Cognitive-behaviour therapies have been demonstrated effective in reducing psychological distress, physical disability, and pain in individuals with a variety of pain problems. Behaviour therapies, which began to be developed in the 1950s, are based on the assumption that maladaptive behaviours are learned and therefore can be modified through new learning experiences. Behaviour therapies aim to modify behaviours directly through the application of techniques based on learning theory principles. It involves identifying specific maladaptive behaviours and the factors maintaining them, and setting and working towards specific treatment goals. Fordyce (1976) described the application of behaviour therapy techniques to patients with chronic pain, and this approach has since been widely applied to the treatment of patients in multidisciplinary pain management programmes.

Cognitive therapies began to be developed in the late 1950s with the work of Albert Ellis, whose Rational-Emotive Therapy (Ellis, 1962) was based on the assumption that emotional distress arises from faulty or irrational patterns of thinking, and that learning to identify and change maladaptive thinking patterns can reduce psychological distress and maladaptive behaviours. Beginning in the 1970s, Beck and his colleagues (Beck et. al., 1979) developed a cognitive therapy designed to help patients identify, reality-test, and correct negative distortions in their views of themselves and their experiences. This therapy had been applied to depression, anxiety, anger, and other psychological problems. Both RET and Beck’s cognitive therapy make use of many behaviour therapy techniques (e.g., home work assignments, behaviour rehearsal, self-monitoring). The term “cognitive therapy” is most commonly used to refer to techniques such as cognitive restructuring and problem-solving. The term “cognitive-behaviour therapy” (or CBT) refers to a therapy that combines these cognitive techniques with behaviour techniques such as relaxation training and assertiveness training. Typically, CBT involves training in coping skills, teaching patients a variety of methods that can be applied across problems and situations.

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Since the 1970s, there has been widespread interest in, and application of, cognitive-behaviour therapy. Over the same time period as the growth and development of cognitive-behaviour therapy, clinicians and researchers have increasingly recognised the role of cognitive, affective, and behavioural factors in individuals’ responses to pain. Cognitive-behaviour therapies have been developed for chronic pain problems based on the rationale that learning new cognitive and behavioural responses to pain and to factors such as stress that can influence pain can decrease pain, suffering, and disability.

A number of randomised clinical trials have demonstrated the efficacy of cognitive-behaviour therapies in improving pain, psychological dysfunction, and physical disability in patients with various pain conditions (Keefe et. al., 1992 and Compas et. al., 1998).

Scheer et. al., (1997) reviewed randomised clinical trails of CBT for subacute and chronic low back pain that assessed return to work and were published between 1975 and 1993. They found eight articles describing five studies that included or emphasised CBT for chronic low back pain, and from these concluded that the data support the effectiveness of cognitive-behavioural strategies in affecting vocationally relevant outcomes.

US National Institutes of Health (NIH) Technology Assessment Conference Statement (1996) concluded that there was empirical support for the efficacy of CBT for chronic pain, and that there was strong evidence for the efficacy of relaxation techniques and multimodal treatments for chronic pain problem. The panel believed that there were insufficient data to conclude that one cognitive or behavioural technique was usually more effective than another for a given condition, although they noted that for an individual patient one approach may be more appropriate than another. The panel concluded that additional efficacy, effectiveness, and cost-effectiveness studies are needed, as are innovative methods of introducing psychosocial treatments into health care curricula and practice.

Compas et. al., (1998) published a review of studies of cognitive-behaviour therapies for various pain conditions. They concluded that the literature supported the efficacy of CBT for rheumatic diseases. For example, CBT was efficacious in reducing pain, anxiety, and psycho-physiological symptoms in patients with ankylosing spondylitis (Basler and Rehfsch, 1991), and more efficacious in decreasing pain and joint inflammation in patients with rheumatoid arthritis. Leary et. al., (1988) found five studies that compared CBT to both attention control and standard medical treatments for rheumatic diseases. All five reported improvements in psychological functioning, and three found significant pain reductions in patients who received CBT. Compas et al. (1998) concluded from their review of the literature that CBT was efficacious in improving pain, activity level, and psychological functioning in patients with chronic low back pain, but that there was no evidence that cognitive therapy or CBT enhances the benefits of biofeedback and relaxation training for patients with migraine headache.

Although cognitive-behaviour therapies vary in goals and techniques, they share certain fundamental characteristics, including the assumption that individuals’ feelings and behaviours are
influenced greatly by their thoughts; the use of active, structured techniques to teach patients how
to identify, monitor, and change maladaptive thoughts, feelings, and behaviours; a focus on helping
patients acquire skills in applying such techniques to a variety of problems; and a collaborative
approach to therapy, in which the patient and therapist work as a team. Behavioural techniques
and strategies such as graded task assignments, mastery and pleasure activity scheduling, behaviour
rehearsal, and role-playing are often incorporated into therapy. In addition, cognitive therapy
techniques are used to help patients recognise their dysfunctional and irrational thinking, reality-
test their thinking and develop skills for coping with life problems.

