

## **Hypnotherapeutic Advances in Pain Management**

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There is little doubt that the induction of hypnoidal states dates back to earliest history utilizing chanting and breathing exercises. The earliest clinical records of hypnosis date back to John Elliotson (1792 to 1869) an English surgeon, who utilized hypnosis for pain management in his practice. James A. Esdaile (1808 to 1859) performed over 300 operations using hypnosis as analgesia while practicing in India (Bassman & Wester, 1992). One such operation reportedly entailed the removal of a one hundred and three-pound tumor (Jackson 1999). Hypnosis and trance represent an age-old treatment for a variety of conditions including pain, it has been only embraced as a legitimate therapy consequent to continuing research over the past 50 years (Hrezo 1998).

Hypnosis as a form of pain management fell in and out of favor from the early 1940's until the 1960's when Milton H. Erickson demonstrated its utility with acute and chronic pain control (Erickson, 1986). The application of hypnosis within the medical and pain setting has continued to develop from the work of Hilgard and LeBarron (1975), Barber and Adrian (1982), and Melzack and Wall (1965,1982).

Zohaurek (1985) points out two historical misconceptions of pain that have affected the role of hypnosis in treating pain.

1. Pain was considered only to be a symptom of an underlying disease or trauma. Therefore, research and treatment focused on the "etiological cause and ignored the pain, assuming it would disappear when the "cause" was addressed. Historically pain reporting was by necessity heavily relied upon as part of the initial diagnostic procedure, where severity, location, and nature of the pain often assisted in proper diagnosis. Though pain reporting maintains a significant role in diagnosis the advent of additional diagnostic procedures assist in diagnosis (i.e. CAT, MRI scans) beyond pain reports and reduce their unique significance. The reliance on pain reports was especially true in certain acute pain situations though not as much in chronic pain situations where a diagnosis had been reached (Bonica, 1980). It was postulated that hypnosis could mask the symptoms of pain and might interfere with obtaining a proper diagnosis and treatment (i.e. hypnosis utilized to mask pain associated with appendicitis could result in delaying care until the appendix had ruptured).
2. Pain was seen as evolving from either a physical or a psychological origin as opposed to being from both. Pain was perceived to either have a "real/organic" basis or a "functional/imaginary" basis (Fordyce, 1976, Sternbach, 1978). Current thinking might view the impact of pain as an etiological factor by nature of its bidirectional psychoneuroimmunological role (on the psychological, endocrinological and immunological systems) which may contribute to the maintenance of illness (Burte, 2000) or enhance the progression or metastasis of certain illnesses (Paige and Ben Eliyahoo, 1997).

Since 1958, hypnosis has been recognized by the American Medical Association as a legitimate form of medical treatment when administered by an appropriately trained practitioner (Simon and James, 1999). Fortunately, with the resurgence of integrative, mind /body, psychoneuroimmunological approaches current thought and research has begun to view hypnosis as a potentially significant modality in the treatment of pain and illness.

In this section, I will seek to focus on the hypnotherapeutic advances in pain management. In the next section, I will discuss the applicability of hypnosis in the treatment of specific illnesses. Due in part to its historical misportrayal in the popular media patients referred for hypnosis often ask, “but does it really work?” Contemporary popular media portrays hypnosis as an effective means of pain control (Foderaro 1996) Currently sufficient experimental and clinical research exists to allow clinicians to respond affirmatively to the question. However, certain caveats, which will be discussed later, still exist.

What then is “medical or clinical hypnosis” and what are the contemporary views of both practitioners and the public alike, especially within the realm of pain management? One recent survey indicates, “that most people have a positive view of the therapeutic benefits with a vast majority of respondents believing that it reduces the time that is usually required to uncover causes of a person’s problems, and that hypnotized persons can undergo dental and medical procedures without pain” (Johnson and Hauck 1999).

Retrospectively, it is important to recognize that “pain,” until the twentieth century, was considered an untreatable consequence of illness or injury. Indeed, Chaves and Workin (1997) astutely point out that hypnoanalgesia did not fully emerge until the 19<sup>th</sup> century, due largely in part to the societal belief which, at that time, did not define pain relief and reduced suffering as the primary goal in treatment. Prior to effective clinical techniques for pain management, pain was an accepted aspect of life. One might wonder whether the introduction of pharmacological forms of pain relief such as analgesia and anesthesia altered patient’s perceptions and ultimately their thresholds for pain.

