

Management of pain through autogenic training

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Physical and emotional pain are an inevitable part of human existence and are without natural antidotes. In view of this, and in the light of increasing professional reluctance to depend on analgesics, this paper proposes the widespread application of autogenic training, a relaxation technique which has been seen to confront pain very effectively, and also to reduce substantially drugs dependency. It analyses autogenic training in respect of some of the more common pain-allied disorders such as childbirth, headaches and migraines, back pain, cancer and palliative care, and cardiology. © 2000 Harcourt Publishers Ltd

... the sick suffer to excess from mental as well as bodily pains...

These were the words of Florence Nightingale in 1859, portentous in recognizing that the seriously ill have to contend not just with pain, but with the *fear* of pain.

If Florence Nightingale was the founder of this view, others such as Lewis (1942) have since identified the mental suffering and anguish inherent in pain; and Sternbach (1968) emphasized the individuality of pain, defining it as a private sensation of hurt and being what the patient says it is.

No one lives a life free of physical or emotional pain. Pain is a certain factor in the human experience. Thirst, hunger and fatigue are human conditions that may become unpleasant and acute, but they succumb to liquid, food and sleep respectively. There is no parallel solution for dealing with pain.

Often pain is a message from the body, reflecting damage, telling us that injury is present and drawing our attention to the part of the body that is harmed. Equally, physical pain may be induced by mental pains, such as anxiety, depression, fear, anger and guilt. That attitude can cause pain is recognized in the old but true expression, 'He gives me a pain in the neck'; while in a more modern expression, describing someone who is a source of emotional pain, we say, 'She's on my back'.

The phenomenon of pain is never far away in nursing practice, with an estimated three-quarters of hospital patients experiencing pain to a greater or lesser extent (Bruster et al. 1994,

Royal College of Surgeons & College of Anaesthetists 1990); however, many patients have reported less than satisfactory experiences of relief and comfort during hospital confinement and in other community settings (McMillan 1996, Browne 1996, Walker 1994). It is widely held that the second most important nursing activity is pain relief (Webb & Hope 1995); and although some commentators have assumed that nurses have an adequate understanding of this, and of the concept of pain relief (Montes-Sandoval 1999), others (Carson & Mitchell 1998, Zalon 1995) argue that generally nurses lack essential basic knowledge in this area.

Traditionally, treatment of pain has been through analgesics, nerve blocks or surgical procedures. But modern medical opinion is now uncomfortable with these methods, perceiving them to have serious shortcomings, and advocates that each of the many factors which govern the nature of pain should be dealt with individually in a combined physical and psychological attack.

COMPLEMENTARY MEDICINE VERSUS PAIN

In centuries gone by, aspects of complementary medicine have been effective to some extent in the containment of pain. An obvious example occurs in the pre-modern use of herbal remedies. At the beginning of the 20th century, Andrew Taylor Still (1908) expounded the case for what are now called complementary therapies when he wrote 'Man should study and use the

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drugs compounded in his own body'. There are many who express a similar view today.

It seems certain that acupuncture, in the hands of an effective practitioner, can provide notable pain relief; and despite a long history of mixed reviews, much support is forthcoming presently for hypnosis. However, sceptics are not hard to find: such is Szmelskyj, who made an evaluation of acupuncture and hypnosis, as well as chiropractic and osteopathy, and found them wanting. On the basis of this distinctly narrow sample he concluded that the whole of complementary medicine lacks reliability (Szmelskyj 1998). Among contrary views are those of Sindhu (1996), who, in a meta-analysis of non-pharmacological nursing interventions for the management of pain, has shown that there are primary studies with evidence to suggest that non-pharmacological nursing interventions are effective in the management of pain, while Malone and Strube (1988) support the accuracy of Florence Nightingale's original perceptions and suggest that the benefit of psychological approaches to pain management may lie principally in reducing the fear and depression generated by pain.

AUTOGENIC TRAINING

Autogenic training offers a revolutionary approach to the containment and dispersal of human pain in all its aspects and may be introduced in this paper as a potentially valuable tool for nurses. Autogenic training, known as AT, is a relaxation technique carried out by an individual on himself or herself, involving the use of passive concentration and certain combinations of mental and physical stimuli. Defined medically as a psycho-physiologic form of psychotherapy, AT was introduced first in 1932 by Johannes Schultz and subsequently developed further by Wolfgang Luthe. Essentially it consists of a series of simple mental exercises designed to turn off the stress mechanisms in the body, and to turn on the restorative rhythms associated with profound psychophysical relaxation. Autogenic training is self-induced, as its name implies, generated by a person from within, and able to achieve a steadily developing enhancement of energy and tranquillity. Once learned, and this is a simple enough process, it may be practised for a lifetime. Carried out regularly and properly, AT can achieve results comparable to those attained by Eastern meditators who have been working at their practices for a long time. From the Western point of view, autogenic training has the great appeal of being without cultural, religious or cosmological overtones, and it is completely modern, with the enormous bonus of not requiring any special clothing, postures or rituals.

