

**Practical utility of cognitive behavioural therapy in fibromyalgia patients**

Sirs,

Cognitive behavioural therapy (CBT) has been described as a useful modality for the management of fibromyalgia (1-3). The practical utility of CBT in improving fibromyalgia is not known. This was attained by evaluating the number of patients achieving a 20%, 50% or 70% improvement in FIQR and other parameters. Another novelty of this study was the Asian Indian patient population as most research on CBT in FMS has been conducted in the US or in European countries (4).

One hundred fibromyalgia patients satisfying the ACR 1990 criteria for FM were enrolled. Patients with a history of polymyalgia rheumatica, hypothyroidism, hepatitis C, sleep apnea, inflammatory arthritis, endocrine disorders, malignancy, schizophrenia and paranoia were excluded from the study. The study was conducted in a community setting in a middle socio-economic area of Lucknow, Uttar Pradesh, India in patients not attending any hospital clinic, nor taking any formal treatment. The mean age of study group was 39.9 years (range: 20–60yrs). There were 92 females and 8 males. Mean duration of illness was 36.1 months (range 3–180 months). The number of tender points ranged from 11 to 18 (mean 14.9).

Patients were provided with a structured CBT weekly programme three times followed by a reinforcement session after two months. CBT counsellors collaboratively worked with the patients to help them in identifying problem behaviour patterns and problems underlying thinking. They encouraged efforts to develop new more realistic and helpful beliefs, and in planning and executing specific behavioural change. Four post-intervention assessments were made with a gap of one month each.

Comparison between pre-intervention assessment and four post-intervention assessments was made to see the improvement by repeated ‘ANOVA’ measures and F-statistics was applied to obtain F values.

Following CBT there was a highly significant improvement in all psychological parameters, namely quality of life, self-efficacy, depression, anxiety, stress and coping strategies with an associated improvement in FIQR scores (Table I). The practical utility of CBT was seen by calculating the number of patients achieving a 20%, 50% or 70% response in individual parameters. This strategy is akin to the use of ACR 20, ACR 50, and ACR 70 responses in patients with rheumatoid arthritis (5). Seventy-six patients achieved >50% improvement in fibromyalgia-related health (FIQR). Seventy and 95 patients showed >50% improvement in their self efficacy and DASS scores, respectively. Among coping strategies, only problem focused coping strategies showed >50% improvement in 54 patients. Despite a highly significant improvement in all variables as assessed by ANOVA, the number of patients showing a 70% improvement was not very high and only about 20% patients showed 70% improvement in FIQR. However, 83 patients showed a good >70% response in psychological parameters of depression and overall DASS (depression, anxiety and stress scale). To the best of our knowledge, this strategy of assessing 20%, 50% and 70% response has not been previously used for FM or for various psychological measures that we used. Mc Beth *et al.* (6) divided responses into categories of “much better” and “very much better” and compared numbers and percentages of patients achieving this response. We divided the patients according to a 20%, 50% and 70% improvement in a well established parameter like FIQR. FIQR is a composite index to assess overall health in fibromyalgia patients.

FIQR 20, 50, 70 like ACR 20, 50, 70 can be used to standardise the assessment of

responsiveness of FMS to different kinds of treatment. However, by analysing the results in this way, the present study showed that CBT can lead to positive outcomes albeit limited to a certain extent.

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**Table I.** Repeated measure ANOVA on different parameters.

n=100	Pre-Intervention Mean (SD)	Reassessment 1 Mean (SD)	Reassessment 2 Mean (SD)	Reassessment 3 Mean (SD)	Reassessment 4 Mean (SD)	F (p-value)
Coping Strategies	26.97 (2.22)	26.97 (2.22)	29.66 (2.33)	31.57 (2.67)	33.49 (2.87)	180.59 (<0.001)
DASS#	55.88 (15.03)	33.80 (12.89)	19.96 (9.92)	14.74 (6.63)	11.34 (3.83)	452.30 (<0.001)
FIQR*	65.16 (13.14)	47.65 (14.64)	36.16 (12.35)	29.78 (9.42)	24.54 (8.13)	435.64 (<0.001)
Quality of Life	64.39 (8.60)	75.93 (5.87)	82.83 (6.00)	87.28 (6.22)	91.60 (10.28)	315.12 (<0.001)
Self Efficacy	32.83 (10.81)	42.17 (9.05)	48.49 (7.97)	53.74 (7.47)	59.75 (8.63)	353.63 (<0.001)

\*FIQR: Fibromyalgia Impact Questionnaire Revised; # DASS: Depression, Anxiety, Stress Scale.