

A COMPARISON OF MINDFUL-ATTENTION VERSUS DISTRACTION ON PAIN OUTCOMES IN CHILDREN

DURING THE COLD PRESSOR

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Introduction

- Attention-based coping strategies are widely used non-pharmacological interventions for the management of children's acute pain.
- Distraction based strategies are designed to focus children's attention away from painful stimulus. There is a wealth of evidence that distraction-based techniques help reduce acute pain in children.
- Sensory-focused strategies are designed to focus children's attention on a potentially painful stimulus in an objective way.
- There is growing evidence that sensory-focus strategies can be especially helpful for children when it is congruent with their baseline coping style.
- Mindfulness is a state of consciousness that involves purposefully paying attention to one's moment-to-moment external and internal experience in an accepting and non-judgmental manner.
- Sensory-focus and mindfulness share some similarities in that they encourage awareness of experience in the present moment. However, mindfulness also addresses cognitive and emotional reactions to that experience.

Procedure

Baseline Measures (n = 82)

- Child Acceptance and Mindfulness Measure
- Pain Coping Questionnaire

Mindfulness (n = 42)



Distraction (n = 40)



Cold Pressor Task



Outcome Measures

- Pain Ratings



- Attention Measure

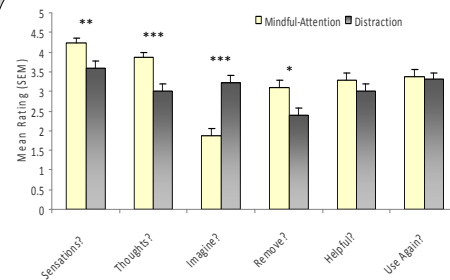


Figure 1. Direction of attention during cold pressor and evaluation of intervention for between experimental groups. ***p < .001, **p < .01, *p < .05

Objectives

- Evaluate whether a brief intervention can help children pay attention to pain mindfully.
- Compare the effects of a distraction-based (guided imagery) and a mindfulness-based attention intervention on pain outcomes during the cold pressor task.
- To test the "congruence-hypothesis" by examining whether interventions that are matched to children's baseline coping style are more effective than mismatched interventions.

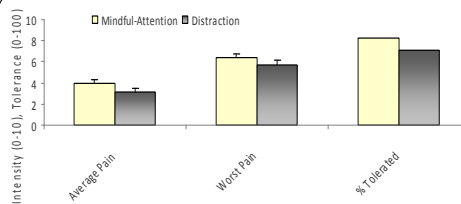


Figure 2. Pain ratings and percentage of individuals who reached full tolerance time across groups.

Participants

| | Children | |
|--------------------------|----------------------------|----------------------|
| | Mindful-Attention (n = 42) | Distraction (n = 40) |
| Age | *12.39 years (1.20) | 11.64 years (1.51) |
| Male | 66% | 46% |
| Caucasian | 85% | 79% |
| Trait Mindfulness (0-40) | 23.31 (5.54) | 23.40 (6.27) |
| Distraction Coping (0-5) | 1.56 (1.25) | 1.56 (1.05) |
| | Parents | |
| | Mindful-Attention (n = 42) | Distraction (n = 40) |
| Age | 41.75 years (5.62) | 42.02 years (5.31) |
| Married | 68% | 59% |
| Post-secondary education | 78% | 83% |

*p < .05

Acknowledgments



Results & Discussion

- The mindful-attention group noticed the sensations in their arm, their thoughts about those sensations, and wanted to remove their arm more often.
- The distraction group imagined they were somewhere else more often.
- There were no group differences on average or worst pain, or pain tolerance during the cold pressor task, with a high rate of participants reaching the 4-minute ceiling for the task (mindful-attention =81%, distraction =72%).
- There was no interaction between experimental condition and baseline coping style or trait mindfulness.
- Given the strong evidence base for the use of distraction during acute pain, it is encouraging that the mindful-attention intervention was approximately equal in terms of pain outcomes and perceived helpfulness.
- A brief mindful-attention intervention helped children focus their attention on the physical sensations and the thoughts they had about those sensations, without significantly increasing pain intensity or decreasing pain tolerance.
- Results did not support the "congruence-hypothesis" of pain interventions.
- Mindfulness-based interventions show promise in helping children dealing with acute pain.