject's pain. The main emphasis, from this perspective, lies in creating a context wherein a greater degree of adaptation to pain may come about, regardless of the presumed underlying pathology (Fourie, 1998).

The aim of this study was not to bring about complete and permanent pain relief. As Spinhoven and Linssen (1989) argued, a more realistic goal when working with low back pain patients is a better adjustment to continuing pain or learning to live with chronic pain, rather than curing pain or pain reduction. Ultimately, the effectiveness and viability of any ecosystemically oriented therapy for the chronic pain syndrome is determined in terms of facilitation of the development of more functional patterns of interaction and relationships in each patient's ecology.

PARTICIPANTS

Six chronic low back pain patients provided individual case data for the study. The original sample consisted of three married males and three married female participants. One of the male participants chose to withdraw after the second session. All participants were recruited through physiotherapists.

The McMaster Model of Family Functioning (MMFF), described by Epstein, Bishop and Baldwin (1982), was used to assess the current functioning of each sufferer's family. Such a description was deemed necessary because, as Barber (1986, p. 165) states, "the particular way an individual patient's pain is integrated into his or her life will determine some of the twists and turns that treatment is likely to take."

Given the substantial changes that families with a chronic pain patient undergo, "it is quite imperative to assess the family functioning on multiple

dimensions” (Roy, 1985, p. 303). Roy (1985) believes the six dimensions of family functioning (problem solving, roles, communication, affective responsiveness, affective involvement, and behaviour control) described by Epstein and his colleagues serve that purpose well. Roy (1989) cites his use of the MMFF in his 1987 study of chronic headache patients and his 1989 study with headache and backache sufferers. In both studies the MMFF proved capable of assessing the impact of an event such as illness in a family member on the overall functioning of the family.

Case history participants also completed the Brief Pain Inventory (BPI), used in the study to track treatment progress. The BPI is a brief, easy to use tool for the assessment of pain in both clinical and research settings. The inventory asks patients to rate their pain for the last week on 0 to 10 numerical rating scales presented as a row of equidistant numbers.

With regard to severity of pain, the BPI asks patients to rate the severity of their pain at its “worst,” “least,” “average,” and at the time the rating is made — “now”. Each scale for Worst Pain, Least Pain, Pain on Average, and Pain Right Now uses a 10-point scale, where 0 = “no pain” and 10 = “pain as bad as you can imagine.” For analysis purposes, the “pain worst” item was chosen as the primary response variable, with the other items serving as a check on variability.

Items for the BPI’s interference scale were selected to tap how pain impairs both level of function (e.g., walking) and social affective wellbeing (e.g., mood). Using the same type of scales, patients are asked to separately rate how their pain interferes with their Enjoyment of Life, Activity, Walking, Mood, Sleep, Work, and Relations with Others. These scales are bounded by 0 = “does not interfere” and 10 = “interferes completely.” For analysis purposes, the mean of the seven pain interference items was used as a pain interference score.

Cronbach alpha reliability for the BPI ranges from .77 to .91. Construct validity of the original version of the BPI has been confirmed by factor analysis. The pain intensity ratings load on a common factor of “pain severity”, while the seven interference items showing high loadings on the factor “interference with function.” Validation of the BPI in different languages consistently demonstrates these two common factors (Radbruch et al., 1999).

PROCEDURE

Initial contact was made with the prospective participants by telephone. The nature of the study was explained and each potential participant was vetted

against study criteria. Participants were informed at this stage that it was not possible to stipulate how many sessions would be employed and that the researcher could not guarantee that any benefits (in terms of permanent pain relief or otherwise) would be derived from their participation.

All sessions were conducted in the participant's home in an attempt to let them feel as much at ease as possible, and to allow the researcher to observe the family in their own environment. Weekly sessions were conducted with participants. It was hoped that this would convey to participants that the researcher viewed their pain problem seriously enough to warrant an intensive approach to treatment.

The first session and part of the second session were used for assessment of the family's functioning, using the McMaster model of family functioning. When seeing the family for the assessment the aim was for all the family members living at home to be present. This allowed the researcher to obtain a full range of views. Knowledgeable children were asked to wait in another room when assessing the parents' sexual relationship. Ongoing participation by all, or some, family members after the initial assessment was decided on a case-by-case basis.

The second session was also used to assess the participant and, if necessary, his/her family's expectations regarding hypnosis as a form of treatment. The chronic low back pain sufferer also completed the Brief Pain Inventory for the first time in the second session. The BPI was completed in each subsequent session thereafter.

Hypnosis was employed from the third session on. No fixed number of sessions was set; the number of sessions was decided on a case-by-case basis.

CASE PRESENTATIONS

The Adaptive Copers

Two of the chronic pain sufferers in the present study could be classified as adaptive copers who continued to function at a relatively high level.

Eve had been suffering from chronic back pain for six years and her doctor believed most of her pain was due to muscle spasm. Eve, her husband and their two teenage sons (13 and 19 years) were present for the MMFF assessment. The MMFF indicated that pain's overall influence over this family had been kept to a minimum and, therefore, only Eve was scheduled to attend further sessions.

Eve's expectation was that hypnosis would teach her to relax, and therefore cope better with the pain. This expectation linked with her doctor's opinion of the cause of her pain. Eve also expected hypnosis to involve some sort of visualisation and she believed that "the deeper you went" the more effective hypnosis could be. From an ecosystemic viewpoint, it was necessary to create a hypnotic experience that would be congruent with Eve's expectations. For example, as she believed that the "deeper" one went the more powerful hypnosis would be, an arm levitation was used to prove to her how "deeply" she was hypnotised. The image of going down in a lift was also used in response to her request for depth. Although from an ecosystemic perspective no credence is given to reified concepts such as "depth" of hypnosis, this term was used because it linked with the conceptions of the client (Fourie, 1991a). Similarly, the idea that hypnosis involves imagery and visualisation was capitalised on through the use of a metaphor of the sun. Eve's pain was likened to the sun because burning was the primary sensation she associated with her pain. She was asked to visualise her pain as a large, red, burning ball and to imagine the ball becoming lighter in colour and smaller until she visualised it disappearing completely. Eve was taught to use relaxation exercises and the visualisation exercise for herself through "self-hypnosis." Although the ecosystemic approach views the notion of self-hypnosis as an artefact of the state conception in which hypnosis came to have a reality of its own (Lifschitz and Fourie, 1985), this again does not imply a rejection of the strategic utilisation of "self-hypnosis" in the contexts of therapy.

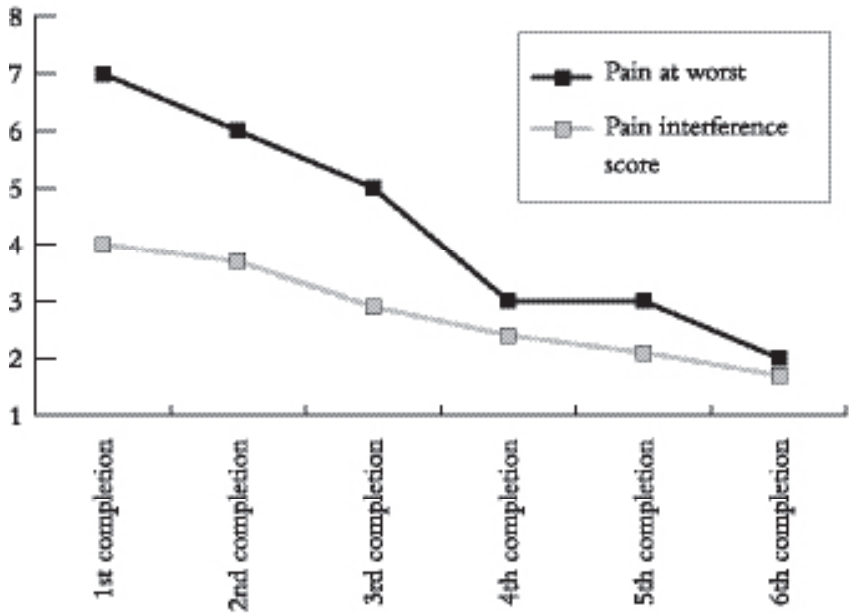
On the BPI, Eve's pain at worst rating decreased from 7 on the first completion to a rating of 2 on the final completion at her fifth hypnosis session. Her pain interference score decreased from 4 to 1.7 on the final completion (see Figure 1).

The Need for Support

Two of the chronic pain sufferers demonstrated a need for support.

Dudu had been suffering from chronic low back pain for three years and had already had surgery twice. Her husband and daughter Lindy (20 years) were present for the MMFF assessment. Dudu made a concerted effort not to let her pain slow her down and her occupational role and social activities appeared to have been little affected.

The MMFF did, however, indicate Dudu's feeling of obligation not to impose her difficulties on her family and her reluctance to share her emotions.

Figure 1: Summary of Brief Pain Inventory for Eve

Tunks (1990, p. 245) discussed the problem of “the patient who copes well,” arguing that these patients need to learn more appropriate adaptive responses. They need to learn to ventilate feelings rather than push themselves to the point of breakdown, and they need to set limits on themselves and others.

Dudu needed to accept the requirement to depend appropriately on others. As the members of this family appeared to care a great deal for each other and the researcher introduced the idea to the family that perhaps Dudu would appreciate someone attending the sessions with her, to encourage and support her. Her daughter immediately indicated that she would like to remain involved in the process. Lindy attended all subsequent sessions with Dudu.

At the end of the first hypnosis session, Lindy said that she too would like to “experience hypnosis.” It was suggested that hypnosis might be something that Lindy could “do for Dudu.” It was agreed that Lindy and Dudu would be hypnotised together in the next session. After their joint hypnotic experience, Lindy and Dudu were instructed to practise the breathing and relaxation exercises at home. Once Dudu started using “self-hypnosis,” Lindy remained involved. If Dudu was feeling tired or in pain, Lindy would “talk her through” her relaxation exercise.

Homework tasks were assigned to Dudu at the end of each session. For example, she was instructed to ask her family for help with at least one household task each day, no matter how small the task. She was also instructed to inform her family when she was experiencing pain, not so that they would feel obliged to do something about it, but so that they would know how she was feeling.

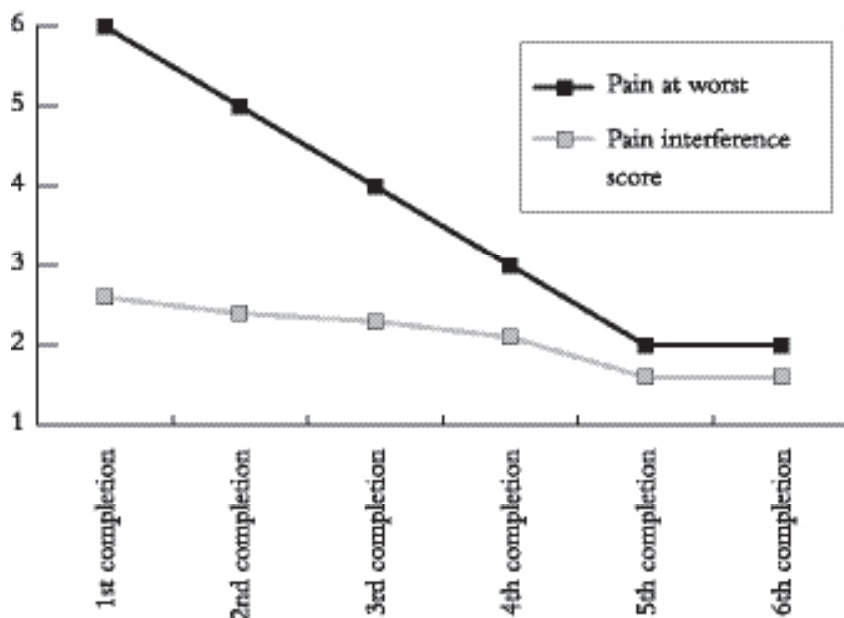
In the initial discussion of their expectations of hypnosis, both Dudu's husband and daughter stated that they thought that hypnosis might help Dudu relax and feel less pain. Dudu said that she "hoped" it was about relaxation. She did not think hypnosis could remove the pain, but that it could perhaps make it something she could cope with. An approach was adopted that would fit with these ideas. Relaxation exercises were used from the first session, and in the later sessions externalisation was introduced. The pain problem was made a separate entity and external to Dudu, so that she could change its fixed qualities. Dudu was asked to visualise her pain and to "give it a form." She reported seeing her pain as a solid red block and she was then asked to imagine the form of her pain changing. Firstly, she was asked to imagine the edges of the block softening and losing their rigidity until they almost became fluid. She was then asked to imagine the colour changing from red to purple and then to blue, until the color resembled that of waves, an image that linked with Dudu's choice of the ocean as her "safe place." In this way Dudu's pain was not taken away, but changed into something she could better cope with.

