PERCEIVED WORKPLACE ADVERSITY AND THE PSYCHOLOGICAL WELLBEING OF CORRECTIONAL OFFICERS: EXAMINING THE IMPACTS AND IMPLICATIONS.

Justin Scott Trounson

Doctor of Philosophy (Clinical Psychology)

2016

Department of Psychological Sciences

Faculty of Health, Arts and Design, Swinburne University
“People forget that we’re prisoners too for 12 hours a day. This job…you know, it gets to you…it gets under your skin”

- Anonymous Correctional Officer
Abstract

As with many professions, correctional officers face a range of unique workplace difficulties that can impact their mental health and workplace productivity. Regular interaction with offenders who are incarcerated against their will and the constant possibility of experiencing violent events are realities of the workplace for those employed within correctional facilities. Working within such an adverse environment can negatively impact employee psychological wellbeing and result in heightened organisational costs due to increased absenteeism, presenteeism, job dissatisfaction and high employee turnover rates. Despite past research demonstrating the psychological impact of the work environment on correctional officers, little research has empirically investigated correctional officer perceptions of workplace adversity and the factors that contribute to this perception. Furthermore, little research has empirically examined how officers respond to workplace adversity and how officer responses to perceived workplace adversity impact their psychological wellbeing and in turn, the organisations that employ them.

The broad goal of this thesis was to fill this identified gap in the literature. To achieve this goal, the research project was divided into three distinct empirical studies. Study 1 aimed to add to the existing literature by identifying whether correctional officers perceived a significantly higher level of workplace adversity than those in other occupations found throughout the community. Furthermore, it aimed to empirically investigate whether perceived workplace adversity resulted in stress reactions for correctional officers and clarify which specific adversity factors contributed to their perception of workplace adversity. Results indicated that correctional officers perceived a significantly higher level of workplace adversity than those in other occupations, with the exception of police and emergency service personnel. Furthermore, not only was this perception of workplace adversity associated with the report of stress reactions for employees, the association was significantly stronger for correctional officers than for the rest of the study sample.

Study 2 aimed to empirically examine how officers responded to workplace adversity and categorise these reactions dependent on their shared characteristics. Previous investigations of officer responses to workplace adversity have tended to use standardised measurement tools not developed specifically for use with correctional officers. Such tools are often tested and normed using general community samples and
may not capture salient response tendencies unique to correctional officers. In contrast, Study 2 aimed to add to the existing literature by using a qualitative design that drew upon the practical expertise of officers to establish a set of officer-endorsed response tendencies. Results indicated that officers engage in a broad range of response tendencies that could be categorised as either cognitively, interpersonally or behaviourally based.

Study 3 aimed to firstly determine whether an empirical link existed between perceived workplace adversity, psychological wellbeing and a set of negative organisational impacts that have been shown to affect the correctional industry (i.e., absenteeism, presenteeism and job dissatisfaction). Secondly, it aimed to examine the moderating effect of officer response tendencies on the relationship between perceived workplace adversity, psychological wellbeing and the eventuation of negative organisational impacts. Results indicated that a high level of perceived workplace adversity predicted low psychological wellbeing and increased frequency of negative organisational impacts for correctional officers. Results also suggested that the use of an Interpersonal/Solution Focused response style when managing workplace adversity may reduce the negative impact of perceived workplace adversity on officer psychological wellbeing and the eventuation of negative organisational impacts. Implications of these research findings are then discussed in relation to the future development of preventative, psychological training programs designed to assist officers to better manage perceived workplace adversity.
Acknowledgements

This thesis was made possible due to the help and support of numerous individuals whose efforts all warrant acknowledgement and my deepest appreciation. Firstly, I would like to thank my supervisor Associate Professor Jeffrey Pfeifer for his encouragement and guidance throughout my candidature. Reflecting on my experience over the past four years, I am thankful for all the opportunities that you afforded me. I would also like to thank A/Prof Christine Critchley, Dr Jason Skues, Rita Henshall, the whole Henshall family, Dr Karin Hammarberg, Dr Joe Greet, Theolyn Naidoo, Carlye Weiner, James Collett, Matt Farrugia, Sue Trounson, Alan Trounson, Kylie Trounson, and Nick Mackenzie for their advice, assistance and unwavering support all of which were fundamental in making this research project possible. A very special thanks to Stephanie Louise for her never ending support and patience.

In addition to these acknowledgements, I would like to acknowledge the help and assistance provided by those within the correctional industry that made this research possible. A very big thank you to G4S, Port Phillip prison, Mt Gambier prison, Dennis Roach, Alfie Oliva, Glenn Ahern, Rachel Owens, Anne Hooker, Rick Dobson, Michael Arnaboldi, Terry McDonald and Mark McCorkle. Finally, I would like to thank all the correctional officers who dared open up to me throughout this project and that took the time to support and/or be part of my research, it was a humbling experience to meet you all and hear your stories. I hope that this thesis makes some small difference to your lives and to those who choose to join the profession in the future.
Declaration

"I declare that this dissertation does not incorporate without acknowledgment any material previously submitted for a degree in any University, College of Advanced Education, or other educational institution, and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text. I further declare that the ethical principles and procedures specified in the Faculty of Health, Arts and Design Human Research Ethics Committee document have been adhered to in the preparation of this report."

Signed

Mr Justin Scott Trounson

Date
Table of Contents

Abstract ........................................................................................................................................... i
Acknowledgements ............................................................................................................................ iii
Declaration.......................................................................................................................................... iv
Table of Contents ............................................................................................................................. v
List of Tables and Figures ................................................................................................................ x
List of Common or Important Abbreviations ................................................................................. xi
List of Peer Reviewed Publications during Candidature .............................................................. xii
List of Additional Publications during Candidature ........................................................................ xii
List of Conference Presentations during Candidature .................................................................... xiii

CHAPTER 1: INTRODUCTION ........................................................................................................... 2
  1.1 Chapter Guide .............................................................................................................................. 3
  1.2 Thesis Goal ................................................................................................................................. 3
  1.3 Overview of Thesis Structure .................................................................................................. 4

CHAPTER 2: LITERATURE REVIEW ............................................................................................... 6
  2.1 Chapter Guide ............................................................................................................................ 7
  2.2 Correctional Officers ................................................................................................................ 7
    2.2.1 The Definition and Demographic Profile of Correctional Officers ...................................... 8
    2.2.2 Correctional Officers in Australia ......................................................................................... 9
    2.2.3 Correctional Officers in the United States ........................................................................... 9
    2.2.4 Correctional Officers in Canada ......................................................................................... 10
    2.2.5 Correctional Officers in the United Kingdom ................................................................. 10
    2.2.6 The Evolution of Corrections and the Role of Officers .................................................... 11
    2.2.7 Roles and Duties of the Contemporary Correctional Officer ........................................ 12
  2.3 Stress and the Correctional Work Environment ....................................................................... 13
  2.4 Workplace Adversity and the Correctional Officer ................................................................. 15
    2.4.1 Objective Vs. Perceived Adversity .................................................................................... 19
  2.5 The Impact of Work-related Stress ......................................................................................... 20
    2.5.1 Societal Impact .................................................................................................................. 21
2.5.2 Correctional Industry Impact ................................................................. 22
2.5.3 Individual Officer Impact ................................................................... 23
2.6 New Frontiers in Responding to Work-related Stress ............................. 26
2.6.1 Conceptualising Psychological Wellbeing ........................................ 28
2.6.2 Correctional Officer Psychological Wellbeing .................................... 29
2.6.3 Past Research Examining Correctional Officer Responses to Adversity ................................................................................................................. 29
2.7 The Present Investigation ....................................................................... 31
2.8 Research Aims .......................................................................................... 32
2.8.1 Research Aim 1: Identify if Correctional Officers Perceive High Levels of Workplace Adversity and whether this Results in Stress Reactions .............................................................................................................. 32
2.8.2 Research Aim 2: Identify Which Adversity Factors Contribute to Correctional Officers’ Perceptions of Workplace Adversity ........... 33
2.8.3 Research Aim 3: Identify How Officers Respond to Perceived Adversity .............................................................................................................. 33
2.8.4 Research Aim 4: Determine whether an Empirical Link Exists Between Perceived Workplace Adversity, Psychological Wellbeing and Negative Organisational Impacts ................................................................. 34
2.8.5 Research Aim 5: Identify if Officers Employ Specific Response Styles When Managing Workplace Adversity .............................................................................. 34
2.8.6 Research Aim 6: Explore if Officer Response Style Impacts the Relationship Between Perceived Workplace Adversity, Psychological Wellbeing and Organisational Impacts .......... 35

CHAPTER 3: METHODS ................................................................................... 36
3.1 Chapter Guide ......................................................................................... 37
3.2 Overview of Method and Design ............................................................. 38
3.3 Study 1 .................................................................................................... 39
3.3.1 Experimental Design ........................................................................ 39
3.3.2 Recruitment Procedures .................................................................... 40
3.3.3 Inclusion Exclusion Criteria .............................................................. 40
3.3.4 Materials ............................................................................................ 41
3.3.5 Methodological Considerations ......................................................... 42
3.4 Study 2 .................................................................................................... 45
3.4.1 Experimental Design ........................................................................ 46
3.4.2 Recruitment Procedures .................................................................... 47
3.4.3 Inclusion Exclusion Criteria ................................................................. 47
3.4.4 Materials .............................................................................................. 48
3.4.5 Methodological Considerations ........................................................ 48

3.5 Study 3 ................................................................................................... 49
3.5.1 Experimental Design ........................................................................ 50
3.5.2 Recruitment Procedures ................................................................. 51
3.5.3 Inclusion Exclusion Criteria ............................................................. 51
3.5.4 Materials .............................................................................................. 51
3.5.5 Methodological Considerations ........................................................ 54

CHAPTER 4: PERCEIVED WORKPLACE ADVERSITY AND CORRECTIONAL OFFICERS
........................................................................................................................................ 61
  4.1 Preamble to Empirical Study 1 ............................................................... 62
  4.2 Correctional Officers and Work-Related Environmental Adversity: A Cross-
Occupational Comparison ..................................................................................... 63

CHAPTER 5: CORRECTIONAL OFFICER RESPONSES TO WORKPLACE ADVERSITY
........................................................................................................................................ 90
  5.1 Preamble to Empirical Study 2 ............................................................... 91
  5.2 Correctional Officers and Workplace Adversity: Identifying Interpersonal,
Cognitive and Behavioral Response Tendencies ..................................................... 92

CHAPTER 6: THE RELATIONSHIP BETWEEN PERCEIVED WORKPLACE ADVERSITY, RESPONSE TENDENCIES, CORRECTIONAL OFFICER WELLBEING AND ORGANISATIONAL IMPACTS
........................................................................................................................................ 113
  6.1 Preamble to Empirical Study 3 ............................................................... 114
  6.2 Perceived Workplace Adversity and Correctional Officer Well-being: Examining the Impact of Officer Response Styles ......................................................... 115

CHAPTER 7: DISCUSSION ..................................................................................... 142
  7.1 Chapter Guide .......................................................................................... 143
  7.2 Overview and Synthesis of Main Findings ............................................ 144
    7.2.1 Findings Relating to Research Aim 1 ............................................... 144
    7.2.2 Findings Relating to Research Aim 2 ............................................... 146
    7.2.3 Findings Relating to Research Aim 3 ............................................... 148
    7.2.4 Findings Relating to Research Aim 4 ............................................... 154
    7.2.5 Findings Relating to Research Aim 5 ............................................... 155
    7.2.6 Findings Relating to Research Aim 6 ............................................... 157
List of Tables and Figures

Table 1. The Seven Underlying Dimensions of Work-Related Environmental Adversity, and their Conceptual Components ................................................................. 44
Table 2. Factor Loadings and Communalities Based on a Principal Components Analysis with Oblimin Rotation for the Seven Dimensions of the WREAS .................................. 56
Table 3. Factor Loadings Based on Exploratory Factor Analysis with MLR Estimation for the Sixteen Response Tendency Usage Items ............................................................ 57
Table 4. Factor loadings based on exploratory factor analysis with MLR estimation for the nineteen wellbeing items .......................................................................................... 58
Table 5. Factor Loadings Based on Exploratory Factor Analysis with Maximum Likelihood Extraction and Oblimin Rotation for the Six Organisational Impact Items .................. 59
Table 6. Standardised Regression Weights, Standard Errors and Significance Levels for each of the 36 items of the Work-related Environmental Adversity Scale (WREAS) ............... 73
Table 7. Means, Standard Deviation, Theoretical Ranges, and Cronbach's Alpha for the Full-scale and each of the Seven Sub-scales of the WREAS ...................................................................... 74
Table 8. Mean Total Scores and Standard Deviations for the 36-item Work-related Environmental Adversity Scale (WREAS) by Occupational Categories ............................................. 75
Table 9. Means and Standard Deviations for each of the Seven Sub-scales of the WREAS by Occupational Category and Significant Differences in Mean Scores between Correctional Officers and all other Occupational Categories .......................................................... 76
Table 10. Demographic Characteristics of Each of the Eight Correctional Officer Focus Groups and Eleven Semi-structured Interviews ......................................................................... 98
Table 11. Means, Standard Deviations, Cronbach’s Alpha and Theoretical Ranges for Each of the Study Measures ...................................................................................................... 126
Table 12. Correlations and Significance Levels for Each of the Study Measures ................. 126
Table 14. Summary Table of the Impact of Work-related Stress on Societal, Industry and Individual Levels .................................................................................................................. 314
Figure 1. Conceptualisation of relationship between perceived workplace adversity, stress reactions, psychological wellbeing and organisational impacts ............................................ 20
Figure 2. A structural model of perceived workplace adversity, response tendency usage, psychological wellbeing and related organisational impacts ........................................ 124
## List of Common or Important Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANOVA</td>
<td>Analysis of Variance</td>
</tr>
<tr>
<td>CFA</td>
<td>Confirmatory Factor Analysis</td>
</tr>
<tr>
<td>CSC</td>
<td>Correctional Services for Canada</td>
</tr>
<tr>
<td>CSF</td>
<td>Comprehensive Soldier Fitness</td>
</tr>
<tr>
<td>DASS-21</td>
<td>Depression, Anxiety and Stress Scale</td>
</tr>
<tr>
<td>EA</td>
<td>Emotional/Avoidant Response Style</td>
</tr>
<tr>
<td>EAP</td>
<td>Employee Assistance Program</td>
</tr>
<tr>
<td>EFA</td>
<td>Exploratory Factor Analysis</td>
</tr>
<tr>
<td>ISF</td>
<td>Interpersonal/Solution Focussed Response Style</td>
</tr>
<tr>
<td>PA</td>
<td>Parallel Analysis</td>
</tr>
<tr>
<td>PCA</td>
<td>Principal Components Analysis</td>
</tr>
<tr>
<td>PSP</td>
<td>Peer Support Program</td>
</tr>
<tr>
<td>PSS</td>
<td>Perceived Stress Scale</td>
</tr>
<tr>
<td>SEM</td>
<td>Structural Equation Modelling</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for the Social Sciences</td>
</tr>
<tr>
<td>WREAS</td>
<td>Work-related Environmental Adversity Scale</td>
</tr>
</tbody>
</table>

Note. This list is not exhaustive and contains only important or commonly used abbreviations mentioned within the text.
List of Peer Reviewed Publications during Candidature


List of Additional Publications during Candidature


List of Conference Presentations during Candidature


**Poster Presentations**


CHAPTER 1: INTRODUCTION
1.1 Chapter Guide

This introductory chapter aims to provide the reader with an understanding of the overarching thesis goal and provide a brief overview of the structure of the thesis. Section 1.2 provides a statement of the overarching research goal and relevant general information to orient the reader prior to reading the body of the dissertation. The introductory chapter then concludes with an overview of the thesis structure.

1.2 Thesis Goal

The overarching research goal of this thesis is to provide a new level of empirical insight into how correctional officers perceive and manage workplace adversity, and to utilise this empirical evidence to explore how officer responses to perceived workplace adversity may impact their psychological wellbeing and in turn the organisations that employ them. It is hoped this investigation will provide a substantial contribution to the current scientific understanding of the antecedents of correctional officer psychological wellbeing and begin to fill an identified gap in the existing literature. Improved understanding of the relationship between perceived workplace adversity and the psychological wellbeing of correctional officers may also benefit correctional organisations aiming to assist officers to better manage perceived workplace adversity and maintain their psychological wellbeing.

This thesis presents a series of interrelated empirical studies specifically designed to achieve this overarching thesis goal. The dissertation is structured in a thesis by associated papers format, which includes a set of three empirical studies that are either published, in press or currently under review within peer-reviewed academic journals. Due to the inclusion of these papers as part of this dissertation there is some unavoidable repetition, particularly in relation to the provision of background information within the introductory sections of each empirical paper. Despite this unavoidable repetition, each of the three papers included details an original piece of research that differs in its objective and design. Each study involved independent samples and offers a discrete set of findings that when considered collectively, function to address the six research aims presented in Chapter 2 (see section 2.9) and the overarching thesis goal outlined above. It should be noted that the use of US spelling was a specific requirement for all submitted papers. Therefore, the reader is advised that
US spelling is employed throughout these publications presented in chapters 4, 5 and 6. Outside of these three empirical studies UK spelling is used throughout in line with university requirements.

A short guide or preamble precedes each chapter to orient the reader. These chapter guides and preambles also function to reiterate how each of the empirical studies interrelate and to highlight how these studies combine to create a substantial and cohesive body of work. All empirical studies included within this thesis were conducted and written in their entirety within the period of candidature and with the approval and oversight of the Swinburne University Human Research Ethics Committee (SUHREC; see Appendix A). All studies were conducted in full accordance with the ethical standards required (see Appendix B). Ethics application forms for each of the three studies are presented in the thesis appendices (see Appendix C).

1.3 Overview of Thesis Structure

This section outlines the general structure of the dissertation. This initial introductory chapter (Chapter 1) is provided to present the overarching thesis goal and general information regarding its structure. Chapter 2 presents a review of the literature, introducing the study concepts and summarising the relevant academic research that relates to the larger thesis topic. The literature review chapter concludes with an outline of the present study and a statement of each of the underlying research aims of the thesis. Chapter 3 of this dissertation details the specific designs and methodological considerations of each of the empirical studies included. As a consequence of electing a thesis by associated papers format for this thesis, all empirical studies must be written and submitted for publication in peer-reviewed academic journals. Publishing requirements and prescribed limitations in manuscript length preclude the inclusion of detailed information regarding study design, statistical analyses, and relevant theoretical considerations within each of the three empirical studies presented in chapters 4, 5 and 6. Consequently, Chapter 3 offers the reader additional information in relation to each of the three studies that could not be included within the empirical papers. This methods chapter also clarifies the objective of each study and provides the reader with an understanding of how each study builds systematically to form a cohesive body of research. The three interrelated empirical studies directly follow the methods chapter (Chapters 4, 5 & 6). Each study is included in the format in which it was submitted for
publication and in accordance with the specific requirements of the respective journals. In short, Study 1 (presented in Chapter 4), was designed to empirically establish whether correctional officers reported a high level of perceived workplace adversity compared to those in other occupations found within the community and to clarify which adversity factors contributed to a heightened sense of workplace adversity for officers. Study 2 is included in Chapter 5 of this thesis. It was designed to build systematically upon the findings of Study 1, using the identified adversity factors to assist in establishing the breadth of ways officers responded to workplace adversity. Study 3 is provided within Chapter 6 of this thesis. Study 3 builds further upon the findings of Study 1 and Study 2, establishing an empirical link between the larger thesis concepts and clarifying which response tendencies assist or impede officers in maintaining their psychological wellbeing, when attempting to manage workplace adversity. A final discussion chapter (Chapter 7) follows the three empirical studies providing an overview of the main findings and an in-depth discussion of their implications in relation to the general thesis goal, the research aims detailed in Chapter 2, and the theoretical and practical implications of these findings.
CHAPTER 2: LITERATURE REVIEW
2.1 Chapter Guide

This chapter provides an introduction to the literature regarding the major concepts underpinning the narrative of this thesis. The chapter begins by presenting contextual information regarding the contemporary correctional officer, including information regarding their demographic profile, their roles and duties and a review of the challenges and difficulties they face within their work environment. A review of the relevant scientific literature follows, providing context for the larger research goal of the thesis and for the empirical studies included in chapters 4, 5 and 6. It is important to note that the literature review encompasses both the related scientific literature and grey literature (i.e., published, non-academic, industry and government reports that provide insight into the concepts relevant to this dissertation) as significant practice-based research is conducted by government agencies who tend to publish research in reports rather than in the academic literature. The literature review is structured in a narrative review format, selected as an appropriate method for synthesising the extant literature (Grant & Booth, 2009). A theoretical model of stress is provided and a discussion of the concept of psychological wellbeing is also presented within this chapter, to provide a theoretical foundation for the thesis and a framework for both the interpretation of research findings and the generalisation of these results to ‘real-world’ applications in Chapter 7. The literature review chapter then concludes with a brief rationale for the current investigation and a clarification of the specific research aims of the thesis.

2.2 Correctional Officers

As described in section 1.2, this thesis aims to provide a new level of empirical insight into how correctional officers perceive and manage workplace adversity and use this empirical evidence to examine how perceived workplace adversity can impact the psychological wellbeing of officers and the organisations that employ them. As such, it is important to first define what is meant by the term correctional officer within the parameters of this thesis and provide the reader with relevant contextual information. Section 2.2 provides information regarding the demographic profile of correctional officers, a description of their roles and duties and functions to highlight how both the demographic profile and duties of officers have changed over time.
2.2.1 The Definition and Demographic Profile of Correctional Officers

In comparison to the volume of research that examines the complex nature of prison life, there is a surprising lack of empirical investigation and scientific knowledge in relation to those who elect to pursue a career as a correctional officer (Leibling, Price, & Shefer, 2010). In fact, it has been argued that there is currently little clear consensus in regard to what being a correctional officer truly means and what the role involves (Leibling et al., 2010). Although there is likely to be many reasons for this ambiguity, it may be at least partly due to the fact that the roles, duties and demographic profile of officers have changed substantially over time and differ considerably between countries, cultures and across levels of seniority (Leibling et al., 2010).

It is important to clearly define whom we are referring to when discussing and examining correctional officers within the parameters of this dissertation. The correctional officers examined within this body of research are those that work predominantly as ‘frontline’ officers. Frontline correctional officers have been classified using a wide array of workplace titles that vary across both time and place. For instance, frontline correctional officers have been referred to by occupational titles such as prison guard, prison officer, penal officer, corrections officer, custodial correctional officer, turnkey, jailer and jail guard (Government of Canada, 2016; Leibling et al., 2010). For the purposes of this thesis, frontline correctional officers are those employees within a correctional facility who are charged with the responsibility of maintaining the security and daily functioning of the facility and that have direct contact and often daily interaction with prisoners, whilst supervising their behaviour (Corrections Victoria, 2016).

Frontline correctional officers were chosen as the focus of this thesis, as past research indicates they report a higher level of job stress than correctional officers in supervisory roles (Keinan & Malach-Pines, 2007; Paoline, Lambert, & Hogan, 2006) and those in non-custodial positions within the field of corrections (Gerstein, Topp, & Correll, 1987; Hepburn & Knepper, 1993; D. Robinson, Porporino, & Simourd, 1996). Only frontline correctional officers currently working within developed Western countries were examined within this dissertation (e.g., Australia, US, UK, Canada and Western Europe)¹. It should be noted however, that an emphasis is placed on Australian

---

¹ Officers from Australia, US, UK, Canada, Sweden and Denmark were examined across the three empirical studies. Although it is acknowledged that there are many inherent cultural, occupational and environmental differences between officers working in each of these nations, there still remains a substantial number of similarities between these officers in regard to their demographic profiles, roles and duties and in relation to their working environments to warrant their inclusion and collective examination.
correctional officers throughout the thesis, as these officers comprise the majority of the research samples attained within the empirical studies included. For this reason, results should be interpreted with a degree of caution and be considered as most relevant and generalisable to the Australian correctional environment. However due to the inclusion of frontline officers from the abovementioned nations, the following sections provide a brief context to the correctional systems of each of the national groups included within this dissertation and the correctional officers who work within them.

2.2.2 Correctional Officers in Australia

In June of 2014, Australian corrective services agencies operated 111 correctional facilities nationally, resulting in an estimated recurrent expenditure on prisons and detention totalling around $2.6 billion (SCRGSP, 2015). Statistics indicate that the number of individuals incarcerated across Australia continues to grow steadily, increasing a further 7% from 33,789 to 36,134 inmates within the 2014-2015 financial year (Australian Bureau of Statistics, 2015). Accompanying this growth has come an increase in the employment of correctional officers (Department of Justice, 2014). It is currently estimated that over 15,900 correctional officers are employed nationally to manage Australian correctional facilities and this figure is forecast to increase to an estimated 17,000 officers by 2019 (Australian Federal Government, 2016). In relation to staff to inmate ratios, national statistics indicate a ratio of one officer to every 22 prisoners for 2014-2015, however rates from state to state appear to vary substantially (SCRGSP, 2015). In terms of demographics, the Australian federal government (2016) currently estimates the vast majority of Australian correctional officers are male (71.3%), with 40.4% of officers aged between 18 and 44 years and an additional 31% of the workforce currently between 45 and 54 years of age.

2.2.3 Correctional Officers in the United States

Statistics indicate that the US currently incarcerates more individuals than any other country in the world (Institute for Criminal Policy Research, 2015; Travis, Western, & Redburn, 2014). At the end of 2014, an estimated 6,851,000 individuals were under the supervision of US adult correctional systems, with 2,224,400 of these people incarcerated (Kaeble, Glaze, Tsoutis, & Minton, 2016). Despite these statistics being heralded as the lowest number of supervised individuals observed within the US correctional system in a decade, the number of inmates incarcerated in state and federal prisons or local jails had slightly increased (Kaeble et al., 2016). According to the 2005
Census of State and Federal Correctional Facilities, the US ran over 1,800 correctional facilities across the country and employed 295,261 correctional officers (Stephan, 2008). In 2014 however, the Bureau of Labor Statistics has estimated this to have risen to 434,420 correctional officers (Bureau of Labor Statistics, 2014a), employed across an estimated 4,575 institutions including 3,283 local jails, 1,190 State confinement facilities and 102 Federal confinement facilities (Institute for Criminal Policy Research, 2015). The Federal Bureau of Prisons (2016) estimates the majority of correctional officers within Federal prisons are Caucasian (63%) males (72.7%). These figures are largely consistent with estimated figures for State operated facilities (74% male; Stephan, 2008).

2.2.4 Correctional Officers in Canada

In 2013/14, it was estimated that an average of 139,337 individuals were incarcerated on any given day in Canada, costing the government an estimated $4.6 billion in operating costs (Statistics Canada, 2016). Despite this level of incarceration representing a 12% decrease in inmate numbers over the previous 5 years, the Correctional Service of Canada expects to add 2,700 accommodation spaces to men’s and women’s penitentiaries in the coming years (Correctional Service of Canada, 2016b). The Correctional Service of Canada currently operates 44 institutions and 15 community correctional centres (Correctional Service of Canada, 2016a). According to the National Household Survey data, in 2011 a total of 64.2% of officers were male, with 60.6% of all officers aged between 25 and 44 years (Service Canada, 2016).

