FIBROMYALGIA RESEARCH REVIEW

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Cognitive behavioural therapy is a form of psychotherapy used to treat psychological distress, which was initially developed by Albert Ellis in the 1950s. It is thought that certain anxious or depressed patients experience specific unhelpful thinking (cognition) patterns of which they are little aware. These unhelpful, negative thoughts may lead to difficulty completing daily activities, the avoidance of specific situations and difficulty with the achievement of personal goals at home and at work. Depressed people may experience negative thoughts as beyond their control (hopelessness), allowing the negative thoughts to become automatic and self-perpetuating. The goal of cognitive behavioural therapy is to help patients gain a greater control over negative behaviour or thinking. In addition to depression, a range of medical problems have been shown to be treated by cognitive behavioural therapy, including chronic pain, obsessive compulsive disorder, post traumatic stress disorder, irritable bowel syndrome and chronic fatigue syndrome.

It has previously been suggested that a proportion of fibromyalgia syndrome (FMS) patients exhibit distinctive cognitive behavioural patterns that may increase pain and disability. Fear of pain, pain-avoidance behaviour and catastrophising (see next article) may maintain or exacerbate FMS symptoms. Researchers from the Netherlands therefore decided to investigate the effect of cognitive behavioural therapy on two patients who were classified by the researchers as displaying a pain-avoidance (case 1) or pain-persistence pattern (case 2).

Pain-avoidance pattern

- preoccupation with or high attention to pain
- pain-related worrying
- fear of pain and movement

Pain-persistence pattern

- active despite pain
- ignoring pain and physical limits
- non-accepting attitude towards limitations

Case 1 (pain-avoidance pattern)

Mrs. A (47 years) is married with three children, and although she was only diagnosed with FMS half a year ago, she has experienced severe pain for the last 10 years. Mrs. A displays a pain-avoidance pattern of coping, and has anxious thoughts such as "I have to be careful, because pain means that there is something wrong with my body". She avoids physical activity and retreats from daily activities, no longer doing housework, hobbies or social activities. Mrs. A rests for about 6 hours a day. This avoidance behaviour has led to a decline in her physical fitness, as well as low self-esteem and depression. As a result, the researchers concluded that an important goal of treatment should be to increase the level of activities in Mrs. A's daily life, and to overcome her fear and avoidance of pain.

Case 2 (pain-persistence pattern)

Mrs. B (40 years) is married with one child, and reports pain since childhood. She was diagnosed with FMS one year ago. Mrs. B works at a flower shop for 24 hours a week, and displays a pain-persistence pattern of coping. Mrs. B tries to ignore her complaints, and finds it difficult to know her limits. As a reaction to pain she experiences thoughts such as "I won't let the pain interfere with my life", which leads to considerable frustration. She takes part in outdoor activities for at least 3 hours a day, rests very little between activities, and spends only a small proportion of her time on pleasant activities or hobbies. Whenever Mrs. B experiences fewer symptoms she becomes over-active in order to make up for the time she has spent in pain. Unfortunately, these bursts of activity are inevitably followed by days of exhaustion. Mrs. B has difficulty communicating her limits to others as well as asking others for help. By not respecting her physical limits Mrs. B is exhausted and in chronic pain. However physical fitness tests showed that Mrs. B was in relatively good physical condition with few limitations, thus the researchers concluded that an important goal of treatment should be to regulate Mrs. B's daily activities and overcome her "pain-persistence" pattern of thinking.

Treatment of both patients consisted of 16 sessions conducted twice a week, plus one follow-up session 3 months after treatment. Every session started with 2 hours of cognitive behavioural therapy, followed by 2 hours of exercise training. Exercise training consisted of aerobic exercises (cycling, gymnastic exercises), anaerobic exercises (strength and flexibility exercises), hydrotherapy and relaxation therapy. Pain-avoidance treatment (case 1) was aimed at diminishing fear of pain and increasing the level of daily activities. In contrast, pain-persistence treatment (case 2) focused on changing pain-persistence thinking patterns and regulating daily activities. The treatment programmes for both patients addressed communication problems, and family members were present in some of the sessions. The final session of both treatment programmes also focused on relapse prevention and future goals.

During the pain-avoidance treatment, the therapist explained that avoiding activities as a way of coping with pain will lead to muscle weakening and further pain in the long-run. Mrs. A (case 1) learned how not to consider pain as a signal to stop a particular activity. Although she reported difficulty in performing certain activities, the positive lift she experienced when she was finally able to increase daily activities (self-care, housework, social activities and hobbies), gave her motivation to change her way of thinking. The goal of the exercise session in the pain-avoidance treatment was graded increase in activity,

and exercises had to be carried out regardless of pain. Mrs. A initially reported an increase of pain after exercising, and was afraid that she was damaging her body. However, over time her physical fitness improved and the pain after exercising decreased. Relaxation therapy complemented the exercise therapy, allowing her to recognise early signals of muscle tension and perform muscle relaxation techniques.

