

# Acupuncture for Chronic Pain in Adults with Sickle Cell Disease: A Mixed-Methods Pilot Study

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## ABSTRACT

### Purpose/Background

Adults with sickle cell disease (SCD) experience chronic as well as acute pain. Growing evidence shows that acupuncture effectively treats chronic pain. We conducted this pilot study to assess the feasibility and acceptability of performing acupuncture for the treatment of chronic pain in adults with SCD.

### Methods

This was a single-arm, prospective pilot study of six adults with SCD. Participants reported  $\geq 3$  months of chronic pain and were  $> 18$  years of age. Acupuncture was administered twice per week for five weeks, for 30 minutes per session. Pain intensity, pain interference and other pain related measures were completed at baseline and after the intervention. Participants completed a semi-structured interview and a protocol acceptability questionnaire after the acupuncture intervention.

### Results

Six participants (mean age 52.5, six Black) were enrolled. Although the study was suspended due to COVID-19 and not all participants completed the 10-session protocol, completion rates were high and there were no missed appointments. One participant did not complete the study due to hospitalization unrelated to acupuncture and requested to return when her health stabilized, then the study was suspended. No adverse events were reported. At completion of the intervention at 4-5 weeks post-baseline, Mean reductions in pain intensity ( $-7.1 \pm 3.8$ ), pain inference ( $-9.9 \pm 12.7$ ), sleep disturbance ( $-6.8 \pm 12.6$ ), anxiety ( $-4.6 \pm 6.7$ ), depression ( $-1.6 \pm 9.0$ ), and anger ( $-1.0 \pm 6.4$ ). All participants reported positive effects of acupuncture on pain and related symptoms, like “it reduces the pain at night, I am able to sleep well”, like “I had no pain crisis”, and “my depression, get much better, my mood”. The mean acceptability score on the protocol acceptability questionnaire was 82% which was above the 80% criterion.

### Conclusions

Chronic pain is a common symptom experienced among patients with SCD. This pilot shows it was feasible and acceptable to implement acupuncture in adults with SCD. This study can be used to guide a larger randomized controlled trial to evaluate the effect of acupuncture on reducing chronic pain in adults with SCD.