2.2.5 Correctional Officers in the United Kingdom

In 2014, the UK operated 119 correctional facilities housing a collective prison population of 84,305 (Prison Reform Trust, 2014). Statistics indicate that in 2013, UK corrections employed in surplus of 17,500 correctional officers to supervise this population, resulting in a ratio of one officer to every 4.8 inmates. In 2006, it was estimated that over 55% of correctional officers in the UK had worked as an officer for 10 years or less (Leibling et al., 2010). Furthermore, according to Leibling and colleagues (2010), the majority of correctional officers in the UK continue to be male (78%), Caucasian (91.1%) and aged between 35 and 45 years (40%). Conversely, around one in five officers is female, making up 22% of the officer population in 2006 (an increase from 17% in 2000).
2.2.6 The Evolution of Corrections and the Role of Officers

It has been argued that the modern prison systems existing in Australia, Canada, the UK and US were originally founded upon a para-military model of incarceration (King, 2001). These systems traditionally emphasised the removal of offenders from the greater community as their primary purpose (King, 2001; Pollock, 2005), with incarceration viewed predominantly as a form of deterrence and punishment for those who offended (King, 2000). This correctional philosophy embedded within these correctional systems directly influenced the roles and duties of the correctional officer, creating an expectation of officers to function in what could be described as a ‘militant role’ embracing the ideals of control, discipline and custody, above care or inmate rehabilitation (McGowen, 1998). Little emphasis was placed on building relationships with inmates and the duties of officers revolved around exercising behavioural control over those incarcerated and maintaining the good order of the facility (Leibling et al., 2010). In line with the military tradition, the vast majority of correctional officers were male, with only a handful of female officers employed specifically to supervise female prisoners (McGowen, 1998).

Over the last century however, there has been a continual and gradual shift away from the traditional para-military model of incarceration within these systems and toward a more reformative correctional model that acknowledges the importance of the ideals of care and rehabilitation (Leibling et al., 2010). In line with this transformation in penal philosophy and penology, correctional systems have declared increasingly reformative goals. It has been argued however, that correctional officers were largely excluded from this transformative process and the implementation of these new goals, with correctional systems opting to integrate expert professionals into the correctional system to lead such reforms (Thomas, 1972). According to Thomas (1972), this exclusion led to an alienation of correctional officers from the aims of the organisations that employed them and resulted in the consolidation of the perception of officers as mere ‘turnkeys’ whose only responsibilities included taking charge of facility safety, daily operations and prisoner behaviour.

Over the past few decades however, there has been further shifts in regard to the role of correctional officers within the correctional workplaces of Australia, US, UK and Canada. Officers are now expected to transcend their traditional role of the custodian/disciplinarian and play a more substantial role in the care and rehabilitation of
inmates (Bennett, Crewe, & Wahidin, 2013). This has increased the complexity of the role of the contemporary correctional officer with interpersonal abilities such as good communication and conflict management skills playing an increasingly substantial role in their everyday work (Josi & Sechrest, 1998; Leibling et al., 2010). This substantial change in the roles and duties of officers has also been accompanied with changes in the demographic profile of those enlisting to work as correctional officers. Although traditionally the domain of Caucasian males with limited education, more recently the profession has seen an increase in females, individuals from ethnic minorities and those with higher educational levels (Josi & Sechrest, 1998; Stohr & Walsh, 2016).

The contemporary correctional officer is indeed a very different entity than their predecessors and the roles, duties and demographic profile of these officers continue to change. What can be stated with confidence however, is that the role of the correctional officer continues to become more complex and nuanced as correctional systems evolve toward more reformative goals that emphasise the need to instil behavioural and psychological change in those under their care (Leibling et al., 2010). The following section provides a brief summary of the types of roles and duties expected of the contemporary correctional officer.

2.2.7 Roles and Duties of the Contemporary Correctional Officer

Correctional officer duties can vary dependent on a number of factors including their occupational role within the prison, their level of seniority, specific requirements of the correctional system in which they work and across time (Leibling et al., 2010). However, for the majority of frontline correctional officers their primary duty continues to remain to be the daily supervision of prisoners and the maintenance of the good order of the prison. This primary objective is accomplished through engaging in a wide array of activities including searches, escort duties, operating security equipment and responding to prison incidents (Cheeseman-Dial, 2010). In addition to these active duties, officers also engage in daily administrative responsibilities such as completing case files, collating information and writing reports (Corrections Victoria, 2016).

However, the role and duties of the correctional officer have expanded considerably over the past few decades (Leibling et al., 2010). Contemporary correctional officers are now expected to play a more substantial role in the assessment of inmate behaviour, identify inmate service needs, and contribute to prisoner
rehabilitation through providing leadership, support, advice, role modelling and guidance to those they supervise (Corrections Victoria, 2016). These secondary goals can often conflict with an officers primary objective of ensuring the safety and good order of a facility and can frequently involve finding a delicate and complex balance between opposing objectives (Josi & Sechrest, 1998). In fact, it has been stated that the contemporary correctional officer is the primary agent for promoting health, wellbeing, security and safety within a correctional facility (Rogers, 1991). However, fulfilling such a complex and multifaceted role can be difficult and is made substantially more so by the many unique workplace challenges that face correctional officers (see section 2.4 for a review of workplace challenges for correctional officers). The following section details how the correctional working environment may result in the experience of stress for correctional officers.

2.3 Stress and the Correctional Work Environment

Examination of the related occupational literature indicates there is substantial evidence to suggest that work-related stress may negatively affect the health and wellbeing of employees (Cox, Griffiths, & Rial-Gonzalez, 2000; S. Johnson et al., 2005). Considering the substantial challenges faced by correctional officers within their workplace, it is not surprising that research indicates that officers experience a high level of work-related stress (Finn, 1998). Research conducted within the field of corrections is generally consistent with these findings, providing evidence that work-related stress is inversely associated with the mental health of correctional officers (Ghaddar, Mateo, & Sanchez, 2008; Spinaris, 2014). Gaining a better understanding of how the correctional working environment can impact correctional officers is therefore warranted. However, to build a comprehensive understanding of the impact of the work environment on the correctional officer the concept of stress must first be defined.

The concept of stress and how we cope with it is one of the most researched topics within the field of psychology (Hobfoll, Schwarzer, & Chon, 1998). Consequently, there is a wealth of definitions and theoretical models from which to draw from when considering the potential impact of workplace adversity on the contemporary correctional officer. Despite the existence of a substantial literature exploring the notion of stress, defining the concept has proven difficult with little true consensus in relation to its definition (Dewe, Driscoll, & Cooper, 2012). It has been
argued however, that stress can be understood broadly as “a challenge to a person's capacity to adapt to inner and outer demands” (Burton, Westen, & Kowalski, 2015, pp. 545). Stress is often referred to within the extant literature as a psychobiological process that involves both biological and psychological components and is commonly viewed as having the capacity to negatively impact an individual both physically (see e.g., Keskinen-Rosenqvist, Michelsen, Schulman, & Wahlstrom, 2011) and mentally (see e.g., Neria, Nandi, & Galea, 2007).

Despite the general lack of consensus, the stress literature has tended to conceptualise stress in one of three ways. Firstly, there is the notion of stress as a stimulus or characteristic of the environment. This type of conceptualisation, popular in the early definitions of stress, inferences that the stress resides predominantly within an individual’s environment, impacting the individual and resulting in negative outcomes (Dewe et al., 2012). This stimulus-response theory of stress tends to place emphasis on the objective qualities of an environmental stressor, de-emphasising the role of the organism in the stress process (Hobfoll et al., 1998).

The second type of conceptualisation is also based on a stimulus-response theory of stress, however it maintains a more physiological approach, emphasising that stress is the biological and physiological changes or response that occurs within an individual when faced with environmental difficulty (Mark & Smith, 2008). Finally, there is the transactional approach to the concept of stress. The transactional approach contends that stress is neither simply an aspect of our environment or our physiological response to environmental difficulty, rather it theorises that stress is a dynamic process that occurs when an individual interacts with their environment (Cox & Mackay, 1981). Although all three approaches offer useful insights into the nature of stress, both the first and second approaches have been criticised for being too simplistic and unable to adequately account for the potential mediating effects of individual differences such as coping strategies (Cox et al., 2000). In contrast, a notable strength of the transactional theory of stress is that it allows for the influence of individual differences, thus providing some explanation as to why stressful events do not impact all individuals in the same way or to the same extent.

Lazarus and Folkman’s (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986; Lazarus & Folkman, 1984) cognitive theory of stress and coping is one transactional conceptualisation of stress that may be effectively applied to correctional officers and their experience of adversity within their working environment. They
argued that one’s perception or cognitive appraisal of adversity was a critical component of the concept of stress, defining psychological stress as “a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being” (Lazarus & Folkman, 1984, pp. 19). Lazarus and Folkman’s cognitive theory of stress posits that it is not necessarily the objective characteristics of any given event that are the key to the development of stress, but rather an individual’s appraisals or perception of imminent threat and resource capacity that are most important.

According to the cognitive theory of stress and coping, when confronted with a potentially adverse environmental event, individuals engage in a primary appraisal of the level of threat the event poses. If the individual perceives the situation as threatening a secondary appraisal occurs, which involves an evaluation of whether the individual possesses the resources to overcome the presenting threat (Lazarus & Folkman, 1984). Stress would not occur if the individual evaluates the event as unthreatening or within the bounds of their resources. However, Lazarus and Folkman did acknowledge that when a stressor was more severe (e.g., a near death experience or natural disaster), an individual’s appraisal would align more closely with the objective reality of the stressor, making reactions to severe stressors more universal rather than individual. The following section details some of the common workplace challenges facing correctional officers that may contribute to correctional officer perceptions of workplace adversity.

2.4 Workplace Adversity and the Correctional Officer

The concept of adversity has been defined as the experience of hardship or suffering associated with trauma, distress, difficulty or a tragic event (Luthar, Cicchetti, & Becker, 2000; Luthar & Cicchetti, 2000; Rutter, 1999). In line with this definition, workplace adversity can be understood as the level to which an employees’ work environment is characterised by the experience of hardship or suffering associated with trauma, distress, difficulty or a tragic event. Previous literature has identified that working within an adverse environment can impact negatively on an employees psychological health (Noblet, 2003). As described within the earlier sections of this

---

2 It should be noted that throughout the existing literature the concepts of workplace-adversity and stress share many parallels. For the purposes of this thesis workplace-adversity refers to stressors that exist within the specific working environment whereas the term stress refers to an individual’s response to such adversity factors.
chapter, correctional officers are expected to supervise and manage the safety of the correctional facility. However, a broad range of factors within their unique working environment can complicate this responsibility, culminating in a level of workplace adversity that may in turn increase their level of stress and impact the psychological wellbeing of officers.

Working as a correctional officer can be a dangerous and potentially stressful experience that can involve exposure to a range of adverse situations (Kunst, 2011). Furthermore, offenders placed under their care can suffer from a wide range of complex and often inter-related psychological and behavioural problems (Fazel & Danesh, 2002; Fazel, Xenitidis, & Powell, 2008; Harlow, 1999; Sindich et al., 2014). Managing the behaviour of such individuals can be extremely difficult and at times highly dangerous and challenging (Peeters, Schaufeli, & Buunk, 1995). For instance, in their employment, correctional officers may experience many potentially challenging or traumatic experiences including being victims of (or observing) verbal and physical abuse, witnessing graphic and distressing events and functioning as first responders to a range of difficult and dangerous facility incidents (Harrell, 2011; Konda et al. 2012; Spinaris et al., 2012). These incidents may include, but are not limited to, medical emergencies, acts of violence, acts of self-harm, suicides in custody, fires, riots, murders and sexual assaults (Rosine, 1992). Given the above, it is unsurprising that research indicates that correctional officers report strong expectations of experiencing workplace trauma (Trounson, Pfeifer, & Critchley, 2016).

Moreover, the experience of traumatic events at work is a reality for correctional officers that has the potential to impact their psychological wellbeing and employment. In fact, research indicates that officers reporting a higher frequency of traumatic workplace events score significantly higher on measures of burnout and traumatic stress (Lewis, Lewis, & Garby, 2013). Additionally, in a study examining Post-traumatic Stress Disorder (PTSD) in corrections employees in Saskatchewan, it was found that nearly 80% of those surveyed reported they had experienced a traumatic event while at work (Stadnyk, 2003). Furthermore, those employees who did meet PTSD criteria reported higher rates of absenteeism, poorer physical health, higher alcohol consumption and decreased life satisfaction, compared to those not meeting criteria (Stadnyk, 2003). These findings are supported by similar investigations into the experience of traumatic events, the prevalence of PTSD in corrections staff and the
associated relationships with negative health and organisational outcomes (Denhof & Spinaris, 2013; Spinaris et al., 2012).

Despite a general consensus that physical violence is a common problem within the correctional workplace, few recent studies examine the prevalence of workplace violence in regard to prison employees (Rasmussen, Hogh, & Andersen, 2013). However, in a study of American jails, Safran and Tartaglini (1998) found that 26% of officers reported being subjected to physical violence, with 20% being exposed to more than two incidents throughout their career. Recent US statistics support these findings, indicating that the number of workplace non-fatal violent incidents for correctional officers is higher per capita than for any other profession, except policing (Bureau of Labor Statistics, 2010; Harrell, 2011; Konda et al., 2012; Rosine, 1992; Warchol, 1998). Furthermore, research has suggested that such critical incidents are likely to continue to increase as prison facilities become increasingly overcrowded (Konda et al., 2012; Martin et al., 2012).

In addition to the continual threat of violence, officers are exposed to (and regularly interact with) a group of individuals who are shown to have a heightened prevalence of serious infections and transmittable diseases. Compared to the general population, inmates have increased prevalence rates of many transmittable diseases including Hepatitis B, Hepatitis C, syphilis, gonorrhea and HIV (Hammett, Harmon, & Rhodes, 2002; Mayer et al., 2002). For instance, research suggests that the rate of diagnosed HIV infections is five times higher for inmates in State and Federal prisons than for those not incarcerated (Centers for Disease Control, 2016). It is therefore unsurprising that correctional officers have been identified as being at a heightened risk of serious work-related infections compared to other professions (Australian Safety and Compensation Council, 2006). Furthermore, fear of infection has been shown to be associated with job stress for correctional officers (Hartley, Davila, Marquart, & Mullings, 2012).

Additionally, these identified workplace challenges are accompanied by a range of commonly reported organisational stressors and hazards, which may contribute to a sense of workplace adversity (Finney, Stergiopoulos, Hensel, Bonato, & Dewa, 2013; Schaufeli & Peeters, 2000). These include organisational issues such as role problems (Grossi & Berg, 1991), staff conflict, low organisational support and poor facility conditions (Dollard & Winefield, 1995, 1998; Keinan & Malach-Pines, 2007; Spinaris, 2014). For example, in an examination of the impact of physical prison conditions on
inmate violence, Bierie (2012) found that harsher physical facility conditions are associated with increased serious violent incidents. Furthermore, in a study examining 419 Australian correctional officers it was found that job posts characterised by high demands, low control and low social support were associated with reports of psychological distress, job dissatisfaction and negative affect for officers (Dollard & Winefield, 1998). The hierarchical nature of the relationship between management and frontline officers within correctional institutions has also been shown to be associated with stress and job dissatisfaction (Møller, Stöver, Jürgens, Gatherer, & Nikogosian, 2007). For instance, in a recent systematic review of correctional officer stress and burnout, organisational structure and organisational climate were the two factors most consistently associated with officer stress and burnout (Finney et al., 2013). In addition, a lack of job autonomy and job variety have also been associated with correctional officer burnout (Griffin, Hogan, & Lambert, 2012).

Furthermore, the continued and rapid growth observed across correctional systems has also resulted in an increase in operational pressures being placed upon correctional officers (Swenson, Waseleski, & Hartl, 2008). Research indicates that common operational stressors such as shiftwork, high workload, and an expectation to work overtime may contribute to a sense of workplace adversity for officers and impact their psychological wellbeing (Denhof, Spinaris, & Morton, 2014; Moon & Maxwell, 2004; Spinaris, 2014). For instance, in a study of 496 Israeli prison workers, Keinan and Malach-Pines (2007) found that correctional officers reported that engaging in overtime, receiving a low salary and managing a heavy workload were the most stressful work-related factors they experienced. Furthermore, in their study of 318 correctional officers, Moon and Maxwell (2004) found work overload to be an important predictor of job stress for correctional officers. Similarly, shiftwork has also been associated with an array of negative health outcomes for officers (Cheek & Miller, 1983; Finn, 2000) and may adversely impact officers’ cognitive, emotional and motor functioning (Swenson et al., 2008).

In summary, examination of the extant literature relating to the working conditions, roles and duties of the contemporary correctional officer reveals there are a range of challenges within the correctional work environment that may contribute to a sense of workplace adversity for officers. These workplace challenges have been recognised and reflected upon within the current scientific literature (Dowden & Tellier, 2004) and documented in many industry reports and evaluations examining the realities
of working as a correctional officer (see e.g., Brower, 2013; Finn, 2000; Inspector of Custodial Services, 2014; UK Justice Committee, 2015). However, not all correctional officers are impacted similarly by the workplace challenges they face. The following section introduces the concepts of objective and perceived adversity to provide some understanding as to why officers may be impacted differently by their working environment.

2.4.1 Objective Vs. Perceived Adversity

Section 2.3 of this thesis highlighted the fact that correctional officers work within what could be described as an ‘objectively adverse’ working environment. Furthermore, the following sections will expand on this notion by outlining how working within a correctional environment can negatively impact the psychological and physical health of officers. However, it is important to note that not all correctional employees are negatively affected in the same manner or to the same extent by the adversity they face at work (see e.g., Keinan & Malach-Pines, 2007; E. G. Lambert, Hogan, & Tucker, 2009). This is also true of individuals working in other high-risk occupational settings such as the police (see e.g., R. Jones, 2005), military (see e.g., Hourani, Williams, & Kress, 2006) and emergency services (see e.g., Wagner, Heinrichs, & Ehlert, 1998). Lazarus and Folkman’s (1984) cognitive theory of stress and coping may provide some insight into these findings.

Examination of the extant literature relating to the concept of stress indicates that it is difficult to clearly discern whether true stress is a product of what the individual perceives or what occurs objectively within their environment (Hobfoll et al., 1998). In line with Lazarus and Folkman’s (1984) cognitive theory of stress and coping, research indicates that it is not simply the level of objective adversity in correctional settings that impacts correctional officers but also their appraisal of the level of adversity within their environment that matters. For example, research has demonstrated that perceived dangerousness (Dowden & Tellier, 2004; Grossi, Keil, & Vito, 1996; Hartley et al., 2012; Moon & Maxwell, 2004) and perceived threat (Senol-Durak, Durak, & Gençöz, 2006; Sui et al., 2014) have been associated with job stress and negative psychological outcomes for correctional officers. These findings suggest that the examination of perceived workplace adversity may be a particularly important factor that warrants further investigation in relation to correctional officers.
For the purposes of this thesis Lazarus and Folkman’s (1984) cognitive theory of stress and coping will be used to help conceptualise the potential relationship between workplace adversity and the occurrence of negative outcomes for both the correctional officer and the organisations that employ them. Specifically, it is theorised that perceived workplace adversity will impact correctional officers, resulting in the emergence of stress reactions and in turn impacting the psychological wellbeing of officers and impacting the organisations that employ them (see Figure 1 for a visual representation of this conceptualisation). The following section will examine the potential impacts of work-related stress on our society and specifically in relation to the correctional industry and individual correctional officers.

![Conceptualisation of relationship between perceived workplace adversity, stress reactions, psychological wellbeing and organisational impacts](image)

*Figure 1. Conceptualisation of relationship between perceived workplace adversity, stress reactions, psychological wellbeing and organisational impacts*

### 2.5 The Impact of Work-related Stress

The information provided within section 2.4 has highlighted some of the ways that the correctional working environment can be objectively challenging, requiring correctional officers to continually manage a range of complex workplace difficulties that can result in heightened work-related stress (Finn, 1998; W. Morgan, 2009). Unfortunately, accurately estimating the true cost of work-related stress remains an exceptionally difficult task (Cox et al., 2000). Despite this, it is largely accepted that global costs of work-related stress are extremely high and continue to grow (EU-OSHA, 2014). To gain an understanding of the overall magnitude of the impact and cost of work-related stress one might consider its far-reaching effect across societal, industrial and individual levels. The following sections provide a brief review of the literature in relation to work-related stress and its impact on each of these distinct yet inter-related...
levels (see Table 14 included in the thesis appendices for summary of work-related stress impacts).

2.5.1 Societal Impact

Work-related stress has been widely accepted as a global problem (International Labour Organization, 2016) resulting in high and ever increasing national financial costs (EU-OSHA, 2014; MacKay, Cousins, Kelly, Lee, & McCaig, 2004). It has been argued that nations are financially impacted by work-related stress through loss of workforce productivity owing to employee absenteeism and presenteeism (i.e., the practice of coming to work despite being unfit to do so, resulting in reduced productivity; Guthrie, Ciccarelli, & Babic, 2010), increased workers compensation claims in relation to stress (Medibank Private, 2008), and through increased costs and resource burden to national health systems due to stress-related health conditions (Bejean & Sultan-Taieb, 2005).

For instance, in a study examining workforce absenteeism in the US, Elkin and Rosch (1990) estimated that over 550 million working days are lost each year due to absenteeism alone, 54% of which were considered to be due to work-related stress. European estimates appear to return similar findings with a recent report stating that around 40 million workers are affected by work-related stress in the European Union alone, with work-related stress contributing to more than half (50-60%) of all lost working days (EU-OSHA, 2014). Likewise, UK approximations infer substantial productivity losses with one report estimating more than 40 million working days lost per year due to stress-related disorders (J. R. Jones, Hodgson, Clegg, & Elliot, 1998). In a recent Australian report commissioned by Medibank Private, it was estimated that stress-related presenteeism and absenteeism resulted in $10.11AUD billion per annum in direct costs to employers, a labour productivity loss of 1.36% and an estimated 3.2 days lost per worker every year nationally (Medibank Private, 2008).

However, financial approximations of the cost of work-related stress on a societal level vary markedly across nations and appear largely influenced by the manner in which they are calculated and contingent on the factors included or excluded from estimation (Cox et al., 2000). Nevertheless, recent estimates have suggested work-
related stress to have cost approximately £30.3 billion in the UK (Centre for Mental Health, 2010), €29.2 billion in Germany (EU-OSHA, 2014), between €1.9 and €3 billion in France (EU-OSHA, 2014), $14.8AUD billion in Australia (Medibank Private, 2008), between $2.3 and $14.7DKK billion in Denmark (EU-OSHA, 2014) and upwards of $300USD billion in the US every year (Rosch, 2001). These concerning financial estimates provide some insight into the substantial and detrimental impact work-related stress can have at a societal level and highlight the need for new methods to address this global issue.

2.5.2 Correctional Industry Impact

In addition to the identified societal costs, work-related stress results in a substantial burden at an industry-level. This burden is reflected in high financial costs and substantial productivity loss incurred by employing organisations (EU-OSHA, 2014). The correctional industry is one occupational field that has identified work-related stress as a significant and pervasive problem warranting attention (Marzuki & Ishak, 2011). It is estimated that work-related stress may be particularly high in correctional officer groups (S. Johnson et al., 2009), with one study reporting up to 37% of correctional officers experience substantial job stress and burnout (Bourbonnais, Malenfant, Vézina, Jauvin, & Brisson, 2005). In fact, research comparing correctional officers to police officers has found that correctional officers report significantly more work-related stress and burnout (Keinan & Malach-Pines, 2007; Summerlin, Oehme, Stern, & Valentine, 2010). Furthermore, there is some evidence that workplace stress and job strain have continued to increase for correctional officers over time (Bourbonnais, Jauvin, Dussault, & Vézina, 2007).

Research indicates that heightened work-related stress in correctional officers may result a number of negative consequences for the institutions that employ them, potentially leading to organisational issues that hinder the effective and safe operation of correctional facilities (E. G. Lambert, Edwards, Camp, & Saylor, 2005; E. G. Lambert, Hogan, & Altheimer, 2010). These include high rates of absenteeism (Dowden & Tellier, 2004; E. G. Lambert et al., 2005), burn-out (Finney et al., 2013; Gould, Watson, Price, & Valliant, 2013; Schaufeli & Peeters, 2000), high officer turnover (Finn, 1998; Lambert et al., 2010), and low levels of job satisfaction (Mahfood et al., 2013). Furthermore, research also suggests that correctional organisations can be
negatively impacted by a range of additional direct and indirect costs (Stohr et al., 1992) including increased overtime payments and staff shortages due to absenteeism, excessive training costs due to high staff turnover rates and reduced staff productivity (E. G. Lambert et al., 2005, 2010; Tewksbury & Higgins, 2006). Correctional officer stress has also been associated with reduced organisational commitment (Dowden & Tellier, 2004), reduced institutional safety (Finn, 2000) and decreased job involvement (E. G. Lambert & Paoline, 2010). These organisational impacts may have numerous negative financial and safety implications for correctional institutions.

Additionally, statistics indicate that correctional systems are faced with high sickness levels amongst correctional officers. For example, the average number of working days lost in the UK correctional industry due to staff sickness in 2012-13 was 10.5 days, an increase on the 9.8 days lost in 2011-12 (Ministry of Justice, 2013). These figures are particularly high compared to the estimate of 6.8 days across all other sectors in 2011-12 (Churchard, 2012). Moreover, research indicates that correctional officer stress is one factor that has been linked to increased use of sick days (Finn, 1998).

### 2.5.3 Individual Officer Impact

Work-related stress can have serious effects on an individual’s health and wellbeing (Chandola et al., 2008; Kirkcaldy, Cooper, & Ruffalo, 1995; McCraty, Atkinson, Lipsenthal, & Arguelles, 2009; Tennant, 2001). Considering the potentially stressful work environment of correctional officers, it is perhaps not surprising that they have been shown to be highly vulnerable to a wide range of negative physical and psychological conditions, when compared to individuals in other occupations (Ghaddar et al., 2008; Goldberg et al., 1996; S. Johnson et al., 2005, 2009). The following sections provide a brief review of what is currently known in relation to the many physical and psychological health risks facing correctional officers.

