

# EMOTIONAL INTELLIGENCE (EI) AS A MODERATOR OF STRESS: A THREE PART STUDY.

## BASIC RESEARCH QUESTION

Does EI moderate stress?

## KEY PAPER(S)

Mikolajczak, Moira, et al. The moderating impact of emotional intelligence on free cortisol responses to stress. *Psychoneuroendocrinology* 32.8 (2007): 1000-1012.

## MOTIVATION/ PUZZLE

Can EI moderate stress? Can EI be trained? Can EI training assist in regulating stress, particularly in a high octane environment like the Military. If so, does this improvement in an individual's ' stress response positively impact their immune function and reduce burnout? Does the use of objective (non-self report ) measures of EI and stress give a more accurate picture of stress and its moderators rather than relying on self-report measures?

## THREE CORE ASPECTS OF ANY EMPIRICAL RESEARCH PROJECT

### THE IDEA

Does EI moderate stress caused by supervisor abuse? Do perceptions of supervisor trustworthiness impact an individual's stress response?

Can EI training reduce stress as measured by objective physiological measures in high octane environments.

Can we produce more emotionally intelligent Commandos that are better able to manage stress, and therefore demonstrate higher performance and have a more robust immune system?

DV's stress as measured by cortisol- stress hormone (Studies 1, 2 & 3), Immune function as measured by IgA (only 3rd study)

IV's supervisor trustworthiness / abuse- no abuse (Studies 1 & 2), EI training vs no EI training (study 3)

IV (Study 3) PsychEdge training based on EI principles of emotional perception, understanding, use and management.

### THE DATA

Data is collected using objective measures: salivary cortisol as a proxy for stress / IgA- immunoglobulin A as a proxy for burnout, ability measure of EI the MSCEIT (non self-report), as well as self-report surveys measuring stress, well-being, trust, stress mindset.

Study 1 & 2 laboratory at UQ. Participants' cortisol levels were tested before and after engaging in a stress evoking Business Manager Case mentoring session with either abusing or supportive supervisors.

Sample sizes for lab study = 515 Study 2 = 328

Field study 3 is at 2 Commando, Holsworthy Army Base Sydney, in custom designed environments to emulate typical combat settings.

Testing was conducted over a 9 month period, then a replication study is currently under-way.

Testing involves collecting baseline saliva tests, then testing over a number of stress serials, concluding with an end baseline saliva test.

This method investigates two types of stress; in the moment and stress over time.

Behavioural measures of performance were taken (recall, shooting accuracy, cognitive tests under pressure and pain tolerance)

Study 3 will be 111.

SPSS will be used to analyse data. Correlational and ANOVA analyses.

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## THE TOOLS

The first 2 studies use a basic between groups 3 x 2 experimental design (abusive vs supportive vs neutral) (trustworthy vs untrustworthy) supervisor.

The field study employs a treatment (PsychEdge training) and control counter-balanced quasi-experimental research design.

Cortisol and IgA are tested using a mobile point of care iPro device (which I have been trained to operate).

## TWO KEY QUESTIONS

### WHAT'S NEW

No other currently known research exists that investigates EI; using the ability model, and stress caused by supervisory abuse or stress caused by simulated combat training; using cortisol and IgA.

More importantly, to my knowledge, there had not been an EI training package evaluated before using these objective measures to ascertain efficacy. In addition, no such training, or research has ever been conducted on this Special Forces Commando population.

### SO WHAT

The impact of this research is to empirically demonstrate that EI moderates stress (results from Study 1 & 2 support this hypothesis that EI is a valid moderator of stress) and EI is a skill that can be trained.

The objective nature of the saliva testing ensures that the results are accurate and are not influenced by self-report biases that typically plague stress and EI research, particularly in high octane male dominated organisations.

The key premise is a pre-emptive approach to stress through emotional management, building self-awareness and team cohesion, but in parallel also addresses building resilience to reduce stress responses and potentially build strategies to moderate stress post-trauma.

## ONE BOTTOM LINE

This research is having a real and practical impact in the Commando population. It is well established that long-term stress negatively impacts psychological, psychosocial and physiological well-being, and ultimately performance. Commandos operate in extreme and diverse environments ranging from high-impact kinetic actions, to lower-tempo advise-and-assist tasks that require them to switch between emotional states, and to cope with emotional demands to a greater extent than other military populations. Special Forces soldiers are entrusted with no-fail mission sets for the protection of Australia's interests, both domestically and abroad. Skills in emotional flexibility, regulation, perceptiveness, and understanding are therefore crucial capabilities (among others) that enable these soldiers to perform optimally in such high-stakes situations. In this study, we investigated the effectiveness of the Army Research Scheme Funded project Psych-Edge Training – pre-emptive stress management training for Special Forces Soldiers. This ongoing study is the first-of-its-kind to examine the impact of emotional intelligence training using biological measures of hormone (cortisol) and immune function (IgA) as objective indicators of stress and burnout in a military setting. Results based on the first phase of the research demonstrate that soldiers receiving the Psych-Edge Training were more effective at managing their stress (lower cortisol and protected immune function) and performed better (e.g., better shoot-no-shoot under cognitive load outcomes, memory recall, pain-tolerance) than the soldiers who did not receive the training.

## THE CONTRIBUTION

Empirical evidence that EI moderates stress, and EI can be trained to create measurable and positive changes in performance.

## OTHER CONSIDERATIONS

Potential for future collaboration with the Department of Defence. The 2 Commando Regiment are interested in future research and implementation of this current research as an ongoing component of Special Forces Commando training. Ethical clearance has been obtained.