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**THE IMPACT OF LOCUS OF CONTROL AND  
CONTROL ON PERFORMANCE DURING  
PAINFUL STIMULATION:  
AN EXPERIMENTAL INVESTIGATION**

**A dissertation in partial fulfillment of the requirements  
for the degree of Masters of Arts in Psychology  
at Massey University**

**Matthew David Manderson**

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## **ABSTRACT**

Pain interrupts cognitive processing, is hard to ignore and demands priority attention (Crombez, Baeyens & Eelen, 1994). Focusing on the effect of pain on attention, the primary task paradigm was used to investigate the effect pain had on the task performance of 59 psychology undergraduate students assessed for their locus of control (LOC) beliefs using Rotter's (1964) LOC Scale. In a mixed experimental design, participants were required to discriminate between 250 and 750 MHz tones while being exposed to the experimental pain stimulus potassium iontophoresis, a control stimulus of an old man's face and tone only baseline trials. A control manipulation gave all participants both control and no control over the presentation of three levels of pain; high, medium and low pain. The results show that pain interfered with the accuracy of tone discriminations but not reaction times (RT). Additionally, the interference effect from painful stimulation was greater at 250 ms after the onset of the tone compared to the 750 ms onset. A signalling/warning effect is discussed as an explanation for this finding. The external LOC group performed worse when they had control over pain compared to no control. The internal LOC group showed less task degradation overall during the pain condition compared to the external group. These results are discussed in relation with current theories of attention, the effects of control and LOC beliefs.

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