After the fifth hypnosis session, Dudu's pain at worst rating on the BPI had dropped to 2 from the first rating of 6. The average for the pain interference items dropped from the original 2.6 to 1.6 (see Figure 2).

The Need to Be Involved

The need to be involved was clearly demonstrated in the case of Mandy and her husband, Dylan (pseudonyms). Mandy was referred by her physiotherapist, but it was Dylan who made contact before the referral could even be followed up. Mandy had been suffering from low back pain for a total of 20 months.

Mandy had already seen five different neurosurgeons at the time of the referral, none of whom seemed able to find a definite cause for her lower back pain. Three weeks earlier, her current neurosurgeon had performed a joint block in an attempt to alleviate her pain. She had been very optimistic because she felt some action was finally being taken. However, the procedure provided no relief and in fact seemed to make her pain worse. Her husband stated in

Figure 2: Summary of Brief Pain Inventory for Dudu

the first telephone call that they felt as if they had reached the end of the road, with no idea where to go next.

Mandy, Dylan and their two sons (17 and 14 years of age) were present for the MMFF assessment. Mandy had been off work for two months at the time of the first meeting. She believed that her pain had affected her family. She stated that it felt as if the pain, rather than her family, had become the centre of her life. Mandy felt that her pain had become a barrier between her and the family and she admitted that she had withdrawn from her family to a great extent.

Dylan's dominant feeling was one of helplessness after seeing so many doctors, with no answers forthcoming. He admitted that he was starting to feel depressed, but believed he had to stop himself from feeling that way, because Mandy was "so down." He said he was tired of sitting with the boys while she was lying on her own in their room. Dylan felt controlled by Mandy's pain because the headaches interfered with things like their social plans. He also felt the pain had taken his control away in that he could not do anything to help her, even though he really would have liked to.

Mandy's sons admitted that they no longer wanted to talk to her, as "all she talks about is pain." They both complained that she no longer spent the time with them that she used to.

Mandy's expectation of hypnosis was that it was a deep form of relaxation that might help her take her mind off the pain. She also felt that it might relieve some of her fear and anticipation of spasms if she could learn to relax her muscles. Mandy stated that her pain left her feeling helpless and out of control and she desperately wanted to feel some degree of control of her life again. Dylan agreed that he thought it might make her relax more and cope better. He wanted to know if he could be involved in some way, because he felt very shut off and very helpless.

From the initial conversation it seemed as if the following ideas were relevant: hypnosis can help with relaxation and allow the mind to exert some control over the body. The issue of control appeared central to Mandy. She felt as if her "old life" was slipping away. In the second hypnosis session a glove anaesthesia exercise was used with great success. She was asked to imagine the right hand becoming numb and the numbness was then "transferred" to her lower back. Mandy reported that both her hands had become numb and stated she had not believed it possible to control the sensation in one's body to such an extent. Using glove anaesthesia could well have been unsuccessful. However, it was worth attempting because it is a technique which helps the client achieve feelings of control over his/her bodily sensations.

From our initial meeting it also became obvious that pain was splitting the family up and isolating its members. Mandy's reaction to pain was to isolate herself, but this ignored Dylan's need to be there for her and help her. Dylan was left feeling inadequate and helpless. The MMFF revealed a mutual love of the outdoors. Mandy's fear of muscle spasm and hurting herself had resulted in her giving up her usual walks around the neighborhood. After the first hypnosis session, she was given the homework exercise of taking a walk around the block. Dylan was instructed to accompany her, so that he could help her if she did go into spasm or hurt herself. Mandy discovered that the walking actually made her muscles feel less likely to go into spasm and a daily walk was instituted. There was a very real need to unite this couple in doing something active and positive to combat the pain and walking fulfilled this purpose.

Dylan was also involved in the hypnosis and this too helped build a supportive relationship. A joint guided relaxation was used with the couple in the first session. At the end of the second session Mandy reported finding it

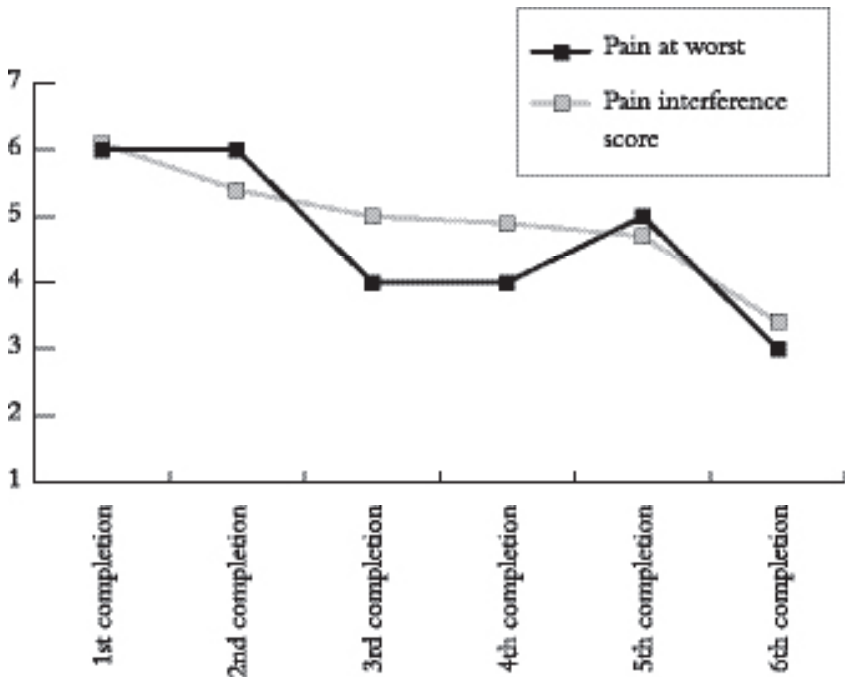
difficult to “talk herself through” the progressive relaxation. The suggestion was made that perhaps her talent lay in responding to hypnotic suggestions rather than making them and it was suggested that Dylan “talk her through” the relaxation. From this point on, Dylan assumed the role of “guide” for all Mandy’s homework exercises.

After the fifth hypnosis session, Mandy’s pain at worst rating had decreased from 6 to 3 over the course of the sessions. Her pain interference score had decreased from 6.1 to a 3.4 on the last completion of the inventory (see Figure 3).

DISCUSSION

Viewing hypnosis as a concept, rather than an as an entity, means that to work with hypnosis is to work with people’s ideas, conceptions and expectations, which ecosystemically seen, are all valid (Fourie, 1991b). In each case study the

Figure 3: Summary of Brief Pain Inventory for Mandy



researcher spent time trying to understand the conceptualisations of hypnosis held by the subject and his/her family member/s, as treatment had to fit with these conceptualisations. If the subjects expected hypnosis to involve relaxation, then that idea was capitalised on. Once hypnosis had been experienced, the researcher had to work with each subject's experience thereof so as to perturb the consensual domain around pain.

The flexibility of the ecosystemic approach allows it to be compatible with more conventional forms of treatment. It will be noted that many of the techniques used in traditional hypnosis were employed in the presented case studies, such as hand levitation, eye closure and imagery. However, the thinking behind the use of these techniques represents the point of departure from traditional hypnosis. No attempt was made to make these individuals fit an approach. Rather, the emphasis was on creating an approach to fit each of them. For example, hypnosis was used in this study to establish an experience of support, as in Dudu's case. Hypnosis was also something that the spouse of the subject could do, as in the case Dylan, in order not to feel helpless or cut off. During the entire process, the experiences of all individuals were incorporated into the therapeutic rationale through the use of feedback.

Many chronic low back pain patients experience any number of conventional treatments and are left frustrated because they have failed to respond. An advantage of an ecosystemic approach is that some form of therapeutic change is inevitable once more functional patterns of interaction have been initiated in the subject's ecology. As a result, the subject could be spared some of the costs and risks frequently associated with other forms of medical examination and treatment.

REFERENCES

- Banks, S. M., & Kerns, R. D. (1996). Explaining high rates of depression in chronic pain: A diathesis-stress framework. *Psychological Bulletin*, 119, 95–110.
- Barber, J. (1986). Hypnotic analgesia. In A. Holzman & D. C. Turk (Eds.), *A handbook of treatment strategies* (pp. 151–167). New York: Pergamon Press.
- Bassett, G. R. (1992). *The chronic pain syndrome: A hypnotherapeutic approach in the context of general systems theory*. Unpublished master's thesis, University of South Africa, Pretoria.
- Bishop, G. D. (1994). *Health psychology*. Boston: Allyn & Bacon.
- Capra, F. (1983). *The turning point: Science, society and the rising culture*. London: Flamingo.
- Epstein, N.B., Bishop, D. S., & Baldwin, L. M. (1982). McMaster model of family functioning: A view of the normal family. In F. Walsh (Ed.), *Normal Family Processes* (pp. 115–141). New York: Guilford Press.

- Fourie, D. P. (1988). Hypnosis in dental practice: From awkward add-on to smooth integration. *Journal of the Dental Association of South Africa*, *43*, 141–146.
- Fourie, D. P. (1991a). The ecosystemic approach to hypnosis. In S. J. Lynn and J. W. Rhue (Eds.), *Theories of hypnosis: Current models and perspectives* (pp. 466–481). New York: Guilford Press.
- Fourie, D. P. (1991b). The withholding of hypnosis in family therapy. *Journal of Family Psychotherapy*, *2*, 41–53.
- Fourie, D. P. (1995). Attribution of meaning: An ecosystemic perspective on hypnotherapy. *American Journal of Clinical Hypnosis*, *37*, 300–315.
- Fourie, D. P. (1998). *Hypnosis in treatment: An ecosystemic approach*. Pretoria: Unisa.
- Fourie, D. P., & Lifschitz, S. (1989). Ecosystemic hypnosis: Ideas and therapeutic application. *British Journal of Experimental and Clinical Hypnosis*, *6*, 99–107.
- Hamel, J. (1993). *Case Study Methods*. London: Sage Publications.
- Hilgard, E. R. (1973). A neodissociation interpretation of pain reduction in hypnosis. *Psychological Review*, *80*, 396–411.
- Holroyd, J. (1996). Hypnosis treatment of clinical pain: Understanding why hypnosis is useful. *International Journal of Clinical and Experimental Hypnosis*, *44*, 33–51.
- Jackson, J. A., & Middleton, W. R. J. (1978). The use of hypnosis for analgesia in upper gastrointestinal endoscopy. *Australian Journal of Clinical and Experimental Hypnosis*, *6*, 27–33.
- Kihlstrom, J. F. (1985). Hypnosis. *Annual Review of Psychology*, *36*, 384–418.
- Macfarlane, G. J., Thomas, E., Croft, P. R., Papageorgiou, A. C., Jayson, M. I. V., & Silman, A. J. (1999). Predictors of early improvement in low back pain amongst consultants to general practice: The influence of pre-morbid and episode-related factors. *Pain*, *80*, 113–119.
- Lifschitz, S., & Fourie, D. P. (1985). The hypnotic situation – a systems approach. *Reports from the Psychology Department No. 13*. Pretoria: Unisa.
- Maniadakis, N., & Gray, A. (2000). The economic burden of back pain in the UK. *Pain*, *84*, 95–103.
- Miller, M. E., & Bowers, K. S. (1983). Hypnotic analgesia: Dissociated experience or dissociated control? *Journal of Abnormal Psychology*, *102*, 29–38.
- Perry, C., & Laurence, J. (1983). Hypnosis, surgery and mind–body interaction: An historical evaluation. *International Journal of Psychosomatics*, *15*, 351–372.
- Radbruch, L., Loick, G., Kiencke, P., Lindena, G., Sabatowski, R., Grond, S., Lehmann, K. A., & Cleeland, C. S. (1999). Validation of the German Version of the Brief Pain Inventory. *Journal of Pain and Symptom Management*, *18*, 180–187.