In using cognitive-behaviour therapy with patients who have chronic pain, it is essential that
the therapist begin by assessing and addressing the patient’s attitudes towards and expectations of
therapy. It is critical that the therapist make sure the patient understands the rationale for CBT, as
it may not be clear to a patient who is focused on a medical rather than a psychological or
behavioural approach to the pain problem. A simplified explanation of the gate control theory of
pain (Melzack, 1973) can be used to illustrate how psychological as well as physiological factors
may play a role in determining an individual’s responses to pain. This concept can be made
personally relevant by asking the patient to identify physical, emotional, and cognitive factors that
increase or decrease the experience of pain, discussing these in terms of opening or closing the
“pain gate.” It can also be helpful to explain that stress and negative emotions such as anger and
anxiety, which can stem from chronic pain and associated problems, as well as from other sources,
can result in increased muscle tension, which in turn can produce increased pain. This serves as a
rationale for relaxation and stress management training. It is helpful to emphasise that the existence
of such relationships does not imply that the sole cause of the patient’s pain is stress or tension,
but only that such processes can increase pain and suffering. It can also be helpful to discuss the
negative impact of chronic pain on areas such as vocational functioning, marital and family
relationships, and social and leisure activities. Such negative changes can in turn result in depression
and anxiety, increased time available to focus on and worry about the pain, and decreased
ability to cope with or tolerate the pain. Cognitive-behaviour techniques can help to reverse such
negative changes.

Cognitive restructuring techniques are used to teach patients to identify and modify maladaptive,
negatively distorted thoughts that can lead to negative feelings such as depression, anxiety, and
anger. Patients learn to examine objectively whether such thoughts are accurate and justified by
evidence and to substitute more adaptive, evidence-based cognitions for negatively distorted
thoughts. The goal is to help patients learn to recognise their negative thoughts, and to respond to
negative thoughts by examining the extent to which they are supported by evidence and by asking
themselves if there are other more positive ways of viewing the situation. As therapy progresses,
the therapist helps the patient to become aware of core assumptions underlying negative thinking
patterns and to address these assumptions with CBT techniques.

A variety of relaxation methods are available, and there is no empirical evidence supporting
the efficacy of any one method over another for chronic pain problems. It is often useful to teach
patients several methods so that patients may use a variety or select the type they find most useful. Many patients with chronic pain find progressive muscle relaxation, imagery, and deep breathing to be helpful. Daily practice of relaxation over a period of several weeks is necessary for maximum benefits.

Many techniques are helpful for enhancing relaxation, including saying a word such as “calm” or “relax” silently to oneself, focusing on a pleasant image, and listening to music. Mental imagery can be used with muscle relaxation techniques as a procedure for decreasing pain. For example, pain can be imagined as an object such as a tight band that can be as an object such as a tight band that can be manipulated decrease discomfort or the patient can imagine being in a pleasant place such as a beach. It is very important that the patient find an image that is highly involving, if possible using multiple (visual, auditory, tactile) senses.

Although behavioral therapies and cognitive therapies were originally developed as individual psycho therapies, both have made use of groups, and group CBT is an important component of many pain treatment programmes. Groups have several advantages over individual session, including patient exposure to and feedback from others with similar problems, and opportunities for patients to participate in and observe role-play with a number of different people. In addition, explanation, information, and instructions are often more easily given in a group than in an individual format. Many groups start with education, for example, about the causes and natural history of the pain condition of the patients in the group, the role of diagnostic tests, and various treatment options. However, CBT groups include cognitive and behavioral techniques in addition to education, in order to increase the likelihood of patient behaviour change resulting in improved physical and psychosocial functioning. Typically, each patient develops specific individualised goals for behaviour change as part of group CBT treatment. This could include goals such as increased physical activity (e.g., increasing daily walking time) or increased social or recreational activity (e.g., increased family recreation). Sessions can cover diverse topics, such as stress management training, communication/assertiveness skills training, problem-solving, cognitive restructuring techniques, sleep hygiene, coping with pain flare-ups, conflict resolution, and anger management.