#### 2.5.3.1 Physical health issues

Examination of the extant literature reveals there is evidence that correctional officers may be at a heightened risk of experiencing a range of stress-related physical health conditions (Dollard & Winefield, 1998; Finn, 1998). For example, correctional officers have been found to be at a heightened risk for heart disease (Calvert, Merling, & Burnett, 1999) and hypertension (Anson et al., 1997; Cheek & Miller, 1983;
For instance, in a study of 335 correctional officers, Morse, Dussetschleger, Warren and Cherniack (2011) found that officers were substantially more likely to experience hypertension (31% male officers, 25.8% female officers) compared to national norms (17.1% males, 15.1% females). Additionally, officers have been shown to suffer from substantially higher rates of obesity, compared to the national average (Ferraro, Faghri, Henning, & Cherniack, 2013; Webster, Porritt, & Brennan, 1983). For example, one study exploring the physical health of US correctional officers reported high obesity rates (62% female officers, 56% male officers) compared to the national rate of 32% in the general population (Morse et al., 2011). In addition, research has indicated that correctional officers are at a high risk of musculoskeletal disorder symptoms, with symptom prevalence being related to increased exposure to psychosocial stressors (Warren, Dussetschleger, Punnett, & Cherniack, 2015). Likewise, chronic pain has been shown to be prevalent in correctional officer groups, with one recent study reporting 48% of the 152 Irish officers surveyed reported experiencing chronic pain (Costello, Bogue, Sarma, & McGuire, 2015).

2.5.3.2 Psychological health issues

Work-related stress has been identified as an important determinant of many psychological health issues and mental disorders (Levi, 2005; Tennant, 2001). Furthermore, research indicates that correctional staff are at a heightened risk of mental health concerns, than those in other occupations (Goldberg et al., 1996). For instance, correctional officers are at a heightened risk of experiencing depression and depressive symptomology (Bourbonnais et al., 2007; Samak, 2003). For instance, in a study involving 4,587 correctional staff, it was found that 24% of the sample met diagnostic criteria for depression (Goldberg et al., 1996). Likewise, Obidoa and colleagues (2011) found a similar rate of depression (31%) within their sample of 220 correctional officers. Furthermore, these findings are generally supported across officer specific samples, with some studies providing evidence that frontline officers have a particularly high prevalence rate of depression and depressive symptomology (Denhof & Spinaris, 2013; Liu, Hu, Wang, Sui, & Ma, 2013; Samak, 2003; Sui et al., 2014).

Moreover, high rates of PTSD and post-traumatic symptoms have also been identified in correctional officer samples (Spinaris, 2014). For example, in a study of 3,599 corrections professionals it was found that 27% of respondents met criteria for PTSD (Spinaris et al., 2012). Furthermore, this rate was higher for those working in
security/custody roles, with the highest estimated rate of PTSD reported by male security/custody staff (34%). In a recent study of depression and PTSD comorbidity in 3,599 US correctional officers, Denhof and Spinaris (2013) found that rates of depression, PTSD and comorbid depression/PTSD far exceeded that found in the general population and in military veterans, with 67% of those with depression also meeting criteria for PTSD.

Furthermore, correctional officers may also be particularly vulnerable to experiencing anxiety and anxiety-related symptoms (Goldberg et al., 1996) and it has been suggested this may inflate the association between work-stressors and psychological distress (Dollard & Winefield, 1995). For instance, there is some evidence that officers working with dangerous inmates may be particularly susceptible to state-based anxiety (Tsirigotis, Gruszczyński, & Pęczkowski, 2015).

In addition, research indicates that work stress may be associated with a range of negative social and emotional impacts for correctional officers including decreased life satisfaction, reduced frequency and quality of both positive social interactions and relationships (E. G. Lambert et al., 2010), and an increase in work-family conflict (Finn, 1998). For instance, in a study of 335 correctional officers, Morse and colleagues (2011) found 40% of respondents reported feeling emotionally drained after finishing work and 44% reported being worn out and weary after work. Additionally, past research has indicated that work stress and burnout in correctional officers may be associated with increased internal withdrawal and an inability to cope with traumatic experiences (Møller et al., 2007).

Correctional officers may be more likely than others to engage in a range of stress-related problematic behaviours. For example, research indicates that correctional officers may be more likely to engage in problematic alcohol consumption, illicit drug use (Bierie, 2012; Freeman, 1998; Møller et al., 2007; Svenson et al., 1995; Weir, Stewart, & Morris, 2012; Woodruff, 1993a) and be prone to experiencing recurrent sleep disorders (Goldberg et al., 1996). Of greatest concern however, is the fact that there is some evidence that correctional officers may be at a heightened risk of suicide and self-harm (see e.g., W. Morgan, 2009; New Jersey Police Suicide Task Force, 2009; Stack & Tsoudis, 1997). More specifically, Stack and Tsoudis (1997) explored officer suicide rates by examining the death certificates throughout 21 US states. They found that 7.14% of correctional officer deaths had been attributed to suicide, as compared to 4.5% of the deaths of those working in all other occupations. After controlling for
marital status, age, gender, race and educational level, officers were found to be at 39% higher risk of suicide than the rest of the working population. In line with these findings, the New Jersey Police Suicide Task Force (2009) identified a suicide rate of 34.8 per 100,000 male correctional officers (aged 25-64 years old) as compared to the rate of 14 per 100,000 men of equivalent age in the general population.

In summary, the burden of work-related stress on our society, the correctional industry and correctional officers themselves appears substantial and represents an area in need of additional scientific attention. To effectively minimise the negative impact of work-related stress, employers need to identify its antecedents and explore ways of assisting employees to manage the impact of workplace adversity. To meet this goal a collaborative approach is needed that can bridge the gap between research and industry so as to ensure that organisational responses to the problem of work-related stress remain evidence-based and informed by best-practice principles.

2.6 New Frontiers in Responding to Work-related Stress

Despite the fact that work-related stress presents a substantial problem for employees, employers and the community, it is only more recently that organisations and industries have begun to look for ways to effectively address the issue (Cox et al., 2000). For instance, in an examination of occupational health issues across Europe it was found that despite work-related stress being identified as a key occupational health issue for employers, only half of those surveyed reported informing their workers of psychosocial stressors and the potential for associated negative health outcomes. Furthermore, less than a third of employers surveyed reported having services implemented to manage the work-related stress of employees (González, Cockburn, & Irastorza, 2010).

However, over the past few decades, this identified gap between the needs of employees and the provision of adequate organisational services has begun to close (McCarthy, Almeida, & Ahrens, 2011), with work-related stress interventions becoming increasingly prevalent across most occupational fields including within corrections (Cox et al., 2000; EU-OSHA, 2014; Finn, 2000). The implementation of such programs has been further encouraged by an emerging body of research providing evidence that work-related stress interventions can be both cost-efficient and effective in reducing the
negative effects of stress on employees (van der Klink, Blonk, Schene, & van Dijk, 2001).

Early interventional attempts to address work-related stress have tended to be reactive in nature, designed to provide assistance to employees once identified as experiencing psychological distress or once identified as impaired by psychological symptoms (Millie & Das, 2008). More recently however, the high cost of workplace-related mental health problems has led to the recommendation that employers move from a reactive approach to addressing psychosocial conditions, to a more proactive approach designed to promote employee wellbeing (Joyce, 2013). Consequently, there has been a growing shift toward developing proactive or preventative organisational initiatives designed to assist employees to maintain their wellbeing (Reynolds, 1997). This shift toward the development of preventative initiatives may be at least partly explainable by the concurrent theoretical shift observed within the field of psychology.

Emerging from the discipline of medicine, the field of psychology has traditionally adopted what could be described as a ‘medical model’ approach to its inquests, focussing predominantly on the examination of psychopathology and mental illness (Anthony, 1987). However, it has been argued that this adherence to the traditional approach has impacted the very nature of psychological research (Seligman & Csikszentmihalyi, 2000), resulting in an emphasis on research examining negative psychological phenomena. Consequently, much of the early psychological literature exploring managing the issue of work-related stress has tended to focus on symptom reduction rather then symptom prevention.

Over the past few decades however, the field of psychology has continued to develop and grow, displaying signs of departing from its traditional focus on pathology and illness. In fact, there has been a notable surge in interest in examining individuals who are able to achieve positive outcomes (e.g., mental wellbeing) despite exposure to factors known to increase the risk of poor outcomes (Cicchetti, 2003; Luthar et al., 2000; Luthar & Cicchetti, 2000; Masten & Coatsworth, 1998). The emergence of the field of positive psychology (Seligman & Csikszentmihalyi, 2000) and the surge in psychological wellbeing research has in turn led to the development and increased implementation of proactive and preventative solutions to the issue of work-related stress that aim to assist employees to maintain their psychological wellbeing. However, there still remains a paucity of empirical research that can inform the development of such initiatives.
2.6.1 Conceptualising Psychological Wellbeing

Over the past few decades there has been a substantial increase in research examining the concept of psychological wellbeing (Seligman & Csikszentmihalyi, 2000). However, despite this surge in empirical interest, debate continues over how to best conceptualise the concept (Dodge et al., 2012). It has been argued that early conceptualisations of psychological wellbeing emerged from the more general movement to de-medicalise the concept of health by encouraging the acceptance of a wider range of contributing factors than simply the presence or absence of infirmity, disease and illness (Statham & Chase, 2010). Most contemporary understandings of the concept of psychological wellbeing require both the absence of markers of negative states of being (such as stress, distress and pathology) and the presence of positive states of being such as life satisfaction, contentment and a sense of thriving (Keyes, 2015). However, Dodge and colleagues (2012) argue that such conceptualisations of wellbeing focus purely on the dimensions of wellbeing (that which is quantifiable) rather than its definition. To address this issue, Dodge and colleagues (2012) posited that psychological wellbeing may be better conceptualised as a dynamic state of balance between an individual’s resource pool and challenges faced, a state that may be quantifiable by establishing; a) the absence of negative factors such as psychological distress and b) the presence of positive factors that indicate an individual is thriving (e.g., the presence of positive affective states and sense of contentment).

Furthermore, research examining the concept of psychological wellbeing in occupational settings and how to best assist an employee to maintain their sense of wellbeing have become increasingly prevalent (Mäkikangas, Kinnunen, Feldt, & Schaufeli, 2016; Sparks, Faragher, & Cooper, 2001). In fact, the relationship between the psychosocial work environment and employee wellbeing has been well established (Nieuwenhuijsen, Bruinvels, & Frings-Dresen, 2010). It is largely agreed that environmental factors found within the workplace can negatively impact the wellbeing of employees both physically (Kivimäki et al., 2012; S. E. Taylor, Repetti, & Seeman, 1997) and psychologically (Stansfeld & Candy, 2006). However, additional research is needed to gain a better understanding of psychological wellbeing within correctional
environments and to better understand how correctional organisations can foster wellbeing within the correctional workforce.

### 2.6.2 Correctional Officer Psychological Wellbeing

The psychological wellbeing of correctional officers is an important issue that warrants the attention of both the profession and researchers (Marzuki & Ishak, 2011; Trounson & Pfeifer, 2016). Although negative health impacts have been observed across a broad range of occupational environments (Langan-Fox & Cooper, 2011), the correctional work environment is one occupational setting that continues to demonstrate substantial negative impact on employee wellbeing (Dowden & Tellier, 2004).

In contrast to the substantial literature establishing the prevalence of pathology in correctional officers, a review of the research indicates there are comparatively few studies exploring the specific concept of psychological wellbeing in correctional officer samples (Brower, 2013; Kinman, Clements, & Hart, 2014). Furthermore, despite a few notable exceptions (see e.g., Aube, Rousseau, Mama, & Morin, 2009; Botha & Pienaar, 2006), the majority of studies that purport to examine the concept of psychological wellbeing have explored the concept by simply measuring markers of pathology and subsequently inferring psychological wellbeing through the absence of markers of pathology and illness (see e.g., Bierie, 2012). Consequently, in comparison to the substantial knowledge in relation to negative health outcomes for correctional officers, little is known about the factors that may assist correctional officers in fostering and maintaining psychological wellbeing from a proactive perspective. This thesis aims to assist in filling this gap in the literature. The following section provides a summary of what is currently known in relation to correctional officer responses to stress and how officer responses may assist or impede them in the management of workplace adversity.

### 2.6.3 Past Research Examining Correctional Officer Responses to Adversity

The scientific literature relating to coping with and responding to adversity indicates that an individual’s response to adverse events is a critical mediator of the relationship between adversity and the eventuation of negative health outcomes (Folkman et al., 1986; R. Jones, 2005; Lazarus & Folkman, 1984). More specifically, it has been argued that the inability to cope effectively can lead to stress and both negative health and organisational outcomes (Cox et al., 2000). However, in contrast to the
substantive literature that examines the concepts of coping and responding to adversity, comparatively little is known regarding how correctional officers respond to the workplace adversity they experience. This section outlines what is currently known regarding how correctional officers respond to workplace adversity.

Overall, review of the limited research examining correctional officers’ responses to workplace adversity provides mixed results (Gould et al., 2013; Triplett, Mullings, & Scarborough, 1996). For instance, in a study exploring correctional officer coping strategies and their impact on burnout, Gould and colleagues (2013) found that dysfunctional coping mechanisms (e.g., behavioural disengagement and venting) were related to increased burnout and that problem-focused coping was related to lower burnout ratings of emotional exhaustion. In contrast, Triplett et al. (1996) found that problem-focused responses were ineffective in reducing officer stress and that emotion-focused strategies were helpful in reducing burnout.

Additionally, Cieslak, Korczynska, Strelau and Kaczmarek (2008) found that emotion-focused coping may be unhelpful to officers by demonstrating its relationship with increased emotional exhaustion and lowered personal accomplishment. In contrast, task-oriented coping was associated with increased personal accomplishment. Furthermore, it was found that the effect of work stressors on burnout was mediated by the use of both social support and emotion-focused coping. In addition, in their review of the literature relating to correctional officer stress and burnout, Schaufeli and Peeters (2000) reported that the most common coping strategies used by officers were passive and indirect in nature, such as refusing to talk about work, reading and reducing on-the-job involvement rather than actively tackling their problems. Furthermore, Dollard and Winefield (1998) extended these findings to demonstrate that longer serving correctional officers were more likely to use passive coping strategies than shorter serving officers.

Moreover, in a qualitative study of UK correctional officer responses to repetitive, non-suicidal self-harm using semi-structured interviews, Marzano, Adler and Ciclitira (2013) found that officers reported using psychological detachment as a coping mechanism for dealing with the associated adversity. In addition, in a qualitative study of sex offender treatment providers in Australia, a number of coping strategies were identified that were used specifically when dealing with the impact of working with sex offenders (Hatcher & Noakes, 2010). These included a range of professional and personal strategies such as talking to colleagues, self-care behaviours, exercise and both
cognitive and affective responses. However, it should be noted that these responses were derived from therapeutic correctional staff not correctional officers.

These contrasting findings across numerous studies indicate that there is still much to learn regarding correctional officer responses to workplace adversity. Furthermore, it is likely that officers respond differently in different contexts. This contention is supported by a recent study which found that officers working in different working environments may vary in the way they respond to stress and the effectiveness of these responses (Tsirigotis et al., 2015). Furthermore, it should be noted that most of the studies examining correctional officer responses to adversity have employed quantitative designs that utilise self-report measures to acquire information regarding the coping strategies used by officers. Though the use of standardised measures provides many important research benefits, the use of prescribed questionnaires precludes officers from providing information regarding their use of response strategies that may lie outside of the parameters of the measures employed. More simply, it is possible that valuable information regarding correctional officer responses to workplace adversity may be obscured by the exclusive use of quantitative methods and the use of psychometric measurement tools that have been developed using non-correctional officer samples. The conduct of additional qualitative research may provide us with a better understanding of the true breadth of responses that officers turn to when managing workplace adversity.

2.7 The Present Investigation

This literature review demonstrates that the issue of correctional officer psychological wellbeing is one that deserves continued scientific attention. Furthermore, review of the existing literature relating to the working environment of correctional officers indicates that they work within a challenging, stressful and unique occupational setting. Moreover, previous research suggests that officers are at a heightened risk of experiencing many adverse physical and psychological conditions relating to their employment. Correctional organisations also experience a range of problems relating to the employment of officers including high rates of absenteeism, presenteeism (i.e., being physically present at work but not mentally attentive) and job dissatisfaction, which previous research has linked to burn-out and staff turn over. It is recognised that the correctional industry has taken substantial and proactive steps toward addressing
these issues through the implementation of various staff training initiatives worldwide. However, more empirical research is needed that examines correctional officers’ perceptions of adversity at work, how they respond to this adversity and how this can impact their psychological wellbeing and the functioning of the organisations that employ them. The present investigation aims to address this gap in the literature by empirically examining the level of perceived workplace adversity experienced by correctional officers and to determine its impact on officer psychological wellbeing. Furthermore, the present investigation aims to provide new information regarding how correctional officers respond to workplace adversity and how these responses may impact officer psychological wellbeing and the organisations that employ them.

2.8 Research Aims

A number of specific research aims were generated to guide the dissertation in addressing the larger thesis goal outlined in Chapter 1 (see section 1.2). Each research aim was chosen to build systematically so as to provide a deeper empirical understanding of correctional officers’ perception of workplace adversity, their responses to workplace adversity and how these factors impact the psychological wellbeing of officers and the organisations that employ them. The research aims presented in the following sections form the basis for the specific hypotheses outlined in the empirical studies described later in chapters 4, 5 and 6.

2.8.1 Research Aim 1: Identify if Correctional Officers Perceive High Levels of Workplace Adversity and whether this Results in Stress Reactions

The first research aim of this thesis was to clearly identify if correctional officers perceive a high level of workplace adversity and whether this heightened perception of workplace adversity is associated with stress reactions. Although past research indicates that working as a correctional officer can be challenging and that officers are at a heightened risk of experiencing a number of negative health impacts, there is currently little empirical research that demonstrates that correctional officers actually perceive their working environment as highly adverse (Dowden & Tellier, 2004). Furthermore, there is little empirical evidence that establishes whether perceived workplace adversity is associated with the development of stress reactions for correctional officers. This research aim will be addressed by establishing empirical
evidence that; a) correctional officers perceive their working environment as substantially more adverse than those working in other professions found within the general community, and b) a heightened perception of adversity in the workplace is associated with increased stress reactions. Study 1 was designed to address this specific research aim and is presented in Chapter 4 of this thesis.

2.8.2 Research Aim 2: Identify Which Adversity Factors Contribute to Correctional Officers’ Perceptions of Workplace Adversity

It has been argued that some stress related disorders may be preventable by identifying specific workplace adversity factors that impact employees and using this information to improve the psychosocial work environment (Nieuwenhuijsen et al., 2010). In their systematic review of the work environment and the development of stress related disorders, Nieuwenhuijsen and colleagues (2010) concluded that more research is needed that can identify such pertinent workplace adversity factors. Correctional officers work within a unique occupational environment that may present a unique set of adversity factors. Few studies have empirically examined which adversity factors contribute to officers’ perceptions of workplace adversity. To fill this gap in the literature and provide a deeper empirical understanding of what makes the correctional environment adverse for officers, research aim 2 of this thesis was to identify specific adversity factors that contribute to correctional officers’ perceptions of workplace adversity. Study 1 of this thesis addressed this research aim and is presented in Chapter 4.

2.8.3 Research Aim 3: Identify How Officers Respond to Perceived Adversity

Although much is known regarding the negative health outcomes experienced by correctional officers, little research has attempted to empirically explore the range of ways correctional officers respond when attempting to manage the adversity they face in the workplace. Furthermore, of the research available that has attempted to examine correctional officer responses to workplace adversity, no studies were identified that drew upon the expertise of officers by directly asking them to identify the types of responses they believed officers used when attempting to manage the adversity they face at work. Research aim 3 aimed to fill this gap in the literature by using a qualitative design to identify the breadth of ways that correctional officers manage the adversity
they face at work. Study 2 was designed to specifically address this research aim and is presented in Chapter 5 of this thesis.

2.8.4 Research Aim 4: Determine whether an Empirical Link Exists Between Perceived Workplace Adversity, Psychological Wellbeing and Negative Organisational Impacts

Determining the existence of a meaningful empirical link between each of the overarching thesis concepts is an important step in building a cohesive and robust thesis providing legitimacy to the broader thesis findings. Demonstrating an association between the concepts of perceived workplace adversity, psychological wellbeing and the eventuation of negative organisational impacts fills an important gap in the literature. No empirical study to date has empirically examined the relationship between perceived workplace adversity, psychological wellbeing and range of negative organisational impacts such as absenteeism, presenteeism and job dissatisfaction using predictive modelling techniques. A clearer understanding of the relationship between these factors may have implications for the development of interventions and provide additional empirical justification for the correctional industry to implement interventional initiatives. Therefore, research aim 4 was to identify a clear empirical link between perceived workplace adversity, officer psychological wellbeing and negative organisational impacts. Study 3 addressed this research aim and is presented in Chapter 6 of this thesis.

2.8.5 Research Aim 5: Identify if Officers Employ Specific Response Styles When Managing Workplace Adversity

To gain a deeper understanding of how officers respond to workplace adversity this thesis aims to build upon the findings of Study 2 by identifying whether officers gravitate toward different response styles when managing workplace adversity. Empirically identifying the existence of a set of latent correctional officer response styles would add to the existing literature relating to employee management of workplace adversity within correctional settings. Therefore, research aim 5 was to identify if officers gravitated toward particular response styles when managing workplace adversity, and if so, clarify which response tendencies characterised each of
these response styles. This research aim was addressed by Study 3 and is presented in Chapter 6 of this thesis.

2.8.6 Research Aim 6: Explore if Officer Response Style Impacts the Relationship Between Perceived Workplace Adversity, Psychological Wellbeing and Organisational Impacts

Examination of the extant literature revealed that there are few studies that can provide a deep empirical understanding of whether an officer’s response style can ameliorate or exacerbate the potential negative psychological effects of perceived workplace adversity. Furthermore, there have been few empirical investigations conducted that examine how perceived workplace adversity and officer responses to workplace adversity impact the organisations that employ them. Therefore, research aim 6 was to determine whether an officer’s response style moderates the relationship between perceived workplace adversity and officer psychological wellbeing, and whether this can in turn affect the organisation for which they work. Study 3 was designed to specifically address this research aim and is included in Chapter 6 of this thesis.
CHAPTER 3: METHODS
3.1 Chapter Guide

This chapter is included to provide the reader a detailed understanding of the study designs and methodologies of each of the three empirical chapters that comprise this thesis. Each empirical chapter has been written for publication in a peer-reviewed scientific journal and are either published, in press or currently under review with consideration to publish. Publication requirements and restrictions regarding manuscript length preclude high levels of detail in relation to the study designs, ethical procedures, measures used, recruitment processes and study procedures within each article. Therefore, this chapter provides additional information not included within each of the empirical studies. This chapter also functions to outline how the empirical studies inter-relate and function collectively to address the thesis goal outlined in Chapter 1 (section 1.2) and the research aims stated in Chapter 2 (section 2.8). This is included to give the reader a better sense of how the three empirical papers comprising the research component of the thesis combine to form a cohesive narrative and create an integrated and substantial research contribution to the fields of psychology and corrections.
3.2 Overview of Method and Design

Overall, this thesis was designed to address a specific research goal. That is, to provide a new level of empirical insight into how correctional officers perceive and manage workplace adversity, and to utilise this empirical evidence to explore how officer responses to perceived workplace adversity may impact their psychological wellbeing and in turn the organisations that employ them. To achieve this overarching goal this dissertation addressed a number of research aims; 1) to determine whether correctional officers perceive a higher level of workplace adversity than those in other occupational fields, 2) to identify which adversity factors contribute to correctional officers’ perceptions of workplace adversity, 3) to explore how officers respond to workplace adversity, 4) to determine whether an empirical link between perceived workplace adversity, officer wellbeing and a range of negative organisational impacts that face the correctional industry, 5) to determine whether officers employ specific response styles when managing workplace adversity, and 6) to explore if an officers’ response style moderates the relationship between perceived workplace adversity and psychological wellbeing, in turn impacting the organisations that employ them. The empirical studies included within the following chapters worked collectively to achieve these research goals.

The three studies that are presented within this thesis involved the participation of a total of 672 individuals across three distinct study samples. Participants included members from the general Australian population and those working in specialised occupational fields such as the police, emergency services, military and correctional services. Overall, this thesis included the participation of a total of 264 correctional officers working in facilities in Australia, US, UK, Canada, Denmark and Sweden. Both quantitative and qualitative methodologies were used in this thesis and a range of data collection methods were also employed so as to attain a rich depth of information. This included the conduct of online surveys, paper-and-pen surveys, focus group discussions and semi-structured interviews. A breadth of statistical analysis was also used to explore the data collected across the three studies. This included the conduct and interpretation of multiple between-groups ANOVA’s, Confirmatory Factor Analysis (CFA), Exploratory Factor Analysis (EFA), Structural Equation Modelling (SEM) and Thematic Analysis (TA). These statistical methods were conducted using a range of specialised software packages including recent versions of SPSS, Mplus and Nvivo.
3.3 Study 1

Study 1 aimed to provide a new level of empirical insight into how correctional officers perceive workplace adversity. The study was designed to do so by specifically addressing research aims 1 and 2 of this thesis. To achieve this end the study attempted to provide empirical evidence that correctional officers perceive their working environment as significantly more adverse than those working across a range of professions commonly found within the general community. Second, this study aimed to further address research aim 1 by demonstrating that correctional officers perceived a level of workplace adversity analogous to those working in other high-risk/high intensity workplaces such as police, military and the emergency services. Third, by determining if the perception of workplace adversity was in fact linked to the experience of stress reactions and to explore if this relationship was stronger for correctional officers than for those working in other occupational environments. Finally, this study aimed to address research aim 2 by clarifying which adversity factors contributed to correctional officers’ heightened perception of workplace adversity.

Providing evidence that correctional officers perceive their working environment as particularly adverse and demonstrating that this heightened perception of adversity is linked to increased stress and stress reactions would add to the existing literature. Furthermore, identifying which specific adversity factors contribute most to a heightened perception of workplace adversity for officers provides the scientific community and correctional industry with a deeper understanding of why working as an officer can be so psychologically challenging. These identified adversity factors may also provide relevant discussion points to build upon when discussing the challenges of the job with officers in Study 2.

3.3.1 Experimental Design

After careful consideration of the study aims a cross-sectional design was selected as most appropriate for Study 1. The cross-sectional design allowed for the efficient collection of data from a large population of interest and the ability to do so at a low cost. The use of a quantitative design provided an avenue to attaining precise measures of the study variables and facilitated the generalisability of the findings. Data collection was conducted using a self-report survey. An online survey method was
chosen as the most appropriate mode for data collection as it allowed for broad distribution and simplified data retrieval.

### 3.3.2 Recruitment Procedures

Participants were recruited through invitations to participate distributed through social networks, online discussion forums and web-based social utilities such as Facebook. A snowball sampling technique was also implemented as a secondary recruitment procedure. This was achieved by including a request within the invitation to participate for respondents to pass the invitation onwards to others who might be interested in participating in the study. It should be noted that some difficulty was experienced attaining an adequate sample size of correctional officers, police and military personnel through these recruitment strategies. To address this issue, permission was attained to make a set of announcements regarding the study at staff meetings within Port Phillip Prison, a maximum security correctional facility located in Victoria, Australia. Furthermore, announcements indicating the need for military personnel and police officers were made on web-based social networking sites such as Facebook. These strategies resulted in the acquisition of adequate sized samples of all occupational groups required for analysis. All participants were provided a consent information statement (Appendix D) prior to participation and consent was inferred by the submission of surveys.