- Roy, R. (1985). Family treatment for chronic pain: State of the art. *International Journal of Family Therapy*, 7, 297–309.
- Roy, R. (1986). A problem-centered family systems approach in treating chronic pain. In A. Holzman and D. Turk (Eds.), *Pain Management: A handbook of treatment strategies* (pp. 113–130). New York: Pergamon Press.
- Roy, R. (1989). *Chronic pain and the family: A problem centered perspective*. New York: Human Sciences Press.
- Spinhoven, P., & Linssen, C. G. (1989). Education and self-hypnosis in the management of low back pain: A component analysis. *British Journal of Clinical Psychology*, 28, 145–153.
- Tunks, E. (1990). Psychiatric management of chronic pain. In R. Roy, A. Bellissimo and E. Tunks (Eds.), *Chronic pain: Psychosocial factors in rehabilitation* (pp. 229–254). Malabar, FL: R. E. Kreiger.

A SINGLE SESSION OF HYPNOSIS AND EYE MOVEMENT DESENSITISATION AND REPROCESSING (EMDR) IN THE TREATMENT OF CHRONIC PAIN

Patricia Ray
Royal Perth Hospital

Andrew C. Page
University of Western Australia

Hypnosis and eye movement desensitisation and reprocessing (EMDR) in the treatment of chronic pain were examined. In a randomised controlled trial, patients in a crossover design experienced one session of hypnotherapy and EMDR. Subjective pain within treatment sessions was assessed using the McGill Pain Questionnaire. Subjective pain between treatment sessions was assessed using a diary record of pain. Treatment brought about reductions in subjective pain with evidence for the superiority of hypnosis.

Sufferers of pain disorder experience pain disproportionate to organic pathology (APA, 1994). Consequently, treatments focus on psychological factors that may modify the experience of pain. One such treatment is hypnosis (Hilgard & Hilgard, 1975). The hypno-analgesic effect of hypnosis is comparable to cognitive behaviour therapy (Syrjala, Cummings, & Donaldson, 1992) and it can assist in the management of chronic pain (Edelson & Fitzpatrick 1989). Since hypnosis is well documented in the management of both clinical and experimental pain (Montgomery, Duhamel, & Redd, 2000), we predicted that pain ratings would decrease during and following hypnotherapy.

In contrast to this relatively well-established treatment for pain, eye movement desensitisation and reprocessing (EMDR: Shapiro, 1997), and its predecessor EMD, were originally applied to post-traumatic stress disorder

(PTSD: McNally, 1999; Page & Crino, 1993) and only more recently has been used with chronic pain (Hassard, 1995). Second, Kleinknecht and Morgan (1992) suggested that EMDR might modify the accessibility or availability of distressing thoughts or images which are known to exacerbate pain (Turk, Meichenbaum, & Genest, 1983). Finally, there is a study that found EMDR facilitated coping with acute pain (Hekmat, Groth, & Rogers, 1994). Thus, the present investigation aimed to examine the efficacy of EMDR and hypnosis in the treatment of chronic pain.

METHOD

Subjects

Participants were 17 patients (10 male) of the Psychology Section of the Royal Perth Hospital, of whom 15 completed all sessions. The mean age of patients was 36.8 ($SD = 9.0$). All participants met DSM-IV (APA, 1994) criteria for Pain Disorder, Chronic Type. In terms of the McGill Pain Questionnaire, the mean score of the present pain subscale was 11.9 ($SD = 8.03$), the mean on the Visual Analog Scale was 46.8 ($SD = 17.18$), and the mean distress score was 1.9 ($SD = .30$). One patient had met criteria for PTSD and two patients met criteria for a current major depression (mild). The mean score on the Beck Depression Inventory (Beck & Steer, 1987) was 13.1 ($SD = 17.24$; range 4–28), placing them in the moderate range. Only 2 people were in paid (part-time) employment, 5 were occupied with home duties, 5 were unemployed and seeking work, and 5 were supported by a pension or benefits.

Materials

The McGill Pain Questionnaire (MPQ; Melzack, 1975) measured acute pain within experimental sessions. This reliable and valid instrument generates three indices. The first is a rating of Present Pain based on the sum of a series of Likert-type scales, the second is a Visual Analog Scale (VAS), and the final is a rating of the Distress regarding the present pain.

A diary record measured acute pain between sessions. Patients completed a VAS regarding their present pain first thing in the morning, at midday, and last thing at night. Mean daily pain ratings were obtained by averaging the three daily pain ratings. Where data points were missing, the daily average was calculated from remaining data points. Data were coded as missing if no data were recorded for a particular day (this occurred in the data from only one patient on one day).

Researcher Orientation

Both researchers are trained as clinical psychologists and have been trained in hypnosis and EMDR (Level 1). The clinician delivering the treatment (PR) has been practising for 24 years and using EMDR since Shapiro trained her in 1993. She has been using hypnosis since 1991.

Procedure

During an initial assessment session demographic information was obtained from patients who then rated their present pain. They completed the MPQ and the Beck Depression Inventory. This was followed by a diagnostic interview in which the clinical psychologist (PR) reviewed the relevant medical information and assessed if the patient met DSM-IV criteria for Pain Disorder, Chronic Type. The interview also involved administration of a DSM-IV checklist to investigate PTSD and Major Depression. Patients were asked if they would prefer to receive EMDR or hypnosis in treatment for their chronic pain disorder. Finally, they were given the pain diary to complete over the following seven days.

Patients were randomly assigned to receive either hypnosis followed by EMDR or EMDR followed by hypnosis. The EMDR session was conducted according to Shapiro's (1997) protocol, except that rather than providing a series of therapy sessions, treatment was provided in a single 90-minute session. Before beginning EMDR, patients completed the MPQ. The patient was requested to focus on the pain, any negative cognitions regarding the pain, and any noxious images or feelings associated with the pain. Eye movements were produced by requesting the patient to track the therapist's finger moving back and forward at 30–35 cm from the patient's face. The speed of finger movements was at a rate that was comfortable to the client, but was generally two back and forth movements per second. The protocol required that eye movements were carried out until the patient reported a SUDS (subjective units of distress) level of 1 or 0 on a 10-point scale. While focusing on the pain location, a positive cognition was then installed using a new set of eye movements with a positive image. Patients were asked to scan the body to locate other areas of discomfort or sensation. If distress or discomfort was elevated, then to gain closure a "vipassana technique" was employed (Shapiro, personal communication, 1993). This is a visualisation technique using the image of a healing light directed to the body to dissolve pain and distress.

Finally, the MPQ was re-administered and the pain diary for the next seven days was given out.

The hypnosis session began with administration of the MPQ. This was followed by a hypnosis procedure as outlined by Hammond (1990). Each patient was induced using eye fixation method followed by a deepening technique using the image of falling leaves from a tree. After this, an ideomotor signalling technique was used to identify unconscious motivations or past events that might be contributing to the chronic pain (Hammond, 1990). If these factors were present, the issues were explored and a resolution attempted. If no unconscious motivations or past events were impeding current pain, other suggestive techniques were explored. For instance, anaesthesia was developed by use of imagery or by the displacement of pain. Hypnosis concluded with ego boosting and posthypnotic suggestions for better pain management, reduced pain perception, and increased self-esteem. Prior to completion of the session, the MPQ was re-administered and the next week's pain diary given out.

The final session was conducted one week after the last treatment session. Patients completed the MPQ and indicated whether they would prefer to continue treatment with hypnosis or EMDR. Patients continued to receive treatment within the hospital.

RESULTS

The raw data are presented in Table 1, but given that the three subscales of the McGill were substantially correlated, a factor analysis was conducted on the pre-test McGill subscales to identify if the scales could be meaningfully combined into a single index. A principal components analysis yielded a single factor that accounted for 80.3% of the variance in scale scores (McGill VAS = .886; McGill Distress = .934; McGill Present Pain = .866). The component score coefficients were used to create a weighted sum of the standardised McGill scale scores at the pre-test so that each subject received a score of the single pain factor. The procedure was repeated for each subsequent measurement occasion. However, to preserve change over time the scores were standardised relative to the pre-test scores. The effect was reductions in reported pain were reflected in negative scores. Examination of the resulting scores indicated one subject with outlying data (Tabachnick & Fidell, 1996) and therefore these data were deleted from further analyses.

Table 1 Mean (*SDs* in brackets) ratings of pain and discomfort before and after treatment sessions for chronic pain involving hypnosis and EMDR

Time	<i>n</i>	McGill			
		Present pain	VAS	Distress	SUDS
Pre treatment	17	11.94 (8.03)	46.82 (17.18)	1.94 (.18)	50.65 (17.87)
Pre EMDR	16	7.44 (5.33)	42.50 (18.22)	2.00 (.16)	43.94 (18.91)
Post EMDR	16	7.00 (6.31)	35.20 (19.80)	1.60 (.19)	38.25 (19.48)
Pre hypnosis	17	8.53 (6.18)	41.12 (17.69)	2.00 (.17)	42.71 (20.44)
Post hypnosis	17	5.88 (6.17)	32.00 (20.38)	1.53 (.21)	32.24 (22.77)
Post treatment	15	5.53 (3.44)	37.93 (22.35)	1.80 (.17)	37.00 (20.71)

Overall Treatment Efficacy

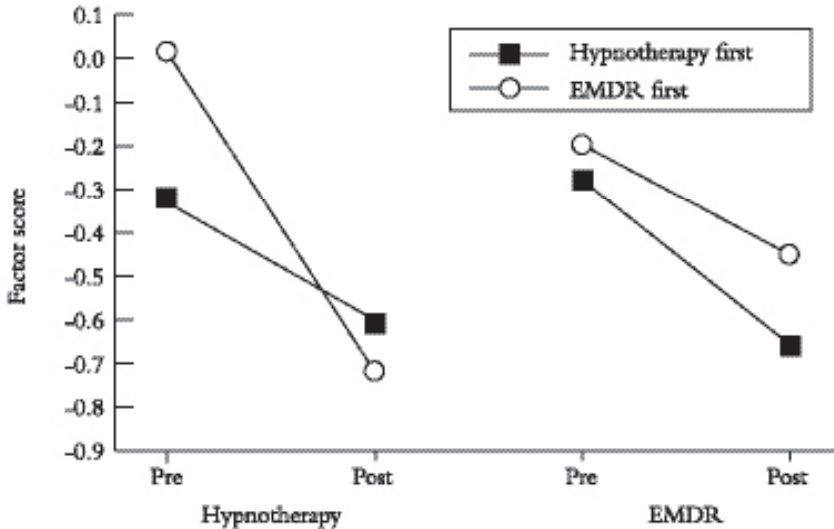
Since subjects were tested before and after random assignment to one session of EMDR and hypnosis, these pre- and post-treatment scores were examined to determine the overall treatment efficacy one week after the final of the two treatment sessions. The mean factor score decreased from .13 ($SD = .91$) to $-.53$ ($SD = .91$), but the difference was not statistically significant ($F(1,13) = 4.24$; $p = .06$; $\eta^2 = .25$).

