

# Retrospective Review on the Effectiveness of Psychological Intervention Program for Mood Problems on People with Chronic Pain

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Chronic pain is a common condition with a prevalence rate up to 40-65% in developed countries like Sweden and Great Britain. A local research shows that the prevalence of chronic pain for general population in Hong Kong is 34.9% with an average of 1.5 pain sites which affects the occupational performance in physical & psychological aspects. It causes profound sufferings such as declined function at work and normal daily tasks, reducing social and psychological wellbeing, and marked changes in sleep pattern. Impact on the individual also includes increased comorbidity of depression and anxiety. The increase in burden on health services and reduction of work productivity result in high society cost [1, 2].



The biopsychosocial model is widely accepted as a comprehensive approach in understanding of chronic pain disorders. In this model, pain is view as the dynamic interaction among physiologic, psychological, social factors and environmental factors. Various studies on chronic pain have reviewed the

negative impact of psychological factors on treatment outcomes. Increased comorbidity of mood problems such as depression and anxiety are observed and there has been hypothesis on it correlation of development of chronicity in pain. Correlation of mood problems with poor treatment results is observed [1, 6]. Psychological interventions to tackle this are often one the essential components of multidisciplinary treatment programs for chronic pain management. Cognitive behavioural therapy is one of the programs that demonstrated good evidence in treatment of mood problems [3, 4, 5].

In local situation, people with chronic pain are referred to psychiatric services for their mood problems. However, the waiting time for the service is long. An early intervention program for patients with common mental disorders has been piloted in

2009 [7, 8]. There have been 8 common mental disorder clinics set up in Hong Kong in 2010-2011. In this program, psychological interventions such as cognitive behavioural therapy and lifestyle management strategies are employed. Two self-report outcomes measures – Chinese Versions of Depression Anxiety Stress Scales (DASS) and WHO (Five) Well-Being Index (WHO-5) are administered at the beginning of the program as baseline and at the end of the program for evaluation of the treatment. Satisfaction survey is administered at the end of the program to collect data on subjective improvement and patient satisfaction.

Review of the effectiveness of the program is conducted periodically and there are significant reduction of symptoms and improvement of sense of well-being for patients with common mental disorders. A significant portion of patients are discharged from the psychiatric specialist outpatient services [9]. Some of the patients also revealed comorbidity of chronic pain but the data obtained is not specific to this group of patients.

A retrospective study on the effectiveness of the self-management program for mood problems for patients with chronic pain is conducted. Patients attend the program at Occupational Therapy Department of Alice Ho Miu Ling Nethersole Hospital (AHNH) Common Mental Disorders Clinic between January 2011 and December 2013 are reviewed. The inclusion criteria are: (1) Adult cases with aged 18-64; (2) Suffer from chronic musculoskeletal pain with medical consultation in Hospital Authority for more than 3 months; (3) Diagnose with mild to moderate grade of common mental disorders such as depression and anxiety; (4) Complete 8 sessions of self-management program for mood and sleep problem. Subjects are excluded if: (1) present with active psychotic symptoms such as visual and auditory hallucination or active delusion that affecting attention and daily life functioning; (2) malignancy pain; (3) without medical consultation records about chronic pain.

26 subjects out of the 112 patients who have completed program meet the inclusion criteria. 7 of them are male with mean age of 49.1, (range 33-55), while 19 of them are female with mean age of 53.6 (range 23-64). For the educational level, 46.2% of them study up to primary level while 53.8% study up to secondary level. All of them suffer from musculoskeletal pain for more than 3 months, location of pain are varied;



including neck, shoulders, fingers, back and knee pain with 23.1% of subjects had more than 1 pain site. All of the subjects are diagnosis with common mental disorders, 42.3% of the subjects with depression (n=11), 34.6% with anxiety disorders (n=9), 11.5% with post-traumatic stress disorders (n=3) and 11.5% are diagnosed as adjustment disorders (n=3).



Statistical significant differences are found in the depression, stress and anxiety subscales scores of the DASS. For the depression subscale, the mean score of pre-treatment is 17.08 and labelled as “moderate” in severity. The mean score of post-treatment is 9.16 and labelled as “mild” in severity. It shows a reduction of 46% in mean score and depressive symptoms are significantly reduced after finishing the program ( $p= 0.002$ ). For Anxiety subscale, the mean score of pre-treatment is 16.92 that of post-treatment is 10.7. The severity has been dropped from “severe” to “moderate”. It shows an improvement of 37% of the mean score after the treatment and significant reduction in anxiety is demonstrated ( $p=0.001$ ). For the stress subscale, the mean score of pre-treatment is 22.3 and that for post-treatment is 12.92. The severity of stress level has been reduced from “moderate” to “normal”. Result shows a 42% improvement in mean score and significant reduction of stress level ( $p< 0.001$ ).

There is significant difference in the WHO (Five) well-being index scores ( $p< 0.001$ ). At the baseline, the mean raw score of WHO-5 is 10.73 and the percentage score was 42.92. For post-treatment results, the raw score is increased to 14.54 (percentage score = 58.16) with a significant improvement of 36% in score. In reviewing the individual items, four out of five show significant improvement. The improved items include positive mood ( $p=0.005$ ), vitality and being active ( $p=0.001$ ), Energy ( $p<0.001$ ), and Interest ( $p=0.002$ ) while the item on Being Calm and Relax was just below the cut off significant level ( $p=0.060$ ).

For Satisfaction survey, 92.3% agree that the program greatly improves their mental health condition, 88.5% report that it helps to reduce symptoms, 90% report that it help them to stat a healthy lifestyle and 92.3% opine that they have gained

knowledge about their mental health condition. For overall satisfaction, 76.9% agreed that they are satisfied with the service. The mean score of satisfaction is 4.19 (sd = 1.23, score of five as full score).

The above findings indicates that patients with chronic pain and comorbidity of common mental disorders have reduction of depressive mood, anxiety and stress level after attending the mood management program. Furthermore, their sense of well-being and perceived mental condition have been improved. Apart from psychological intervention techniques, Health Qigong - Ba Duan Jin is taught for health promotion [10, 11]. Programs using psychological intervention and some using combined techniques have shown significant effect in treatment of people with chronic pain and mood problems [12, 13, 14].

This study is a limited retrospective review of a small convenient sample, future controlled study of larger sample size is suggested. Furthermore, it will be better to include outcome measures on pain intensity and functional performance.

This program is designed for patients with Common Mental Disorders and does not include strategies for tackling psychological problems specific to chronic pain. Tailored made chronic pain management program which includes pain management and coping strategies, and work and/or daily living reconditioning program are suggested for optimizing the treatment effect. A fast track program designed for patient with chronic pain has been piloted at AHNH in October 2013. Patients with urgent need in return to work are referred from the pain clinic and the program aims at regaining active life roles in home, work and leisure aspects. Four out of five patients have completed the program and significant improvement in function and reduction in pain are reported. One patient immediately returns to work before completion of the program. Due to very limited resources, only a small number of patients can be served. Further evaluation and refinement of the program is needed.

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