If pain can act as a mediator in trance production with pain patients then did our progenitors and do perhaps third world cultures who had/have limited access to various forms of pain relief intuitively rely on hypnosis and self hypnosis to alter their pain thresholds. For these individuals pain, whether from childbirth, dental procedures, illness or injury was anticipated.

Today the application of hypnotic analgesia in acute and chronic pain treatment has substantially grown. Both patients and clinicians alike are demonstrating increased knowledge and experience with hypnosis. In many cases, patients bring clinical experiences with hypnosis for related or unrelated issues to the treating physician (Lynch, 1999), thereby opening a door to increased complementary approaches to standard interventions.

Where this may be significantly prevalent is in the non-pharmacological strategies employed in managing cancer pain. As Zaza, et al (1999) point out, while pharmacological treatments are appropriately the central component of cancer pain

management, the under-utilization of effective non-pharmacological strategies may contribute to the problem of pain and suffering among cancer patients. In a study of 214 health professionals, Zaza, et al (1999) found that the health care professionals recommended “imagery” exercises 54% percent of the time and meditation 43% of the time. They expressed interest in learning more about hypnosis and other non-pharmacological strategies suggesting its under-utilization as a complementary or adjunctive treatment to standard care. In a critical review of the literature, Sellick and Zaza (1998) found that in randomized controlled studies of hypnosis in managing cancer pain, substantial evidence exists for its effectiveness when non-pharmacological pain management approaches are being sought.

This concept, then, of unifying both the confidence of the practitioner and the trust and belief of the patient, may represent the components necessary to obtain efficacious pain relief. Barber (1998) aptly delineates a two-component model as to why hypnosis may work for pain management. He suggests that in the first component the “clinician communicates specific ideas that strengthen the patient's ability to derive therapeutic support and to develop a sense of openness to the unexplored possibilities of pain relief within the security of a nurturing therapeutic relationship.” In so doing, the patient is led to relax in the clinician’s confidence in hypnosis. In the second component, “the clinician employs posthypnotic suggestions that capitalize on the patient's particular pain experiences which simultaneously ameliorate the pain experience and which, in small repetitive increments, tend to maintain persistent pain relief over increasing periods of time.” This second component offers the patient a sense of voluntary learned control over their pain, thereby reducing anxiety and learned helplessness.

A somewhat more constructionistic view is offered by Chapman and Nakamura (1998) who suggest that hypnosis alters the learned pain experience (pain schemata) by interacting with feedback processes that prime the associations and memories tied to the pain. Thereby shaping the formation of pain expectations and processes and ultimately reducing the experience of pain.

As mentioned previously, hypnosis has fallen in and out of favor over the years due in part to arguments concerning the lack of hard scientific data to supports its efficacy or pathophysiology. With increasing frequency studies are demonstrating the impact of hypnosis on pain from the perspective of changes occurring in the brain itself. Rainville, et al (1997) demonstrated that positron emission tomography revealed significant changes in pain-evoked activity within the anterior cingulate cortex consistent with the encoding of perceived unpleasantness thereby linking frontal lobe limbic activity with pain susceptible to hypnotic suggestion.

In an examination of exposure to noxious stimuli presented to subjects, Faymonville, et al (2000) found that hypnosis could reduce the intensity and unpleasantness of the exposure. By examining cerebral blood flow of subjects both with and without hypnotic intervention, they concluded that hypnotic modulation of pain appears to be mediated by the anterior cingulate cortex.

Rainville, et. al. (1999), in their examination of cerebral blood flow, utilizing PET scans found that the hypnotic experience may result in increased occipital regional cerebral blood flow (RCBF) and delta activity (EEG) by altering the consciousness associated with decreased arousal via facilitation of visual imagery. Frontal increases in RCBF may be associated with verbal mediation of suggestions, working memory, and top-down processes involved in re-interpreting the perceptual experience of the noxious stimuli. They concluded that specific patterns of cerebral activation appear to be associated with the hypnotic state.

Other researchers have demonstrated the effectiveness of hypnotic analgesia on raising pain thresholds by examining the nociceptive flexion (RIII) reflex and EEG patterns (Danziger, et al 1999).