Relative Treatment Efficacy and Treatment Preferences

To examine the relative effects of EMDR and hypnosis, the relevant factor scores were entered into a repeated measures ANOVA, where time (pre and post) and treatment (EMDR or hypnosis) were repeated measures factors and order (hypnosis or EMDR first) was a between subjects factor. The three-way interaction (time by treatment by order) was marginally significant ($F(1,12) = 4.77$; $p = .05$; $\eta^2 = .28$). Breaking this interaction down by treatment condition, it was evident that while the effect of time was significant with hypnosis ($F(1,14) = 5.25$; $p = .038$; $\eta^2 = .27$) it declined, but was not significant for EMDR ($F(1,12) = 3.48$; $p = .087$; $\eta^2 = .23$; and not modified by order in either case). The factor scores are displayed in Figure 1.

The average of the first three daily pain ratings provided an index of the short-term changes in pain and the average of the final four daily ratings provided an index of the longer-term changes in pain. Analyses indicated a significant effect of treatment ($F(2,26) = 4.08$; $p < .05$; $\eta^2 = .24$) unmodified

Figure 1 Mean McGill Pain Questionnaire Factor Scores Before and After Treatment Sessions for Chronic Pain Involving Hypnosis and EMDR



by time of week ($F(2,26) = 0.22; p < .05; \eta^2 = .02$). Follow-up tests indicated that the significant difference emerged because the mean SUDS in the diary records following the pre-treatment sessions ($M = 48.35; SE = 3.52$) were higher than the ratings following the treatment sessions ($F(1,13) = 4.86; p < .05; \eta^2 = .27$). However, the ratings after EMDR ($M = 42.62; SE = 4.33$) were not different from those following the session of hypnosis ($M = 43.15; SE = 4.12; F(1,13) = 0.14; p = ns; \eta^2 = .01$).

Prior to treatment, 3 (21.4%) patients preferred hypnosis, 1 EMDR (7.1%), and 10 were undecided (71.4%). After experiencing one session of EMDR and hypnosis, 13 patients chose hypnosis (86.7%) and 2 patients chose EMDR (13.3%).

DISCUSSION

A single session of EMDR and hypnotherapy were compared in patients with chronic pain. The changes from pre to post "treatment" indicated a non-significant decline in self-reported pain. The result is encouraging, but the lack of significance is not surprising given that the sample were experiencing chronic pain and dramatic therapeutic effects of a single session of either

treatment in a chronic population would seem unlikely. However, the within-session changes on the composite index favoured hypnosis. While both EMDR and hypnosis brought about declines in self-reported pain, the reductions only reached statistical significance for hypnosis. Despite this difference, there was no evidence that the within-session benefit translated into pain ratings over the week.

In addition to the slight within-session therapeutic advantage favouring hypnosis, the data indicated that by the end of the study patient preferences favoured hypnosis. That is, by the end of the study the majority of patients elected to continue with hypnosis (see also Devilly & Spence, 1999). One possibility is that EMDR involved the elicitation of unpleasant memories and pain to a greater degree than hypnosis. That is, while the hypnotic procedure was relaxing, EMDR involved asking patients to retrieve traumatic memories. Although the associated distress reduced by the end of the session, patients may have been electing to avoid the pain and discomfort associated with these memories. Also the patients' pain level often increased during EMDR and this was not reported as an enjoyable experience.

One limitation of the present study is the restriction to a single session. Nevertheless, it is important to note in this context that Rogers, Silver, Goss, Obenchain, Willis, and Whitney (1999) found that a single session of EMDR was effective in the reduction of PTSD symptoms in a study with a sample size smaller than the present investigation. Another limitation is the investigators' level of training. It is possible that had the researchers had Level 2 training, the results could have been different. A further limitation is the absence of a blind evaluator who made behavioural ratings. The absence of these ratings means that there is no independent validation of the self-reports. Finally, the study straddled the competing requirements for internal and external validity. Desiring to maximise external validity, we designed the study so that the routine practice of hypnosis and EMDR was formalised into a randomised crossover design. The strength of this approach is that it demonstrates the effectiveness of these procedures as administered in a hospital setting.

In summary, a randomised controlled trial conducted by trained and experienced staff in an inpatient setting with patients seen during routine clinical practice revealed that while within-session changes were similar, only the within-session changes for hypnosis reached statistical significance. While the present data are consistent with the literature supporting the usefulness of hypnosis in pain management, they are less encouraging for EMDR. While it

would be premature to conclude that EMDR is not effective in the treatment of pain, future research could examine the effectiveness of additional sessions or modified versions of EMDR. It is also apparent that neither a single session of EMDR nor hypnosis (or their combined effects) brought about a lasting reduction in self-reported pain. Therefore, future research could identify ways to strengthen and maintain the within-session gains.

REFERENCES

- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Beck, A. T., & Steer, R. A. (1987). *Beck Depression Inventory Manual*. San Antonio: Psychological Corporation.
- Devilly, G. J., & Spence, S. H. (1999). The relative efficacy and treatment distress of EMDR and a cognitive-behavioral trauma treatment protocol in the amelioration of posttraumatic stress disorder. *Journal of Anxiety Disorders, 13*, 131–157.
- Edelson, J., & Fitzpatrick, J. L. (1989). A comparison of cognitive-behavioural and hypnotic treatments of chronic pain. *Journal of Clinical Psychology, 45*, 316–323.
- Hammond, D. C. (1990). *Handbook of hypnotic suggestions and metaphors*. New York: W. W. Norton & Co.
- Hassard, A. (1995). Investigation of eye movement desensitization in pain clinic patients. *Behavioural and Cognitive Psychotherapy, 23*, 177–185.
- Hekmat, H., Groth, S., & Rogers, D. (1994). Pain ameliorating effect of eye movement desensitization. *Journal of Behavior Therapy and Experimental Psychiatry, 25*, 121–129.
- Hilgard, E. R., & Hilgard, J. R. (1975). *Hypnosis in the relief of pain*. Los Angeles: W. Kaufman.
- Kleinknecht, R. A., & Morgan, M. P. (1992). Treatment of post-traumatic stress disorder with eye-movement desensitization. *Journal of Behavior Therapy and Experimental Psychiatry, 23*, 43–49.
- McNally, R. J. (1999). EMDR and Mesmerism: A comparative historical analysis. *Journal of Anxiety Disorders, 13*, 225–236.
- Melzack, R. (1975). The McGill Pain Questionnaire: Major properties and scoring methods. *Pain, 1*, 27–299.
- Montgomery, G. H., Duhamel, K. N., & Redd, W. H. (2000). A meta-analysis of hypnotically induced analgesia: How effective is hypnosis? *International Journal of Clinical and Experimental Hypnosis, 48*, 138–153.
- Page, A. C., & Crino, R. D. (1993). Eye-movement desensitization: Is it a simple treatment for post-traumatic stress disorder? *Australian and New Zealand Journal of Psychiatry, 27*, 288–293.
- Rogers, S., Silver, S. M., Goss, J., Obenchain, J., Willis, A., & Whitney, R. L. (1999). A single session, group study of exposure and Eye Movement Desensitization and Reprocessing in treating posttraumatic stress disorder among Vietnam War veterans: Preliminary data. *Journal of Anxiety Disorders, 13*, 185–207.

- Shapiro, F. (1997). *E.M.D.R.: The breakthrough therapy for overcoming anxiety, stress and trauma*. New York: Basic Books.
- Syrjala, K. L., Cummings, C., & Donaldson, G. W. (1992). Hypnosis or cognitive behavioural training for the reduction of pain and nausea during cancer treatment: A controlled clinical trial. *Pain*, 48, 137–146.
- Tabachnick, B. G., & Fidell, L. S. (1996). *Using multivariate statistics* (3rd ed.). New York: HarperCollins.
- Turk, D. C., Meichenbaum, D. H., & Genest, M. (1983). *Pain behavioral medicine: A cognitive behavioral perspective*. New York: Guilford Press.

WHEN THE UNCONSCIOUS HAS BEEN LEFT IN THE WRONG HANDS

Annette Allman
Clinical Psychologist

This case illustrates the treatment of recurring postnatal depression in a mother of three young children utilising psychotherapy and pharmacotherapies. It reveals how hypnosis provided the necessary breakthrough to resolve the issues causing the recurrence of the severe, chronic postnatal depression and how this led to the client's symptom relief and cure. The case highlights the extreme destructiveness and ensuing pathology that can take place when others deliberately impose their views on an unconscious patient. We follow the unconscious journey of Mary, a 17-year-old girl who has had a termination, to the older 34-year-old mother who cannot love her three children because she feels she deserves to suffer. Why? How did this come about? The case addresses several spiritual issues such as our relationship to life and death, as well as life after death and our need to have a respectful relationship to the world of the unconscious, the spirit, and the soul.

Session 1

Mary was referred with post-natal depression, following the birth of her third child. She had suffered from a total of four depressive episodes, with the first occurring after the termination of a teenage pregnancy and the other episodes following birth. Mary had never received any psychotherapy but had been on antidepressants for the past six years. Her general practitioner referred her when Mary disclosed that she deserved to have depression for terminating her pregnancy 17 years ago.

Mary was 34 years old, married to an academic and a mother of three young children. Prior to motherhood, she had worked as a theatre nurse, but had become a community nurse since the arrival of her first child. She was currently on maternity leave.

Mary presented as extremely well-groomed, and physically fit with a golden suntan. She was very chatty and spoke about the sunny weather. She immediately connected with my dog, Dot, commenting on her beautiful, big black eyes. Mary masked her depression so well that I had to wonder whether I had the right Mary in the room.

After prompting her to speak about her depression, she said life had become a chore and that she found no enjoyment in anything, not even going to the beach with her children. "I feel that I pretend at life. Like I am not really there," she said. "I'm always thinking about what I have to do next and I feel that I am under constant pressure."

Mary said she set high standards for herself and described herself as a perfectionist. "My husband doesn't even know I'm depressed at the moment. I work hard all day to keep up with the chores so that when he gets home late at night the house looks perfect and so do the children. Then I hide my depression by pretending to read a book. He works long hours and he doesn't even know that the termination still upsets me."

Mary spoke about the termination as if it had happened yesterday. She showed a distinct lack of compassion towards herself and was full of self-loathing and self-condemnation. This was in direct contrast to the compassion she showed towards her "hard working, long-suffering husband and her poor children stuck with a depressed mother."

Towards the end of the first session, I explained to Mary that there was a need to get to the bottom of her depression and that she was to become an observer and research herself. I asked her to keep a journal and bring in any material from her unconscious, such as flashbacks, thoughts, feelings, and dreams. I also questioned whether her ideal of perfectionism was useful given that she had three children in her life. I asked her to think about the wisdom of the Navajo Indians. I explained that they knew their rightful place in relation to nature and the gods and how they would deliberately weave an unsightly thread into their beautiful carpets, so that their creations would never be perfect and offend the gods.

Session 2

Mary brought in her journal. She was worried that she was going to force herself to be better too soon and was aware of her habit of pushing herself. Actively struggling with her perfectionism, she talked about feeling a failure and not feeling that she was good enough or that she belonged.

I asked Mary about her family of origin. She reported that she was born the second of three children, to Irish Catholic parents. Her siblings, as described, are very clever and Mary put herself down in relation to them. "I'm just the mother, the one who provides offspring." She described a very distant relationship with her parents, having nothing in common with her mother. Mary began to cry when talking about her father. She said she had failed him and that she felt that she had lost him when she had the termination. She hung her head and said that the termination was never discussed within the family and that her father never made eye contact with her again. She left home to avoid his shame, speaking only on the phone and never visiting her parents. She said this had hurt them because they wanted to see their grandchildren.

Mary said that her father suffered from depression following his migration from Ireland. He had never come to terms with the fact that he had let his family down by leaving the family farm, which then had to be sold.

I mapped out the parallel between her father's migration experience and her own psychological migration and subsequent isolation from her family of origin at the same age in life. We explored how patterns tend to repeat themselves in families.