### 3.3.3 Inclusion Exclusion Criteria

In line with recommendations, participants completing less than 70% of the survey measures were excluded from analysis (Tabachnick & Fidell, 2013). This resulted in the exclusion of 21 cases, resulting in a final sample size of 440. As part of the survey, respondents classified themselves into occupational categories. However, self-categorisation was checked for accuracy prior to analysis by comparing respondents’ reported job title with the self-selected occupational category. The method section of empirical Study 1 should be consulted for specific sample details.
3.3.4 Materials

This section provides a description of the measures used in Study 1. This is followed by a brief description of each measure. All materials relating to Study 1 can be seen in Appendix E and additional information regarding study materials can be found in the materials section of the empirical study provided in chapter 4.

3.3.4.1 Demographic

Respondents were asked a series of questions to attain necessary demographic information. This included items designed to establish participants’ age, gender, level of education, their level of seniority, job title, occupational category, and hours worked per week. The full list of demographic items can be found in Appendix E.

3.3.4.2 Work-related environmental adversity

The work-related environmental adversity scale (WREAS) was developed for the purposes of this study (see Appendix F for full 36-item measurement tool). After review of the work-based adversity measures available within the public domain it became apparent that no existing measure was able to be used cross-occupationally, was unconstrained to a single event and able to account for the expected response bias that may be present in correctional officer samples (see introduction of empirical Study 1 in section 4.2 of this thesis for more information regarding expected response bias). The WREAS was intentionally designed to reduce the type of response bias expected in correctional officer groups by encouraging respondents to consider their working environment from a depersonalised viewpoint, requesting respondents to appraise the nature of their working environment rather than report their personal stress reactions. Furthermore, the WREAS was designed to be used cross-occupationally and to provide a general measure of work-related adversity that is not limited to any single event. According to the results presented in Study 1, the WREAS demonstrated acceptable preliminary psychometric properties. A more detailed account of the development and refinement process of the WREAS can be seen in the results section of Study 1 in section 4.2 and within section 3.3.5.
3.3.4.3 Stress reactions

The Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983) was used to measure the level of perceived stress experienced by respondents. The 10-item version of the PSS used in this study has demonstrated good internal reliability (\( \alpha = .84 \) to .86) and good construct validity in past studies (Cohen, Tyrrell, & Smith, 1991, 1993; Cohen & Williamson, 1991). The PSS was administered in Study 1 for the following reasons. Firstly, to provide a measure of construct validity for the WREAS, offering preliminary evidence of convergent validity for the newly developed measure. Secondly, to establish the link between perceived work-related environmental adversity and stress reactions. Thirdly, to examine whether the association between perceived workplace adversity and perceived stress reactions were significantly stronger for correctional officers than for others working in different professional environments.

The stress sub-scale of the Depression Anxiety Stress Scale (DASS-21; Lovibond & Lovibond, 1995) was also used to measure respondents’ stress reactions. The DASS-21 is a well established, highly regarded measurement tool that has continually shown to be a reliable and valid measure of depression, anxiety and stress in past research (Antony, Bieling, Cox, Enns, & Swinson, 1998; Henry & Crawford, 2005; Sinclair et al., 2012). It was chosen as one of two stress measures to be used to demonstrate convergent validity for the WREAS. The DASS-21 stress sub-scale was also used in this study to establish a link between perceived workplace adversity and the experience of stress reactions for employees and to subsequently examine whether this association was stronger for correctional officers than for others working in other professional environments.

3.3.5 Methodological Considerations

A number of methodological considerations arose while designing and conducting this study that were not detailed in the empirical study presented in section 4.2 due to restrictions in manuscript length. This section provides a detailed account of the underlying scientific and theoretical processes that were not described within the empirical study presented in chapter 4 of this thesis.

As described in section 3.3.4 the WREAS was developed specifically to fulfil the needs of Study 1. Careful consideration was taken while developing the items proposed for inclusion in the WREAS. The item development phase involved the initial
identification of seven underlying dimensions of perceived workplace adversity. This process commenced with an examination of the existing literature relating to the concepts of environmental adversity and stress to identify a set of relevant factors that had; a) been previously associated with the experience of stress or adversity, b) been linked to workplace stress or adversity, and c) been examined across a range of occupational environments. Once identified, these factors were then screened to isolate those that were dynamic rather than static and that were also based on individuals’ perceptions of their work environment. This process resulted in the identification of seven factors or dimensions that were theorised as underpinning the concept of perceived workplace adversity. Each factor was then deconstructed theoretically to identify a set of underlying contributing conceptual components that were used to guide the generation of relevant factor items (see Table 1). Care was taken when generating the items to ensure each were reflective of their related factor while avoiding unnecessary redundancy by ensuring each item measured a different component of the specific dimension.
<table>
<thead>
<tr>
<th>Dimension</th>
<th>Conceptual Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Threat</td>
<td>i) Belief of workplace danger</td>
</tr>
<tr>
<td></td>
<td>ii) Belief of lack of safety</td>
</tr>
<tr>
<td></td>
<td>iii) The need for caution at work</td>
</tr>
<tr>
<td></td>
<td>iv) Specific threats in one's immediate environment</td>
</tr>
<tr>
<td>Environmental Unpredictability</td>
<td>i) Environmental uncertainty</td>
</tr>
<tr>
<td></td>
<td>ii) Inability to be prepared for workplace events</td>
</tr>
<tr>
<td>Action Consequence</td>
<td>i) That one has to be aware of one's actions and think carefully before acting</td>
</tr>
<tr>
<td></td>
<td>ii) That one's actions can have unwanted consequences</td>
</tr>
<tr>
<td></td>
<td>iii) That even small actions can have serious consequences</td>
</tr>
<tr>
<td></td>
<td>iv) That one's actions can affect one's safety or the safety of others</td>
</tr>
<tr>
<td>Need For Vigilance</td>
<td>i) Heightened fight/flight response</td>
</tr>
<tr>
<td></td>
<td>ii) Heightened nervous response</td>
</tr>
<tr>
<td></td>
<td>iii) Heightened fear of harm coming to oneself</td>
</tr>
<tr>
<td></td>
<td>iv) Heightened alertness</td>
</tr>
<tr>
<td>Expectation of Workplace Trauma</td>
<td>i) Expectation of distressing events</td>
</tr>
<tr>
<td></td>
<td>ii) Witnessing violent events</td>
</tr>
<tr>
<td></td>
<td>iii) Visually confronting situations</td>
</tr>
<tr>
<td>Inability to Achieve Workplace</td>
<td>i) Inability to relax at work</td>
</tr>
<tr>
<td>Respite</td>
<td>ii) Inability to get psychological respite at work</td>
</tr>
<tr>
<td></td>
<td>iii) Inability to leave the working environment physically</td>
</tr>
<tr>
<td></td>
<td>iv) Signs of lack of respite at the end of a shift</td>
</tr>
<tr>
<td>Workplace/Life Separation</td>
<td>i) Separating work and life</td>
</tr>
<tr>
<td></td>
<td>ii) Feeling constantly &quot;on call&quot;, bad emotions from work transferring to life</td>
</tr>
<tr>
<td></td>
<td>iii) Level to which your negative work experience colours your perceptions in your non work-life</td>
</tr>
<tr>
<td></td>
<td>iv) Level of identification with occupational role</td>
</tr>
</tbody>
</table>
Data was screened prior to conducting the statistical analyses outlined in the results section of the empirical paper presented in section 4.2. Firstly, data was screened for outliers and missing data. In addition, Little’s MCAR test was used to address the issue of missing values. Results indicated that the missing values were indeed Missing Completely at Random, $\chi^2 (3647) = 3738.73, p = .142$. Therefore, to best manage these missing values listwise deletion of cases was used throughout analysis (Tabachnick & Fidell, 2013). Basic data screening was also conducted on the 57 proposed items for the WREAS. Prior to examining the underlying factor structure of the 57 proposed WREAS items, all 57 items were initially screened for evidence of floor and ceiling effects, extreme standard deviation, and severe skewness and/or kurtosis to assess discriminability.

3.4 Study 2

Correctional officers work within a highly adverse work environment and are particularly susceptible to a range of negative health outcomes. Furthermore, the findings from Study 1 (see section 4.2) provided empirical evidence that correctional officers perceive their working environment as significantly more adverse than those in other occupations found within the general community and analogous to only those working in the police and emergency services. Despite these findings, there remains a need to identify the breadth of responses correctional officers employ when managing adversity at work. Few, if any studies have empirically explored the range of response tendencies employed by correctional officers and attempted to classify them dependent on whether they are interpersonally, cognitively or behaviourally based. Study 2 aimed to fill this gap in the scientific literature.

Study 2 was designed to specifically address research aim 3 of this thesis by drawing upon the knowledge, experiences and expertise of correctional officers to clarify the ways in which officers attempt to manage workplace adversity. This study also built upon the findings of Study 1 by drawing from the relevant findings in relation to correctional officer perceptions of workplace adversity to inform the design of the discussion prompts used to guide both the focus group discussions and semi-structured interviews (see Appendix G). The discussion prompts developed for Study 2 were designed to encourage participants to respond in regard to how they felt other officers addressed the different adversity factors specifically identified as contributing to
perceived workplace adversity for correctional officers in Study 1. Furthermore, Study 2 was designed to lay the foundations for Study 3 by identifying a range of officer-endorsed response tendencies that could be used to explore whether officers gravitated toward a particular response style when managing workplace adversity and to clarify which response style moderated the relationship between perceived adversity and officer wellbeing.

3.4.1 Experimental Design

In line with the decision process employed in Study 1, a cross-sectional design was selected as appropriate for Study 2. Due to the absence of existing research exploring how correctional officers respond to workplace adversity, it was deemed necessary to turn to the academic literature available within related occupational fields for guidance in regard to selecting the appropriate methodology. The police and emergency services sectors suffer many of the organisational and health-related problems that are common in the correctional industry such as high rates of physical and psychological illness (Keinan & Malach-Pines, 2007; Kirkcaldy, Cooper, Shephard, & Brown, 1994; Regehr, Goldberg, & Hughes, 2002) and related organisational impacts (Basinska & Wiciak, 2012; Kohan & Mazmanian, 2003). Furthermore, Study 1 provided evidence that correctional officers may face similar types of workplace adversity as those working within police and the emergency services sectors.

For these reasons it appeared appropriate to refer to the related scientific literature within both these fields as both have explored employee responses to stress and have done so within the constraints of their respective professions for a number of decades (Biggam, Power, & Macdonald, 1997; Kaiseler, Queirós, Passos, & Sousa, 2014; Kirmeyer & Diamond, 1985). From a methodological perspective, it is notable that many of the early attempts to build knowledge about workplace adversity within these fields are largely exploratory in nature, often utilising qualitative designs (i.e. focus groups and interviews) to initially explore the effect of the occupational environment on employee health and wellbeing (Gersons, 1989; L. Robinson & Gmeiner, 1998; Savery, Soutar, & Weaver, 1993). Furthermore, a qualitative approach is recommended in situations where little previous research has been conducted (Wilkinson, 2008; Willig, 2008) and when research may be primarily exploratory in nature (Patenaude, 2004).
Given the above, it was argued that a qualitative approach should be employed to identify and explore the response tendencies of officers in Study 2. According to Hesse-Biber and Leavy (2010), a qualitative design is appropriate when conducting exploratory research, allowing participants to provide a richness of data that is difficult to attain through quantitative methods. Furthermore, a mixed-method involving focus groups and semi-structured individual interviews was selected for Study 2 to gain both a breadth and depth of data. More specifically, the focus groups provided a breadth of data (Willig, 2008) while the semi-structured interviews provided additional depth, and functioned to confirm focus group discussion findings (Patenaude, 2004).

3.4.2 Recruitment Procedures

Invitations to participate were distributed using online noticeboards, social networks, social media utilities such as MySpace and Facebook and through targeted emails to individuals working within the correctional industry that had demonstrated interest in collaborating. Recruitment was also aided by operational staff at Port Phillip prison (a maximum security facility) in Victoria and Mt Gambier prison (a medium security facility) in South Australia. Both facilities allowed for focus groups and semi-structured interviews to be conducted onsite. Four focus groups were conducted at Port Phillip Prison and four at the Mt Gambier facility. Semi-structured interviews were conducted at both facilities. Due to necessary security constraints implemented across both facilities no audio equipment was allowed onsite. Therefore, all data were collected by hand in the form of research notes compiled by a secondary group facilitator. All participants were provided with a consent information statement and provided signed consent prior to participation (see Appendix H).

3.4.3 Inclusion Exclusion Criteria

All correctional officers that indicated interest in participation and who provided written consent were included in the study. Officers electing not to take part and those who did not complete and sign the consent form were not included in either the interviews or focus group discussions. It should be noted that officers who elected to take part in the initial focus group discussions were excluded from taking part in the subsequent individual interviews.
3.4.4 Materials

This section lists and briefly describes the Study 2 materials. Additional information can be found in the materials section of the empirical Study 2 presented in Chapter 5. All study materials relating to Study 2 can be seen in Appendix G of this thesis.

3.4.4.1 Demographics

Respondents completed a number of questions to acquire necessary demographic information. These included items establishing participants’ age, gender, and length of time working as a correctional officer. All demographic items can be found in Appendix G.

3.4.4.2 Focus group briefings

All focus groups were provided an identical briefing prior to and at the conclusion of group discussions. This was provided in addition to the consent information statements detailed in Appendix H. The scripted group briefing used in all focus groups can be seen in Appendix G.

3.4.4.3 Discussion prompts

A set of nine discussion prompts was used to guide the focus group discussions and the semi-structured interviews (see Appendix G). Officers were asked to comment on the common ways they believed officers respond to workplace adversity as well as the healthy and unhealthy ways officers respond. The final five discussion prompts were derived directly from the findings of Study 1 and requested participants to comment on how officers respond to specific adversity factors they may experience while working as an officer.

3.4.5 Methodological Considerations

There were a number of methodological considerations that arose through the design and conduct of Study 2 that are not specifically detailed in the empirical paper presented in section 5.2. This was due to restrictions in relation to manuscript length requirements specified by the publication to which it was submitted. As described in the
results section of the empirical study presented in section 5.2, data was analysed using a linear, hierarchical, analytic process as outlined by Creswell (2014) and data coding recommendations outlined by Tesch (1990). To ensure accuracy of the research data collected a number of processes were undertaken. Firstly, at the conclusion of all focus groups time was taken to recount notes to the group and request confirmation of accuracy. This allowed for additional confidence regarding the accuracy of the content of the research data attained. Secondly, once focus groups were completed the research notes were then thematically coded to categorise comments by content. An independent evaluator with experience in qualitative research design and analysis then reviewed this process. This process was implemented to reduce evaluator bias and provide evidence of inter-rater reliability. This process was also implemented in relation to the identification of higher-order themes to ensure accuracy of classification.

### 3.5 Study 3

The third empirical study outlined in this thesis was designed to build upon the findings of both Study 1 and Study 2. Study 1 found that correctional officers perceived a higher level of workplace adversity than those in other general community occupations and analogous to those working in the police force and emergency service sectors. Furthermore, it provided preliminary evidence of a link between perceived workplace adversity and employee stress reactions. More specifically, results indicated the existence of a significant positive correlation between perceived workplace adversity and stress reactions as measured by the Perceived Stress Scale (PSS; Cohen et al., 1983) and stress subscale of the Depression Anxiety Stress Scale (DASS-21; Lovibond & Lovibond, 1995) for employees. Furthermore, this link between perceived workplace adversity and reported stress reactions was significantly stronger for correctional officers than those working in other occupational fields (in relation to scores on the PSS).

These findings suggest that although all employees - irrespective of their occupational role - are susceptible to being negatively impacted by their work environment, the negative impact of workplace adversity may be more substantial for correctional officers. These findings indicate that further investigation into perceived workplace adversity and its potential effect on correctional officers is warranted. However, despite establishing a clear link between perceived workplace adversity and
stress reactions, little is known in relation to its effect on the psychological wellbeing of officers. Study 3 aimed to extend upon the findings of Study 1 by addressing this gap in the literature through examining the potential negative impact of workplace adversity on officer psychological wellbeing.

Despite the extant literature providing us with a good understanding of the potential negative effects of workplace adversity on correctional officers (see review, Dowden & Tellier, 2004), it is still largely unclear exactly how officers react when faced with high levels of perceived workplace adversity. To address this gap in the literature, Study 2 identified a range of officer-specific, interpersonal, cognitive and behavioral response tendencies that correctional officers believed were commonly employed by officers when managing adversity at work. However, Study 2 was not designed to establish an empirical link between the concepts of perceived workplace adversity, the use of response tendencies and markers of officer psychological wellbeing. Furthermore, Study 2 provided no indication of which response tendencies are most commonly employed by officers or which are the most effective and ineffective in relation to assisting officers to maintain their psychological wellbeing as perceived adversity increases.

Study 3 aimed to extend on the findings of Study 2 and progress the overall thesis narrative by providing a clear empirical link between each of the main thesis concepts, that is, perceived workplace adversity, officer response tendencies, officer psychological wellbeing and negative organisational impacts. Furthermore, Study 3 aimed to explore the role of response tendencies in moderating the relationship between correctional officers’ perceptions of workplace adversity and correctional officer psychological wellbeing and in turn, clarify how this relationship might impact the organisations that employ them.

3.5.1 Experimental Design

Consideration of the aims of Study 3 resulted in the implementation of a cross-sectional design combined with a quantitative methodology. The cross-sectional design allowed for the efficient collection of data at a low cost whilst the quantitative methodology provided an avenue to attaining precise measures of the study variables. An online survey was deemed the most appropriate medium for data collection as it
allowed for efficient distribution and collection of completed surveys. Furthermore, it allowed for officers from around the world to participate.

3.5.2 Recruitment Procedures

Correctional officers were recruited through the distribution of invitations to participate via social networks, online discussion forums (e.g., Officer.com, Corrections.com and Prisonofficer.org) and web-based social utilities such as Facebook and MySpace. A snowball sampling technique was also implemented via a request within the invitation for respondents to pass the invitation onward to others who might be interested in participating. These recruitment strategies resulted in the participation of 174 correctional officers from around the world. All participants were provided with a consent information statement (see Appendix I) prior to participation and consent was inferred by the submission of surveys.

3.5.3 Inclusion Exclusion Criteria

All respondents were required to be working as a correctional officer and over 18 years of age in order to participate. In line with recommendations, participants completing less than 70% of the survey measures were excluded from analysis (Tabachnick & Fidell, 2013). This resulted in the exclusion of four cases, resulting in a final sample size of 174 correctional officers. The demographic profile of the study sample can be seen within the method section of empirical Study 3 presented in section 6.2.

3.5.4 Materials

This section lists and briefly describes the materials used in Study 3. Additional information can be found in the materials section of the empirical paper presented in Chapter 6. All Study 3 materials are included in the study survey found in Appendix J.

3.5.4.1 Demographics

Respondents were asked a number of questions to acquire necessary demographic information. These included items designed to ascertain participants’ age,
gender, level of education, level of occupational seniority, job title and hours worked per week. The full list of demographic items can be found in Appendix J.

3.5.4.2 Perceived workplace adversity

The Work-related Environmental Adversity Scale (WREAS; Trounson et al., 2016) developed in Study 1 was used to measure the level of workplace adversity perceived by officers in Study 3. Examination of the psychometric properties of the WREAS indicate it to be a reliable and valid measure of perceived workplace adversity (Trounson et al., 2016). However, it should be noted that due to a theoretical re-conceptualisation of the concept of perceived workplace adversity the WREAS was treated as a formative measure in Study 3 rather than as a reflective measure as in Study 1 (see section 3.5.5 for a more detailed explanation regarding the re-conceptualisation of the WREAS in Study 3).

3.5.4.3 Response tendency usage

Twenty-four items were generated specifically for Study 3 to establish how correctional officers responded when faced with adversity at work. The 24 items were generated based on the findings of Study 2, which successfully identified a range of officer-endorsed response tendencies correctional officers employed to manage workplace adversity. Each item requested participants to indicate their level of agreement with a statements such as “When things are tough at work and I am feeling overwhelmed I drink alcohol to cope”. Participants rated their agreement with each item on a 7-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). These 24 items were designed to ascertain the frequency to which officers engaged in a range of officer-endorsed response tendencies when attempting to manage workplace adversity.

Exploratory Factor Analysis (EFA) of the 24 items revealed two underlying response styles; a) an emotional/avoidant (EA) style and b) an interpersonal/solution-focused response style (see section 3.5.5 for additional information, Table 3 for factor loadings and Appendix K for a list of affiliated response tendencies). Examination of the psychometric properties of the six items comprising the EA response style indicated the items demonstrated reasonable internal reliability ($\alpha = .74$). Furthermore, the 10 items comprising the ISF response style demonstrated good internal reliability ($\alpha = .82$). Response style total scores were calculated as an average of scores across all items relating to each specific response style. High EA response style scores indicate a strong
likelihood for implementing response tendencies that could be described as either emotional or avoidant strategies for managing workplace adversity. High ISF scores indicate a strong likelihood to engage in response tendencies that could be described as solution-focussed or interpersonally based.

### 3.5.4.4 Officer psychological wellbeing

The psychological wellbeing of officers in Study 3 was measured using 22 items designed to quantify officers’ perceptions of how much their work has impacted their psychological wellbeing. All items were generated based on a range of existing tools that are often used to measure the concepts of either psychological distress or psychological wellbeing. These included the DASS-21 (Lovibond & Lovibond, 1995), the Perceived Stress Scale (PSS; Cohen et al., 1983) and the Personal Wellbeing Index (PWI; International Wellbeing Group, 2013). Generation of items was also conducted in accordance with recommendations and guidelines provided by the Organisation for Economic Co-operation and Development (OECD, 2013).

An EFA was conducted using the 22 proposed items revealing two underlying factors, one relating to the experience of psychological distress and the other relating to the experience of psychological thriving (see section 3.5.5). Overall, results indicated that 19 of the original 22 proposed items fitted well with these two identified psychological wellbeing factors. Fifteen items loaded on the psychological distress construct ($\alpha = .93$) and four items loaded on the psychological thriving construct ($\alpha = .73$). Total scores for both the psychological distress and psychological thriving constructs were calculated as an average of an individual’s scores across all construct related items. High scores on the distress construct indicated the presence of high levels of psychological distress while high scores on the thriving construct indicated the presence of high levels of psychological thriving and life contentment.

### 3.5.4.5 Organisational impact

The level of negative organisational impact was quantified using three items that measured the frequency to which officers engaged in absenteeism, presenteeism and job dissatisfaction. Each of these negative organisational impacts has been previously identified as problems facing the correctional industry in relation to staff (see section 2.5.2). Items required participants to rate their agreement with statements such as “I take time off work even when I am well enough to come to work”. Participants rated
their agreement on 7-point Likert scales from 1 (strongly disagree) to 7 (strongly agree). Scores were calculated by creating an average of the three items. It should be noted that the item measuring job dissatisfaction was reverse scored. The three items demonstrated acceptable internal reliability (α = .71) and factorability (see section 3.5.5). A high score on the organisational impact measure indicated the presence of a more negative impact on the organisation or institution that employs them.

### 3.5.5 Methodological Considerations

A number of methodological considerations arose while analysing the data attained for empirical Study 3 that could not be included in the study manuscript due to length restrictions. This section provides a detailed account of these considerations to provide the reader with a better understanding of the scientific processes underlying the empirical study presented in section 6.2 of this thesis. The first of these related to the underlying factor structure of the WREAS. Despite the WREAS demonstrating adequate model fit and good psychometric properties in Study 1, analysis of the WREAS factor structure using the sample attained in Study 3 revealed that there were statistical issues in relation to model fit.

As a preliminary step in the data analysis process for Study 3, a confirmatory factor analysis (CFA) using Mplus version 5 was run to confirm the underlying factor structure of the WREAS. An MLR estimation method was employed to account for non-normality in the data due to the presence of expected negative skewness across the majority of WREAS items. Results indicated that the seven-factor model was not an acceptable fit of the data, $\chi^2 (399) = 636.99, p < .001$, CFI = .93, TLI = .89 RMSEA = .07, SRMR = .03. This finding, along with careful theoretical consideration led to a decision to reconceptualise the WREAS tool as a formative measure of perceived workplace adversity rather than as a reflective measure as it was originally intended. This decision was driven theoretically and supported by the lack of statistical model fit and recommendations outlined within the literature relating to formative measurement (Coltman, Devinney, Midgley, & Venaik, 2008; Diamantopoulos, Riefler, & Roth, 2008; Wilcox, Howell, & Breivik, 2008). After careful consideration of the nature of the items, the underlying concepts measured by the WREAS and the theorised direction of causality between each of these components, it was decided that the most accurate way to conceptualise the measure was as a multidimensional construct with a reflective first-
order (i.e., the items) and formative second-order (i.e., the seven dimensions that contribute to an individual’s perception of workplace adversity) structure.

A set of one-factor congeneric confirmatory factor analytic measurement models were subsequently run for each of the seven dimensions of the WREAS using the Mplus version 5 statistical software package. These were conducted to assess if each of the seven dimensions were in fact unidimensional. An MLR estimation method was employed once more to account for the observed non-normality in the data. Due to poor fit item 30 was excluded from the Action Consequence dimension of the WREAS. Once item 30 was excluded the results of the one-factor congeneric models indicated that each of the seven dimensions were indeed unidimensional.

Total scores for each underlying dimension were calculated and a Principal Component Analysis (PCA) was then conducted using SPSS version 23, which included all seven dimensions of the WREAS to examine fit and attain sub-scale factor loadings to create index scores. A direct oblimin rotation method was used as all seven dimensions were theoretically expected to correlate. The factorability of the seven dimensions was good (KMO = .86) with Bartlett’s test of sphericity attaining significance, $\chi^2(21) = 732.76, p < .001$. Initial eigenvalues indicated that the first factor (eigenvalue = 4.30) explained 61.45% of the variance with a potential second factor (eigenvalue = 1.10) explaining 15.80% of the variance in the data. However, due to the presence of strong primary factor dominance, low second factor reliability (i.e., < 3 variables defining the factor), and previous theoretical support for a single factor model (Trounson et al., 2016), a decision was made to conduct a parallel analysis (PA) test to confirm factor structure.

Research indicates that PA may be a more accurate cut off criterion than Kaiser’s Rule when determining the number of underlying factors within an EFA (Lance, 2006). Factor loadings, communalities, eigenvalues and parallel analysis eigenvalue cut-offs can be seen in Table 2. Horn’s PA test confirmed a single factor solution was the most appropriate representation of the underlying factor structure. Factor loadings were then used to calculate a weighted WREAS index score that reflected the formative influence of each of the seven underlying dimensions of perceived workplace adversity.
Table 2.