However, the real question for clinicians is, “Can learning to develop hypnoanalgesia to noxious stimuli in a laboratory (an acute short-term artificial environment) be generalized to a patient’s ability to control real nociceptive acute or chronic pain. Crawford, et al (1998) found that chronic back pain patients could be trained to utilize hypnotic analgesia on a noxious stimulus and then generalize the hypnotic analgesia to their back pain. They concluded that “hypnotic analgesia is an active process that requires an inhibitory effort dissociated from conscious awareness where the anterior frontal cortex participates in a topographically specific inhibitory feedback circuit that cooperates in the allocation of the thalamocortical activities.” They further point out that the subjects could successfully transfer the experimental pain reduction to reduction of their own chronic pain; and, in so doing, also experience increased well-being and increased sleep quality. Utilizing a modulated form of pain, patients can learn the “hypnotic skill” of pain control or the raising of their pain thresholds. They can then be taught to generalize this skill to pain situations that are more a function of their illness or injuries.

Hypnotic analgesia has also been shown to reduce subjective pain perceptions and the nociceptive flexion reflex in high-hypnotizable subjects (Sandrini, et. al., 2000). This raises yet another question. If pain can, via hypnoanalgesia be unlearned, does it imply that, at least to some degree it is a psychoneurologically learned behavior? The concept of there being a “neural signature of pain” which acts as a progenitor of subsequent pain experiences is offered by Melzack (1993). If this is so, we should teach patients how to communicate more positively when in acute pain stages before they develop chronic pain. Meta-analyses of 18 studies revealed a moderate-to-large hypnoanalgesia effect supporting the efficacy of hypnotic technique for pain management in both clinical and experimental pain settings (Montgomery, et al, 2000).

When we speak of pain patients and hypnosis, another important question is raised. Does hypnosis work equally well for all patients? The literature seems to suggest that numerous variables must be considered in drawing any conclusions. Issues of patient’s hypnotic susceptibility, chronic versus acute pain, and the origin and etiology of the pain are relevant factors.

In the realm of hypnosis, the question of the importance of hypnotic susceptibility and trance depth have long been debated (Frankel et al 1979, Hilgard and Hilgard 1979, Perry et al 1979) especially with regards to pain (Hilgard and LeBaron 1982). Recent studies which have examined the importance of hypnotic susceptibility of pain patients (as opposed to non-pain patients) appears to indicate that when dealing with acute pain issues, hypnotic susceptibility is very important. Sandhrini, et al (2000), examined subjects rated as either high or low susceptibles on the Harvard Group Scale of Hypnotic Susceptibility (Shor and Orne 1963) and the Stanford Hypnotic Susceptibility Scale (Weitzenhoffer and Hilgard 1959). Utilizing a noxious stimulus, they concluded that, “the susceptibility of the subject is critical in hypnotically induced analgesia. Similarly, high hypnotic but not low hypnotic subjects demonstrated significant reductions in pain intensity and reduced nociceptive receptive reflexes during hypnotic analgesia (Zachariae, et al, 1999).

Increased hypnotizability was also found to positively affect sensory and pain thresholds during dissociated imagery and focused analgesia as measured by skin conductance responses, somatosensory event-related potentials, and pain perceptions (De Pascalis, et al, 1999). The ability to modulate pain was greater when subjects demonstrated higher hypnotic suggestibility (Rainville, et. al., 1999). Controlled associative ability (Agargun, et al, 1998) and the ability to utilize internal (guided-imagery), and external distractors (word memory and pursuit rotor tasks) was also found to be effective only in high susceptibility subjects fulfilling analgesic suggestions (Farthing, et al, 1997).

Is then the low suggestibility patient subjugated to not being able to utilize hypnosis or is suggestibility trainable? In a brief training experience (Milling, et al, 1999) utilizing the Carlton Skill Training Program, found that training failed to increase overall suggestibility scores or to enhance the effects of a suggestion for pain reduction. However, pain reduction was more highly correlated with posttraumatic levels of suggestibility than to pre-treatment suggestibility.

Many authors have suggested that hypnotizability is a skill that is enhanced with practice but occurring at a rate set by the patient. It has been further suggested that “hypnosis may be best conceived as a set of skills to be deployed by the individual rather than as a state (Alden and Heep, 1999).