How autogenic training works

Autogenic training involves certain key exercises. All of these are easy to learn and simple to do. These exercises are conducted by an individual in one of three optional postures, namely:

- Sitting slumped rather like a rag doll on a stool
- Lounging in an easy chair
- Lying prostrate, arms by the side.

A subject takes up one of these postures, having selected a quiet location likely to be without disturbances for the next 10–15 min. Now the eyes are closed and attention is focused on various areas of the body, commencing with the suggestion 'My right arm is heavy'. The principle theme of this first exercise is muscular relaxation.

Subsequent concentration is on warmth, keyed by the instruction 'My right arm is warm'. This instigates a developing situation whereby warmth is felt in other limbs until all the extremities become heavy and warm. Next, there is passive concentration on cardiac activity instigated by the formula 'My heartbeat is calm and regular'. Then follows passive concentration on the respiratory mechanism with the formula: 'It breathes me', moving on to warmth in the abdominal region with 'My solar plexus is warm'. The final standard exercise concerns the cranial region, which is induced to be cooler than the rest of the body through the formula 'My forehead is cool'. The state of passive concentration is terminated by the application of a three-step procedure: the arms are flexed energetically; the subject breathes deeply; the eyes are opened. Learning to do the exercises properly occurs through a leisurely programme of eight weekly one-hour sessions (Kanji 1997). As can be seen, the effectiveness of AT depends on one main factor, i.e. mental contact with various parts of the body in turn through passive concentration.

In addition to the Standard Exercises, there are Intentional Exercises, Intentional Formulae and Organ-Specific Formulae (Fig. 1). The Intentional Exercises help individuals to off load any suppressed feelings that prevent a state of calm, such as anxiety, anger, crying need, motor discharge, vomiting and fear of death.

The Intentional Formulae are designed to deal with specific symptoms such as pain, insomnia and recovery from illness and amount to personalized phrases added to the Standard Exercises, with the intention of influencing specific emotional, mental and behavioral problems. To this end several minutes are spent contemplating the Formulae.

Finally, there are the Organ-Specific Formulae, which are physiologically oriented. These aim at reinforcing or supporting the effects

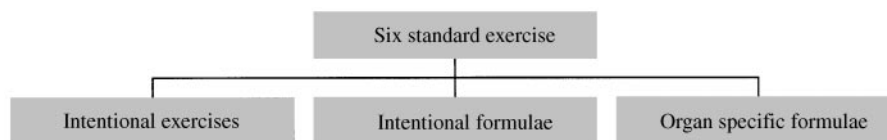


Fig. 1 Autogenic training exercises/formulae.

Through AT, a person is enabled to acquire a new and successful way of thinking and living.

already induced by the Standard Exercises. In accordance with Autogenic principles, the functional theme of the Organ-Specific Formulae may be heaviness, warmth or cooling, or may imply that the self-regulatory mechanisms function automatically. Organ-Specific Formulae are used always at the end of the sequence of Standard Formulae.

Benefits of autogenic training

Autogenic training supports the existing self-healing and self-regulating physiological functions of various body systems (homeostasis). AT does not try to control or override these natural systems, but helps them to use their inherent self-healing potential. AT enables individuals to become aware of manifestations within themselves, both physically and spiritually. Subjects become aware of the negative patterns of life they are prone to and which continue to recur. AT shows the individual that there *are* alternatives and there *are* choices, and how to find them. Through AT, a person is enabled to acquire a new and successful way of thinking and living.

The benefits of AT are, therefore, numerous. Some of them are instant, such as the counteracting of acute stress or fatigue and the provision of mental and physical refreshment; others are more long-term and help trainees to:

- Achieve peace of mind
- Cope with life's pressures
- Find emotional balance
- Enhance health and general wellbeing
- Improve coping abilities
- Control the body's stress responses.

O'Donovan (1989) suggests that the current ideas about psycho-neuro-immunology are particularly relevant to the AT process, whereby the individual has the potential to mobilize inner resources and self-healing properties.