At the end of the second session I suggested that Mary might like to write a letter to her parents telling them how the termination affected her life. This would be a letter she would never send. It was merely a task to promote the exploration and working through of what had for years remained unspoken, what had become taboo. I noted the parallel between concealing the termination within her family of origin and Mary's need to hide her feelings of depression from her husband.

Session 3

Mary had been to Rottneest Island for a long weekend. She described feelings of being detached, caught up in her own world and remote from her family. She had written a letter to her parents and was surprised by the amount of anger that poured onto the pages. She said she was shocked to find that her father had emotionally killed her off when she had the termination. "He did to me what I did to my baby!" She again condemned herself for what she had done, identifying with her wounded father's rejection.

Mary thought God was punishing her and that was why she always suffered from postnatal depression. God was taking away the joy of being a mother, because she was not fit to be a mother.

I felt profoundly affected by Mary's anguish and feelings of devastating guilt. I stated that I didn't believe that God was vengeful. "God doesn't punish us," I said "Only we punish ourselves."

I spoke about how religions see *suffering* as part of a bigger plan: how Christians and Jews endure suffering because they believe that God's meaning for the suffering will manifest itself in time and how Buddhists believe in the existence of pain and suffering to test, strengthen, and deepen the experience of life. In other words, good can come from suffering. I shared with her the character Harry Lime's observations in Graham Greene's *The Third Man*: "In Italy for thirty years under the Borgias, they had warfare, terror, murder, and bloodshed — but they produced Michelangelo, Leonardo da Vinci, and the Renaissance. In Switzerland, they have brotherly love, five hundred years of democracy and peace and what did they produce? The cuckoo clock."

I asked Mary to stop punishing herself for a while, so we could *examine all of the evidence*. I agreed to let her continue the case for the prosecution after we explored the case for the defence. I spoke of the spiritual aspects of incarnation and how in her father's view he would be looking at the termination from a Catholic perspective. I spoke of how in other philosophies and religions, life and death were seen differently. I explained that in the East, it is believed that the soul of the incarnated being chooses the parents and chooses the journey ahead.

I asked Mary to contemplate this alternative viewpoint, to at least explore the possibility that her unborn child had chosen to live only in the womb for such a short time. We spoke of other concepts such as a soul's life purpose, karma, life and death, life after death and reincarnation.

I also shared with Mary the view that the soul never dies and is never in physical pain. I explained that in some religions, people would expect her child to have reincarnated again. Mary said she had never thought of it this way before. She seemed intrigued. I explained more about the spirit world and suggested that she might like to write to the soul of her baby (her terminology) to seek the forgiveness that was so important to her.

Session 4

Mary announced that she felt more present over the last week and that she had actually been able to laugh with her children. She spoke about her husband and how he had been adopted. I noticed that she put his biological mother on a pedestal because she had given her husband his life.

Mary remarked on the similarities between her husband being given up for adoption and how she had lost her first child. I told the story of Abraham and how God tested his faith by asking him to sacrifice his first-born. We talked about how common it was in the Bible for first-born children to be surrendered, such as Moses. I also spoke briefly about the story of the “Angel of Death.”

Mary wondered why her husband never wanted to find his birth parents. I saw this as a mirror for the work she was doing with her unborn child. We talked about how a mother can still be with a child in spirit and how a child in spirit can be with an earth-bound mother. I said that even scientists have found that there are more ways of connecting than we are aware of in the physical world. I spoke briefly of the findings of Dr Rupert Sheldrake, the biologist who presented the theory of morphic resonance (in his book *The Presence of the Past*).

The basic idea behind morphic resonance is that: when a species learns a new behaviour other members of the same species learn the behaviour more quickly, irrespective of time and distance. This phenomenon is observed in the Hundredth Monkey principle. An isolated group of monkeys learn to wash their food prior to eating and suddenly other monkeys all over the world independently learn the same behaviour. Sheldrake proposed that there was a form of interconnectedness or collective memory that is inherent in nature and which all members of a species can access. This concept is similar to Carl Jung’s psychological theory of a collective unconscious.

Session 5

Mary said she wanted to live without fear. She asked me questions about why a soul would choose to incarnate when termination was inevitable. I spoke of ideas such as, the wrong time, the soul’s karma, and the need to teach lessons on a deep, spiritual level. We pondered whether her baby had come to expand her consciousness, to strengthen her faith, and to open her up to compassion.

Mary said she had still been unable to write to her child and that she was finding that music was speaking to her, especially John Lennon’s song “Imagine.” We discussed the lyrics of the song and marvelled at the resemblance of Julian Lennon to his estranged father, despite their lack of physical contact. We explored the realms of what it must be like to be a spiritual parent as opposed to a physical, hands-on parent. She then asked, do you think my child lives on through me? I asked her to answer her own question, before joining her in her discoveries.

Session 6

Mary had become more depressed and her general practitioner increased her medications. She said she was caught in a downward spiral and that she had even been unable to exercise. "It's too hard," she said. "I can't be bothered being happy again ... What I did was wrong. It has completely destroyed my relationship with God."

For the first time, Mary started to talk about the circumstances surrounding her termination. I felt that she had entered some kind of therapeutic confessional box. I just listened.

She went back in time to when she was 17 years of age. Mary was working, she was able to travel, and she felt as if she was embarking on a new beginning. Mary was devastated when she discovered she was pregnant. Telling no one but her mother, she travelled to a clinic in a far-away town. Her mother refused to enter the clinic and dropped her off outside the front doors in the dark. Mary described a chilling, hostile experience within the clinic. She said that after the operation, when she became conscious again, she remembered shouting aloud, asking for forgiveness and that the porters were all laughing at her.

Alarm bells rang within me. I asked myself, why would Mary emerge from the anaesthetic pleading for forgiveness? Without showing my concern, I asked Mary for her thoughts about her pleas for mercy. I then suggested that hypnosis might be useful to more fully explore the circumstances surrounding the termination.

Session 7

Mary was highly hypnotisable. Hypnosis was achieved via a relatively short induction involving eye fixation followed by descending steps into the unconscious. Mary was given the power of speech as well as ideomotor signaling.

There are lots of women around me. They have all been sent away to have terminations. The nurse tries to make light of the situation, but everyone is serious and they try to think of other things. I know I have to be there. There is something living inside me. I feel sorry for the baby, it is not the baby's fault. I hope it doesn't feel any pain.

I am wheeled into theatre. Everyone has gowns on. It feels like a concentration camp, as everyone has had to take their clothes off. Other girls in gowns walk upstairs. I go first. I sit on the trolley. I feel robotic, no

eye contact, and no one speaks. While I am on the table I change my mind. I don't want to go through with the termination. I pull out the drip. I want to leave, but the anaesthetist tuts and grabs me by my arm. He says they have a busy schedule and they have to get on with it. I know they don't want to be there. It feels like the house of death.

I ask the doctors to bring my son to me, but they say they flushed him away. The doctor who performed the termination tells me I've killed my baby. She calls me a murderer and tells me I'll pay for this.

I am wheeled away. I call back to her that I will never do it again, but she just turns away. The porters are laughing at me. A nurse comes to me in the recovery room, because I am twitching and unable to sleep. I have a stomach ache. I feel I deserve it. I refuse painkillers as I feel that I need to feel the pain. I want to be punished. She is a nice nurse, there is lightness around her like a haze of light. She tells me she has a daughter my age. She treats patients like family not like pieces of meat.

Mary sobbed throughout the trance and at times was twitching and grimacing. I gave her complete recall for the experience, telling her that this time she would emerge from the ordeal more empowered due to her new-found awareness. She would experience feelings of love towards her son and great compassion towards herself.

Mary emerged from trance calm, yet tearful. She said she couldn't understand why they didn't follow her request to halt the termination. Why didn't they let her get off the table and go home? Why had the female doctor been so damning?

I talked about ethics and the need to act with respect whenever a patient was unconscious, as this state left them vulnerable to suggestion and interference. Mary had worked in theatre herself and she knew first hand how some doctors over-rode their patients. She also knew that theatre staff frequently passed judgments on their patients while they were on the operating table.

Session 8

Mary's mood had improved. She spoke as if a light had come on in her life. She had been putting together the missing pieces surrounding the termination and now realised why she had been unable to nurse and love her newborn babies. All of her children had been delivered by caesarian, which no doubt linked the circumstances of their births to the unconscious remains of the termination.

Mary stated that it had been a good fortnight. Her children had been off school and for the first time she had enjoyed the school holidays and just being with them. She said she had been working hard at allowing herself to forgive herself.

Session 9

Mary was having flashbacks. Driving in the car, she experienced an overwhelming desire to have her baby back. "Then I felt warm," she said. "I felt the baby's spirit and soul. I now know that I did keep the baby in some form."

She said she now felt ready to write a letter to her baby, as she knew he was with her spiritually. She was going away for Easter to see the whales and she wanted to write before she left

Session 10

Mary returned announcing that she had had a marvellous holiday with her family. She now had a name for her son; Michael, named after the Archangel. She said she talked to him and then described the only dream she ever brought to therapy. She was trying to find her old school friend, Helen, a Greek Cypriot who had been forced into an arranged marriage which was very violent.

Mary felt that she was resurrecting Michael and Helen. We spoke about Easter and how it is a time for letting go and renewal and we explored why Helen had come back into her consciousness. Helen represented the aspect of herself that had been killed off and exiled into a life with no love or compassion.

We spoke about baby Michael and I suggested that she might like to draw what he represented to her mind's eye. Mary had discovered that she liked drawing and that she did have something in common with her mother.

Session 11

Mary came in smiling and full of life. She said that Michael was always there and that she felt stronger with him around. She had been able to write to him and she now felt that he had forgiven her. We spoke about him growing up on the other side and how he will remain with her in spirit. She said she had been reading about life after death. Mary felt that they would be reunited one day.

On leaving, Mary asked me to tell others about her case. She didn't want other people being abused while they lay unconscious on an operating table. I accepted her challenge and I promised to encourage others to have the utmost of respect for the unconscious.

One Year, Post-Therapy Follow-Up

Mary had reconnected with her parents. She was continuing to relate well with her children. She was nursing again and work had become a kind of personal crusade on Michael's behalf, so his life would not be in vain. She told me how she had asked a surgeon to stop leaning on a patient's leg, informing him that the patient would feel the discomfort on an unconscious level. She also said that she ensured that theatre staff talked positively towards their patients when they were operating. In essence, Mary had transformed her suffering into a mission with heart, helping those who have to place their unconscious in others' hands.

HYPNOSIS AS AN ADJUNCT TO HABIT REVERSAL IN THE TREATMENT OF CHRONIC FACIAL MOTOR TICS

Trevor G. Mazzucchelli
Psychologist

This case study describes the treatment of a 52-year-old woman for two facial motor tics. Treatment was centred around “habit reversal,” a behavioural approach which is supported by the bulk of psychotherapy outcome research. Hypnosis was included as part of the treatment plan because the client had expectations for a positive therapeutic outcome from this technique and it was felt that it might enhance various components of the habit reversal package. After two sessions the client reported a significant reduction in the frequency of tics. Issues associated with the intervention are discussed.

The client, Peta, was a 52-year-old woman referred by her general practitioner for treatment by hypnosis of two motor tics. One tic involved the tensing of muscles in the front and back of the neck. The second combined the wrinkling of the nose, the raising of the upper lip, squinting of the eyes, and wrinkling of the forehead.

Peta reported that she had had nervous habits as a child which came and went, but that they seemed to disappear after puberty. She stated, however, that she continued to be a nervous and fidgety person.

When she was 35 she experienced a “mid-life crisis.” Peta reported that this was a very stressful time because her husband was overseas and she was preparing to move to the United States. She experienced panic attacks and was hospitalised. Ever since this time she has been managed on antidepressant medication.