Factor Loadings and Communalities Based on a Principal Components Analysis with Oblimin Rotation for the Seven Dimensions of the WREAS

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Communalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threat</td>
<td>.73</td>
<td>-.03</td>
<td>.72</td>
</tr>
<tr>
<td>Unpredictability</td>
<td>.91</td>
<td>-.07</td>
<td>.77</td>
</tr>
<tr>
<td>Action Consequence</td>
<td>.84</td>
<td>.01</td>
<td>.70</td>
</tr>
<tr>
<td>Need for Vigilance</td>
<td>.92</td>
<td>-.09</td>
<td>.77</td>
</tr>
<tr>
<td>Expectation of Workplace Trauma</td>
<td>.83</td>
<td>.07</td>
<td>.75</td>
</tr>
<tr>
<td>Work/life Separation</td>
<td>-.08</td>
<td>.97</td>
<td>.87</td>
</tr>
<tr>
<td>Inability to Achieve Respite at Work</td>
<td>.17</td>
<td>.81</td>
<td>.81</td>
</tr>
</tbody>
</table>

Actual Eigenvalues                      | 4.30     | 1.10     |
Parallel Analysis cut-off Eigenvalues    | 1.28     | 1.17     |

Note. N = 174.

In addition to the statistical examination of the WREAS described above, an EFA was conducted (with an MLR estimation method) using the 24 items measuring response tendency usage to determine the underlying factor structure. Results suggested that a two-factor model would likely be the best fit of the data if problematic items were excluded. In all, eight problematic items were excluded due to poor fit and unacceptable factor cross-loadings. The analysis was then re-run with the remaining 16 items. Results indicated a two-factor solution was indeed the most appropriate, $\chi^2 (89) = 147.09, p < .001$, SRMR = .05, RMSEA = .06, CFI = .90, TLI = .86, demonstrating good simple factor structure (see Table 3). Despite demonstrating good simple factor structure, examination of the fit indices indicated a three-factor solution may provide a better statistical fit of the data in relation to the 16 items, $\chi^2 (75) = 105.90, p < .05$, SRMR = .04, RMSEA = .05, CFI = .94, TLI = .91. However, inspection of item loadings in the three-factor model indicated low third factor reliability (i.e., < 3 items defining the factor) and a reduction in simple structure. Therefore, a two-factor model was deemed the best fit of the data. Theoretical consideration of the nature of the items comprising the two factors identified in the final model suggested the presence of two distinct response styles employed by officers when managing workplace adversity. The first
response style involved the use of emotional and avoidant responses in the face of workplace adversity and was consequently labelled emotional-avoidant (EA) response style. The second style was characterised by problem-focussed responses that often involved gaining support from others and was subsequently labelled Interpersonal/solution-focussed (ISF) response style.

Table 3.
Factor Loadings Based on Exploratory Factor Analysis with MLR Estimation for the Sixteen Response Tendency Usage Items

<table>
<thead>
<tr>
<th>Item</th>
<th>EA</th>
<th>ISF</th>
</tr>
</thead>
<tbody>
<tr>
<td>I tend to close up</td>
<td>.72</td>
<td>-.06</td>
</tr>
<tr>
<td>I engage in behaviours that I know are harmful to myself</td>
<td>.59</td>
<td>.01</td>
</tr>
<tr>
<td>I have confrontations with my loved ones</td>
<td>.59</td>
<td>.03</td>
</tr>
<tr>
<td>I am able to calm myself down easily</td>
<td>-.54</td>
<td>.04</td>
</tr>
<tr>
<td>I tend to avoid thinking about how I am feeling</td>
<td>.51</td>
<td>-.00</td>
</tr>
<tr>
<td>I drink alcohol as a way to cope</td>
<td>.47</td>
<td>.06</td>
</tr>
<tr>
<td>I continue to engage in social activities as a way to manage</td>
<td>-.03</td>
<td>.68</td>
</tr>
<tr>
<td>I turn to friends to talk about it</td>
<td>.00</td>
<td>.65</td>
</tr>
<tr>
<td>I look to others to help me manage</td>
<td>.20</td>
<td>.65</td>
</tr>
<tr>
<td>I rely on my ability to communicate with others to get me through</td>
<td>-.01</td>
<td>.64</td>
</tr>
<tr>
<td>I speak with workmates to help me manage</td>
<td>.06</td>
<td>.62</td>
</tr>
<tr>
<td>I try to think about different ways I might be able to tackle the problems I face</td>
<td>.12</td>
<td>.58</td>
</tr>
<tr>
<td>I take the time to try and make sense of the things that have happened</td>
<td>-.10</td>
<td>.52</td>
</tr>
<tr>
<td>I rely on humour to manage</td>
<td>.21</td>
<td>.48</td>
</tr>
<tr>
<td>I take time off work to refresh and recover</td>
<td>-.04</td>
<td>.42</td>
</tr>
<tr>
<td>I try to use my problem solving skills to work my way through the situation</td>
<td>-.11</td>
<td>.40</td>
</tr>
</tbody>
</table>


An EFA with an MLR estimation method was then conducted on the items measuring officer psychological wellbeing to determine the underlying factor structure.
Results indicated a two-factor solution would be the most appropriate fit of the data given the exclusion of three poorly fitting items. After the exclusion of the three problematic items the model was re-run and was found to be a reasonable fit of the data, $\chi^2(134) = 228.27, p < .001$, SRMR = .04, RMSEA = .06, CFI = .93, TLI = .91. Examination of item content and their factor loadings (see Table 4) inferred the presence of a first factor that could be described as measuring psychological distress and a second factor measuring psychological thriving (as described in section 3.5.4.4).

Table 4.
Factor Loadings Based on Exploratory Factor Analysis with MLR Estimation for the Nineteen Wellbeing Items

<table>
<thead>
<tr>
<th>Item</th>
<th>Distress</th>
<th>Thriving</th>
</tr>
</thead>
<tbody>
<tr>
<td>That is was difficult for you to enjoy things</td>
<td>.79</td>
<td>-.00</td>
</tr>
<tr>
<td>Down</td>
<td>.79</td>
<td>.16</td>
</tr>
<tr>
<td>Anxious</td>
<td>.78</td>
<td>-.01</td>
</tr>
<tr>
<td>Distracted</td>
<td>.75</td>
<td>-.04</td>
</tr>
<tr>
<td>Like you are having difficulty sleeping</td>
<td>.73</td>
<td>-.15</td>
</tr>
<tr>
<td>Stressed</td>
<td>.70</td>
<td>-.00</td>
</tr>
<tr>
<td>Your mood was out of your control</td>
<td>.66</td>
<td>.09</td>
</tr>
<tr>
<td>Overwhelmed</td>
<td>.66</td>
<td>-.10</td>
</tr>
<tr>
<td>Angry</td>
<td>.65</td>
<td>.12</td>
</tr>
<tr>
<td>Like you find it difficult to get things done in a timely manner</td>
<td>.65</td>
<td>-.02</td>
</tr>
<tr>
<td>Like you don’t feel much at all</td>
<td>.64</td>
<td>.06</td>
</tr>
<tr>
<td>Like you cannot stop thinking about the bad things that happen in your life</td>
<td>.64</td>
<td>.11</td>
</tr>
<tr>
<td>Unmotivated</td>
<td>.63</td>
<td>.26</td>
</tr>
<tr>
<td>Unengaged with your duties while working</td>
<td>.62</td>
<td>.19</td>
</tr>
<tr>
<td>Giving up on things easily</td>
<td>.57</td>
<td>.23</td>
</tr>
<tr>
<td>Capable</td>
<td>.03</td>
<td>.77</td>
</tr>
<tr>
<td>Confident</td>
<td>-.19</td>
<td>.65</td>
</tr>
<tr>
<td>Content</td>
<td>-.24</td>
<td>.50</td>
</tr>
<tr>
<td>Optimistic</td>
<td>-.21</td>
<td>.39</td>
</tr>
</tbody>
</table>

Note. $N = 174$, Distress = psychological distress factor, Thriving = psychological thriving factor.
Finally, an EFA was conducted on the six items examining the potential organisational impacts of workplace adversity to establish the underlying factor structure. A Maximum Likelihood (ML) extraction method with direct oblimin rotation was used due to the presence of item inter-correlations. The factorability of the items was good (KMO = .82) with Bartlett’s test of sphericity attaining significance, $\chi^2 (15) = 371.12, p < .001$. Examination of the eigenvalues indicated the presence of a dominant factor (eigenvalue = 3.24) explaining 46.49% of the variance with the potential presence of a second factor (eigenvalue = .96) explaining an additional 8.5% of the variance. Factor loadings and communalities for each of the six items can be seen in Table 5. Although examination of the chi-square goodness of fit test indicated that a two-factor model was a good fit of the data, $\chi^2 (4) = 8.36, p = .08$, only the three organisationally-based items were used in the Study 3 structural model which examined the relationship between each of the study variables. This was due to the model not terminating normally with the employee-based impacts measure included. Due to an inability to circumvent this issue, a decision was made to run the structural model with the employee-based items excluded.

**Table 5.**

*Factor Loadings Based on Exploratory Factor Analysis with Maximum Likelihood Extraction and Oblimin Rotation for the Six Organisational Impact Items*

<table>
<thead>
<tr>
<th>Item</th>
<th>Employee</th>
<th>Work</th>
<th>Communalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship Impact</td>
<td>.76</td>
<td>.00</td>
<td>.58</td>
</tr>
<tr>
<td>Physical Impact</td>
<td>.86</td>
<td>.03</td>
<td>.70</td>
</tr>
<tr>
<td>Burn-out</td>
<td>.50</td>
<td>-.38</td>
<td>.64</td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>-.05</td>
<td>.77</td>
<td>.54</td>
</tr>
<tr>
<td>Presenteeism</td>
<td>.11</td>
<td>-.63</td>
<td>.50</td>
</tr>
<tr>
<td>Absenteeism</td>
<td>-.01</td>
<td>-.59</td>
<td>.34</td>
</tr>
</tbody>
</table>


There were a number of statistical considerations in relation to testing the structural model that were also not described within the empirical study presented in Chapter 6. Firstly, a decision was made to utilise latent interaction modelling using SEM rather than moderated regression. According to Steinmetz, Davidov and Schmidt (2011), latent interaction modelling using SEM is proposed as a better alternative to test
for interaction effects than moderated regression which often suffers from low power due to not adequately accounting for measurement error. In line with recommendations, an unconstrained approach was adopted to examine the interaction between response style and perceived workplace adversity (Steinmetz et al., 2011).

Secondly, it was deemed necessary to appropriately address the relatively small sample size used in Study 3 as it could be argued that a sample size of 174 cases is small for testing a model of its size and complexity. However, research emerging over the past decade has demonstrated that small samples such as that of Study 3 can indeed be used to effectively and accurately test models using SEM (Muthén & Muthén, 2009; Nevitt & Hancock, 2004). To further address questions of sample size the specified model was structured to increase model parsimony. To aid in this process, a number of steps were taken. First, a single indicator latent variable was used in relation to the organisationally based impacts measure to reduce model parameters (Wolf, Harrington, Clark, & Miller, 2013). As part of this process, the factor loading and error variance was specified for the latent variable to account for measurement error. Second, item parcelling was used to reflect the latent variables of officer psychological distress and officer psychological thriving. Item parcelling effectively reduced the number of model parameters further increasing the parsimony in the specified model.
CHAPTER 4: PERCEIVED WORKPLACE ADVERSITY AND CORRECTIONAL OFFICERS
4.1 Preamble to Empirical Study 1


Chapter 4 is the first of the original research studies conducted as part of this thesis. Within this Chapter the paper is provided in its published form (a copy of the published article is provided in Appendix L). This paper aimed to establish a need for correctional officer training designed to assist them in managing the impact of work-related environmental adversity. The findings of this study indicated the presence of a need for training by providing empirical evidence that correctional officers perceive their working environment as significantly more adverse than those working within other occupations found within the general community. Furthermore, this Chapter highlights that correctional officers perceive a similar level of work-related environmental adversity as those working within other high-risk professions such as the police force and the emergency services. Finally, this Chapter provided preliminary evidence to suggest a link between perceived work-related environmental adversity and employee stress reactions. Furthermore, this identified association between adversity and stress reactions was observed to be substantially stronger for correctional officers than for those in other general community professions.
4.2 Correctional Officers and Work-Related Environmental Adversity: A Cross-Occupational Comparison

Justin S. Trounson*, Jeffrey E. Pfeifer, and Christine Critchley, Swinburne University of Technology, Melbourne, Australia

Author Note

*We would like to acknowledge Alfie Oliva, Rebecca Lacey, Joe Greet, Stephanie Louise and Charlotte Boyce who were instrumental in providing assistance on a number of aspects of the project. We would also like to thank G4S for their continued support and collaboration throughout this study. This research was made possible in part by Linkage Grant LP140100397 from the Australian Research Council. Correspondence concerning this article should be addressed to Mr Justin Trounson at Swinburne University of Technology, Department of Psychological Sciences and Statistics, PO Box 218, H24, Hawthorn, Victoria, Australia 3122 (email: jstrounson@swin.edu.au).
Abstract

This study explores differences in perceived work-related environmental adversity between correctional officers and those in other occupations in order to gain a clearer understanding of how prisons may impact those who work there. The Work-Related Environmental Adversity Scale (WREAS) was developed in order to assess the perceptions of employees across a range of occupations, including correctional officers. The instrument was completed by 440 participants and, as hypothesized, results indicate that correctional officer perceptions of work-related environmental adversity were significantly higher than the perceptions of those employed in all other occupations assessed (with the exception of police and emergency service workers). Further analyses of sub-scales indicated that correctional workers identify a number of specific environmental factors that impact their perceptions and subsequent well-being. The results of this study identify the importance of empirically assessing occupational workplace adversity as a component of the overall understanding of correctional officer well-being.

Keywords: wellbeing; occupation; prison; personnel; stress; wellness
Introduction

Like many other frontline service personnel, correctional officers often work within a highly stressful work environment (Kunst, 2011). Among other things, it has been suggested that prison settings require officers to continually manage a range of unique, stressful and often unpredictable workplace difficulties as part of their role (Ghaddar et al., 2008; Harrell, 2011). Within this environment officers can at times be exposed to highly traumatic or dangerous situations and, as a result, are a group with one of the highest rates of workplace-related injury and illness of any occupation in the United States (Bureau of Labor Statistics, 2014b). For example, compared to those in the greater community, correctional officers have a higher prevalence of negative physical and psychological consequences related to workplace stress (see e.g., S. Johnson et al., 2009). Specific consequences include higher rates of depression (Sui et al., 2014), post-traumatic stress (Spinaris et al., 2012), substance abuse (see e.g., Svenson et al., 1995), heart disease (see e.g., Harenstam et al., 1988) and a heightened risk of developing a range of stress-related conditions (see e.g., Anson et al., 1997; Cheek & Miller, 1983; Harenstam et al., 1988). Given these findings, it is not surprising that correctional officers tend to engage in significant levels of absenteeism and other related negative behaviors (Lambert, Edwards, Camp, & Saylor, 2005) as well as having one of the highest occupational burn-out rates of any profession (Hurst & Hurst, 1997; Keinan & Malach-Pines, 2007).

Given the above, it is not surprising that there has been a substantial increase in the development and implementation of preventative programs aimed at addressing the negative impacts of workplace stress and adversity across numerous high-risk occupational environments including: the police service (see e.g., Arnetz, Nevedal, Lumley, Backman, & Lublin, 2008), the military (see e.g., Griffith & West, 2013), emergency services (Varker & Devilly, 2012) and nursing (see e.g., McDonald, Jackson, Wilkes, & Vickers, 2012). Similar initiatives have also begun to be implemented within correctional settings (see e.g., Bravo-Mehmedbasic et al., 2009; Finn, 2000; Leo, 2011; McCraty et al., 2009; Shochet et al., 2011). As the prevalence of these programs has increased, however, so too has the call for evidence-based confirmation of their applicability and effectiveness (Dunt, 2009; Eidelson, 2011, 2012; B. J. Morgan & Garmon Bibb, 2011).

This call for evidence-based confirmation is unsurprising given that the demonstration of a clear need for any training program is a first and fundamental step in
the process of intervention development (Allen, 2006; Gagne, Wager, Gola, & Keller, 2005). As such, it may be argued that training programs designed to assist individuals in managing adversity must first provide evidence that the intended recipients actually perceive their environment as particularly adverse (Trounson & Pfeifer, 2013). Cross-occupational studies that specifically examine differences in perceived work-related environmental adversity may be one method of addressing this issue. Findings from such research would contribute to an evidence-based rationale for implementation, and would provide guidance as to the types of occupational environments most in need of such training programs.

Despite the existence of a substantial literature examining correctional officer well-being and related health outcomes (Brower, 2013), there still remains a relative paucity of cross-occupational research that empirically establishes that working as a correctional officer is more adverse and stressful than working within other occupational environments (Dowden & Tellier, 2004). It appears that there is also a limited amount of research providing a deeper understanding of the specific environmental factors that contribute to the perception of workplace adversity for correctional officers (Trounson & Pfeifer, 2013). As such, conducting comparative research examining cross-occupational differences in relation to specific environmental factors that contribute to perceptions of workplace adversity will provide valuable insight into officers’ unique environmental context. Such research is pivotal to informing the development of future workplace initiatives aimed at addressing workplace adversity in corrections.

One current difficulty in examining perceived work-related environmental adversity across occupations is the lack of an appropriate measurement instrument. Although numerous self-report questionnaires are available that examine the impact of an individual’s working environment on their physical and psychological health (see e.g., Aust, Rugulies, Skakon, Scherzer, & Jensen, 2007; McCusker, Denudkuri, Cardinal, Katofsky, & Riccardi, 2005), there are very few instruments that assess the level of perceived adversity existing within one’s workplace (see e.g., Andrews et al., 2012). In addition, most measurement instruments are often either occupation-specific (Biggam, Power, Macdonald, Carcary, & Moodie, 1997; Lambert, Benight, Harrison, & Cieslak, 2012; Senol-Durak, Durak, & Gençöz, 2006) or event-specific (see e.g., Tehrani, Cox, & Cox, 2002), limiting their applicability to general cross-occupational comparisons.
and their ability to inform the development of workplace initiatives for correctional officers specifically.

In addition to the above, a review of the literature indicates that there is also a lack of self-report measurement instruments that can effectively evaluate employees’ perceptions of adversity within their work environment in a way that negates individual perceptions of the impact of the environment on one’s psychological or physical well-being. This is particularly important to consider when measuring perceived adversity within high-risk work environments, as individuals working in such situations (e.g., correctional officers) may be more likely to deny or underplay their experience of workplace stress due to a desire to present a ‘tough image’ (Cheek & Miller, 1983; Veneziano, 1984).

In order to address these limitations, a new measure of work-related environmental adversity was developed as part of this study. Unlike existing instruments, the current measure was designed to reduce the type of response bias described above by encouraging respondents to consider their working environment from a depersonalised viewpoint, requesting respondents to evaluate the nature of their working environment rather than report their personal stress reactions. Furthermore, the measure was designed to be used cross-occupationally and provides a general measure of work-related adversity that is not limited to any single event.

This study aims to fill two specific gaps in the existing literature. First, it aims to develop a valid and reliable measure of perceived work-related environmental adversity (i.e., the Work-Related Environmental Adversity Scale; WREAS). Second, the current study also aims to address the gap in the literature identified by Dowden and Tellier (2004), by assessing whether correctional officers perceive a greater level of work-related environmental adversity than those in other occupational roles, and if so, whether it is associated with a heightened level of stress reactions. The collection and analyses of these perceptions will subsequently assist with the systematic development of a sound evidence-base for the implementation of proactive psychological training within the field of corrections.

Based on the above, a number of specific hypotheses may be identified. First, given that previous research indicates that perception of adverse psychosocial factors in the workplace is related to an elevated risk of subsequent stress reactions (Gilbert-Ouimet, Trudel, Brisson, Milot, & Vezina, 2014), it is hypothesized that scores on the WREAS will positively correlate with established measures of perceived stress. More
specifically, it is predicted that scores on the refined WREAS will be significantly positively related to scores on the Perceived Stress Scale (Cohen et al., 1983) as well as the stress sub-scale of the DASS-21 (Lovibond & Lovibond, 1995).

Second, it is hypothesized that correctional officers will perceive significantly more work-related environmental adversity than those in other general community occupational roles, as measured by the WREAS. Finally, it is predicted that a significant positive correlation will exist between perceived workplace adversity and reported stress reactions in the correctional officer sample and that this association will be stronger for correctional officers than for those working in other general community occupational roles.

**Method**

**Participants**

A total of 461 participants completed the online survey. Respondents who completed less than 70% of the WREAS items were excluded from analysis, resulting in a final sample of 440. The sample consisted of 202 males and 238 females ranging in age from 18 to 67 years ($M = 35.81, SD = 10.63$). The average number of hours worked per week was 37.33 ($SD = 11.68$), with approximately 59.1% of all participants having attained a university degree.

**Materials**

After responding to a number of demographic items (e.g., gender, age, level of education, occupational affiliation, number of hours worked per week), respondents completed the Perceived Stress Scale (PSS; Cohen et al., 1983), DASS-21 (Lovibond & Lovibond, 1995), and the WREAS.

**Work-related Environmental Adversity Scale (WREAS).** The WREAS was designed to measure differences in perceived workplace adversity across occupational categories to assist in the establishment of an evidence base for the implementation of proactive psychological training programs within correctional settings. The concept of adversity was defined as the experience of hardship or suffering associated with trauma, distress, difficulty, or a tragic event (Luthar et al., 2000; Luthar & Cicchetti, 2000; Rutter, 1999). For the purposes of the current study, perceived work-related
environmental adversity was defined as an individual’s view of their work environment as one in which such markers of adversity are likely to occur.

The WREAS is comprised of seven distinct concepts that have been previously associated with the experience of stress or adversity and have been examined across a range of occupational environments. As such, these seven factors were considered relevant and important markers of the presence of workplace adversity. Factors identified included perceived environmental threat (Rasmussen et al., 2013), environmental unpredictability (Brodsky, 1984), need for vigilance (Warm & Parasuraman, 2008), expectation of workplace trauma (Denhof et al., 2014; Rasmussen et al., 2013), work-life separation (Armstrong, Atkin-Plunk, & Wells, 2015; Hämmig & Bauer, 2014), inability to achieve workplace respite (Drach-Zahavy & Marzuq, 2013) and the preoccupation with potential negative consequences of one’s actions (i.e., action consequence; Pabst, Brand, & Wolf, 2013).

Items were designed to be unidirectional, easy to understand and to encourage respondents to consider their working environment from a depersonalised viewpoint. Items were presented as statements to which respondents indicated their level of agreement on a 7-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). The WREAS was designed to allow interpretation of either the total scale score or at the sub-scale level, providing a more detailed profile of the factors contributing to respondents’ perception of work-related environmental adversity. Examination of the psychometric properties of the WREAS on item, sub-scale and full-scale levels resulted in the development of a refined WREAS scale consisting of 36 final items (see results section for refinement process).

The refined 36-item WREAS measures an individual’s perception of workplace adversity by assessing respondents’ perceptions in relation to the seven aforementioned underlying adversity factors. The Environmental Threat sub-scale consists of seven items measuring the level of perception that one’s safety is compromised within one’s work environment. Environmental Unpredictability is measured with five items and can be conceptualised as the perception that one’s work environment is unpredictable. The Action Consequence sub-scale comprises five items designed to quantify the perception that one’s actions can result in serious negative consequences while at work. Need for Vigilance is measured with four items and can be understood as the perception of the need for continued heightened attentiveness or hyper-awareness within one’s work environment. Five additional items comprise the Expectation of Workplace Trauma.
sub-scale and are designed to measure the level of perceived likelihood that one will be exposed to traumatic events in their work environment. The Inability to Achieve Workplace Respite sub-scale consists of five items measuring the level of perceived lack of reprieve from one’s occupational environment or occupational role at work. Finally, the Workplace/life Separation sub-scale (five items) measures the perception that work invades one’s personal life. A full-scale score can be determined by aggregating an individual’s score on each item and dividing it by the number of items to which they responded. Thus, full-scale scores range from 1-7, with higher scores indicating higher levels of perceived work-related environmental adversity. Sub-scale scores are derived in a similar manner, providing total sub-scale scores ranging from 1 to 7, with higher scores indicating a heightened perception of workplace adversity on any given sub-scale.

**Perceived Stress Scale (PSS).** The PSS (Cohen et al., 1983) was used to assess the convergent validity of the WREAS. The PSS is a self-report measure designed to quantify participants’ level of perceived stress and has been shown to be a reliable and valid measure (Cohen et al., 1983; Lavoie & Douglas, 2011). The 10-item version of the PSS has demonstrated good internal reliability (α = .84 to .86) and construct validity in past studies (Cohen et al., 1991, 1993; Cohen & Williamson, 1991).

**Depression Anxiety Stress Scale (DASS-21).** The DASS-21 (Lovibond & Lovibond, 1995) is a well-established standardized measure of depression, anxiety and stress that was also used to assess the convergent validity of the WREAS. The stress sub-scale of the DASS-21 comprises 7 items on which respondents rated the level they have experienced specific stress-related symptoms over the past week. Past research has demonstrated the DASS-21 to be a reliable and valid measure (Antony et al., 1998; Henry & Crawford, 2005; Sinclair et al., 2012).

**Education and Occupation.** Level of education was used to assess the discriminant validity of the WREAS while criterion validity was assessed through examination of score differences between high-risk (e.g., police and correctional officers) and low-risk (e.g., sales and administrative staff) occupational categories.
Results

Psychometric Properties of the WREAS

As this study is the first to use the WREAS, the refinement process and psychometric properties of the final 36-item instrument are first presented, followed by the results comparing level of perceived work-related environmental adversity across occupational categories. Based on scale-development recommendations outlined by Clark and Watson (1995), a systematic process was implemented in both the development and refinement of the item pool. To assess the discriminability of the proposed items, all 57 were initially screened for evidence of floor and ceiling effects, extreme standard deviation, and severe skewness and/or kurtosis. To assess the underlying factor structure of each of the seven sub-scales of the WREAS and to assist in the item refinement process, a set of one-factor congeneric confirmatory factor analytic measurement models for each sub-scale were then run using AMOS version 20. Items demonstrating weak factor loadings (i.e., $\lambda < .35$) with their respective sub-scale as well as weak inter-correlations with other items within each sub-scale (i.e., $< .35$) were identified for potential exclusion. The potential impact of item deletion on sub-scale alpha levels was then examined to assess the impact of item exclusion. These processes resulted in the identification of 13 items that displayed a range of psychometric properties indicative of poor fit with other related sub-scale items. These 13 items were excluded from the scale due to their poor psychometric properties and possible redundancy.