In contrast, the therapist helped Mrs. B (case 2) to develop a structured daily routine with more pauses in order to break her pain-persistence thinking, and allow her to have more time and energy for pleasant activities. The importance of relaxation was discussed with Mrs. B, and she developed the ability to stop an activity, even though it was unfinished, in order to rest and recuperate her energy. She was taught to plan a systematic and gradual increase in activity levels to achieve a particular goal, rather than bursts of activity that used to leave Mrs. B feeling exhausted. The therapists were able to replace the pain-persistence thinking patterns with cognitions that emphasised the regulation of daily activities, such as "If I stop in time with my activities, eventually I can do more." The main goal of exercise in the pain-persistence programme was to regulate the level of physical exercise. Attention was also paid to relaxation techniques in order to reduce the negative effect of stress on FMS symptoms.

Both patients reported a number of positive outcomes following the treatment programmes. Mrs. A found that she was more active in her daily life (she started a cooking club and regular exercise), and lost 9kg. Her FMS symptoms diminished and her marital relationship improved. Mrs. B reported that she was better able to respect her limits and to stop in time, enabling her to maintain daily activities, including work and hobbies. By the end of the treatment, Mrs. B no longer considered herself an FMS patient. These two case studies therefore demonstrate the feasibility of distinguishing subgroups of FMS patients with pain-avoidance or pain-persistence patterns, in order to offer them tailored treatment. This approach may offer benefits over standardised treatments that fail to recognise the heterogeneous nature of fibromyalgia patients.

S van Koulil, W van Lankveld, FW Kraaimaat, T van Helmond, A Vedder, H van Hoorn, H Cats, PLCM van Riel and AWM Evers. 2008. "Tailored cognitive behavioral therapy for fibromyalgia: Two case studies." Patient Education and Counseling 71:308-14. Department of Medical Psychology, Radboud University Nijmegen Medical Centre, Nijmegen, The Netherlands.

IMAGINED EXPOSURE AS A TREATMENT OF CATASTROPHISING IN FIBROMYALGIA PATIENTS.

Pain is considered as unwanted or unpleasant by the majority of people, but not as catastrophic. However a minority of people experience pain as a catastrophic event. These individuals fear further pain or re-injury, leading towards a vicious cycle of fear-avoidance, in which a reduction of activities due to fear of pain eventually leads to incapacity, muscle and joint weakness and increased pain. A number of chronic pain disorders, including fibromyalgia syndrome (FMS), have been associated with "catastrophising". Catastrophising results from a combination of negative thoughts, primarily magnification, rumination and helplessness. Magnification is the exaggeration of the threatening properties of pain, rumination refers to obsession over pain - the patient cannot stop thinking about the pain, and helplessness refers to the estimation the patients makes that they cannot do anything to influence the pain. Of these three components of catastrophism, rumination is most associated with increased pain intensity.

The cognitive behavioural technique known as "imagined exposure" has previously been shown to be effective in the treatment of rumination (an inability to stop thinking about pain). Imagined exposure involves exposing the patient to the feared stimuli without permitting avoidance or escape (i.e. by distraction), until the patient's anxiety level is reduced. Thus a group of researchers from Spain aimed to determine whether the imagined exposure technique could be effective in the treatment of fibromyalgia syndrome. Eight FMS patients (7 women and 1 man) with a mean age of 50.5 years took part in a number of cognitive-behavioural treatment sessions that incorporated the "imagined exposure" technique. However two of the patients dropped out, leaving just six patients in the study, therefore limiting its significance. The treatment consisted of ten sessions, including an imagined exposure session entitled "coping with ruminations-obsessions-worrying", in which patients recorded a story about the worse possible scenario imaginable for the future based on their greatest fear. The patients were then encouraged to listen to this story for 10-15 times, until it no longer caused anxiety. The effect of treatment was analysed by interview and questionnaires, including a "pain catastrophising scale". Fibromyalgia symptoms improved following treatment, however statistically significant improvements were found only in pain catastrophising. On average, all three areas of pain catastrophising (magnification, rumination and helplessness) improved following the treatment, as judged by the pain catastrophising scale. However the success rate of the imagined exposure treatment varied widely between individuals. Older patients who had suffered from fibromyalgia for many years experienced fewer improvements, whereas imagined exposure showed the greatest success in a young woman who had the highest level of rumination at the start of the treatment. The authors suggest further studies with more patients are needed before this branch of cognitive behavioural therapy can be considered as effective among a wide range of fibromyalgia sufferers.

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