I thank Sandra Boughton for her encouragement in the preparation of this manuscript. The case study was prepared as part examination for full membership of the Australian Society of Hypnosis.

Requests for reprints should be sent to Trevor G. Mazzucchelli, Clinical and Applied Psychological

Peta began to re-experience tics when she was 43. She found that they would come and go for months at a time and it was difficult to predict what would bring them on. For example, when her brother died in England she thought that she would have a particularly bad bout because this was a high-stress time. Instead she remained relatively tic free. In contrast, when a friend's son died, she experienced a severe bout of tics.

Peta described a recent occasion when she experienced a particularly bad bout of tics. She was at work, driving residents of an intellectually disabled group home on an outing. She stated that she became very stressed because she was lost, it was dark, and she was encountering kangaroos on the road. While driving she first noticed her neck tic, but then noticed that both tics were occurring with great frequency. When she got home and calmed down she reported that her face tics decreased in frequency, but her neck kept "firing."

Peta noticed that her tics worsened in the evenings when she was tired, but that she did not seem to have any control over them. She dreaded social situations and was hesitant to accept invitations to social activities. She reported that the tics sapped her confidence and made her feel depressed. She further reported that she found it very embarrassing to discuss her tics, even to her husband to whom she had been married for 30 years and who was very supportive. Peta stated that she had two sons who also had tics.

Despite her history, at her intake session, Peta scored in the minimal range for depression on the Beck Depression Inventory and at the 54th and 52nd percentile for state and trait anxiety respectively on the State-Trait Anxiety Inventory.

During the session many tics of both variety were observed.

TREATMENT FOR MOTOR TICS

Peta reported some reservations of psychologists, stating that she had had contact with several through her work with adults with intellectual disability. She found that their advice in relation to behavioural interventions was often unrealistic and unhelpful. These negative impressions may have led her to seek hypnotherapy in preference to a behaviour-based intervention.

Self-hypnosis has been successfully employed to reduce the nature and frequency of tics, particularly in children with Tourette syndrome (e.g., Kohen, 1995; Kohen & Botts, 1987). However, the weight of the evidence in psychotherapy outcome research indicates the behavioural intervention "habit

reversal” and in particular the awareness training and competing response training components of the habit reversal package (Miltenberger, Fuqua, & Woods, 1998). Using such components, dramatic reductions in muscle tics have been reported in just one or two treatment sessions (e.g., Azrin & Nunn, 1973; Azrin, Nunn, & Frantz, 1980; Finney, Rapoff, Hall, & Christophersen, 1983; Miltenberger & Fuqua, 1985).

Hypnosis was included as part of the treatment plan because, although having not previously experienced hypnosis, Peta had expectations for a positive therapeutic outcome from this therapeutic approach. Such expectancy is often predictive of improvement in treatment (Kirsch, 1990). Given the strong support for behavioural intervention, however, it was decided to combine hypnosis with behavioural methods, an approach which has support in the literature (Schoenberger, 2000; Young, 1991). Indeed, it was felt that hypnosis might enhance the effectiveness of the awareness training, relaxation, and motivation components of the habit reversal package.

Peta did not present with any symptoms of psychosis, did not take any medication that would impinge on or act as a contraindication for hypnosis, nor did she have severe depression with suicidal ideation.

TREATMENT PLAN

The agreed aims of therapy were to reduce her motor tics, increase Peta’s capacity to relax and increase her social activity. These goals were to be accomplished through habit reversal strategies and through hypnosis.

Session 1

The aims of the initial session were to complete an assessment and commence intervention. Much of the assessment information outlined above was obtained during the first part of this session. The habit reversal components and hypnosis procedure covered in the second part of the session are outlined below.

Awareness training and self-monitoring The initial procedure focused on increasing Peta’s awareness of the frequency and severity of the tics, and the specific movements involved in the tics. Although reluctant to do so, Peta was then asked to describe the details of each tic using a mirror. The rationale for this response description procedure was that being able to effectively control tic symptoms requires individuals to be keenly aware of all tic movements.

It became apparent that Peta was often unaware when she exhibited a tic. Consequently she was alerted to each instance of a tic to give her practice in detecting their occurrence and increase her awareness of the earliest signs or sensory preconditions of a tic.

Competing response training In this stage of the session, Peta practised using the competing response (incompatible behaviour) for 1–3 minutes contingent on the occurrence of the habit or awareness that the habit was about to occur. For Peta the competing responses used were as follows:

- *Neck*: Isometric contraction of the neck flexors, pulling the chin slightly down and in, and maintaining the head in an eyes forward position.
- *Nose, lip and forehead*: Pull upper lip down slightly, pressing lips together and raising eyebrows.

Explanation of hypnosis Peta and I collaboratively discussed how self-hypnosis could facilitate the achievement of our therapeutic goals by:

- Assisting her to be more relaxed in situations where she was likely to experience a greater frequency of tics;
- Assisting her to become more aware of the first signs that a tic might occur;
- Strengthening her motivation to perform the required treatment procedures; and
- Reducing the frequency and severity of tics directly.

A careful explanation of hypnosis was undertaken. Trance was described as a state between fully awake and fully asleep, a “normal” state of focused attention, where one is calm and paying attention to what the practitioner is saying, rather than to their own thoughts or things around them. It was further explained that, when in trance, the conscious or critical mind is relaxed, so that the subconscious mind can be accessed more directly. Peta was told that hypnosis involves the willingness to imagine what is suggested and to be open to useful suggestions.

Hypnotic induction Techniques suggested by McCarthy (2000) were used to induce a hypnotic trance. Peta was directed to sit back comfortably, let her eyes close, and listen to the sound of my voice. Various truisms regarding external awareness were offered — that even though her eyes were closed she could remain aware of her surroundings, the size and shape of the room, sounds and

touch sensations. She was then told a story of how, as a child, I used a magnifying glass to focus light to create heat. This metaphor was then linked to the current goal of focused concentration. Guided progressive muscle relaxation was used to deepen the trance. Ratification was achieved by inviting Peta to notice how her brain now perceived the sensations from her body differently. Peta reported that she felt heavier, warmer, and bigger. Further deepening was achieved by suggesting that with each breath she could move deeper and deeper into trance.

Trance utilisation Various therapeutic suggestions were then made including:

- That her mind and body were working together to free her from the tics.
- That she had all the strength she needed inside herself to be free of the tics.
- That she could picture herself in a situation where she has experienced many tics in the past. That she is feeling calm and relaxed. That her subconscious is aware of the first signs that a tic might occur. All of her senses helping her to be alert to the first occurrence of a tic.
- That she could picture herself successfully using her competing response.
- That the use of her competing response makes her feel good. Using her competing responses reminds her that she is taking steps to be rid of the tics. Using her competing responses gives her a sense of wellbeing and self-approval.
- That the more she practises her competing response the more powerful the effects of the response.
- That the fewer and fewer tics she experiences, the stronger and stronger her resolve to be free of the tics.
- That she could find a phrase or an image to anchor her resolve to be free of the tics.
- That she could picture herself being free of the tics — that this is who she truly is.

Peta was guided back to ordinary awareness by counting from 1 to 10.

Hypnosis debriefing Debriefing at the conclusion of the trance work resulted in positive feedback. Peta reported that she had become extremely relaxed and was able to picture the suggestions put to her. Overall, she advised that she thoroughly enjoyed the experience.

Self-hypnosis instruction Peta was agreeable to learning how to recreate this

state of mind by herself. Consequently, she was taught a “finger attraction” technique for achieving self-hypnosis. Once back in trance, it was suggested that she could use self-hypnosis when she chose to. That the more she practised, the more skilled she would become at achieving this wonderful state. It was also suggested that while doing self-hypnosis she could give positive suggestions about the tics becoming less frequent. That she could think about a wonderful comfortable future, as if it were really happening now. When ready, Peta was told that she could count herself back to ordinary awareness.

Contingency management Peta’s husband (who was also present in the first session) was instructed to reinforce Peta by commenting favourably on her improved appearance during tic-free periods or significant reductions in symptoms. Peta was encouraged to participate in social activities that were previously avoided because of the social disruptiveness of her tics.

Homework Peta was asked to practise her competing response whenever she emitted a tic. She was also instructed to practice her self-hypnosis at least once per day, but also whenever she felt anxious. Finally, both Peta and her husband were instructed to record the incidence of each of the tics for a 10-minute period each evening.

Session 2

Peta attended her second session, a fortnight later, on her own.

Review Peta stated that she had had a very busy two weeks and that, while she had noticed a reduction in the number of tics, she had not completed any monitoring. Further, she stated that she felt too embarrassed to practise her competing responses when anyone was present, including her husband. Although practising the self-hypnosis exercise, she stated that she had not been able to achieve the same degree of relaxation she had achieved at the previous session.

Hypnotic induction Peta was instructed to take herself back to a trance state using her finger induction technique. Then various Elman (1984) rapid induction techniques were used as deepening strategies. Peta was instructed to turn her attention to her breathing, to take a deep breath in, hold it, and then let it go. She was asked to notice her breathing finding a soothing rhythm and allow all the muscles of her body to relax. Peta was then asked to turn her attention to her eyes. It was suggested that she could relax her eye muscles so that they were so tired and heavy that they would not open. Eye catalepsy was tested by inviting Peta to (briefly) try to open her eyes just a bit. Fractionation

by repeated eye closure with interspersed suggestions of trance deepening and relaxation followed. Then an imaginary walk down steps to a sunken garden to a seat of “peace and power.” Then counting down from 100 with the numbers being lost for mental relaxation. Trance ratification was achieved through hand levitation.

Trance utilisation Similar therapeutic suggestions were made as those used in the previous session. That Peta’s unconscious and conscious mind were working together to free her from the tics. That she had the strength inside herself, the unconscious mind was already taking the steps needed to free her from the tics, effortlessly. Reacquainting herself or perhaps finding another anchor to which she could anchor her resolve to be free of the tics.

Reviewing the inconveniences, embarrassment, and suffering that resulted from emitting the tics as well as the positive aspects of eliminating tics. Seeing these points listed on a writing board. Allowing these reasons to swell motivation and commitment and resolve.

A symbolic rehearsal procedure was used where it was suggested that Peta could notice herself in a situation in which she had found herself experiencing the tics many times in the past. She was asked to picture herself going about her usual business but subconsciously aware. Noticing the first indications that a tic might occur. Automatically she found herself using her competing response. Feeling good about herself for using her competing response. Reminding herself of the reasons why she wanted to be free of the tics and recognising that each practice of her response was a step closer to being tic free. Her unconscious noticing that the tics which were once a part of her were “fading, dissolving, detaching, breaking up ... like clouds in the wind.” Suggestions were given for increased awareness of the first signs of a tic and the ability to relax and let the moment pass, or use a competing response.

Peta was prompted to find herself in social situations that she has previously avoided, feeling relaxed, calm, comfortable, and serene. She was asked to recognise her inner strength to follow through on her competing responses, if she needed them.

It was suggested that the more Peta practised the strategies outlined in these sessions, the more proficient she would become, and the more proficient she became the more powerful the strategies’ effects. That she would find each moment become easier and easier, because she would be developing more and more strength and resolve.

Peta was guided back to ordinary awareness by imaging herself coming down through the clouds and falling into her body. She was asked to open her

eyes, although only as quickly as she realised that she could re-access this state at any time in the future, but only deeper.

Hypnosis debriefing Peta reported that she went into a deeper trance this session. She expressed amazement at the experience of hand levitation and said that she would never have believed she was capable of experiencing such a thing. She stated that she found the whole experience very powerful.

Competing response practice Peta was prompted to practise her competing responses in the session. She did so with reservations, reporting that she felt very embarrassed and uncomfortable practising the strategies in front of others. Peta reported a subjective discomfort scale rating of 9 when practising the exercises. The rationale for using her competing response was reviewed and strategies to overcome her discomfort were discussed.