A multifactorial seven-factor model was then tested through Confirmatory Factor Analysis (CFA) using the remaining 44 items. A second order CFA was run with adversity set as a higher factor predicting all seven latent adversity factors. The results revealed that the model was not an acceptable fit with the data, $\chi^2 (895) = 3001.48, p < .001$, CFI = .86, TLI = .86, RMSEA = .07, estimate 90% CI: (.07, .08), SRMR = .09. Examination of the modification indices suggested the inclusion of a correlational pathway between the Work/life Separation and Inability to Achieve Workplace Respite sub-scales and between the Environmental Threat and Action Consequence sub-scales. These correlational pathways were included and the revised model was then tested. Although inclusion of correlational pathways increased the model fit, the results indicated that the model was still not an acceptable fit with the data. Examination of the modification indices, squared multiple correlations and standardized residuals revealed
eight poorly fitting items. All eight were omitted from the final WREAS and a final CFA was conducted using the remaining 36 items. Results indicated that the revised 36-item model was an acceptable fit with the data, $\chi^2 (585) = 1526.21, p < .001$, CFI = .92, TLI = .92, RMSEA = .06, estimate 90% CI: (.06, .06), SRMR = .06. The final 36-item WREAS displayed acceptable psychometric properties on full scale, sub-scale and item levels. Standardised regression weights, standard errors and significance levels for each of the 36 items comprising the final WREAS are presented in Table 6. Means, standard deviations, theoretical ranges and Cronbach’s alpha for the full scale WREAS and each of the seven sub-scales are presented in Table 7.

**Construct Validity for the WREAS**

A number of construct validity analyses were conducted in order to provide preliminary evidence of both convergent and discriminant validity for the WREAS.

**Convergent Validity.** Positive (albeit weak), significant correlations were found between WREAS full-scale scores and both the PSS ($r = .15, n = 368, p < .01$) and the DASS-21 stress sub-scale ($r = .14, n = 366, p < .01$) when examined across the whole sample irrespective of occupational affiliation. Furthermore, when examined solely within the correctional officer sample, these correlations between WREAS scores and both the PSS ($r = .67, n = 37, p < .001$) and DASS-21 stress sub-scale ($r = .40, n = 37, p < .05$) increased substantially in strength. Fisher’s $r$-$z$ transformation was computed to assess whether the difference between correlations for correctional officers and the rest of the sample were significant. Results indicated that there was in fact a significant difference between officers and the rest of the sample in relation to the strength of the correlation between perceived work-related environmental adversity and the PSS, $z = 3.26, p < .01$. No significant difference was identified between officers and the rest of the sample in relation to the strength of the correlation between perceived work-related environmental adversity and the DASS-21 stress sub-scale, $z = 1.28, p > .05$.

**Discriminant Validity.** Participants’ level of education was used as a measure of discriminant validity for the WREAS. As expected, no significant relationship was found between WREAS full-scale scores and respondents’ level of education ($p > .05$), providing preliminary evidence of discriminant validity.
Table 6.
Standardised Regression Weights, Standard Errors and Significance Levels for each of the 36 items of the Work-related Environmental Adversity Scale (WREAS)

<table>
<thead>
<tr>
<th>Item number</th>
<th>β</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Threat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 1</td>
<td>.86*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 4</td>
<td>.88*</td>
<td>.01</td>
</tr>
<tr>
<td>Item 15</td>
<td>.86*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 24</td>
<td>.88*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 28</td>
<td>.80*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 31</td>
<td>.90*</td>
<td>.01</td>
</tr>
<tr>
<td>Item 34</td>
<td>.90*</td>
<td>.01</td>
</tr>
<tr>
<td>Environmental Unpredictability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 3</td>
<td>.73*</td>
<td>.03</td>
</tr>
<tr>
<td>Item 13</td>
<td>.87*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 19</td>
<td>.85*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 25</td>
<td>.86*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 36</td>
<td>.88*</td>
<td>.01</td>
</tr>
<tr>
<td>Action Consequence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 10</td>
<td>.66*</td>
<td>.03</td>
</tr>
<tr>
<td>Item 12</td>
<td>.85*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 16</td>
<td>.86*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 27</td>
<td>.78*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 30</td>
<td>.85*</td>
<td>.02</td>
</tr>
<tr>
<td>Need for Vigilance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 8</td>
<td>.74*</td>
<td>.03</td>
</tr>
<tr>
<td>Item 20</td>
<td>.83*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 23</td>
<td>.87*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 29</td>
<td>.77*</td>
<td>.03</td>
</tr>
<tr>
<td>Expectation of Workplace Trauma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 2</td>
<td>.83*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 9</td>
<td>.75*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 32</td>
<td>.93*</td>
<td>.01</td>
</tr>
<tr>
<td>Item 33</td>
<td>.93*</td>
<td>.01</td>
</tr>
<tr>
<td>Item 35</td>
<td>.88*</td>
<td>.02</td>
</tr>
<tr>
<td>Inability to Achieve Workplace Respite</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 5</td>
<td>.72*</td>
<td>.03</td>
</tr>
<tr>
<td>Item 18</td>
<td>.88*</td>
<td>.01</td>
</tr>
<tr>
<td>Item 21</td>
<td>.90*</td>
<td>.01</td>
</tr>
<tr>
<td>Item 22</td>
<td>.78*</td>
<td>.03</td>
</tr>
<tr>
<td>Item 26</td>
<td>.88*</td>
<td>.02</td>
</tr>
<tr>
<td>Work/Life Separation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 6</td>
<td>.71*</td>
<td>.03</td>
</tr>
<tr>
<td>Item 7</td>
<td>.80*</td>
<td>.03</td>
</tr>
<tr>
<td>Item 11</td>
<td>.91*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 14</td>
<td>.69*</td>
<td>.03</td>
</tr>
<tr>
<td>Item 17</td>
<td>.76*</td>
<td>.03</td>
</tr>
</tbody>
</table>

Note. * = p < .001.
Table 7.
Means, Standard Deviation, Theoretical Ranges, and Cronbach’s Alpha for the Full-scale and each of the Seven Sub-scales of the WREAS

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>α</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>WREAS Full Scale</td>
<td>3.52</td>
<td>1.38</td>
<td>.97</td>
<td>383</td>
</tr>
<tr>
<td>WREAS Sub-scales</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Threat</td>
<td>2.69</td>
<td>1.74</td>
<td>.95</td>
<td>428</td>
</tr>
<tr>
<td>Environmental Unpredictability</td>
<td>3.78</td>
<td>1.78</td>
<td>.92</td>
<td>427</td>
</tr>
<tr>
<td>Action Consequence</td>
<td>3.58</td>
<td>1.85</td>
<td>.90</td>
<td>433</td>
</tr>
<tr>
<td>Need for Vigilance</td>
<td>4.12</td>
<td>1.77</td>
<td>.87</td>
<td>427</td>
</tr>
<tr>
<td>Expectation of Workplace Trauma</td>
<td>3.36</td>
<td>1.96</td>
<td>.94</td>
<td>432</td>
</tr>
<tr>
<td>Inability to Achieve Workplace Respite</td>
<td>4.23</td>
<td>1.63</td>
<td>.92</td>
<td>423</td>
</tr>
<tr>
<td>Work/life Separation</td>
<td>3.56</td>
<td>1.49</td>
<td>.88</td>
<td>430</td>
</tr>
</tbody>
</table>

Note. N = 440. α = Cronbach’s alpha co-efficient.

Occupational Differences on the WREAS

Means and standard deviations for the WREAS scores according to occupational category are presented in Table 8. A one-way between groups ANOVA was conducted to compare perceptions of work-related environmental adversity across occupational categories. Occupational category was used as the independent variable, while full-scale total scores on the WREAS were used as the dependent variable. Levene’s test of Homogeneity of Variances was found to be insignificant (p > .05), suggesting equal variance between occupational groups. There was a significant difference between occupational categories in perceived work-related environmental adversity, F (12, 382) = 28.83, p < .001. Post-hoc comparisons using Tukey’s HSD test indicated that correctional officers scored significantly higher than all other occupational categories, with the exception of police and emergency services personnel (see Table 8).
A set of one-way between groups ANOVA’s were then performed to explore differences between occupational groups on each of the seven sub-scales of the WREAS. Means and standard deviations for each of the sub-scales of the WREAS by occupational category are presented in Table 9. Post hoc comparisons using the Tukey’s HSD test indicated significant differences were found between correctional officers and other occupational categories on all sub-scales of the WREAS at the \( p < .001 \) level (see Table 9).
### Table 9.
Means and Standard Deviations for each of the Seven Sub-scales of the WREAS by Occupational Category and Significant Differences in Mean Scores between Correctional Officers and all other Occupational Categories

<table>
<thead>
<tr>
<th>Occupational Category</th>
<th>ET</th>
<th>EU</th>
<th>AC</th>
<th>NV</th>
<th>WT</th>
<th>WR</th>
<th>WL</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correctional Officers</td>
<td>5.40(1.14)</td>
<td>6.12(.74)</td>
<td>5.81(.98)</td>
<td>6.29(.76)</td>
<td>5.73(1.01)</td>
<td>5.14(1.37)</td>
<td>3.21(1.55)</td>
<td>37</td>
</tr>
<tr>
<td>Police Officers</td>
<td>5.01(1.21)</td>
<td>5.95(1.18)</td>
<td>5.95(1.07)</td>
<td>5.75(.85)</td>
<td>6.21(.87)</td>
<td>5.12(1.16)</td>
<td>4.50*(1.30)</td>
<td>18</td>
</tr>
<tr>
<td>Emergency Services personnel</td>
<td>3.46*(1.69)</td>
<td>5.64(1.23)</td>
<td>5.66(1.12)</td>
<td>5.69(1.23)</td>
<td>6.09(.97)</td>
<td>4.74(1.68)</td>
<td>3.89(1.38)</td>
<td>19</td>
</tr>
<tr>
<td>Healthcare professionals</td>
<td>2.76*(1.46)</td>
<td>4.43*(1.38)</td>
<td>3.83*(1.40)</td>
<td>3.97*(1.36)</td>
<td>4.88(1.66)</td>
<td>4.45(1.71)</td>
<td>3.76(1.36)</td>
<td>24</td>
</tr>
<tr>
<td>Tradespersons</td>
<td>3.81*(1.34)</td>
<td>4.02*(1.28)</td>
<td>5.03(1.24)</td>
<td>4.87*(1.21)</td>
<td>3.19*(1.28)</td>
<td>3.86*(1.38)</td>
<td>3.21(1.40)</td>
<td>34</td>
</tr>
<tr>
<td>Military personnel</td>
<td>2.41*(1.44)</td>
<td>3.35*(1.36)</td>
<td>3.61(1.86)</td>
<td>3.95*(1.72)</td>
<td>2.77*(1.34)</td>
<td>3.44*(1.43)</td>
<td>3.09(1.09)</td>
<td>18</td>
</tr>
<tr>
<td>Managerial personnel</td>
<td>1.79*(1.05)</td>
<td>3.11*(1.37)</td>
<td>2.51*(1.17)</td>
<td>3.44*(1.42)</td>
<td>2.54*(1.48)</td>
<td>4.28(1.52)</td>
<td>3.85(1.55)</td>
<td>71</td>
</tr>
<tr>
<td>Teachers</td>
<td>1.89*(1.18)</td>
<td>3.36*(1.51)</td>
<td>2.88*(1.41)</td>
<td>3.94*(1.73)</td>
<td>2.40*(1.12)</td>
<td>4.58(1.72)</td>
<td>4.22*(1.40)</td>
<td>41</td>
</tr>
<tr>
<td>Admin/Clerical personnel</td>
<td>1.61*(1.02)</td>
<td>2.93*(1.38)</td>
<td>2.20*(1.12)</td>
<td>2.98*(1.32)</td>
<td>2.35*(1.69)</td>
<td>3.80*(1.69)</td>
<td>3.16(1.61)</td>
<td>31</td>
</tr>
<tr>
<td>Sales personnel</td>
<td>2.38*(1.40)</td>
<td>3.18*(1.76)</td>
<td>3.27*(1.74)</td>
<td>4.07*(1.79)</td>
<td>2.64*(1.50)</td>
<td>4.51(1.81)</td>
<td>2.96(1.34)</td>
<td>26</td>
</tr>
<tr>
<td>Science and Research personnel</td>
<td>1.89*(1.08)</td>
<td>2.60*(1.28)</td>
<td>3.04*(1.59)</td>
<td>2.90*(1.60)</td>
<td>2.78*(1.54)</td>
<td>2.86*(1.51)</td>
<td>2.88(1.29)</td>
<td>25</td>
</tr>
<tr>
<td>IT personnel</td>
<td>1.53*(.89)</td>
<td>2.40*(1.41)</td>
<td>2.02*(1.08)</td>
<td>2.99*(1.76)</td>
<td>1.95*(1.40)</td>
<td>3.43*(1.57)</td>
<td>3.11(1.59)</td>
<td>19</td>
</tr>
<tr>
<td>Other</td>
<td>1.99*(.95)</td>
<td>3.00*(1.52)</td>
<td>2.65*(1.27)</td>
<td>3.42*(1.53)</td>
<td>2.24*(1.54)</td>
<td>4.19(1.09)</td>
<td>4.09(1.15)</td>
<td>20</td>
</tr>
</tbody>
</table>

Note. * = WREAS sub-scale mean scores found to be significantly different to correctional officers at $p < .001$ level. ET = environmental threat, EU = environmental unpredictability, AC = action consequence, NV = need for vigilance, WT = expectation of workplace trauma, WR = inability to achieve workplace respite, WL = workplace/life separation.
Discussion

This study provides a number of unique contributions to the existing literature on occupational well-being, especially with regard to correctional officers. First, it offers the possibility of a new self-report instrument capable of quantifying an individual’s perception of adversity within their working environment. Second, the results provide a preliminary examination of the psychometric properties of the WREAS as well as identifying a number of specific sub-components related to perceived workplace adversity (e.g., environmental threat, need for vigilance). The results also provide empirical support for the hypothesis that correctional officers perceive their working environment as more adverse than those working in a number of other professions and analogous to those working within other high-risk professions such as the police and the emergency services. The present study also provides a deeper understanding of the specific adversity factors that may lead correctional officers to perceive their working environment as particularly challenging. Finally, the findings offer some preliminary evidence that perceptions of workplace adversity may be more strongly associated with reported stress reactions for officers than those in other general community professions.

Psychometric Properties of the WREAS

Overall, the psychometric properties of the 36-item WREAS appear to be largely satisfactory. In terms of reliability, the total scale and each of the seven subscales were found to be internally consistent. Confirmatory Factor Analysis indicates that the proposed theoretical model was a reasonable fit of the data. In terms of validity, the WREAS displayed acceptable criterion validity values. As predicted, a significant (albeit weak) positive correlation was identified between WREAS scores and scores on both the PSS and the stress sub-scale of the DASS-21. However, these results were reflective of the type of tangential relationship assumed to exist between perceived work-related environmental adversity and self-reported stress reactions. Work-related adversity is likely to be only one of numerous factors that contribute to the development of stress reactions in employees, which may explain the weakness of the observed correlation between WREAS scores and existing measures of perceived stress. Furthermore, the fact that respondents working within high-risk work environments (i.e., correctional officers, police and emergency service workers) scored high on the
WREAS provides further evidence of the validity of the instrument. Finally, in line with predictions, preliminary evidence of discriminant validity was also attained through demonstrating no significant relationship between WREAS scores and respondent’s level of education.

**Occupational Differences**

Comparing levels of perceived work-related environmental adversity between correctional officers and other occupational categories provided several valuable insights. When compared at the full-scale level, correctional officers scored significantly higher on the WREAS than all other occupational categories assessed, with the exception of police and emergency services personnel. These findings provide support for the hypothesis that correctional officers perceive significantly more work-related environmental adversity than those in other general community occupational roles. Furthermore, these findings are consistent with past research (see e.g., Kunst, 2011) and with current available industry statistics (see e.g., Bureau of Labor Statistics, 2014b) that identify the occupation as one that often involves high levels of risk to personal safety.

It is particularly notable that correctional officers scored significantly higher than military personnel on the full-scale and all seven sub-scales of the WREAS. In fact, examination of mean scores across occupational categories indicated that military personnel scored more similarly to that of the general community than any of the high-risk occupational categories assessed such as police, emergency service workers and correctional officers. These findings are inconsistent with past research that has indicated that military personnel demonstrate heightened prevalence rates of stress-related illnesses (Hourani et al., 2006) and are prone to experience adverse and traumatic events within their working environment. Although there are several potential factors that may have contributed to this unexpected finding it is most likely due to sampling issues. Of the 18 military personnel sampled in the study, 14 had not been deployed to a theatre of war or engaged in war-like service. This provides important contextual information and a potential explanation for the relatively low WREAS scores attained for military personnel. It is likely that the duties of military personnel when not deployed may resemble the duties found in other community occupations such as those found in administrative or office-based occupational roles.
The results of the current study provide evidence that correctional officers perceive a significantly heightened level of work-related environmental adversity compared to those working in other general community occupations, and akin to those working in police and emergency service sectors. Furthermore, it should be noted that the correlations between WREAS scores and established measures of physical and psychological manifestations of stress were significantly stronger for correctional officers than for the rest of the sample. These findings further highlight the need for industry-based training and provide the foundations for an evidence-based rationale for the implementation of preventative psychological training programs aimed at addressing the effects of workplace adversity within the correctional industry.

The rationale for the implementation of such programs is strengthened by the fact that similar initiatives already function within other occupational groups found to perceive high levels of work-related environmental adversity (i.e., police and emergency services). For instance, in 2009 the US Army established the $125 million dollar CSF program, which was quickly adopted as part of standard soldier training. The goal was to address the high prevalence of mental illness amongst US Army personnel introducing a preventative approach that encouraged the development of mental wellness through fostering psychological resilience (Casey, 2011). Since the implementation of the CSF program, other military institutions have implemented their own resilience-based training programs (Bowles & Bates, 2010; B. J. Morgan & Garmon Bibb, 2011). For example, after a comprehensive independent review of mental health issues within the Australian Defence Force (ADF; Dunt, 2009), the Australian government committed $83 million dollars to a 4-year mental health reform (Department of Defence, 2009). The review stipulated that the Mental Health Strategy should specifically include components of preventative resilience training. In response, the ADF has expanded their “BattleSMART”, Self-Management and Resilience Training program to improve the psychological resilience of ADF members (Boer, 2009). The correctional industry may benefit from considering the implementation of similar evidence-based preventative training programs designed specifically for correctional settings (Trounson & Pfeifer, in press).

The sub-scale level results outlined in the present study also provide valuable insight into how correctional officers view their work environment and the specific factors that may contribute to their heightened perception of work-related environmental adversity. The findings suggest that correctional officers perceive their
work environment as being both highly threatening and unpredictable. Furthermore, correctional officers appear to perceive their work environment as one in which they are highly likely to experience traumatic events and one which warrants a heightened level of both constant vigilance and extreme caution in relation to their actions. Moreover, correctional officers endorsed these perceptions more strongly than those in other general community occupational roles. In contrast, the differentiation between correctional officers and those working within general community occupational roles was far less clear with regard to both their perception of their ability to achieve workplace respite at work, and their ability to effectively separate their work and home lives.

These findings may have a number of important implications for the development of interventions designed to assist correctional officers to manage perceived work-related environmental adversity. For example, training programs designed for correctional officers may benefit from either directly addressing, or addressing the negative effects of, employees’ perceptions of workplace threat, their perception of environmental unpredictability and their heightened expectation of experiencing workplace trauma. It should be noted however, that although correctional officers scored more similarly to the general public on both the Work/life Separation and Inability to Achieve Workplace Respite sub-scales, both were found to be associated with the self-reporting of stress reactions within the correctional officer sample. This suggests that both factors may still be important to address in the development of proactive psychological training programs, despite officers scoring similarly to those in the greater community. Furthermore, although correctional officers scored particularly high on the Need for Vigilance sub-scale, it was not significantly associated with self-reported stress reactions, suggesting that the need for hyper-vigilance may not be an effective target for preventative training programs.

There were a number of limitations inherent in the present study that warrant acknowledgement. Although the PSS and stress subscale of the DASS-21 were included as convergent validity measures, it may have been appropriate to also include an established measure of work stress to assist with further establishing the convergent validity of the WREAS and future research should address this. Secondly, as the current study predominantly sampled non-deployed military personnel as compared to deployed personnel actively engaged in war-like duties, comparisons between correctional officers and military personnel should be interpreted with a high degree of caution.
Further research is warranted that can examine differences in perceived work-related environmental adversity between military personnel engaged in war-like services and those non-deployed military personnel to provide a deeper understanding of the association between deployment and workplace adversity in a military context. Moreover, further research providing a comprehensive examination of the unique psychometric properties of the 36-item WREAS would be useful. In addition, further research examining intra-occupational differences in work-related environmental adversity would be a welcome addition to the literature. For example, an exploration of the impact of proximity to inmates on both full-scale and sub-scale WREAS scores within correctional officer samples may prove a valuable extension of the current study.

In conclusion, this research has provided new insight into the ways in which the working environment of correctional officers may differ from the working environments of other professions found within the general community. It demonstrated that correctional officers perceive a heightened level of work-related environmental adversity compared with those in other professions, and akin to that observed in police and emergency service workers. It has also provided a deeper understanding of the types of factors that may underpin the work-related environmental adversity perceived by correctional officers. Furthermore, this study has provided the scientific community with a new self-report questionnaire capable of measuring an individual’s perception of work-related environmental adversity. It is hoped that the results of this study will encourage a deeper exploration of work-related environmental adversity and provide an evidence-based rationale for the development and implementation of preventative psychological training programs aimed at assisting correctional officers to better manage the adversity they face in the workplace.
References


doi:10.1056/NEJM199108293250903


CHAPTER 5: CORRECTIONAL OFFICER RESPONSES TO WORKPLACE ADVERSITY
5.1 Preamble to Empirical Study 2


Chapter 5 is the second original research study conducted as part of this thesis. The paper is included in this chapter in its original submitted form. This study aimed to explore the range of responses that correctional officers gravitated toward when attempting to manage workplace adversity. More specifically, it aimed to identify a set of officer-specific response tendencies that correctional officers believed were used when faced with workplace adversity. Due to the exploratory nature of the research question addressed, a mixed-method qualitative design that utilised both focus groups and semi-structured interviews was employed. This design provided a depth and breadth of information that would be difficult to attain through a quantitative research design. Overall, this study was able to successfully identify a set of interpersonal, cognitive and behavioural response tendencies that officers believed were commonly employed when managing workplace adversity. Furthermore, it provided a set of officer specific response tendencies to draw upon when exploring the relationship between perceived workplace adversity, response tendency usage, officer wellbeing and negative organisational outcomes in the third empirical study included in Chapter 6.
5.2 Correctional Officers and Workplace Adversity: Identifying Interpersonal, Cognitive and Behavioral Response Tendencies

Justin S. Trounson* & Jeffrey E. Pfeifer
Swinburne University of Technology, Melbourne, Australia

Author Note

We would like to acknowledge Mr Alfie Oliva, Ms Rebecca Lacey and Ms Stephanie Louise who were instrumental in providing both administrative and technical assistance in relation to a number of aspects of this project. We would also like to thank G4S for their continued support and collaboration throughout this study. This research was partially funded by the Barbara Dicker Brain Sciences Foundation (BDBSF).

*Correspondence concerning this article should be addressed to Mr Justin Trounson at the Centre for Forensic Behavioural Science, Swinburne University of Technology, PO Box 218, H24, Hawthorn, Victoria, Australia 3122 (email: jstrounson@swin.edu.au).
Abstract

This study explored correctional officers’ response tendencies (i.e., cognitive, interpersonal and behavioral response patterns they engage in) when managing workplace adversity. In total, 53 Australian correctional officers participated in the study. Eight exploratory focus group discussions \((n = 42)\) were conducted to identify a set of officer-endorsed response tendencies. Thematic analysis of group data revealed that correctional officers engage in a range of response tendencies when facing workplace adversity and that these tendencies may be categorized as either interpersonally, cognitively or behaviorally-based. Semi-structured interviews \((n = 11)\) were then conducted to provide further depth of information regarding officer response tendency usage. Results are discussed in terms of common themes, future research, and implications for developing training programs designed to ameliorate the effects of workplace adversity.

KEYWORDS: Coping; Stress; Prison; Work; Occupation; Guard; Wellbeing
Introduction

Like many other professions, correctional officers face a range of work-related stressors that can impact their psychological well-being (Dowden & Tellier, 2004; Ghaddar et al., 2008). However, correctional officers are expected to continually manage an array of stressful and often unpredictable workplace difficulties unique to their profession (Harrell, 2011; Konda et al., 2012). Officers function within a high-risk occupational environment that can expose them to a variety of highly adverse experiences (Ghaddar et al., 2008). For example, it is common for correctional officers to observe or experience verbal or physical abuse, witness graphic or distressing events, and function as first responders to many difficult and potentially traumatic incidents (Spinaris et al., 2012). In addition, industry-based statistics suggest that correctional officers in the US are subject to a higher non-fatal violent workplace incident rate compared to other professions (Harrell, 2011; Warchol, 1998) and have one of the highest non-fatal occupational injury rates of all state government employees (Bureau of Labor Statistics, 2010). Research suggests that these trends are likely to continue as facilities become increasingly overcrowded and inmate to officer ratios continue to rise (Martin et al., 2012).

In addition to these workplace challenges, research indicates correctional officers are at a heightened risk of experiencing a gamut of negative psychological and physical conditions compared to the general public (S. Johnson et al., 2009). For example, correctional officers have been shown to suffer from higher rates of depression (Bourbonnais et al., 2007; Sui et al., 2014), anxiety (Goldberg et al., 1996) and stress (Kunst, 2011). Research also indicates that officers are more likely to engage in substance abuse (Svenson et al., 1995) and be particularly susceptible to a number of serious stress-related physical conditions such as hypertension, heart attacks and heart disease (Anson et al., 1997; Calvert et al., 1999; Finn, 1998; Harenstam et al., 1988; Morse et al., 2011).

Although there may be numerous factors that contribute to these negative health outcomes within correctional officer populations, recent research indicates that perceived workplace adversity is one factor that is a contributor worthy of further examination (Trounson et al., 2016). Specifically, it has been found that correctional officers perceive a significantly higher level of workplace adversity than those employed in other occupations found within the general public and that this perception
of workplace adversity is associated with increased report of stress reactions by officers (Trounson et al., 2016). These findings are largely congruent with industry reports and evaluations that detail the realities of working as a correctional officer (Brower, 2013; Finn, 2000; Inspector of Custodial Services, 2014; UK Justice Committee, 2015).

Many of these workplace challenges and associated the stress experienced by correctional officers have also been found to negatively impact the effective functioning of the correctional organizations that employ them (Dowden & Tellier, 2004). Industry-based statistics highlight many associated organizational impacts that obstruct the effective and safe operation of correctional facilities including high rates of absenteeism (E. G. Lambert et al., 2005), burn-out (Gould et al., 2013), officer turnover (Finn, 1998; E. G. Lambert et al., 2010), and low rates of job satisfaction (Mahfood et al., 2013) in correctional officer groups. Furthermore, these organizational impacts have been shown to result in numerous direct and indirect costs to correctional institutions (Stohr et al., 1992), including those related to employee replacement procedures, overtime payments, insufficient staffing issues and reduced staff productivity (E. G. Lambert et al., 2005, 2010).