Although the exact topics may vary according to the particular patient population and the total amount of time available, the emphasis of all such sessions is on increasing the patient’s sense that he or she can decrease pain, distress, activity limitations, and other negative effects of pain by learning and using the techniques taught. An important component of treatment with all patients with chronic pain is planning how to maintain the gains made in treatment and ways to prevent and cope with future setbacks or pain flare-ups. Several things may be done to minimise the chances of setbacks occurring and to minimise the negative impact if a setback does occur. At the beginning of treatment, it is very important to discuss the patient’s expectations of treatment, what it can and cannot do, and the timeframe for change. Unrealistic hopes for rapid, complete pain relief may lead to feelings of hopelessness and failure to use treatment strategies when pain flare-ups occur, or even to dropping out of treatment altogether. The therapist should tell patients that setbacks (e.g., decreased rate of progress, periods of increased pain or depression) are quite
likely to occur, both during treatment and afterwards. The therapist should also educate patients about the basic elements of the relapse process. Patients should be informed that setbacks during treatment can be very useful in providing information as well as an opportunity to practice newly learned coping skills. The therapist should encourage patients to share their negative thoughts about the treatment and to discuss setbacks, so that the reasons for them and various ways of handling them can be explored.

Patients may be best prepared to deal with flare ups if they maintain realistic expectations regarding their occurrence. This means having neither an unrealistic belief that pain will never recur (which may set the patient up for severe disappointment and discouragement if a setback occurs) nor an overly pessimistic view that pain cannot be modified and the patient is unable to do anything to cope with it (which can lead to depression and failure to use techniques that have been taught). Advance preparation also involves keeping skills (for example, in stress management, communication, and relaxation) well practiced. Skills that have not been used for some time are unlikely to work well in a crisis.

One important issue that has received relatively little attention from cognitive-behaviour therapists is helping patients integrate learned coping skills into their exercise regimens. In most comprehensive, multidisciplinary pain treatment programmes, coping skills training is provided in individual or group sessions led by a psychologist, while exercise training is provided in a separate exercise facility by a physical therapist or exercise physiologist. By closely cooperating and coordinating their treatment programmes, therapists doing CBT and exercise training may enhance the efficacy of their interventions.

There are reasons to expect that coping skills training and exercise can be a particularly effective combination. Many chronic pain patients are fearful of exercising and report increased anxiety when thinking about starting an exercise programme. Relaxation methods such as imaginal desensitisation can be particularly helpful in reducing such anxiety responses. Patients who begin to learn how to manage their fears of exercise before starting an exercise regimen are less likely to have problems with tension, fatigue, and pain during early exercise sessions. They are also more likely to persist with an exercise programme. Patients may be able to use pain coping skills to manage increased pain that occurs during or after exercise sessions. Because of deconditioning, many patients with chronic pain report increased muscle pain when they exercise. In many cases, because of this pain, patients stop involvement in exercise programmes that their doctors believe are appropriate and beneficial. By using techniques such as relaxation, imagery, distraction, and activity pacing, patients can learn to manage exercise-related pain problems.

Although CBT for pain has generally been applied by trained clinical psychologists to patients with long-standing chronic pain problems, some strategies based on cognitive-behavioural models could be integrated fairly easily into primary medical care visits for chronic pain. These techniques have the potential to increase patient’s confidence that they can self-manage many symptoms, reduce unnecessary health care utilisation, and decrease and prevent physical and psychological dysfunction.
For patients who show prolonged significant physical and psychosocial dysfunction, including work disability, a very intensive intervention, such as a multi-disciplinary daily pain treatment programme, may be necessary. Interdisciplinary medical management, physical therapy, vocational rehabilitation, and individual and group cognitive-behavioural therapy may be necessary to rehabilitate these patients.

Indian Perspective

Psychological interventions in pain management is a neglected area in India. Doctors, nurses and health care professionals in India should know the concept of pain as a somato-psychic experience. They must be educated that cognitive behaviour therapies have been developed for chronic pain problems based on the rationale that learning new cognitive behavioural responses and coping strategies to pain can decrease the intensity of pain and disability. There are limited number of pain treatment centres in India utilising cognitive behaviour interventions as multimodel treatment packages that combine education about pain and training in variety of cognitive behavioural coping skills. In India, patients with prolonged significant disfunction associated with chronic pain are required to adopt a multidisciplinary pain treatment approach that includes CBT in conjunction with other treatment modalities. Continued research is needed in India which may lead to the development of guidelines to assist clinicians in selecting the most cost effective treatments for chronic pain patients. CBT is now considered an empirically validated treatment for chronic pain problems. Contemporary perspectives on pain management combine pharmacological and cognitive behavioural interventions, and are planned and implemented in a multidisciplinary effort. This being the recent field in India, much research work is required to be undertaken to explore the efficacy of CBT for pain patients in Indian perspective.

REFERENCES


Cognitive-Behaviour Therapy for Chronic Pain: Current Status...