Peta had difficulty reporting thoughts that were going through her mind when practising the exercises. Despite this, coping self-statements for when she used her competing responses were generated, including “my husband loves me” and “I am doing this for myself.” Peta also decided to explain to others why she was using her competing responses. She was then prompted to practise both of her competing responses in the session and maintain each one until her subjective discomfort rating reduced to a 5. This practice was repeated several times. The importance of maintaining her competing response until her level of discomfort reduced (to permit the process of habituation to occur) was stressed.

Homework It was negotiated that Peta would practise her competing response in front of her husband each morning. Peta also agreed to practise her competing response as often as she could after emitting a tic. She also agreed to practise self-hypnosis every day. No further sessions were scheduled. Instead, Peta was asked to make phone contact if she would like to schedule another session in the future.

OUTCOME

Almost two weeks later I received a telephone call from Peta. She happily stated that she did not feel another session was necessary as she had experienced a significant reduction in her tics over the previous fortnight. She stated that she felt something had “clicked” in session 2 and that she had had little need to practise her competing responses. Peta was warned that her tics might get worse in the future but that in such a case she now had the skills to deal with such an eventuality. Nevertheless, she was encouraged to make contact should she re-experience difficulties in the future.

DISCUSSION

The psychotherapy literature suggests that the awareness training and competing response training of habit reversal are the key components to successful intervention with tic disorders (Miltenberger et al., 1998). This case study describes the (apparently) successful incorporation of hypnosis to support these behavioural approaches.

Specifically hypnosis was used to:

- promote relaxation in situations where tics were thought to be more likely to occur,
- increase Peta's awareness of the occurrence of tics,
- increase motivation to use competing responses,
- increase the effectiveness of the competing response,
- associate using her competing response with feelings of wellbeing and self-approval,
- increase expectancy for reduction of tics, and
- suggest a direct reduction in the frequency and severity of tics.

In this way other components of habit reversal (such as habit inconvenience review and symbolic rehearsal) were incorporated within the trance work.

Miltenberger et al. (1998) speculated that for those individuals for whom habit reversal is ineffective, compliance is most likely to be the blame. Peta was very self-conscious about her tics and about using her competing responses. This self-consciousness caused her to avoid self-monitoring her tics and practising her competing responses. The habituation exercises used in session 2 (and instruction to repeat the exercises on a daily basis in front of her husband and others) was intended to reduce Peta's discomfort and consequently increase her compliance with the treatment procedures. It may also have been useful to have provided more symbolic exposure and more suggestions to feel comfortable using her competing responses in front of others while she was in trance. Since embarrassment is reported to be commonly associated with the treatment of tics, such procedures might be usefully incorporated routinely into intervention plans.

Unfortunately, the lack of independent measures, or even self-recording, meant that it is impossible to assess the extent of the success of this intervention, or the mechanisms through which the intervention proved to be successful. While the use of competing responses is recognised as being an active ingredient of habit reversal, the extent to which Peta practised her competing responses is not clear. She certainly found the hand levitation in the second

session to be very powerful and it is possible that this strengthened her belief that she could have some direct influence over the tics. Whether this increased the effectiveness of her competing responses or meant that the use of her competing responses were irrelevant is unclear.

There is little research into the use of hypnosis for the treatment of motor tics. The intervention and apparently successful outcome described in this paper provide some support for the further investigation of the utility of hypnosis as an adjunct to habit reversal for the treatment of motor tics.

REFERENCES

- Azrin, N. H., & Nunn, R. G. (1973). Habit reversal: A method of eliminating nervous habits and tics. *Behaviour Research and Therapy*, *11*, 619–628.
- Azrin, N. H., Nunn, R. G., & Frantz, S. E. (1980). Habit reversal versus negative practice treatment of nervous tics. *Behavior Therapy*, *11*, 169–178.
- Elman, D. (1984). *Hypnotherapy*. Haverford, PA: Westwood Publishing Co.
- Finney, J. W., Rapoff, M. A., Hall, C. L., & Christophersen, E. R. (1983). Replication and social validation of habit reversal treatment for tics. *Behavior Therapy*, *14*, 116–126.
- Kirsch, I. (1990). *Changing expectations: A key to effective psychotherapy*. Pacific Grove, CA: Brooks/Cole.
- Kohen, D. P. (1995). Coping with the stress of Tourette syndrome in children and adolescents: Use of self-hypnosis techniques. *Australian Journal of Clinical and Experimental Hypnosis*, *23*, 145–157.
- Kohen, D. P., & Botts, P. (1987). Relaxation-imagery (self-hypnosis) in Tourette syndrome: Experience with four children. *American Journal of Clinical Hypnosis*, *29*, 227–237.
- McCarthy, P. (2000, October). *Sucking eggs and polishing teapots*. Australian Society of Hypnosis (WA Branch) Workshop. Perth.
- Miltenberger, R. G., & Fuqua, R. W. (1985). A comparison of contingent versus non-contingent competing response practice in the treatment of nervous habits. *Journal of Behavior Therapy and Experimental Psychiatry*, *16*, 195–200.
- Miltenberger, R. G., Fuqua, R. W., & Woods, D. W. (1998). Applying behavior analysis to clinical problems: Review and analysis of habit reversal. *Journal of Applied Behavior Analysis*, *31*, 447–469.
- Schoenberger, N. E. (2000). Research on hypnosis as an adjunct to cognitive-behavioral psychotherapy. *The International Journal of Clinical and Experimental Hypnosis*, *48*, 154–169.
- Young, M. H. (1991). Tics. In W. C. Wester II, & D. J. O'Grady (Eds.), *Clinical hypnosis with children* (pp. 97–112). Philadelphia, PA: Brunner/Mazel.

TREATING DENTAL NEEDLE PHOBIA USING HYPNOSIS

Michael A. Gow
Dentist

This case illustrates the effectiveness of short-term hypnosis treatment for a dental needle phobia. What is significant is the dental history of the patient and the longstanding effect of this on her dental phobias and how quickly hypnosis was able to remove this problem.

Chris is a 48-year-old female living in northern Queensland. She has a complex medical history, having had ovarian and cervical cancer and, following treatment for these, requires hormone replacement injections in her leg. She has no fear of these injections. Chris has a melanoma related to her left eye and requires periocular chemotherapy injections. Although she describes these injections as “burning” and “painful” she does not fear them. Chris has asthma, and for some time required insulin injections for diabetes. These self-administered injections also “did not bother” her.

When she was five years old Chris was taken to the dentist with toothache. “The dentist was a big, threatening man. He gave me an injection which was extremely painful. I was in agony on the whole right side of my face including my eye. He told me to behave when I cried. Then he held me down, holding my face and jaw roughly as he pulled out the tooth. I was shocked by the amount of blood I saw. I especially remember seeing my blood on his clothes. He looked like a butcher.”

Chris then avoided dentists until she broke a tooth at the age of 20. At this time she was so terrified of the injection and treatment that she had to be “put to sleep” with general anaesthetic for an extraction. Between the age of 20 and 48 she had “about a dozen” general anaesthetics, usually for the treatment of

dental pain, however she also has several restorations. Chris explained that she felt pain identical to that she had experienced as a child prior to each dental appointment. Recently she had built up the courage to visit a dentist in the health centre where she worked for a routine examination. He found that she required the replacement of a few defective restorations and suggested that they had time to begin treatment at that appointment. Chris immediately felt pain on the right side of her face as a result of this suggestion. She displayed signs of anxiety and refused to proceed with any treatment. She was then referred to the author for dental anxiety management.

Session 1

A full medical, dental, and phobia history was taken and Chris completed a dental anxiety questionnaire. In this questionnaire she admitted missing or cancelling dental appointments due to anxiety or fear. She scored the pain experienced during previous dental treatment as 10 out of a possible 10 and anticipated future treatment to be just as painful. This demonstrated anticipation of pain often results in a greater experience of pain.

Chris' comments suggested that perhaps a cycle exists, whereby her anxiety may lead to an increased perception of pain, while pain may lead to an increased experience of anxiety. She reported other fears, including fear of heights, spiders, snakes, and flying, which may indicate an innate predisposition to anxiety. Chris reported having a bad experience at the dentist, specifically the visit outlined previously. She scored 26/30 in a modified Corah Dental Anxiety Score, indicating a high level of anxiety and told me: "Take out all my teeth, then I will have no further reason to be scared of dentists."

I taught Chris a progressive muscular relaxation technique. During needle desensitisation therapy, she experienced pain on the application of topical anaesthetic to her oral mucosa. This pain was similar to that she had previously experienced. The nature of the pain was discussed and although Chris knew that she would not be receiving an injection that day, she admitted that she had expected to experience the pain. She was not distressed by the pain that radiated up the right side of her face and lasted for around 20 minutes following the appointment. I discussed hypnosis with her and suggested that hypnotherapy might be of benefit in her case. Chris was very interested and believed that hypnosis could help.

Session 2

The first hypnosis session involved a detailed discussion with Chris regarding her perceptions and expectations of hypnosis. All myths and misconceptions which concerned her were alleviated. The session proceeded with relaxation, induction by eye fixation, and reverse counting from 300. Chris was able to visualise her “happy place” as being in her house making a baby’s christening gown. Ego-strengthening using a mantra of “Calm, control, and confident” was successfully introduced. Chris reported a positive experience with the 40-minute hypnosis session. This visit allowed her to have a basic hypnotic experience that increased her ability to feel relaxed and comfortable with future hypnosis. This session also allowed her “hypnotisability” to be assessed. No therapy was attempted in this initial session.

Chris agreed to have her lower teeth scaled and polished. This procedure was carried out without local anaesthetic and with no problems.

Session 3

Following relaxation, hypnosis was induced using eye fixation and reverse counting from 300. Following further ego-strengthening, Chris was able to vividly recall what it was like to be a 5-year-old child. She was asked to notice how different everything seemed, for example the height of door handles in her house and the steepness of stairs. Chris was also able to recall her traumatic dental appointment as a child while in hypnosis. She was able to compare her emotions as both a 5-year-old girl and a fully grown adult. She was able to visualise her pain and negative emotions as a “grey rock” and was happy to place this rock in a large, locked trunk in the keep of a “wise old man.” I suggested to her that now, as she was free of these feelings, she would be able to proceed with dental treatment. Chris again reported a positive hypnotic experience and was able to proceed with needle desensitisation techniques. Topical anaesthetic was applied to her oral mucosa with no negative response and no pain. Chris stated that she felt happy to begin dental treatment on the left side of her mouth, but was anxious regarding the right side.

Session 4

The session began with Chris using the relaxation techniques which she had learned. The local anaesthetic was warmed and topical anaesthetic applied to the injection site. One cartridge of Xylocaine was infiltrated in the region of

the upper lateral incisor. High and low speed handpieces were used and a buccal composite restoration was placed. Chris reported slight pain at the site of the injection, admitted that she felt slightly nervous and “shaky” after the procedure.

Session 5

Chris was again effectively able to use her relaxation techniques. The local anaesthetic was warmed and topical anaesthetic applied for longer duration. One cartridge of Xylocaine infiltrated in the region of the upper left first premolar. High and low speed handpieces were used and a buccal composite restoration placed. She reported no pain, less anxiety, and reduced post-procedure “shakes.” However, Chris was concerned about the next visit when work was to be carried out on the right side of her mouth.

Session 6

Hypnosis was used in this session to aid relaxation and to produce an anaesthetic effect in the oral mucosa around the upper right canine and first premolar. Hypnosis was quickly induced using the same method as previously. After ego-strengthening, the principles of “hand catalepsy” and “glove anaesthesia” were used to produce a “numb” sensation in Chris’s hand. She was able to visualise placing her hand in an icy cold mountain stream. The numb feeling in her hand was successfully transferred to the proposed injection site. She was completely unaware of the infiltration of the local anaesthetic. When out of trance she asked, “My mouth is numb, have you given me the injection?” Composite restorations were carried out on the two teeth. It was suggested that the numbness in the tissues would reduce as the effect of the local anaesthetic wore off and that there would be no post-procedure pain. Chris reported little pain, no anxiety, and had no evidence of shaking or other signs of anxiety following the treatment. She completed a second anxiety questionnaire to compare with that completed prior to anxiety management.