Others have suggested that hypnotic susceptibility may not be a factor in treatment. In a study of hypnotic susceptibility and the treatment of irritable bowel syndrome, hypnotic susceptibility to suggestion was not a factor in the positive effect found for hypnosis (Galovski and Blanchard, 1999). Utilizing the Hypnotic Induction Profile as part of the hypnotic experience, clinicians can within five to ten minutes assess a patient’s hypnotic response capabilities and provide the patient with an initial first-hand experience (skill acquisition trial) of what hypnosis is like (Spiegel and Spiegel, 1978/87). Any patient, but especially pain patients, may spontaneously shift to an altered state of awareness increasing their suggestibility merely as a function of their motivation to develop rapid rapport and trust in the clinician in an effort to escape the pain (Araoz, 1984).

A simple, but effective means, of incorporating the patient's willingness to accept suggestion is presented by Eimer (2000) who, at the end of an induction concludes, "As you go deeper and deeper into relaxation and hypnosis, the door way to your unconscious opens and, with your permission, I have the opportunity to talk directly to your unconscious and give it the information it needs to help you make the changes you want to make."(p. 20)

A review of the literature points to an increasingly broadening range of applications of hypnosis in treating medical conditions with associated pain. One area where hypnosis has been utilized for both acute pain and healing is with burn victims. Hypnosis has been shown to reduce pain even in situations where opioids fail to bring relief (Ornbach, et al, 1998). Treatment and dressing changes can be an extremely painful part of burn care. Wright and Drummond (2000) found that rapid induction analgesia (RIA) was effective in reducing pain and anxiety associated with dressing changes and Ewin (1986) found that hypnosis positively reduced pain in adults during debridement. Similar findings were also found with pediatric patients (Foertsch, et al, 1998). Indeed, burn victims may demonstrate enhanced receptivity to hypnotic suggestion secondary to issues of motivation, dissociation and regression (Patterson, et al, 1997), especially within the subset of burn patient's who report high levels of baseline pain (Patterson and Ptacek, 1997).

Another area where hypnosis has been extensively utilized is in the arena of surgical intervention. Hypnoanesthesia, the use of hypnotic suggestion rather than general anesthesia to mediate pain during surgical intervention has been successfully employed for endocrine cervical surgery (Defecherix, et al, 1999, Meurisse, et al, 1999). Hypnosedation (hypnosis in combination with conscious IV sedation and local anesthesia) has been employed as an alternative to traditional anesthetic techniques (Faymonville, et al, 1999, Meurisse, et al, 1999).

Hypnosis has also been shown to provide proprioceptive pain and anxiety relief, reduced Alfenta and Midazolam requirements and increased patient's satisfaction and surgical conditions when compared to other surgical stress strategies in patient's receiving conscious sedation (Faymonville, et al, 1997). Audio-taped hypnotic instructions produced reduced anxiety (Ghoneim, et al, 2000) while preoperative hypnosis resulted in a reduction of consumption of analgesics (Engvist and Fischer, 1997) in third molar surgeries.

Self-hypnosis has been employed as an anesthesia for liposuction surgery (Botta, 1999) and for postoperative levels of pain control and relaxation in coronary artery bypass surgery (Ashton, et. al, 1997) and arteriotomies (Austan, 1997). It is attributed to reduced reported pain and anxiety and improved hemodynamic stability during invasive medical interventions such as percutaneous vascular and renal procedures (Lang, et. al., 2000). In particular, hand surgery which requires painful rapid remobilization of the hand is especially benefited by hypnosis. Hypnosis reduces perceived pain intensity allowing patient's to be more compliant with withstanding of the physical rehabilitative

interventions (Mauer, et al, 1999), as well as increased rates of anatomical and functional healing (Ginandes and Rosenthal 1999).