Despite widespread industry and academic awareness of the negative impact of workplace adversity on employee and organizational functioning, little is currently known about how correctional officers attempt to manage their perception of workplace adversity (Trounson et al., 2016). The little existing research examining correctional officer’s responses to workplace adversity, provides mixed results (Gould et al., 2013; Triplet et al., 1996). For example, Gould et al. (2013) found that dysfunctional coping mechanisms (e.g., behavioural disengagement and venting) were related with increased correctional officer burnout and that problem-focussed coping was related to lower burnout ratings of emotional exhaustion. In contrast, Triplett et al. (1996) found evidence that problem-focussed responses may be ineffective in reducing correctional officer stress and that emotion-focused strategies may be useful in reducing officer burnout. Furthermore, there is some evidence that officers working in different working environments may differ in the way they respond to stress (Tsirigotis et al., 2015).

Although associations between officer responses to adversity at work and negative health outcomes have been identified across each of these identified studies (see e.g., Gould et al., 2013; Triplet et al., 1996; Tsirigotis et al., 2015), some ambiguity still remains in relation to the true breadth and nature of the responses employed by correctional officers when faced with workplace adversity. In fact, very little research
effort has been expended on empirically identifying and classifying the range of
response tendencies employed by correctional officers when attempting to manage the
workplace adversity they face.

Examination of the available literature that examines correctional officer responses
to workplace adversity reveals that all of these previous investigations have utilized
standardised psychological measurement tools not developed specifically for use with
correctional officers as a means for exploring and quantifying their responses to
adversity (see e.g., Gould et al., 2013; Triplett et al., 1996; Tsirigotis et al., 2015).
Although the use of these standardized measures provides some inherent benefits in
regard to bolstering the scientific rigour of these investigations, these measurement
tools were all tested and normed using general community samples and do not
necessarily capture the breadth of salient response tendencies unique to correctional
officers. Subsequently, there may be important information regarding the types of
response tendencies employed by correctional officers when faced with workplace
adversity that may be have been previously missed. Furthermore, no studies were
identified that drew upon the expertise of officers by directly asking them to identify the
types of responses they believed officers employed when attempting to manage the
adversity they face at work. Drawing upon this practical expertise may provide valuable
insight into the response tendencies employed by correctional officers, which may in
turn assist in the future investigation of officer responses to workplace adversity.

Given the above, it is suggested that an important foundational step toward gaining
a more comprehensive understanding of correctional officer wellbeing begins with an
empirical understanding of the response tendencies they engage in. To add to the
existing literature this study aims to use a qualitative research design that actively draws
upon the practical expertise of officers to help establish a set of officer-endorsed
response tendencies. Furthermore, this study aims to examine the response tendencies
identified by officers and categorize them dependent on their shared characteristics.
Identifying the breadth and nature of officer responses to workplace adversity is an
important research endeavour considering the scientific literature relating to coping and
responding to adversity indicates that an individual’s response to adverse events can be
a critical mediator of the relationship between adversity and the eventuation of negative
health outcomes (Folkman et al., 1986; Jones, 2005; Lazarus & Folkman, 1984).
Method

Design

Due to the exploratory nature of the research, a qualitative approach was identified as the most appropriate research method (Hesse-Biber & Leavy, 2010). In line with recommendations (S. D. Lambert & Loiselle, 2008), a mixed method design was used that involved eight focus group discussions followed by 11 semi-structured interviews to enhance data richness.

Focus groups were conducted to provide breadth of information (Willig, 2008). All focus groups were kept between five and eight participants, consistent with the recommendations outlined by Krueger and Casey (2009). Participants were assigned to a particular group dependent on their role within their respective facility (i.e., level of seniority) so as to avoid the presence and potential influence of a foreseeable power differential (Krueger & Casey, 2009). All focus groups ran for approximately 90 minutes and were facilitated by a registered psychologist with previous experience in qualitative research methods and focus group facilitation.

Individual semi-structured interviews were conducted to complement focus group discussions, confirm focus group discussion findings, and provide depth of information where relevant (Patenaude, 2004). The individual interviews also provided opportunity for interviewees to discuss their views more freely, allowing them to offer opinions that may not have been offered within the focus group discussions due to hesitation in sharing such views in the presence of other officers. This was considered particularly important as past research has indicated that correctional officers may deny or underplay their experience of workplace stress due to a desire to present a tough image (Cheek & Miller, 1983; Veneziano, 1984). A registered psychologist with previous experience in semi-structured interviewing techniques conducted all interviews, each lasting 20-30 minutes.

Participants

Participants were recruited through online advertisements, social networking sites and through word of mouth. No incentives were provided in return for participation. All participants were provided a brief regarding the purpose of the study and signed consent prior to participation. Basic demographic information was collected from all participants and interview notes were recorded by hand. A total of 53 Australian correctional officers (43 males and 10 females) participated in the study. Officers
ranged in age from 25 to 66 years old ($M = 44.41, SD = 10.89$) and varied in their level of experience of working as an officer from four months to 29.5 years ($M = 6.57, SD = 6.86$). Participants were all working as correctional officers in either medium or maximum-security facilities with direct daily contact with inmates. Overall, 42 officers participated across eight independent focus group discussions and 11 individuals participated in semi-structured interviews. Detailed demographic information for each of the eight focus groups and for the officers interviewed are shown in Table 10.

Table 10.

<table>
<thead>
<tr>
<th></th>
<th>Age (years)</th>
<th>Gender</th>
<th>Experience (years)</th>
<th>Level</th>
<th>Role</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>Range</td>
<td>Male</td>
<td>Female</td>
<td>M</td>
</tr>
<tr>
<td>Group 1</td>
<td>44.50</td>
<td>9.61</td>
<td>34-57</td>
<td>5</td>
<td>1</td>
<td>8.25</td>
</tr>
<tr>
<td>Group 2</td>
<td>54.40</td>
<td>5.18</td>
<td>47-59</td>
<td>3</td>
<td>2</td>
<td>15.40</td>
</tr>
<tr>
<td>Group 3</td>
<td>36.80</td>
<td>9.09</td>
<td>26-46</td>
<td>4</td>
<td>1</td>
<td>2.70</td>
</tr>
<tr>
<td>Group 4</td>
<td>54.20</td>
<td>7.12</td>
<td>47-66</td>
<td>4</td>
<td>1</td>
<td>11.40</td>
</tr>
<tr>
<td>Group 5</td>
<td>44.60</td>
<td>17.95</td>
<td>25-64</td>
<td>5</td>
<td>0</td>
<td>1.70</td>
</tr>
<tr>
<td>Group 6</td>
<td>36.33</td>
<td>10.23</td>
<td>26-54</td>
<td>6</td>
<td>0</td>
<td>.54</td>
</tr>
<tr>
<td>Group 7</td>
<td>49.60</td>
<td>11.39</td>
<td>33-63</td>
<td>2</td>
<td>3</td>
<td>17.30</td>
</tr>
<tr>
<td>Group 8</td>
<td>43.60</td>
<td>9.04</td>
<td>29-51</td>
<td>4</td>
<td>1</td>
<td>6.06</td>
</tr>
<tr>
<td>Interviews</td>
<td>41.18</td>
<td>7.05</td>
<td>30-52</td>
<td>10</td>
<td>1</td>
<td>2.07</td>
</tr>
</tbody>
</table>

Note. $N = 53$, Max = maximum security facility, Med = medium security facility, S = Officers in supervisory roles with continued direct contact with prisoners, F/L = Front line officers with direct contact with prisoners.
Materials

**Focus group briefing and discussion prompts.** A scripted briefing was provided to focus group participants to offer a context for group discussions and to ensure continuity in process across groups. The briefing contained general information regarding the purpose of the study, the aims of the focus groups, discussion parameters and information relating to informed consent. Basic information was also provided in regard to the concepts of workplace adversity, stress and coping to orient participants. Participants were requested to discuss the range of ways they believed (or had observed) officers responded to workplace adversity rather than answer from an individual perspective. Discussion prompts were based on the findings of Trounson, Pfeifer and Critchley’s (2016) study into workplace adversity within correctional officer populations. These discussion prompts provided the structured component of the focus group discussions and were used with each group to facilitate and guide the discussions toward the study aim.

**Semi-structured interview schedule.** A semi-structured interview schedule was developed comprising the same discussion prompts used within the focus groups. Participants were encouraged to elaborate on their responses throughout the interview so as to gain additional depth of information. Interviewees were also asked to provide their views on themes that had been identified in the focus group discussions and that they had not touched on in the interview to assess their level of agreement with each.

**Results**

Data was analyzed using a linear, hierarchical, analytic process as outlined by Creswell (2014) and data coding as recommended by Tesch (1990). Coding and interpretation was aided by the Nvivo Version 10 qualitative software package. As part of the process described by Creswell, a number of steps were taken to validate the focus group data. At the conclusion of each focus group, participants reviewed all discussion notes to ensure accuracy and authenticity of the data collected. Data was then analyzed thematically and responses were categorized in terms of their content and coded pertaining to common themes. To ensure accuracy of interpretation and provide preliminary evidence of inter-rater reliability, the data and analytic process were subsequently reviewed by an independent evaluator with experience in conducting qualitative research and thematic analysis.
An inductive approach was employed throughout the thematic analysis (Braun & Clarke, 2006). This resulted in the identification of a set of response tendencies that participants believed were often used by officers when managing workplace adversity. The response tendencies identified were then analyzed for latent themes, which resulted in the adoption of three higher-order themes or response tendency classifications; i) cognitively-based responses, ii) interpersonally-based responses, and iii) behaviorally-based responses. In this paper, the response tendencies identified are presented dependent on whether they appear to be predominantly cognitively, interpersonally or behaviorally-based. It should also be noted that only those response tendencies identified across multiple focus group discussions have been included for discussion.

**Interpersonally-Based Response Tendencies**

A number of interpersonally-based response tendencies were identified through the focus group discussions and confirmed though the semi-structured interviews. These included effective communication skills, conflict management skills, humour and emotional venting. Participants in each focus group identified effective communication skills as a highly valuable and commonly employed response tendency used by officers when managing workplace adversity. According to participants, communicating effectively with others at work (i.e., officers, management, visitors and the offenders they supervise) was particularly helpful in reducing the negative impact of the stressful or adverse events they experienced while working. Conflict management skills were also identified as commonly employed by officers when they faced workplace adversity. One officer reported that the use of effective communication and conflict management skills can not only assist with the management of adverse events at work once they occur, but in some cases, may also help to circumnavigate or defuse potentially dangerous situations, thus reducing the frequency or severity of facility incidents. Group members also agreed that a lack of effective communication and conflict management skills could at times exacerbate or perpetuate workplace adversity by increasing the frequency and severity of interpersonal conflict and through obstructing conflict resolution processes. One officer went on to state that officers lacking effective communication and conflict management skills could significantly compromise unit safety, the safety of co-workers and could at times contribute to staff stress within a unit.
The use of humour was also identified as a commonly employed response tendency. All groups agreed that officers often used humour when dealing with difficult issues or events that occurred in the workplace. According to the officers, humour (especially in the face of particularly distressing events) allowed correctional officers to engage less intensely with the adverse experiences they encountered at work. This finding is in line with past research that has suggested that humour may in fact function as a positive coping mechanism in high adversity environments (Crawley, 2004).

Emotional venting (i.e., the misdirected and often forceful expression or release of pent-up feelings toward others) was also recognized as a commonly used response to workplace adversity. The most common example of emotional venting raised within the group discussions was when officers returned home and engaged in (or instigated) verbal conflict with family members as a means to release internalized stress that had built up while managing adversity at work. Other types of emotional venting included yelling at co-workers or engaging in physical outbursts toward others or objects.

**Cognitively-Based Response Tendencies**

A set of cognitively-based response tendencies was also identified across focus groups and confirmed in individual interviews. These included engaging in psychological detachment, denying or repressing cognitions and/or feelings relating to difficult experiences at work, and the use of both trauma processing and physiological stress management skills. Participants within each focus group reported the tendency for officers to use psychological detachment which can be understood as the ability to refrain from job-related thoughts when away from the workplace (Sonnentag, Kuttler, & Fritz, 2010) as a mechanism for managing workplace adversity. There is some evidence to suggest that psychological detachment may be a helpful response to workplace adversity (Eden, 2001; Sonnentag & Bayer, 2005; Sonnentag et al., 2010). A number of officers reported that the ability to cognitively disconnect or cognitively separate from difficult experiences that occurred at work was an important skill to have and one that was often used by officers when managing workplace adversity. For example, one officer stated the importance of being able to “leave work at work”, while many stated the need to “be able to leave it all at the gate”. A third officer stated “I don’t like to bring it all home with me, once I take off the uniform I’m a different person”. In fact, some officers reported engaging in ritual behaviors designed to assist with this process.
of psychological detachment such as hand washing or taking off the uniform immediately once arriving home.

Focus group discussions further revealed that officers tended to engage in denying or repressing their cognitions and/or feelings. This was a particularly significant response tendency identified by all groups suggesting that repression or denial of distressing thoughts and feelings is a widespread phenomenon for officers working within the field of corrections. Participants also reported that although the repression of feelings and thoughts could be helpful (and in some cases necessary for the safe operation of the facility) in the short-term, it was viewed as largely unhelpful in the long-term effective management of workplace adversity. This sentiment was reflected in officers’ statements such as “it might make things better at first but then you’ve got a problem”, “it doesn’t work, it gets to you in the end anyway” and “you might think you can switch it off but you’re kidding yourself”.

The ability to effectively process difficult or traumatic experiences was also identified as a helpful and commonly employed response tendency. Participants agreed that they expected to be confronted with traumatic experiences at some point while working as an officer and that some officers appeared better equipped than others at dealing with the adverse events they encountered. When asked whether they believed officers were equipped with the necessary skills to process traumatic events, they reported that this differed significantly between individuals and that little formal training was provided that addressed the ability to cognitively process distressing situations or events.

Finally, physiological stress management (i.e., techniques employed to reduce the physical signs of stress and anxiety) was identified as a helpful and commonly used response tendency when managing workplace adversity. Participants believed it was common for officers to experience a range of physiological symptoms such as increased heart rate, perspiration and irregular respiratory patterns when confronted with adverse experiences at work. The ability to actively alleviate these stress-related symptoms was seen as an important aspect of effective management of the workplace adversity they face. One participant stated that developing a sense of mastery over one’s physiological responses in high-stress situations substantially reduces the negative psychological impact of the event.
Behaviorally-Based Response Tendencies

A range of behaviourally-based response tendencies were also identified across the focus groups and confirmed in the interviews. These included engaging in external activities, help seeking behavior, substance use, work-avoidance behavior, engaging in self-isolation and less commonly, acts of self-harm. Engagement in external activities (e.g. regular exercise and social events) was seen as a helpful and frequently used response tendency. Participants agreed that engaging in such activities allowed officers to detach from the difficult events they had experienced at work and allowed them an alternative avenue for the release of built up stress and tension. In contrast, it was believed that some officers tended to manage workplace adversity by isolating themselves from others including friends, family, colleagues and the offenders they supervised. Self-isolating behaviors identified included reducing engagement in out of work social activities, limiting communication with others and avoiding situations that might involve social interaction while at work.

Work-avoidance behaviour was also mentioned as a commonly used response tendency, in particular taking time off work through the use of sick leave despite being physically well, to avoid workplace stressors. When asked whether they felt work-avoidance was a helpful response tendency, participants agreed that it was a largely unhelpful strategy as workplace stressors tended to remain unchanged upon the return to work.

Being willing to seek professional assistance or emotional support from friends, family or colleagues was perceived as a helpful response tendency. Despite help seeking behaviour being seen as a positive response to adversity in the workplace, participants reported that many officers were uncomfortable about expressing a need for support or assistance even when they were struggling to maintain their well-being.

Participants also stated that substance abuse, alcohol in particular, as a means to manage difficult workplace conditions was common among correctional officers. The concept of self-harm arose in each focus group discussion, however participants reported this was an uncommon response to workplace environmental adversity.

Discussion

This study contributes significantly to the existing literature by revealing common responses to workplace adversity among correctional officers. Firstly, a set of occupationally relevant, officer-endorsed, response tendencies that are employed by
officers when dealing with adversity in the workplace were identified. This provides both the scientific and correctional communities with a new understanding of the breadth of ways in which officers manage the difficulties they face at work. These can be broadly categorized as response tendencies arising from interpersonal, cognitive and behavioral domains. The identification of these occupation-specific response tendencies also provides valuable information when considering how to best assist officers better manage workplace adversity. The findings can inform future intervention or training programs to improve well-being in correctional officer populations. Furthermore, the results provide a foundation and potential framework for future research into correctional officers’ responses to adversity and stressors in the workplace.

From an interventional standpoint, the strategies that have been identified in this study may offer valuable information that can be drawn upon when developing effective interventional responses aimed at assisting correctional officers to maintain well-being. For example, this study identified a number of response tendencies that could be described as potentially unhelpful in managing workplace adversity (i.e. substance use, work-avoidance behavior, repressing feelings and cognitions, emotional venting). Consideration of the shared underlying characteristics of these response tendencies highlights the duplicitous nature of many of these strategies and may offer some partial explanation for why such unhelpful response tendencies are repeatedly employed by officers. Many of these response tendencies can offer immediate and short-term relief from workplace adversity yet, when employed consistently, heavy-handedly and for sustained durations, may result in the development of long-term problems. For example, although the use of alcohol after work may assist an officer to relax and detach from workplace stressors and adversity in the short-term, reliance on alcohol as a primary strategy for dealing with adversity may cause many negative long-term health effects.

It is plausible that the level of short-term relief provided by these strategies may be viewed as worthwhile by officers or may result in the overestimation the helpfulness of the response tendency thus leading them to continue to utilize and rely upon responses that may be harmful in the longer term. Assisting officers to effectively distinguish between helpful and unhelpful response tendencies may assist them to maintain their well-being. Providing officers with a better understanding of how some short-term strategies may negatively impact their well-being over time may in turn assist them to actively avoid unhealthy response tendencies as a means of managing workplace adversity and move towards adopting a more healthy response approach.
When considering the more helpful response tendencies (e.g. effective communication and conflict resolution skills, trauma processing skills and physiological stress management skills), it is apparent that many are essentially skill based which in turn may infer malleability. These response tendencies are dynamic factors that are teachable and can be refined through effective training programs. This is very encouraging from an interventional standpoint, as these skills can be targeted in psycho-educational training programs designed to ameliorate the effect of workplace adversity. This is also true for many of the behaviorally based response tendencies (e.g. engagement in external activities, substance use, the use of humor, self-isolation, work avoidance behavior, help seeking behavior) which can be actively encouraged or discouraged in training programs by providing officers with an understanding of their inherent value or cost to their well-being. For example, past research has suggested that humor may function as a positive coping mechanism in high adversity environments (Crawley, 2004; Severson & Pettus-Davis, 2013) and humor was identified as a common response tendency used by correctional officers. Therefore, it may be beneficial to encourage the use of humour as a way to manage and respond to adversity in the workplace. In contrast, past research has demonstrated that work avoidance (a form of avoidance coping identified in the current study as a common response tendency used by officers) has been linked to negative outcomes (Koeske, Kirk, & Koeske, 1993). Thus, the reduction of work avoidance behavior may be an appropriate goal for future interventions aimed at assisting officers to maintain their sense of well-being when managing workplace adversity.

Future research is needed to establish which response tendencies are truly beneficial for officers and which may hamper their short-term or long-term well-being. This is particularly important, as officers may not be aware of the true benefits and costs of the response tendencies they utilize. This might be best highlighted in the participants’ shared beliefs that psychological detachment is a helpful tool to manage workplace adversity. Although the officers were able to provide a number of good examples of situations where psychological detachment may be useful, over reliance on such a response tendency may over time result in an unhelpful desensitisation to the distress of others which can in turn negatively impact their relationships inside and outside the prison walls (Crawley, 2002). Future research that can empirically demonstrate the link and shed light upon the nature of the relationship between
workplace adversity, the response tendencies correctional officers employ and their well-being is also warranted.

**Strengths and Limitations**

There are a number of inherent strengths and weaknesses that are worth acknowledging. Strengths of this study include the conduct of an appropriate number of focus groups to reach a point of data saturation (Krueger & Casey, 2009), the use of additional confirmatory interviews to ensure richness and accuracy of information, and the participation of correctional officers working in medium and maximum security settings, and engaged in either frontline or supervisory roles. There are however, some limitations worth acknowledging. Firstly, the recruitment of only Australian officers working within medium and maximum-security correctional facilities limits the generalizability of the findings beyond these populations. Whether the responses identified in this study are relevant to other similar settings needs to be established in future studies. A second limitation is the origin of the data. While it can be argued that officers possess invaluable information and expertise in relation to correctional officers’ management of workplace adversity, this exploration does not claim to provide a comprehensive list of officer response tendencies. It is likely that some were not identified by participants because they may not be readily verbalized or may lie outside their conscious knowledge. Finally, it should be noted that this study does not provide empirical guidance in relation to which response tendencies are healthy and which are unhealthy or provide evidence of the potential links between workplace adversity, response tendency use and well-being.

In conclusion, the findings of the present study suggest that correctional officers employ a wide range of response tendencies when attempting to manage workplace adversity. Furthermore, it is apparent that these responses span across interpersonal, cognitive and behavioral domains. It is argued that the response tendencies identified provide a set of relevant, officer-endorsed targets for the development of psycho-educational training programs aimed at ameliorating the impact of workplace adversity on correctional officer well-being. Furthermore, it is hoped that this paper may evoke further research aimed at expanding our understanding of the nature and role of correctional officer response tendencies and their relationship with workplace adversity and officer well-being.
References


functioning. Florence, CO: Desert Waters Correctional Outreach.


CHAPTER 6: THE RELATIONSHIP BETWEEN PERCEIVED WORKPLACE ADVERSITY, RESPONSE TENDENCIES, CORRECTIONAL OFFICER WELLBEING AND ORGANISATIONAL IMPACTS
6.1 Preamble to Empirical Study 3


Chapter 6 is the third original research study conducted as part of this thesis. The study is included in this chapter in its original submitted form. This study aimed to explore the relationship between perceived workplace adversity, response tendency usage, officer wellbeing and negative organisational outcomes. More specifically, it aimed to determine the existence of a clear empirical link between each of the aforementioned concepts and clarify whether response tendency usage moderates the relationship between perceived workplace adversity and officer wellbeing. As expected, the findings indicated that perceived workplace adversity was associated with officer wellbeing and a range of negative organisational impacts. Specifically, the more an officer perceived their work environment as adverse, the less likely they were to report a sense of wellbeing and the more likely they were to engage in absenteeism, presenteeism and experience a sense of job dissatisfaction.

Results also revealed that an Interpersonal/Solution-focused (ISF) response style moderated the relationship between perceived workplace adversity and psychological wellbeing, weakening the negative impact of workplace adversity on wellbeing and reducing the level of negative impact on the employing organisation. No moderating effect was found for the Emotional/Avoidant (EA) response style. However, examination of correlational analysis indicated that an EA response style was positively associated with perceived workplace adversity, psychological distress, lowered thriving and the occurrence of negative organisational impacts. These findings indicate that ISF strategies may be useful for correctional officers to employ when their sense of workplace adversity is high or is increasing and that EA strategies may be best avoided by officers.
6.2 Perceived Workplace Adversity and Correctional Officer Well-being: Examining the Impact of Officer Response Styles

Justin S. Trounson*, Jeffrey E. Pfeifer and Jason L. Skues
Swinburne University of Technology, Melbourne, Australia

Author Note

*The authors would like to acknowledge Mr Alfie Oliva and Ms Stephanie Louise who were instrumental in providing both administrative and technical assistance on a number of aspects of the project. This study was partially funded by the Australian Research Council (LP140100397). Correspondence concerning this article should be addressed to Mr Justin Trounson at the Centre for Forensic Behavioural Science, Swinburne University of Technology, PO Box 218, H24, Hawthorn, Victoria, Australia 3122 (email: jstrounson@swin.edu.au).
Abstract

Correctional officers work in a challenging environment. This study examines how correctional officer response-styles moderate the association between perceived workplace adversity and psychological well-being. The aim was to assess the degree that perceived workplace adversity predicts correctional officer psychological well-being and the subsequent impact on negative organizational outcomes (e.g., absenteeism, presenteeism, and job dissatisfaction). 174 officers completed an online questionnaire including measures of perceived workplace adversity, response tendency usage, psychological well-being, and organizational impact. Structural Equation Modelling revealed that a heightened perception of workplace adversity predicted lower psychological well-being and increased negative organizational impacts. Analyses indicated that using an interpersonal/solution focused response-style moderated the relationship between perceived workplace adversity and psychological well-being, reducing its negative impact on well-being and in turn the frequency of negative organizational impacts. These findings offer insight into how officers’ perceptions of their working environment and how they respond to workplace adversity influence their psychological well-being.

KEYWORDS: Wellbeing; Coping; Occupation; Prison; Personnel; Resilience; Positive psychology; Stress; Employee
Introduction

Working as a correctional officer can be a highly challenging, stressful, and dangerous vocation (Kunst, 2011). As part of their occupational role, officers are expected to supervise and manage the safety of the correctional facility; a responsibility complicated by the fact that offenders placed under their care often suffer from a wide range of complex and inter-related psychological and behavioral problems (Fazel & Danesh, 2002; Fazel et al., 2008; Harlow, 1999; Sindicich et al., 2014). In addition to the stress that may accompany the management of individuals presenting with complex and diverse needs, correctional officers are continuously exposed to an array of negative occupational experiences including verbal and physical abuse, witnessing graphic or violent events, and acting as first responders to potentially traumatic incidents (Konda et al., 2012; Spinaris et al., 2012).

Given this context, it is not surprising that correctional officers experience one of the highest rates of work-related injury and illness (e.g., Ferguson, Prenzler, Sarre, & de Caires, 2011), suffer from high rates of work-related mental stress (e.g., SWA, 2013) and report a broad range of stress-related negative health outcomes (e.g., Denhof & Spinaris, 2013; Spinaris, 2014). Research indicates that correctional officers are particularly vulnerable to an array of negative psychological and physical conditions (e.g., Spinaris et al., 2012; Tartaglini & Safran, 1997). For example, officers have been shown to suffer from high rates of psychological distress (Morse et al., 2011), post-traumatic stress symptoms (Spinaris et al., 2012), depression (Denhof & Spinaris, 2013; Obidoa et al., 2011; Sui et al., 2014), substance abuse (e.g. Svenson et al., 1995), hypertension (Morse et al., 2011), obesity (Morse et al., 2011) and a heightened risk of developing other stress-related health conditions (Finney et al., 2013; S. Johnson et al., 2009). In addition correctional officers experience a higher risk of suicide when compared to the rest of the working age population (Morgan, 2009; Stack & Tsoudis, 1997).

