

ABSTRACT

Four-step Mindfulness-based Therapy for Chronic Pain:

A Pilot Randomized Controlled Trial

Tony Chi Ming Wong

The Chinese University of Hong Kong

Objective: Chronic pain is a common condition worldwide that poses significant impact to society in terms of its health and economic costs. It has been found to be related to a number of emotional and cognitive factors that are amenable to psychological treatments. Traditional cognitive-behavioral therapy (CBT) for chronic pain has become the gold standard of psychological treatment with reported efficacy. However, recent meta-analyses have found its effect size to be only modest at most. Moreover, its specific mechanisms of action are not well elucidated. With recent advances in neuroscience on possible neurocognitive processes underlying chronic pain, alternative treatment models targeting these specific neurocognitive processes are worth exploring. The present study tested the effectiveness of the Four-step

Mindfulness-based Therapy (FSMT) for chronic pain in a randomized-controlled trial.

The FSMT was chosen because of its explicit emphasis on altering neurocognitive processes that appear to be highly relevant in treating chronic pain. **Method:**

Ninety-nine chronic pain patients in a hospital cluster-based outpatient pain clinic were randomly allocated to either the FSMT treatment or wait-list control group. The FSMT was modified for use with chronic pain and incorporated mindfulness exercises, such as mindful breathing and mindful meditation. Treatment consisted of eight weekly two-hour group sessions conducted by a clinical psychologist experienced in the implementation of the FSMT protocol. Assessment took place at baseline and post-treatment for both the FSMT and wait-list control. For the FSMT, assessment also took place at mid-group and 3-month follow-up. **Results:** Findings showed that the FSMT produced superior outcomes in terms of activity interference (primary endpoint), pain unpleasantness, and depression when compared to the wait-list control group or over time. Improvements were also found in the process measures of pain catastrophizing and pain acceptance. All treatment effects were maintained at follow-up. Further, the effects have been shown to be clinically significant and reliable above and beyond measurement errors. Mediation analyses revealed that pain catastrophizing and pain acceptance mediated the effects of FSMT on the

outcomes of activity interference and depression; pain catastrophizing also mediated the effect of FSMT on the outcome of pain unpleasantness. **Conclusions:** The present study was the first to establish statistical and clinical evidence of the FSMT for chronic pain. It also revealed possible processes and mechanisms that might have brought about the changes in outcome, namely reduction in pain catastrophizing and improvement in pain acceptance. How the FSMT led to the outcome changes via these two processes was discussed and enriched by neurocognitive perspectives. Future studies should seek to further compare the FSMT with other active psychological treatments for chronic pain and collect neuroimaging data to further illustrate the neurocognitive processes involved.

摘要

用於長期痛症的四部內觀療法: 一個先導的隨機對照研究

黃志明

香港中文大學

目的: 長期痛症是全球的普通病症。它為社會帶來沉重的健康及經濟上的代價。長期痛症與一系列的情緒和認知因素有關，可通過心理治療更正。傳統針對長期痛症的認知行為療法已成為長期痛症心理治療的標準，並表現出高效度。但是，在近期的綜合分析中它的效應值只為中等，它的特定作用機制也並未清晰闡明。近期的腦神經研究已為長期痛症的腦神經認知過程帶來線索，故此值得探索針對這些腦神經認知過程的替代治療模式。本研究以隨機取樣方式測試了四部內觀療法用於長期痛症的效度。四部內觀療法受選，乃由於它清晰地強調改變腦神經認知過程，與長期痛症的治療尤其相關。**方法:** 本研究為一隨機對照研究，比較四步內觀療法相對於候補對照於長期痛症病人上的分別。99 位醫院聯網痛症科的門診病人隨機分派到四步內觀療法組或候補對照組。四部內觀療法已修改為適用於長期痛症上，並配合以內觀練習（例如觀呼吸、內觀冥想）。治療包括八節小

組，每星期一次，每次兩小時，由熟悉四部內觀療法方案的臨床心理學家帶領。

評估方面，治療及對照組均在底線及治療後作評估，而治療組亦在小組中段及治療完畢三個月後作跟進評估。**結果：**本研究發現四步內觀療法在活動干擾（主要研究終點）、痛的討厭程度和憂鬱三個結果上，相對於對照組或隨時間過去，有優異的表現。在過程量度中，對痛的災難化和對痛的接受也有改善。所有治療效果都維持到三個月後。再者，治療效果也具臨床意義，並且可信賴為超越量度上的誤差。中介分析發現，對痛的災難化和對痛的接受，中介了從治療到活動干擾和憂鬱等結果的過程，而對痛的災難化也中介了也治療到痛的討厭程度這結果的過程。**結論：**本研究首次為四部內觀療法用於長期痛症建立臨床和統計學上的證據，它也揭示治療的可能過程和作用機制，包括對痛災難化的減少和對痛接受的改善。對於四部內觀療法如何通過這兩個過程而產生其效果，作出了詳細討論，並從腦神經認知角度加以理解。將來的研究應對四部內觀療法與其他活躍的心理治療應用於長期痛症上作出比較，也應收集腦神經影像資料，以印證牽涉其中的腦神經認知過程。