

MARK PETTER

BA Honours (Psychology), University of Western Ontario, 2007

DEPARTMENT OF PSYCHOLOGY & NEUROSCIENCE

TITLE OF THESIS: AN EXPERIMENTAL INVESTIGATION INTO THE EFFECTS OF MINDFUL ATTENTION AND TRAIT MINDFULNESS ON ADOLESCENT PAIN

TIME/DATE: 9:00 am, Wednesday, May 29, 2013

PLACE: Room 3107, The Mona Campbell Building, 1459 Lemarchant Street

EXAMINING COMMITTEE:

Dr. Lindsey Cohen, Department of Psychology, Georgia State University (External Examiner)

Dr. Bruce Dick, Department of Anesthesiology & Pain Medicine, University of Alberta (Reader)

Dr. Raymond Klein, Department of Psychology & Neuroscience, Dalhousie University (Reader)

Dr. Christine Chambers, Department of Psychology & Neuroscience and Department of Pediatrics, Dalhousie University (Co-Supervisor)

Dr. Patrick McGrath, Department of Psychology & Neuroscience, Dalhousie University (Co-Supervisor)

DEPARTMENTAL REPRESENTATIVE: Dr. Sherry Stewart, Department of Psychology & Neuroscience, Dalhousie University

CHAIR: TBD, PhD Defence Panel, Faculty of Graduate Studies

ABSTRACT

Mindfulness refers to paying attention to present moment experience nonjudgmentally. It has been hypothesized that attending mindfully to painful sensations may mitigate the experience of pain. The tendency to be mindful in daily life appears to reduce pain and has a unique relationship with cognitive reactions to pain such as pain catastrophizing. However, the relationship between mindfulness and pain has received little attention among adolescents, and research with adults may not generalize to this population given important developmental differences that may affect mindfulness and pain. The current dissertation describes two studies from the same sample. The first study examined the effects of a mindful attention manipulation on experimental pain responses among adolescents. The second study investigated the relationship between trait mindfulness and real world and experimental pain variables among adolescents. In Study 1, 198 adolescents (132 females; 66 males; $M_{age} = 15.99$ years, $SD = 1.89$) completed measures of pain-related variables before being randomly assigned to a mindful attention manipulation or to a control group prior to completing an experimental pain task. Before the pain task, participants completed a measure of state mindfulness, and following the task they completed measures of situational catastrophizing and pain intensity. Results showed that, overall, the mindfulness manipulation did not impact experimental pain. However, secondary analysis showed that meditation experience moderated the effect of the manipulation such that adolescents with a regular meditation practice benefited. State mindfulness was also a significant predictor of pain intensity irrespective of condition, and this relationship was mediated by situational catastrophizing. In Study 2, the relationship between trait mindfulness was investigated in relation to daily and experimental pain responses in the same sample of adolescents. Participants completed measures of trait mindfulness, pain catastrophizing, and pain interference as well as an interview on daily pain. Results showed that trait mindfulness was a significant predictor of typical pain intensity, pain catastrophizing, and pain interference. Furthermore, trait mindfulness predicted experimental pain responses and these relationships were mediated by situational catastrophizing. Overall, these studies highlight that previous exposure to meditation may be necessary for a brief mindful attention manipulation to offer benefit during acute pain. However, trait mindfulness was found to be a strong predictor of pain responses across contexts. Reductions in pain catastrophizing appear to be an important mechanism whereby mindfulness impacts the pain experience. Overall, this work highlights the important influence that mindfulness has on the way that adolescents interpret and respond to pain in a variety of settings.