Hypnosis has also demonstrated its efficacy with children dealing with pain and anxiety associated with invasive medical procedures (Hilgard and LeBaron, 1984), including bone marrow aspiration (Lioffi and Hatira, 1999) and resulting in lower levels of reported pain, reduced anxiety, and shorter hospital stays (Lambert, 1996, Smith, 1996). Distraction and imagery techniques have been shown to be highly effective in reducing pain in painful procedures (Broone, et al, 1992). Scripts and metaphors for children with painful conditions are readily available to the pediatric pain practitioner (Wester and O'Grady 1991, Mills and Crowley 1986)

Another significant area where hypnosis has continued to demonstrate its utility is in the area of cancer intervention. Numerous books and articles on the use of imagery and healing (Gaynor, 1994, Siegel, 1998) have discussed the psychoneuroimmunological benefits of hypnosis (see Psychoneuroimmunology chapter in this volume). For many years hypnosis has also been shown to provide specific pain relief and reduced suffering for cancer patients (Sacerdote 1966, Hilgard and Le Barron 1975). and more recently, by employing physical relaxation coupled with imagery that provides a substitute focus of attention for painful situations (Spiegel and Moore, 1997). Patients demonstrate an increased awareness of the willingness to employ hypnosis adjunctively to their standard medical care resulting in new programs which incorporate hypnosis into their treatment protocols (Lynch, 1999). As recently as 1996, the NIH Technology Assessment Panel, presented in JAMA their conclusion that strong evidence exists for the use of hypnosis in alleviating pain associated with cancer.

Vidakovic-Vukic (1999) notes that irritable bowel syndrome (IBS) is a painful disorder frequently observed but its etiology and pathogenesis are still unknown. However, it is clear that individual perceptions may play an important role in its pathogenesis. Vidakovic-Vukic points out that in recent years, hypnotherapy has shown to be successful in the treatment of IBS resulting in either reduced or complete disappearance of pain and flatulence and a normalization of bowel habits. Similar results with a hypnotic treatment where the focus of intervention was "gut directed" and "symptom driven" found that abdominal pain, constipation, and flatulence improved, while anxiety scores decreased (Gasovski and Blanchard, 1998).

McGraff (1999), based on the studies of P. J. Whorwell and those of O. S. Palsson presents hypnosis as a significant component in the treatment of IBS with success rates of 80% reported in the literature. The focus of hypnosis for IBS should be on the gut directed and associated symptomology. In a review article, Camilleri (1999) points out that in addition to various medicinal interventions and fiber intake, hypnosis may play an important role in relief of pain in IBS patients.

Hypnosis has also been shown to be effective in acute pain care settings such as emergency room settings with burn pain, pediatric procedures, psychiatric presentations, and obstetric situations (Peebles-Klieger, 2000, Zahourek, 1985). Iserson (1999)

describes a simple method of hypnosis utilized in pediatric fracture reduction on four cases of angulated forearm fractures utilizing distraction techniques when no other form of analgesia was available. Interestingly, fracture healing may also be enhanced utilizing hypnosis. Faster edge healing improved ankle mobility, greater function mobility to descend stairs, lower use of analgesic and trends towards lower self-reported pain was found in patients who received hypnotic intervention in addition to standard orthopedic emergency room care (Ginandes and Rosenthal, 1999).

Hypnotically induced glove anesthesia with transference to the pain site for acute pain relief is a commonly utilized technique. This is accomplished by using suggestions of creating a numbing sensation in the hand. Patients may be asked to imagine their hand in a bucket of anesthetic gel or a glove or other such images. This numbing or pleasant sensation is then transferred to the pain site with a pleasant increase in numbness. An excellent example of this technique is offered by Basserman and Wester (1984). Other techniques include distraction techniques and dissociative techniques (Burte, 1999, Eastwood, et al, 1998). In all cases a trusting rapport with the clinician appears to be a critical factor in achieving the desired goals. In addition, as has been noted earlier, pain may act as a mediator toward an altered state of increased suggestibility to pain alleviation. Acute pain patients may willingly and rapidly transfer their pain to the hypnotherapist or anyone willing to accept the pain. Patients should be reassured that proper medical care is fourth coming and they can let go of holding on to their pain. As Schafer (1996) points out perhaps as many as half the patients in an emergency room may be in spontaneous trance. An alternative approach is to focus on the imagery the patient spontaneously reports associated with the pain. Psychosemantics and somatopsychic queues are observed in utilizing the patient's perceptions, internal representations, and understandings of the pain to alter their cognitive emotional and sensory experience (Burte, 1994).

