

# Addressing spiritual and existential factors in the context of chronic pain: outcomes of the Greenwich pain program

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## Background

There has been increasing interest in addressing spiritual and existential aspects as a component of health care. Despite widespread acceptance in related fields such as palliative care, these aspects receive comparatively little attention in the pain community. Recent findings have demonstrated that people with chronic pain have levels of spiritual distress that are equal to or higher than people with cancer or HIV/AIDS<sup>1</sup>.

## Aims

The aims of this study were to:

- Evaluate the effect of a pain management program that sought to address spiritual and existential aspects of pain as a component alongside other traditional cognitive behavioural approaches
- Determine the relationship between spiritual wellbeing and other pain-related variables
- Examine which factors are associated with a reduction in pain intensity during the program.

## Methods

Subjects (n=61) included people with chronic non-cancer pain who participated in a multidisciplinary pain management program comprising six weekly sessions of three hours duration. One session was designed to explicitly focus on addressing spiritual and existential aspects including issues of meaning and purpose in life. Prior to commencing the pain management program and at the end of the last session, each subject was requested to complete a questionnaire assessing pain intensity (0-10 numerical rating scale), mood (DASS-21), pain self efficacy (PSEQ), pain catastrophizing (PCS), perceived disability (Modified R&MDQ) and satisfaction with life. Physical function was measured using stair climb and sit to stand. Spiritual well-being was assessed using a validated instrument, the Functional Assessment of Chronic Illness Therapy – Spirituality Expanded Scale (FACIT-Sp-Ex). Comparisons were made between variables at the beginning and end of the program and analysed using parametric statistical methods with correlational analyses performed to determine the strength of the relationship between different variables.

## Results

The pain management program resulted in significant changes in pain intensity (-32.7%,  $p < 0.0001$ ), physical function (52%,  $p < 0.001$ ), perceived disability (-29.6%,  $p = 0.0001$ ), pain self efficacy (25.5%,  $p < 0.001$ ), catastrophising (-37%,  $p = 0.006$ ) and spiritual wellbeing (21%,  $p = 0.008$ ). There were moderate changes in depression (-31.2%,  $p = 0.024$ ), anxiety (-32.9%,  $p = 0.05$ ) and satisfaction with life (16.6%,  $p = 0.04$ ) (**Table 1**). At baseline, there were significant correlations between spiritual well-being and depression ( $r = -0.46$ ,  $p < 0.001$ ), pain self efficacy ( $r = 0.44$ ,  $p < 0.001$ ), satisfaction with life ( $r = 0.39$ ,  $p = 0.002$ ) and catastrophising ( $r = -0.49$ ,  $p = 0.001$ ) (**Table 2**). The only baseline variables that demonstrated significant correlations with pain relief after the program were satisfaction with life ( $r = -0.44$ ,  $p < 0.001$ ) and spiritual well-being ( $r = -0.40$ ,  $p = 0.002$ ) (**Table 3**).

**Table 1:** Program changes from baseline

Variable	Change %	Effect size	P value
Pain intensity	-32.7	-1.21	< 0.0001
Physical Function (Stair climb)	52	0.96	<0.001
Perceived disability	-29.6	-0.81	0.0001
Pain self efficacy	25.5	0.62	0.003
Catastrophising	-37	-0.44	0.006
Spiritual wellbeing	21	0.47	0.008
Depression	-31.2	-0.40	0.024
Anxiety	-32.9	-0.33	0.05
Satisfaction with Life	16.6	0.42	0.04

**Table 2:** The relationship between spiritual well-being and other factors (at baseline)

Variable	R value	P value
Depression (DASS 21)	-0.46	0.0001
Pain self efficacy (PSEQ)	0.44	0.001
Satisfaction with Life	0.39	0.002
Catastrophising (PCS)	-0.49	0.001
Pain Intensity	-0.16	NS
Stair climb	-0.21	NS
Anxiety (DASS 21)	-0.28	NS

**Table 3:** Relationship between pain reduction after the program and the *baseline* variables

Variable	R value	P value
Satisfaction with Life	-0.44	0.001
Spiritual wellbeing (FACIT-Sp)	-0.40	0.002
Stair climb	0.01	NS
Pain self efficacy (PSEQ)	-0.25	NS
Depression (DASS 21)	0.20	NS
Anxiety (DASS 21)	0.18	NS
Catastrophising (PCS)	-0.31	NS
Disability (R&M)	0.07	NS

## Conclusions

- The pain management program resulted in significant changes in pain intensity and pain-related physical function, mood and cognitions although it was not possible to determine whether the inclusion of content designed to address spiritual and existential issues was a contributing factor.
- Although it is not possible to determine the direction of causality, spiritual well-being is strongly linked to other emotional and cognitive variables including depression, pain self efficacy, satisfaction with life and catastrophising
- Spiritual wellbeing may be a predictor of response to treatment although it may be that this relationship is specific to this program.
- The results of this study provide further support for the exploration of spiritual and existential factors in both the assessment and treatment of chronic pain.

## References

1. Siddall PJ, Lovell M, MacLeod R. Spirituality: What is its Role in Pain Medicine? Pain Medicine, 2014 Aug 26. doi: 10.1111/pme.12511. [Epub ahead of print]

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