



**Major Research Project for the
Doctorate in Clinical and Community Psychology**

Using Mindfulness and the Dive Reflex as Techniques from Polyvagal Theory
to Regulate Approach Motivation

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Target Journal:
Journal of Abnormal Psychology

Word Count:
Manuscript (including tables, figures and titles) 7,920
References 1,544
Appendices (including questionnaires, tables and figures) 4,658

Date of Submission:
6th May 2011

This work has been submitted in partial fulfilment of requirements for
the Doctorate in Clinical and Community Psychology

Abstract

Two techniques, which have been hypothesised to decrease sympathetic activation via their effects on the vagal system, were investigated. Polyvagal theory has not yet been explicitly linked with approach motivation, though there is good reason to do so when considering implications for Bipolar Disorder. Existing literature suggests that mindfulness and the cold pressor test increase parasympathetic nervous system activation. The experimenter postulated that they would promote recovery from heightened approach motivation, to baseline states following an exciting trigger, due to their effect on the parasympathetic nervous system. This study aims to test the feasibility of a laboratory paradigm in which approach motivation is induced and then techniques are deployed whilst approach motivation is simultaneously measured via self-report and physiological response. Feasibility will be assessed in terms of: a) the extent to which the approach motivation induction task evokes a state of approach to reward; b) the validity of using a cross-over design (A-B; B-A) in which each participant undergoes the approach motivation induction task twice, each time followed by a different technique; c) the extent to which the mindfulness technique can be considered to have construct validity. A second aim is to determine the likely size of the deactivating effect that “dive reflex” and “mindfulness” techniques have upon elevated approach motivation. Students completed self-report measures that monitored changes in their mood (approach to reward) and cardiac functioning in response to the mood induction task was recorded. Participants repeated the task followed by a different technique.

Findings show that the mood induction task increased approach motivation and participants reported to be focussing on their breathing during the mindfulness condition, thus ascertaining the feasibility of the laboratory paradigm. Self-report showed mindfulness and mind wander conditions at administration 1 to have the desired calming effect. These elicited large effect sizes. Heart rate decreased during the cold compress condition at administration 1, with a large effect size.

Investigating the mood induction and techniques in a laboratory setting deemed them to be effective. With a larger sample the levels of significance may be greater. As physiological processes affected in the general population should also be affected in a clinical population, these findings are clinically relevant. This pilot study bridges some theoretical gaps by linking polyvagal theory (PVT) and the parasympathetic nervous system (PNS) to approach motivation. It could be the start of a line of research investigating the clinical utility of mindfulness and compress techniques as self help regulators of emotion for people with Bipolar Disorder (BD).

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