Utilizing the New Hypnosis Model developed by Daniel Araoz (1985), patients are helped to achieve an altered state of internally directed experiencing of their symptomology. By focusing on the way they interpret and communicate their pain through any or all of their five senses, patients are led to a reinterpretation and understanding and their ability to modulate their pain. How patients intergrate pain sensations will impact their pain thresholds. Positive suggestions to pain altered the amount of time that patients could keep their hands immersed in "ice water" (Staats, Hekmat and Staats 1998). For example, in the case of the individual with recently cracked ribs, he may be asked to experience or visualize the ribs as they appear to him. He is then asked to visualize the ways to either soothe, protect or heal the ribs (i.e., an anesthetic band wrapped around the chest, relaxing, protecting and healing the area of injury), while communicating calming, relaxing and possibly "in control of the situation" thoughts. At times visualizing being in a safe or pleasant situation helps induce a hypnoidal form of relaxation or mild dissociation. Though creating relaxation has often been seen as an important element-inducing trance for the pain patient, it may be a secondary goal with the imaging or individualized experience of the pain as the primary pathway to the hypnotic state.

Acute pediatric pain represents a somewhat different issue in that children often lack clinical insight regarding their condition, an understanding of the etiology, potential longevity or plausible interventions available for ameliorating their pain, concepts which help adults cope with acute pain more effectively. Patients provided appropriate preoperative information demonstrate less acute pain (Stevensen, 1995). Hypnosis may represent a complementary treatment in conjunction with other forms of intervention such as pharmacological pain management (Rusy, 2000). By providing cognitive and behavioral schemata via modalities easily accessed by children (i.e., imagery, fantasy), the acute pediatric pain patient can be empowered similarly to the way adults utilize reason to empower their coping ability with pain.

Hypnosis may be a means of reducing both pain and pain-related distress (Chen, et al, 2000). For example, Adam, a young cancer patient was treated utilizing hypnosis for pain. He was taught first glove anesthesia which he applied to areas where he was to have finger sticks, Broviac changes, and later bone marrow aspirations. He was taught to visualize himself as a cartoon super hero named He-Man. By lifting his crutch and later his finger into the air and reciting the words, "By the power of Grey Skull I am He-Man," Adam was magically (hypnotically) transformed into He-Man, the strongest man in the universe. At such times, he could withstand increased levels of pain and invasive procedures.

Recurrent pediatric headaches appeared to show a positive response to hypnotic intervention when relaxation and/or thermal feedback techniques are employed (Holden et al 199). The use of autogenic training (hand-warming) with imagery has also been useful in reducing or eliminating pediatric migraines when used early into the migraine episode at the first signs of visual aura or muscular discomfort.

Crawford, et al (1998), in drawing attention to the transition of the acute pain to the chronic pain patient, notes that by utilizing hypnosis, patients could alter acute pain experiences. They further suggest that learned hypnotic analgesia resulted in reported chronic pain reductions, increased psychological well-being and increased sleep quality. The "neurosignature of pain" can influence subsequent pain experiences (Melzack, 1993). Specific pain reduction hypnotic skills may indeed be essential in developing lasting pain relief, especially in situations where chronic pain based on medical conditions (i.e., cancer tumors, herniated discs) is anticipated. In this context, hypnotic pain control may be conceived as a set of skills rather than a state (Alden, 1998). Chronic pain patients clearly represent a different population than acute pain patients. The most common form of chronic pain, other than from illness, is chronic low back pain, accounting for \$50 to \$100 billion dollars a year in lost wages and medical care (Burte, 1994, Miller & Krauss, 1990). Unlike acute pain, chronic pain may result in significant changes in individuals, personalities and clinical presentations as evidenced by performance on MMPI profiles (Strassberg, Tilley, Bristone, and Oei, 1992).

Chronic pain patients clinically demonstrate elevated levels of feelings of hopelessness, helplessness and despair. They often report ongoing struggles with depression, somatic preoccupations and obsessive concerns with fatal illness (Miller and Krauss, 1990).