Clinical application

Autogenic training exerts a therapeutic action on certain mechanisms that are relevant to many types of pathophysiological and mental disorders. With the help of AT principles, it is possible to use the brain to influence particular bodily and mental functions. Obviously this type of psycho-physiologic manipulation requires

proper training, adequate medical background knowledge, critical application and systemic control of the effects of the treatment (Luthe 1962). There have been numerous applications of AT in a variety of patho-physiological conditions, and some of the key areas researched through controlled trials are headaches, migraines, hypertension, rheumatoid arthritis, insomnia, Raynaud's disease, chronic respiratory disease, asthma, inflammatory bowel disease, pregnancy, dermatitis, cardiology, anxiety and panic disorders, stress and motion sickness. Among the most common pain-allied disorders where AT has been seen to be helpful are those that follow.

CHILDBIRTH

Autogenic training offers a number of therapeutic advantages that are valuable in the pre- and post-natal periods and during labour. Often patients feel reassured simply because they have a technique at their disposal able to provide almost instant calmness and relaxation. It has been recognized that regular practice of the Autogenic Standard Exercises, if started during the early phases of pregnancy, will help cope with many of the standard disorders of pregnancy; complaints such as nausea, vomiting, constipation, insomnia, shortness of breath, tenseness and irritability become less disturbing, and subside more quickly, under the influences of the Standard Exercises. Fear and anxiety of actual birth may also be relieved, as confirmed by Yang et al. (1987) who carried out a controlled trial of 80 primigravida at 32–35 weeks, of less than 35 years of age. Here, a Chinese version of Schultz technique was taught and a significant decrease in anxiety in treatment groups was found, along with a greater reduction of anxiety in AT compared with Biofeedback groups.

In addition to helping with a patient's pre-natal state, passive concentration on the first four standard AT formulae has been found to be beneficial in different stages of labour. Other favourable physiological changes are in respect of blood pressure, heart rate, reduction of muscular tension, and the lowering of pain-perception. The allaying of fatigue and exhaustion have also been noted (Schultz & Luthe 1969).

For obvious reasons, and particularly because of the prophylactic and therapeutic value of AT during the prenatal period, it is recommended that the patient begin with the standard AT exercises as soon as possible after pregnancy is verified, or even during pre-conceptual preparation period.

HEADACHES/MIGRAINES

The forehead coolness formula 'My forehead is cool and clear' is most effective in the prevention of headaches and migraines. Several studies in this field endorse this view. Ter Kuile et al. (1996), Engel et al. (1992) and Zitman et al. (1992) demonstrated that AT effected a decline in the severity of headaches and an increase in headache free days, while Van Dyck et al. (1991) and Blanchard et al. (1978) verified a reduction in the consumption of analgesics. Labbe & Williamson (1984) confirmed a significant improvement of headache activity in 93% of children (mean age 10.8 years) at the end of the AT course and at one-month follow-up. Janssen & Neutgens (1986) proved AT to be more effective for combined headaches.

BACK PAIN

According to Melzack & Wall (1988), low back pain is the commonest of all pains. No detailed evidence is offered in support of this statement, but it is in accord with contemporary clinical experience. Back pain can become a chronic or frequently recurring problem resulting in a change of work, status, lifestyle or restriction of social activities, and is often accompanied by anxiety, depression and stress-related disorders (Kermani 1990). Stress reduction techniques such as AT aim to redress the presumptive autonomic imbalance. Chronic back pain may give rise to localized muscular tension of a kind that persists long after the original injury has healed, with the result that a pain-tension cycle will become firmly established (Humphrey 1989). The ensuing anxiety can only compound the problem and by reducing the patient's anxiety one may hope to provide some degree of control over the pain. Hence, AT is intended initially as a means of countering anxiety, secondarily as a remedy for pain. As the large muscles of the back relax with the reduction of tension, the spasm diminishes and so does the pain. Back pain due to repressed and unresolved emotions may be relieved through the use of Intentional Exercises. Yamazaki et al. (1985) confirm the effectiveness of AT in nursing patients with chronic lumbar pain.

CANCER/PALLIATIVE CARE

Pain, particularly that of cancer, is frequently a result of multiple factors. The procedures of being diagnosed and treated for cancer are stressful. Twycross & Lack (1990) estimate that two thirds of patients with cancer experience pain, either due to their physiological status or as a result of treatment, and one of the common mistakes in cancer pain management is the lack of attention to psychosocial issues. Pearce advocates the concept of 'total pain' to that experienced by individuals with terminal illness, based on the observation that pain is a combination of physical, emotional, spiritual and social pain.

