

COVER PAGE

Official title of the study:	Laser acupuncture combined with acupressure improves low back pain and quality of life: a randomized controlled trial
NCT number:	No
Document date:	26/04/2020

Abstract

Background: Low back pain (LBP) is a common, huge health and socioeconomic health problem that affects physiological functions and reduces work efficiency in nurses.

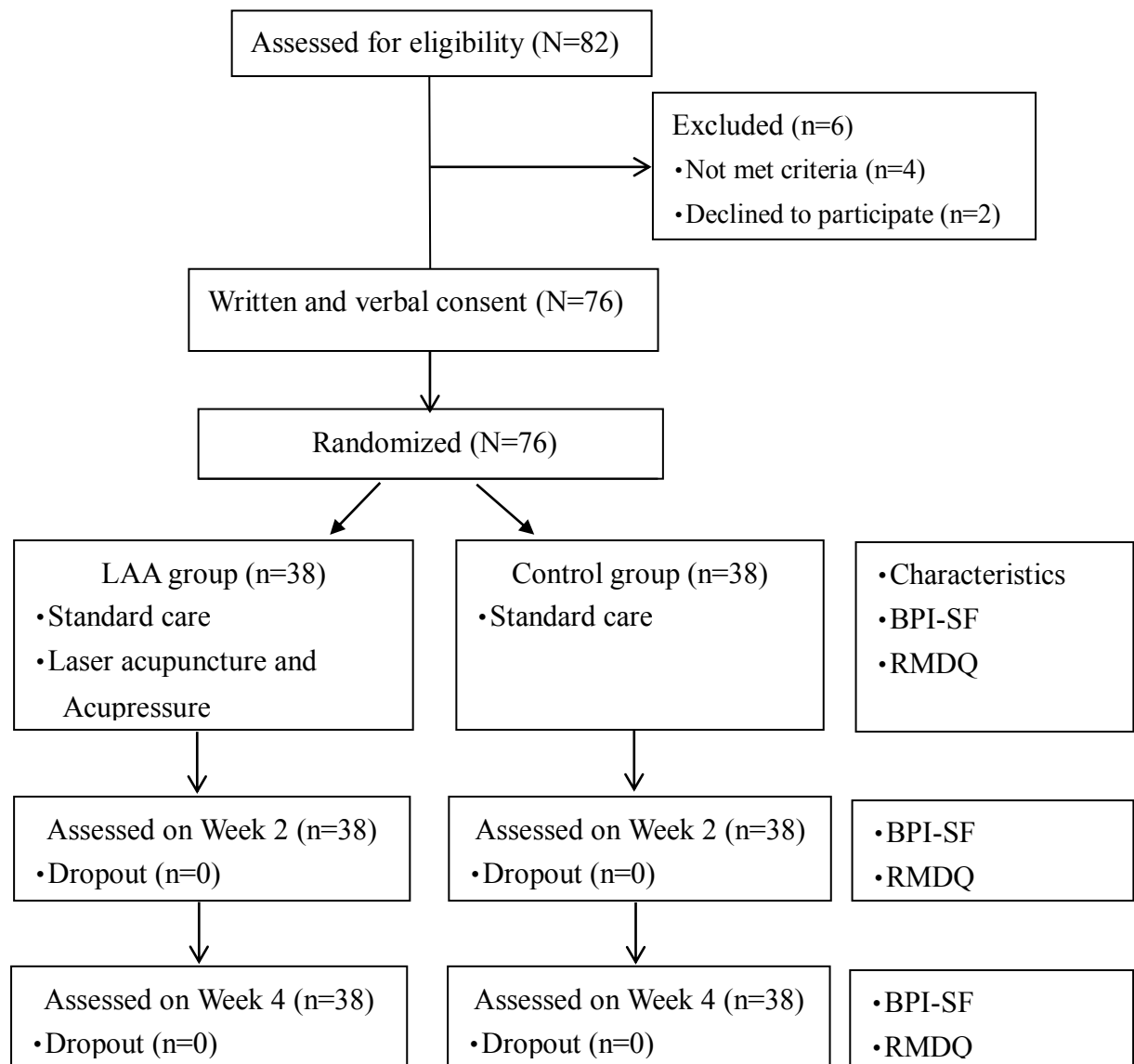
Objective: This study aimed to evaluate the effect of low-level laser acupuncture combined with acupressure (LAA) on pain intensity, pain interference and life dysfunction in hospital nurses with LBP.

Methods: This single-blinded randomized controlled trial enrolled a convenience sample of nurses from one teaching hospital. Seventy-six participants were randomly assigned to the LAA group (n=38) receiving low-level laser acupuncture and auricular acupressure for four weeks, and a control group (n=38) receiving a similar intervention but without laser energy and acupressure. Data were collected using the Short Form of the Brief Pain Inventory (BPI-SF) and Roland-Morris Disability Questionnaire (RDQ) at three time points: baseline before the intervention, and Week 2 and Week 4 during the intervention.

Results: After controlling for prior low back pain, the result of linear mixed-effects model analysis showed trends in significant between-group differences, including: in worst pain occurring in Week 2 ($p < 0.001$) and Week 4 ($p < 0.001$); in current pain in Week 4 ($p < 0.001$); in least pain in Week 2 ($p = 0.032$) and Week 4 ($\beta = -1.55$, $p < 0.001$); in pain interference in Week 2 ($p = -0.009$) and Week 4 ($p < 0.001$); and in life dysfunction in Week 2 ($p < 0.001$) and Week 4 ($\beta = -3.95$, $p < 0.001$).

Conclusions: This study supports that the 4-week LAA intervention improves pain intensity, pain interference, and life dysfunction for hospital nurses with LBP. These effects were maintained continuously for at least 4 weeks after the intervention. The LAA may be another effective, easy-to-use, non-invasive nonpharmacological

analgesic intervention for low back pain.



Flow chart of research design and participant allocation

BPI-SF: Short Form of the Brief Pain Inventory, RMDQ: Roland Morris Disability Questionnaire.

(This article under submission)