When chronic pain becomes a central issue in the individual's life, it may function as a coping mechanism altering the patient's capacities, both psychopathophysiologically and etiologically (Kuhn, 1984). In addition to its direct impact on pain alleviation, it is with the depression and hopelessness the chronic pain patient experiences that hypnosis can play a key role. Melzack (1990) points out the advantages of a multidisciplinary approach inclusive of narcotics, for the purpose of rescuing people in chronic pain. Metaphors and hypnotic scripts can address both the pain and psychological distress (Havens and Walters 1989). Individuals who are diagnosed with what would today be referred to as chronic pain syndrome (CPS), often are overwhelmed by the impact of their pain. For CPS patients the pain often takes on an all encompassing life of its own, dictating the quality of life the patient is both psychologically and physically able to experience. The CPS patient's pain alleviation is often complicated by issues of learned behaviors conditioned avoidance's, and conscious and unconscious secondary gains. Hypnotherapy represents a complementary component in a multi disciplinary approach that should first acknowledge that the CPS patient is not primarily a psychiatric patient but rather composite of both psychological and physical distress. As Hitchcock (1998) points out, there are significant myths and misconceptions about the chronic pain patient that the pain practitioner must address in formulating a treatment plan. She further points out that in many ways the patient is a valuable contributor to the understanding of their own condition. As such, hypnosis may assist patients in that understanding via uncovering techniques and experiential insights into various aspects of their pain.

In addition to low back pain, many other conditions can result in CPS. Patients experiencing temporomandibular disorders who underwent hypnotic intervention demonstrated significant decreases in pain severity and frequency which were maintained for at least six months after treatment (Simon and Lewis, 2000).

Self-hypnosis has been used adjunctively in dealing with pain associated with sickle-cell anemia (Dinges, et al, 1997). Hypnosis has helped adolescent teens and adults with cystic fibrosis (CF) develop improved attitudes about health and a sense of independence and decreased anxiety (Belsky and Kahanna, 1994, Olness and Kohen, 1996). Utilizing a technique introduced by Bressler (1990), Anbar (2000), taught CF patients to seek an inner advisor while in self-hypnosis to uncover information pertaining to their physical or psychological symptoms. In so doing, they achieved greater levels of physical comfort and reduced anxiety levels.

Hypnotic intervention resulted in improvement in symptoms resulting from multiple sclerosis (Sutcher 1997), fibromyalgia syndrome, especially when utilized as part of a multidisciplinary treatment (Berman and Sukyers 1999) and phantom limb-pain (Sthalekar 1993, Muraoka et al 1996). The list of illnesses, disease conditions and injury induced pain conditions for which hypnosis has historically been utilized and for which its application may apply is beyond the scope of one chapter. A review of the literature suggests that its clinical application is continually expanding.

Another arena where hypnosis may play a significant role in pain management and suffering is with patients experiencing psychogenic and psychosomatic pain. Through the

use of the affect bridge (Watkins 1971) and listening to the patient's somatopsychic language (Burte et al 1994) patients can gain insight into the range and variety of symptoms they are experiencing. The psychosemantics the patient utilizes in describing their life situations or describing their pain offers insight into the non-organic etiology of their conditions. Queues associated with past trauma may maintain the patient's symptoms whereas re-associating those symptoms to positive images may result in symptom reduction or alleviation (Burte 1993). With the psychosomatic patient with no known organic etiological basis for their pain the exploration of the negative self-hypnotic (NSH) statements associated with their condition will lend insight into the symptom output. This is especially relevant with patients experiencing sexual dysfunction associated with pain (Araoz 1998, Burte and Araoz 1994).

Techniques and case histories are presented in the above noted works, but the essence of the hypnotherapy is to have the patient through experiencing these NSH statements in trance identify the bridges between their psychic conflicts (semantic input) and the pain or dysfunctional symptoms (somatic output).

In conclusion research continues to support the belief that pain whether acute, recurrent or chronic can be reduced or ameliorated with hypnosis. Hypnosis is becoming more widely accepted in the medical community as its applicability is demonstrated both experimentally and more importantly in the clinical arena. As scientific thinking continues to demonstrate its acceptance of mind/body, psychoneuroimmunological bidirectional communication, the role and impact of hypnosis in the pain patient population will continue to grow. Perhaps as its utilization becomes increasingly more accepted, practitioners will seek out the necessary and appropriate quality training in hypnosis currently available. At which time hypnosis as a treatment modality will take its place as a sought after compliment within main stream pain management medicine.

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