AT can work very effectively in the reduction of stress and anxiety levels and in the development of a positive mental attitude towards oneself, one's cancer and one's health and wellbeing. Through AT, the nurse can facilitate healing by helping the patient to become more centred, more in touch with his or her wholeness. The Intentional Exercises, particularly the ones dealing with anger and anxiety, are particularly useful in this situation. Directed anger can be empowering and invaluable in triggering profound emotional release (Simon 1999). Through the Intentional Dying Exercise, the individual adds substantial leverage to a life change in overcoming the fear of death, whereas the Intentional Formulae may assist with liberating the energy to transform resistance, defence and disease into self-acceptance, peace, and wholeness (Rancour 1994). The spouse and the family can also be enabled to come to terms and cope with the effect of change on them during the period of terminal illness and bereavement. In the ultimate stage of healing, individuals are empowered and move beyond fear, beyond pain and beyond suffering.

CARDIOLOGY

A heart attack, or indeed any cardiac condition, causes pain, distress and impairment of quality of life for patients and their relatives. Long-term quality of life may depend as much on psychological reactions, and how they are managed, as on medical care (Mayou & Bryant 1993). Anxiety and depression are common psychological reactions to coronary heart disease (Thompson et al. 1982) and these occur in around 70% of cardiology patients. Uncertainty and psychological stress is common after coronary angioplasty and coronary bypass surgery (White & Frasure-Smith 1995). Such reactions may be overcome through AT as has been demonstrated by Poackova et al. (1982), who conducted a controlled trial on 131 male patients

Table 1 Results of the Spielberger State-Trait Anxiety Inventory and Ferrans & Powers Quality of Life Index, Cardiac Version III

Variables	Before Autogenic Training Course	After Autogenic Training Course
State Anxiety	54	39
Trait Anxiety	63	39
Quality of Life Index	18	24
Health and Functioning	13	23
Social and Economic Aspects	24	28
Psychological and Spiritual Aspect	16	20
Family Aspect	24	26

(AT = 83, No Treatment = 48) with Myocardial Infarction, mean age 48 years, and found significant changes in anxiety, depression and neuroticism in AT subjects; also a decrease in tiredness, improvements in concentration of attention and sleep.

A case study of a patient A illustrates how 70–80% of pain was eliminated by AT. Patient A is 63 years old, a patient of quadruple bypass surgery and coronary angioplasty with stent. Despite these interventions, he was continuing to experience chest pain and unable to sleep properly at night. After the first week of practicing AT, Patient A reported the 'best night's sleep ever in my whole life' and 'I have not felt so good in years'. After the fifth week, Patient A reported feeling no pain at all.

Patient B was experiencing serious syncopal episodes and ventricular arrhythmias accompanied by chest pain for which extensive medical investigations had determined no explanation. Patient B's obvious anxiety over his state of health led to 'social phobia' and an inability to enjoy social functions. After the first week of AT, Patient B felt able to enjoy a meal out with friends; after three weeks, his symptoms of anxiety were diminished; and after four weeks, he was able to go away for a long weekend's holiday. After five weeks, Patient B was experiencing no tightness in the chest, nor any ventricular arrhythmias. On completion of the AT course of eight weeks, the results obtained with Patient B evaluated very favourably in the Spielberger State-Trait Anxiety Inventory and Ferrans & Powers Quality of Life Index, Cardiac Version III, as illustrated in Table 1. Further reactions such as these are included in the author's randomized clinical trial on patients who have undergone coronary angioplasty (unpublished data).

IMPLICATIONS FOR NURSING PRACTICE

Up to 65% of the general public are currently using some form of complementary and alternative therapies (Ernst 1998), and it seems

certain that a significant proportion of these therapies are connected with the containment of pain or acute discomfort. Nurses have a responsibility to learn the characteristics and scope of these therapies and thereby incorporate them suitably into plans of care.

Men and women become nurses out of a desire to be supportive carers and healers. They have the option to increase the effectiveness of their professional activities by becoming therapists in AT, and through that to provide a measurable increase in pain and stress relief in their patients. AT is entirely compatible with the perceived scope of nursing and correlates with 'new nursing', as defined by Salvage (1990) and characterized by a holistic approach, autonomy, professionalism and the active partnership between patient and nurse and – importantly – a belief in the therapeutic power of nursing.

The potential value of AT has been discussed and its potency demonstrated. It is probably obvious that just as AT is likely to be a most valuable and rewarding experience for a nurse's patients, so it will be for the nurse personally.

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