Responses from the post-treatment questionnaire revealed that Chris now anticipates that future dental treatment will be less painful, scoring it as 4 out of a possible 10. She scored 12/30 in her repeated Corah Dental Anxiety Score, showing a marked and significant decrease. This score indicates a low level of anxiety and is comparable with patients who have no anxiety, fear, or phobia of dentistry. Chris stated, “Thank you kindly, now I am glad to still have all my own teeth. I hope from now on I will be able to keep myself as relaxed

as I did today.” The author is confident that she will and referred her back to her dentist for continuing dental care.

BOOK REVIEW

Guided Imagery and Other Approaches to Healing

Rubin Battino

Carmarthen, U.K.: Crown House Publishing, 2000. xii + 377.

\$A87.

Although enormous amounts of money, time, and effort have gone into cancer research, individuals continue to suffer from, and die from the disease. Rubin Battino's book on guided imagery and other approaches to healing provides the reader with an optimistic view of patients as being capable of altering their views towards the disease and ultimately being able to prolong life or to cure the cancer. The steps involved in using guided imagery are described in detail by the author, to enable readers to implement it in their therapy with cancer patients. The goal of guided imagery, according to the author, is to "diminish or cure the disease, the physical things wrong in the body" (p. vii).

Rubin Battino is a retired professor of chemistry. His interest in becoming a psychotherapist arose from his own experience of psychotherapy as a patient, and culminated with the receipt of his master's degree in mental health counselling in 1978. However, unlike most therapists, he describes himself as a healer, on the grounds that he helps individuals attribute a different meaning to their cancer — to be "at peace" or "in harmony" with themselves. This healing process, he believes, can also cure the disease.

The book is divided into three parts. Part one provides the reader with chapters on "the scientific evidence for the effectiveness of mind/body work, the role of the placebo and prayer, as well as chapters providing a step-by-step training in the use of guided imagery. Readers will find themselves armed with several relaxation and guided imagery scripts, along with helpful advice on the importance of language in guided imagery. Chapters included in part two are directed at individuals with training in psychotherapy or counselling. It includes psychotherapeutic approaches aimed at helping clients deal with their "unfinished business" and eliminate "the garbage in their lives" (p. viii). Part three includes chapters written by other professionals on such topics as

writing, art therapy, coping methods, nutrition. The book ends with a chapter on native American healers.

Battino claims to have received training in Ericksonian hypnosis and hypnotherapy, and strongly urges his readers to obtain such training before using guided imagery. However, he does not provide reasons for this recommendation, nor does he explain what advantages guided imagery has over hypnosis. In fact, at no time does he discuss the precise differences between hypnosis and guided imagery. On the contrary, he says often, without elaboration, that the two are very similar. This might lead the reader to either feel confused, or to conclude that guided imagery and hypnosis may be synonymous: "Using words to lead a person into a relaxation and guided imagery session is not unlike an hypnotic induction" (p. 20). Elsewhere he claims that hypnosis "been proven to be effective for helping people who have life-challenging diseases in many ways ... Guided imagery may be considered to be a form of hypnosis" (p. 23), and "since there is so much in common between hypnotherapy and guided imagery, it behooves the serious student of this work to get training in hypnosis" (p. 97). This similarity certainly helps justify the use of guided imagery to help cancer patients. However, if this is the case, then why not simply entitle his book "Hypnosis and Other Approaches to Healing"? What does guided imagery offer that hypnosis does not? One wonders, given that the section entitled "David Spiegel's Research" involves a summary of one study (Spiegel, Bloom, Kraemer & Gottheil, 1989), which appears to provide the largest argument for Battino's claims concerning the "efficacy of mind/body healing." This study involved supportive group therapy with self-hypnosis for pain.

Studies comparing hypnosis to guided imagery have found no differences between the two in enabling subjects to imagine both new and impossible events which are later believed to have taken place (Spanos, Burgess, Burgess, Samuels, & Blois, 1999; Kandyba, Laurence, & Lambrinos, 2001, Kandyba, 2001). In fact, in a recent study by Kandyba (2001), hypnosis was no different from both guided imagery and relaxation in producing new, and likely false memories from childhood. This is not actually surprising, given that in a relaxed environment, whether it be in a hypnotic or guided imagery context, subjects employ their cognitive abilities to imagine suggested scenes. Perhaps the element of relaxation facilitates this process. In fact, such abilities to imagine and become "absorbed" in one's internal environment are correlated with hypnotisability levels (Tellegen & Atkinson, 1974). Given this, it does not appear to make a difference whether hypnosis or guided imagery is employed.

Further, given Battino's numerous statements on this matter, one would expect a justification for the use of "guided imagery" rather than "hypnosis."

The study by Spiegel et al. (1989) is reviewed in detail at the end of a chapter entitled "Scientific Evidence." Battino concludes that "mind can and does have a significant effect on the progress of disease" (p. 27). "The psychiatrist, David Spiegel (1989, et seq.) has now provided definitive proof that a psychotherapeutic support group has been effective for last stage breast cancer. The women in the support group lived about twice as long beyond the start of the study as the women in the control group" (p. 13). This statement is based on Spiegel et al.'s finding that subjects in the support group/self-hypnosis lived an average of 13 months longer than control subjects. However, the large standard deviations in this study suggest much variability, or spread in the data. In other words, the average survival time reported in the support group may have been strongly influenced by a small number of women who lived much longer than the rest, leading to an exaggeration of the benefits of this therapy. Although this is a possibility, it is possible, also, that his support group / self-hypnosis did influence survival rates. That is why it is very important to replicate such studies. Interestingly, Battino does mention that Spiegel et al.'s (1989) results have been replicated, but does not provide a reference to this effect. He simply mentions that "This work has since been replicated by Spiegel and coworkers and others" (p. 26). At various other places throughout the book, he repeats this pattern; he provides adequate references in some places, but not in a consistent manner.

In addition, the author is mistaken in his belief that one can provide "proof" for statements based on what the results of experiments reveal. An experiment can never prove its hypotheses; it can only reject them or confirm them. This is because other variables may have accounted for the results. Even if we cannot identify alternative explanations for our results, it does not "prove" that there are none. Some alternative explanation for the results is always possible, which means that we can never prove that our explanation is the correct one. A recent report (Kolata, 2001) may best reflect the current state of the issue. It presented the findings of a study performed by a team of medical researchers based at a Toronto hospital. It was headed by Dr Pamela Goodwin, and was published in the *New England Journal of Medicine* during December 2001. It was unable to confirm Spiegel et al.'s finding. Kolata implied that other investigators may have replicated the initial study, but that problems with methodology and sample size rendered them inconclusive. In other words, with one study pro, and another con (and a few smaller studies inconclusive)

the issue remains unresolved. Ultimately, the iron laws or replication will prevail in one way or the other.

Overall, despite the problems outlined above, important information is conveyed in this book from which any therapist or graduate student interested in hypnosis can benefit. The author's emphasis on the words used in hypnosis (guided imagery) and their potential benefit or harm to the client, is but one of its many important emphases. However, a reader will get the most out of this book by maintaining a critical eye.

KRISTINA KANDYBA AND CAMPBELL PERRY,
Concordia University, Montreal

REFERENCES

- Kandyba, K. (2001). *Eliciting new, believed-in memories: The role played by retrieval techniques and demand factors*. Unpublished doctoral dissertation, Concordia University, Canada.
- Kandyba, K., Laurence, J. R., & Lambrinos, A. (2001). *Memories from childhood and the uterus: Creating improbable memories with hypnosis and guided imagery*. Manuscript submitted for publication.
- Kolata, G. (2001, December 13). Cancer study finds support groups do not extend life. *New York Times* (late edition-final), p. A36.
- Spanos, N. P., Burgess, C. A., Burgess, M. F., Samuels, C., & Blois, W. O. (1999). Creating false memories of infancy with hypnosis and nonhypnotic procedures. *Applied Cognitive Psychology, 13*, 201–218.
- Spiegel, D., Bloom, J. R., Kraemer, H. C., & Gottheil, E. (1989). Effects of psychosocial treatment on survival of patients with metastatic breast cancer. *Lancet, 2* (86681), 888–891.
- Tellegen, A., & Atkinson, G. (1974). Openness to absorbing and self-altering experiences ("Absorption"), a trait related to hypnotic susceptibility. *Journal of Abnormal Psychology, 83*, 268–277.

BOOKS AVAILABLE FOR REVIEW

Full members of the Australian Society of Hypnosis interested in reviewing books should apply to the editor. Reviews are subject to editorial review prior to publication. Reviewers are required to return books to the Board of Education of the Society, for use as part of the Distance Education Program.

- | | |
|--------------------------------|--|
| Moshe Lang &
Peter McCallum | <i>The Answer Within.</i> Camberwell, Vic.:
Australian Council for
Educational Research, 2000. |
| Tracie O'Keefe | <i>Self-Hypnosis for Life.</i>
London: Extraordinary Peoples Press, 2000. |
| Anees A. Sheikh (Ed.) | <i>Therapeutic Imagery Techniques.</i>
Amityville, NY: Baywood Publishing
Company Inc, 2002. |
| Joseph Covino | <i>Terror Tales of the City</i>
Berkeley, CA: New Humanity Press, 2002. |

INFORMATION FOR AUTHORS

1. Contributions should conform to the style outlined in the *Publication Manual of the American Psychological Association* (3rd ed.; 1983), except that spelling should conform to *The Macquarie Dictionary*. Page references in the following notes are to the *Publication Manual*. The attention of authors is especially drawn to changes in the third edition (p. 13).
2. Manuscripts (pp. 136-143), not usually to exceed 4500 words, should be typed clearly on quarto (21 x 26 cm or 22 x 28 cm) paper, double-spaced throughout and with margins of at least 4 cm on all four sides. Three copies are required. Duplicated or photocopied copies are acceptable if they closely resemble typed copies.
3. Title page (pp. 143-144) for the manuscript should show the title of the article, the name(s) and affiliation(s) of the authors, a running head and, at the bottom of the page, the name and address (including postal code) of the person to whom proofs and reprint requests should be sent.
4. An abstract (pp. 23-24) should follow the title page. The abstract of a report of an empirical study is 100-150 words; the abstract of a review or theoretical paper is 75-100 words.
5. Abbreviations (pp. 63-64) should be kept to a minimum.
6. Metric units (pp. 75-79) are used in accordance with the International System of Units (SI), with no full stops when abbreviated.
7. Tables (pp. 83-93) should be typed on separate sheets with rules (if any) in light pencil only. Please indicate approximate location in the text.
8. Figures (pp. 94-104) should be presented as glossy photographic prints or as black-ink drawings on Bristol board, similar white card, or good quality tracing paper. Diagrams and lettering must have a professional finish and be about twice the final size required. On the back of each figure there should appear in light pencil the name(s) of the author(s), the article title, the figure number and caption, without the front of the figure being defaced. Indicate approximate location in the text. The two copies of figures may be photocopies.
9. References (pp. 107-133) are given at the end of the text. All references cited in the text must appear in the reference list.
10. A copy of the MS must be kept by the author for proofreading purposes.

Reprints

Because of increasing costs, reprints of articles will not be provided to authors free of charge. Authors may order reprints in multiples of 25 copies at the time of returning proofs. Cost, for each batch of 25 reprints, is \$A2.00 per page rounded up to the next even number of pages. Payment for reprints must be made at the time of ordering.

Copyright

In view of the increasing complexities of copyright law, copyright of material published in the *Australian Journal of Clinical and Experimental Hypnosis* rests with the Australian Society of Hypnosis, Limited. Authors are at liberty to publish their own papers in books of which they are the author or the editor, and may reproduce their papers for their own use.