In response to these observed negative health effects, there has been a substantial increase in research examining the antecedents of correctional officer stress and its impact on officer health over the past few decades (e.g., Brower, 2013; Finn, 1998). At least one recent study suggests that perceived workplace adversity may be associated with correctional officer stress (Trounson et al., 2016).
Perceived Workplace Adversity

The concept of adversity can be defined as the experience of hardship or suffering associated with trauma, distress, difficulty, or a tragic event (Luthar et al., 2000; Luthar & Cicchetti, 2000; Rutter, 1999). For the purposes of the current study, perceived workplace adversity is defined as an individual’s view of their work environment as one in which such markers of adversity are likely to occur (Trounson et al., 2016). A review of the existing literature on correctional officers perceptions of their working environment suggests they view their workplace as being highly adverse (Brower, 2013; Finn, 1998; Finney et al., 2013) and that this perception is related to negative health outcomes (Bourbonnais et al., 2007; Dowden & Tellier, 2004; S. Johnson et al., 2009; Spinaris, 2014; Woodruff, 1993b).

This conclusion was recently supported by a study comparing correctional officer perceptions of workplace adversity and stress with the perceptions of individuals from a variety of other occupations (Trounson et al., 2016). Results indicated that correctional officers’ ratings of adversity were equal to those of police and emergency service personnel and that these three groups’ ratings were significantly higher than those of individuals from other occupational groupings (e.g., sales, general trades, education). Analysis of the data also indicated an association between correctional officers’ perceptions of adversity and their stress reactions. Specifically, correctional officers who rated their workplace as highly adverse were more likely to report a higher level of stress as measured by the Perceived Stress Scale (Cohen et al., 1983) and stress sub-scale of the DASS-21 (Lovibond & Lovibond, 1995). This link between perceived workplace adversity and reported stress reactions identified by Trounson et al. (2016), was significantly stronger for correctional officers than for those working in other occupations. Based on these findings, the authors suggest that the negative impact of perceived workplace adversity on stress levels and psychological well-being may be greater for correctional officers than for people in other occupations.

Correctional Officer Psychological Well-being

The psychological well-being of correctional officers is an important issue that warrants the attention of both the profession and researchers (Marzuki & Ishak, 2011; Trounson & Pfeifer, 2016). However, it is argued that the measurement of officer psychological well-being should include not only markers of pathology but also
markers of a positive state of being, such as psychological thriving or flourishing (Seligman & Csikszentmihalyi, 2000). In line with previous research, Keyes (2015) for example, argues that the well-being of an individual cannot be ascertained by simply establishing the absence of illness or pathology but must also include confirming the presence of health-related markers.

Despite the substantial literature establishing the prevalence of pathology in correctional officers, a review of the research indicates that there are comparatively few studies exploring the specific concept of psychological well-being (Brower, 2013; Kinman et al., 2014). Furthermore, despite a few notable exceptions (e.g., Aube et al., 2009; Botha & Pienaar, 2006), the majority of studies that purport to examine the concept of psychological well-being have explored the concept by simply measuring markers of pathology and subsequently inferring well-being through the absence of markers of pathology and illness (e.g., Bierie, 2012). It is also noteworthy that, despite previous research demonstrating the link between officer pathology and negative organizational impacts (Spinaris, 2014), few studies have attempted to establish an empirical predictive relationship between the psychological well-being of officers and its potential impact on the organizations that employ them.

**Organizational Impact**

Research suggests that many negative organizational impacts may accompany the health-related issues experienced by correctional officers, including high rates of absenteeism (Camp & Lambert, 2006; E. G. Lambert et al., 2005), low job satisfaction (Griffin, Hogan, Lambert, Tucker-Gail, & Baker, 2009), high staff turnover (E. G. Lambert & Paoline, 2010; E. G. Lambert, 2001), and one of the highest occupational burn-out rates of any profession (Keinan & Malach-Pines, 2007). These negative organizational effects result in substantial direct and indirect costs to correctional organizations (Stohr et al., 1992), including increased overtime payments and staff shortages due to absenteeism, excessive training costs due to high turnover of staff and reduced staff productivity (Griffin et al., 2009; E. G. Lambert et al., 2005, 2010).

Of the growing body of research examining negative organizational impacts, the concept of job satisfaction has received the most attention (Garland, McCarty, & Zhao, 2009; E. G. Lambert et al., 2005; E. G. Lambert, Hogan, & Barton, 2002; Stinchcomb & Leip, 2013). Review of this literature suggests that correctional officers may be particularly likely to report low levels of job satisfaction with one study finding that
officers demonstrated the lowest level of job satisfaction of all 26 occupational categories examined (S. Johnson et al., 2009). Furthermore, job satisfaction has been identified as one of the strongest predictors of staff turnover intent (E. G. Lambert & Paoline, 2010). Finding ways to reduce correctional officer job dissatisfaction is therefore a highly important goal of correctional administrators.

Over the past decade, there has also been an increase in research examining the impact of correctional officer absenteeism and its antecedents (e.g., E. G. Lambert, Griffin, Hogan, & Kelley, 2014; E. G. Lambert & Hogan, 2007). Correctional officer absenteeism has been shown to be associated with job stress and job satisfaction and is a considerable problem for the correctional industry (Camp & Lambert, 2006; Lambert et al., 2005; Schaufeli & Peeters, 2000). In light of this, research that explores ways to reduce rates of correctional officer absenteeism is needed.

More recently, presenteeism (i.e., the practice of coming to work despite being unfit to do so, resulting in reduced productivity) has been identified as a major problem and serious health and safety concern for correctional officers and the organizations that employ them (British Psychological Society, 2016; Kinman et al., 2014; Kinman, Clements, & Hart, 2015). For example, Kinman et al. (2014, 2015) found that more than half (53%) of the 1,682 officers within their study reported always feeling under pressure to come to work when unwell. To date, little empirical research has explored the concept of presenteeism within correctional officer populations, however research emerging from police populations has found high rates of presenteeism and that this is associated with the work environment (Leineweber et al., 2011). It is argued that a deeper understanding of presenteeism among correctional officers is needed. Despite the current literature providing us with a reasonable understanding of the antecedents of negative organizational impacts, no studies to date have statistically modeled the relationship between perceived workplace adversity, psychological well-being, officer response tendencies and organizational impacts such as absenteeism, presenteeism and job dissatisfaction.

Coping and Officer Responses to Workplace Adversity

The scientific literature relating to coping and responding to adversity indicates that an individual’s response to adverse events is a critical mediator of the relationship between adversity and the eventuation of negative health outcomes (Folkman et al., 1986; R. Jones, 2005; Lazarus & Folkman, 1984). However, research examining
correctional officers’ responses to adversity provides mixed results (Gould et al., 2013; Triplett et al., 1996). In a study exploring correctional officer coping strategies and their impact on burnout, Gould et al. (2013) found that dysfunctional coping mechanisms (e.g., behavioral disengagement and venting) were related with increased burnout and that problem-focused coping was related to lower burnout ratings of emotional exhaustion.

In contrast, Triplett et al. (1996) found that problem-focused responses were ineffective in reducing officer stress and that emotion-focused strategies can be helpful in reducing burnout. Furthermore, a recent study of correctional officers’ coping with stress found that officers working in different working environments may vary in the way they respond to stress and the effectiveness of these responses (Tsirigotis et al., 2015). In an attempt to clarify the breadth of coping strategies used by officers Trounson and Pfeifer (2014) identified a range of officer-specific, interpersonal, cognitive and behavioral response tendencies endorsed by officers as commonly employed when managing adversity at work. However, no empirical link was established between the use of these response tendencies and markers of officer psychological well-being.

Although associations between officer responses to adversity at work and negative health outcomes have been identified (e.g., Gould et al., 2013; Triplett et al., 1996; Tsirigotis et al., 2015), it is not known whether officers’ response to adversity moderates the relationship between perceived workplace adversity and psychological well-being and in what ways this might affect the organizations that employ them. Gaining such insight may provide the correctional industry with new avenues to better manage the impact of perceived workplace adversity on officer psychological well-being and, in turn, assist to reduce its impact on correctional institutions. Therefore, research exploring how officers respond to stressors in the workplace and effective strategies for reducing the associated stress experienced by officers is needed (Morgan, Van Haveren, & Pearson, 2002).

The Present Study

This study aims to address the identified knowledge gaps in the literature as well as provide a more in-depth analysis of recent research in the area (e.g., Trounson, Pfeifer & Critchley, 2016; Trounson & Pfeifer, 2014). Specifically, this study seeks to
provide a deeper understanding of how officers’ responses to workplace adversity may impact their psychological well-being and the subsequent impact this may have on the organizations that employ them. Specifically, the goal of this study is to explore the relationship between perceived workplace adversity, the psychological well-being of correctional officers, and the occurrence of persistent negative phenomena that may impact correctional agencies (i.e., absenteeism, presenteeism and job dissatisfaction). It was hypothesized that a heightened perception of workplace adversity would predict lower psychological well-being and that this would in turn predict increased negative impact on the organizations that employ them. This study also aimed to explore whether officers’ responses to adversity could function to exacerbate or ameliorate the negative effect of perceived workplace adversity on their psychological well-being and the level of negative organizational impact experienced by the institutions that employed them. Specifically, it was hypothesized that an officer’s response tendency style would act as a moderator of the relationship between perceived workplace adversity and correctional officer psychological well-being, in turn impacting the organizations that employ them.

Method

Participants

Correctional officers were recruited through the distribution of invitations to participate via social networks, online discussion forums (e.g., Officer.com, Corrections.com and Prisonofficer.org) and web-based social utilities such as Facebook and MySpace. A snowball sampling technique was also implemented via a request within the invitation for respondents to pass the invitation onward to others who might be interested in participating. Participants were 174 correctional officers currently employed in a frontline (i.e., working with prisoners on a daily basis) or supervisory (i.e., overseeing day-to day operations) capacity. The sample consisted of 138 males and 36 females ranging in age from 22 to 64 years ($M = 41.10, \text{SD} = 10.32$). An international sample was attained with 42% of respondents working as correctional officers in the US, 39% in Australia, 13% in Denmark, 4.5% in Canada, and 1.7% from Sweden. Most (71.8%) were frontline officers with 22.4% working in supervisory roles. The majority of respondents (85%) worked in medium or maximum-security level settings (47.1% medium, 37.9% maximum, 8.6% minimum, and 6.3% other), and almost all were in full-time positions (97.7% full-time and 2.3% casually employed).
Procedure & Materials

Participants completed an online survey that included sociodemographic questions and measures of perceived workplace adversity, response style, psychological well-being, and negative organizational impacts. Participation was not restricted to specific correctional facilities and no incentives were used to assist in participant recruitment.

Perceived Workplace Adversity - The Work-Related Environmental Adversity Scale (WREAS) was used to measure officers’ perception of workplace adversity (Trounson et al., 2016). The scale is a 36-item, self-report measure designed to measure seven underlying dimensions of perceived work-related adversity. All items are unidirectional and encourage respondents to consider their working environment from a depersonalised viewpoint (e.g., “In my working environment anything could happen at any time”). Respondents indicated their level of agreement with statements on 7-point Likert scales ranging from 1 (strongly disagree) to 7 (strongly agree). Total scores were calculated as a weighted index to account for the individual contribution of each underlying dimension of the WREAS. Higher scores indicate higher levels of perceived workplace adversity. Past research has demonstrated the WREAS to be a reliable ($\alpha = .97$) and valid measure (Trounson et al., 2016).

Officer Response Tendency Style - Sixteen items were used to measure the frequency with which officers engaged in different response tendencies when faced with workplace adversity. Items were informed by the exploratory findings of Trounson and Pfeifer (2013, 2014). Respondents rated how often they engaged in each of the 16 response tendencies when overwhelmed at work on 7-point Likert scales ranging from 1 (never) to 7 (always). Examination of the factor structure for items confirmed the presence of two underlying factors or response styles. After consideration of item factor loadings and content, two distinct response tendency styles were identified: an emotional/avoidant (EA) response style and an interpersonal/solution-focussed (ISF) response style. The EA measure included items such as “I tend to close up” and “I tend to avoid thinking about how I am feeling”. The ISF measure included items such as “I turn to friends to talk about it” and “I try to use my problem solving skills to work my way through the situation”. The EA comprised six items ($\alpha = .74$) while the ISF consisted of 10 items ($\alpha = .82$). Total scores for both response styles were calculated as an average of scores across all response style affiliated items. A high total score on the EA measure indicated a strong affinity to using response tendencies that could be described as either emotional or avoidant strategies for managing workplace adversity.
A high total score for the ISF measure indicated a strong tendency to utilize response
tendencies that could be described as either solution-focussed or interpersonally based.

**Officer Psychological Well-being** - Psychological well-being was measured using 19 items designed to quantify officers’ perception of how much their work affected their well-being. All items were informed by existing tools that are used to measure the concepts of either psychological distress or well-being including the DASS-21 (Lovibond & Lovibond, 1995), the Perceived Stress Scale (PSS; Cohen et al., 1983) and the Personal Wellbeing Index (PWI; International Wellbeing Group, 2013). Generation of items was also conducted in accordance with recommendations provided by the Organization for Economic Co-operation and Development (OECD, 2013). Items required respondents to rate to what degree they felt their work had impacted a range of aspects of their psychological well-being on 7-point Likert scales ranging from 1 (*never*) to 7 (*always*). These included negative aspects of psychological well-being such as feeling “Down” or “Anxious” and positive aspects such as feeling “Confident” or “Content”. In line with theoretical expectations an examination of the factor structure indicated the existence of two underlying factors. Consideration of item content and factor loadings confirmed the presence of a distress based factor and a thriving based factor. The final distress measure ($\alpha = .93$) consisted of 15 items and the thriving measure ($\alpha = .73$) comprised four items. A high score on the distress measure indicated increased psychological distress (e.g., feeling down, anxious, helpless and angry) whilst a high score on the thriving measure indicated increased thriving/life contentment (e.g., feeling confident, optimistic, and high in self-efficacy).

**Organizational Impacts** - Three items were used to measure the potential negative organizational impacts of perceived workplace adversity. The three items assessed employee absenteeism, presenteeism and job dissatisfaction. Each of these organizational impacts have previously been: a) found to be associated with the experience of stress or adversity, b) examined across a range of occupational environments including within the correctional industry, c) identified as problematic and widespread in correctional settings (Brower, 2013). Respondents rated their agreement with each item on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Total scores were calculated by creating an average score across the three items ($\alpha = .71$). It should be noted that the item measuring job dissatisfaction was reverse scored. A high score indicated more negative organizational impact.
Results

Data were analysed using SPSS Version 23.0 and Mplus Version 7.3 statistical packages. Data were screened for outliers and data entry errors, and the relevant assumptions tested prior to analysis. Preliminary analyses revealed no significant differences for gender or age in regard to perceived workplace adversity, psychological well-being or negative organizational impacts. Furthermore, no significant differences in these variables were found between countries and security level affiliation (i.e., low, medium and high). Therefore, these variables were not controlled for in subsequent analyses. As missing data rates were less than 5% cases were excluded pairwise in all subsequent analyses (Peugh & Enders, 2004). One-factor congeneric measurement models were tested for each of the seven underlying dimension of the WREAS in order to determine whether each of these dimensions were unidimensional. An inspection of the one factor congeneric model outputs revealed good fitting models for all but one of the dimensions. For the Action Consequence dimension, item 30 was not associated with the underlying construct and was therefore omitted. The revised Action Consequence model provided a good fit to the data. Given that perceived workplace adversity is a formative construct, a Principal Component Analysis (PCA) was conducted on the WREAS to determine the significance and strength for each dimension of perceived workplace adversity. These values were used to calculate a weighed index score. The means, standard deviations, internal reliability statistics and theoretical ranges for each of the variables in the study can be seen in Table 11. Intercorrelations and related significance levels between each of the study variables are presented in Table 12.
Table 11.  
Means, Standard Deviations, Cronbach’s Alpha and Theoretical Ranges for Each of the Study Measures

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>α</th>
<th>TR</th>
</tr>
</thead>
<tbody>
<tr>
<td>WREAS</td>
<td>30.43</td>
<td>4.65</td>
<td>.95</td>
<td>0-49</td>
</tr>
<tr>
<td>Response Styles</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EA</td>
<td>2.89</td>
<td>1.09</td>
<td>.74</td>
<td>1-7</td>
</tr>
<tr>
<td>ISF</td>
<td>4.54</td>
<td>1.02</td>
<td>.82</td>
<td>1-7</td>
</tr>
<tr>
<td>Wellbeing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distress</td>
<td>3.16</td>
<td>1.26</td>
<td>.93</td>
<td>1-7</td>
</tr>
<tr>
<td>Thriving</td>
<td>3.38</td>
<td>1.04</td>
<td>.73</td>
<td>1-7</td>
</tr>
<tr>
<td>OI</td>
<td>3.00</td>
<td>1.43</td>
<td>.71</td>
<td>1-7</td>
</tr>
</tbody>
</table>

Note. N = 174, α = Cronbach’s alpha, TR = Theoretical range, WREAS = Work-related environmental adversity scale, EA = Emotional/avoidant response style, ISF = Interpersonal/Solution-focused response style, Distress = Distress measure, Thriving = Thriving measure, OI = Organizational impacts.

Table 12.  
Correlations and Significance Levels for Each of the Study Measures

<table>
<thead>
<tr>
<th></th>
<th>WREAS</th>
<th>ISF</th>
<th>EA</th>
<th>Thriving</th>
<th>Distress</th>
<th>OI</th>
</tr>
</thead>
<tbody>
<tr>
<td>WREAS</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISF</td>
<td>.09</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EA</td>
<td>.42**</td>
<td>.03</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thriving</td>
<td>-.20*</td>
<td>.20*</td>
<td>-.36**</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distress</td>
<td>.46**</td>
<td>.05</td>
<td>.74**</td>
<td>.47**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>OI</td>
<td>.25*</td>
<td>.03</td>
<td>.48**</td>
<td>-.49**</td>
<td>61**</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. N = 174, * = p < .01, ** = p < .001, WREAS = Work-related environmental adversity, ISF = Interpersonal/solution focused response style, EA = Emotional/avoidant response style, Thriving = Thriving measure, Distress = Distress measure, OI = Organizational impact.

A structural model was specified to examine whether officer response style moderated the relationship between perceived workplace adversity and psychological well-being, where psychological well-being in turn predicted negative organizational impacts (see Figure 1). The model specified involved a reflective first-order, formative second-order model structure in relation to the WREAS. Given the relatively small sample size, strategies were employed to reduce the number of parameters to be
estimated in the structural model (Preacher, 2006). In particular, item parcelling (Hau & Marsh, 2004) was used to represent the perceived adversity, distress and thriving constructs. Moreover, a single indicator latent variable was used to operationalize organisational impact (Wolf et al., 2013). The structural model was estimated using Maximum Likelihood Mean adjusted (MLM) estimation of the covariance matrix to account for non-normality within the data. The unconstrained approach (see Marsh et al., 2004) was used to create the latent variable interactions between perceived workplace adversity and both officer response styles. The results indicated that the model provided an adequate fit to the data, $\chi^2 (55) = 114.95, p < .001$, CFI = .95, RMSEA = .08, SRMR = .07. The model explained 32.9% of the variance in psychological distress, 14.2% of the variance in psychological thriving and 47.6% of the variance in organizational impact (see Figure 1).

![Figure 1. A structural model of perceived workplace adversity, response tendency usage, psychological wellbeing and related organizational impacts for correctional officers. * = $p < .05$, ** = $p < .01$, *** = $p < .001$.](image)

High scores on the perceived workplace adversity measure were associated with lowered psychological thriving and heightened psychological distress for officers, which in turn was associated with increased negative organizational impact. Significant indirect effects were identified between perceived workplace adversity and organizational impact via psychological distress ($p < .001$) and via psychological thriving ($p < .05$). Furthermore, significant indirect effects were revealed between the ISF interaction term and organizational impacts via psychological distress and
psychological thriving at $p < .05$. The results indicate that ISF response style moderates the relationship between perceived workplace adversity and officer well-being as measured by both officer distress and thriving, which in turn impacts the employing organization. In contrast, the EA response style did not moderate the relationship between perceived workplace adversity and psychological well-being (see Figure 1).

**Discussion**

This study aimed to explore the relationship between perceived workplace adversity, the psychological well-being of correctional officers, and the occurrence of persistent negative phenomena that may impact correctional agencies (i.e., absenteeism, presenteeism and job dissatisfaction). Furthermore, it aimed to provide a deeper understanding of how officers’ responses to workplace adversity may impact their psychological well-being and the subsequent impact this may have on the organizations that employ them. Overall, results supported the hypothesis that a heightened perception of workplace adversity was associated with lower officer psychological well-being and that this was in turn associated with increased negative organizational impacts (i.e., absenteeism, presenteeism and job dissatisfaction). Results also partially supported the hypothesis that officer responses to adversity would act as a moderator of the relationship between perceived workplace adversity and psychological well-being, in turn impacting the employing organizations. Specifically, support was found for the ISF response style as a moderator of the relationship between perceived workplace adversity and psychological well-being for officers. This is largely consistent with previous findings that have linked problem-focused coping (Gould et al., 2013) and relying on interpersonal response strategies such as talking to others (Triplett et al., 1996) with positive psychological outcomes for officers. No evidence however was found to support the EA response style as a moderator of the relationship between perceived workplace adversity and psychological well-being despite evidence of it being significantly associated with each of the study variables.

The association identified between perceived workplace adversity and psychological well-being confirms that officers who perceive a heightened level of adversity within their work environment are more likely to report a lower sense of psychological well-being. Specifically, they are less likely to report a sense of thriving or life contentment and are more likely to experience psychological distress. Results also show that that this lowered psychological well-being is associated with an increase
in negative organizational impacts such as increased risk of engaging in absenteeism, presenteeism and experiencing a heightened sense of job dissatisfaction. These findings are consistent with previous studies that have shown officers to be negatively affected by their work environment (Steiner & Wooldredge, 2015) and demonstrated that work stress is an important antecedent of negative organizational outcomes such as job dissatisfaction (Cornelius, 2005) and absenteeism (E. G. Lambert et al., 2005). The current study extends existing evidence by statistically modelling the relationship between each of these factors to provide a deeper insight into how perceived workplace adversity affects the correctional industry on both individual and organizational levels.

In addition to establishing an empirical link between each of the study concepts, it was predicted that the relationship between perceived workplace adversity and psychological well-being would be moderated by the response style employed by officers. The results indicated however, that only the ISF response style moderated the relationship between perceived workplace adversity and psychological well-being. A significant indirect effect was identified between perceived workplace adversity and negative organizational impacts via both psychological distress and psychological thriving. These findings suggest that for those officers who perceive a high level of workplace adversity, the use of an ISF response style may function to weaken the negative effect of perceived workplace adversity on their psychological well-being, in turn reducing the prevalence of negative organizational outcomes. This indicates that ISF strategies may be increasingly useful to employ in the event that an officers’ perception of workplace adversity increases or in cases where an officer’s level of perceived workplace adversity is particularly high. However, correlational analysis indicated no association between ISF response style use and perceived adversity. This suggests that although there is some evidence that an ISF response style may be helpful to officers experiencing high levels of perceived workplace adversity, there is no evidence that they use such response styles when their perception of adversity is high. In contrast, correlational analysis indicated that officers reporting high rates of perceived workplace adversity were likely to be employing unhelpful EA strategies. These findings suggest that support services or training programs may benefit from assisting officers to identify when work becomes more adverse and encouraging officers to implement ISF strategies under such conditions.

No evidence was found to suggest that the EA response style moderated the relationship between perceived workplace adversity and psychological well-being.
Despite finding no moderating effect in relation to the EA response style, significant correlations were found between the EA response style and the measures of perceived workplace adversity, psychological distress, psychological thriving and organizational impact. These findings are consistent with past research that has indicated that the use of dysfunctional responses such as denial, substance abuse and venting are associated with negative psychological outcomes for officers (Gould et al., 2013). The significant correlations identified suggest that frequent use of EA response strategies is associated with higher psychological distress, lower thriving, increased organizational impacts and that EA strategies tend to be employed more frequently by officers perceiving high levels of workplace adversity. Although EA response style may not moderate the effect of perceived workplace adversity on psychological well-being within the model tested, it may still be an important stand-alone predictor of reduced psychological well-being and a contributor to rates of absenteeism, presenteeism and job dissatisfaction within the correctional field. Future research examining the impact of an EA response style on psychological well-being and organizational impacts is warranted.

The findings of this study have a number of practical implications in relation to the development of training programs aiming to assist officers maintain their psychological well-being and reduce the prevalence of negative organizational outcomes. First, they provide evidence that perceived workplace adversity may impact an officer’s well-being and in turn impact the functioning of correctional agencies by increasing the occurrence of absenteeism, presenteeism and job dissatisfaction. These findings offer an evidence-based justification for the implementation of psychological interventions that address the negative effects of perceived workplace adversity on correctional officers. Furthermore, they clarify how correctional agencies may benefit from the implementation of such programs.

Second, the results provide a set of evidence-based training targets worth considering for inclusion in future training programs. Specifically, the findings suggest that training correctional officers to employ ISF responses when managing heightened workplace adversity may assist them in reducing the severity of the impact of perceived workplace adversity on their sense of well-being and in turn reduce the occurrence of negative organizational outcomes. In contrast, although EA response strategies may not moderate the relationship between perceived workplace adversity and psychological well-being, EA response style is associated with negative psychological well-being, negative organizational outcomes and reliance on EA response strategies tends to
increase as perceived adversity increases. This indicates that training officers to avoid engaging in EA response strategies may be useful in assisting them to maintain their sense of well-being and reduce the negative impact perceived workplace adversity has on the correctional agencies they work for.

There were some limitations inherent in the present study that warrant acknowledgement. Firstly, there is the question of sample size adequacy. The conduct of SEM requires substantial sample sizes to ensure the accuracy of results and to establish confidence of avoiding a Type I or Type II error. The sample size of 174 used in this study may be considered small for SEM analysis when considering the complexity of the specified model. However, statistical experts have argued that SEM can in fact be used effectively with small samples without compromising the accuracy of results (Muthén & Muthén, 2009; Nevitt & Hancock, 2004). Due to the size of the sample used in this study it is recommended that the results be considered with a degree of caution. Future attempts to replicate the findings of this study would benefit from attaining a larger sample size when conducting SEM analysis. Secondly, this study employed a cross-sectional design that limits the generalizability of the findings and limits the ability to make causal inferences in relation to the results. The interpretation of results in this study therefore should be considered with a degree of caution, particularly in relation to inferences of causality. Future studies that employ longitudinal design to provide a clearer understanding of the cause and effect relationships between these constructs are warranted. In the absence of convincing longitudinal research however, a level of tentative causality might be inferred through the conduct of studies using SEM modelling to test alternate or equivalent models (Pearl, 2012) or through the conduct of newer statistical methods such as Bayesian Networks for Latent Variables method (BN-LV; Zheng & Pavlou, 2010). Such research would greatly increase the confidence in the findings of this study and their generalizability to officers around the world.

In conclusion, this research has provided new insight into the relationship between perceived workplace adversity, officer psychological well-being and the eventuation of negative organizational impacts. Furthermore, it has provided a new understanding of how the response style of an officer may moderate the effects of perceived workplace adversity on well-being and in turn, impact the likelihood of negative organizational impacts occurring. It demonstrated a clear link between workplace adversity and officer well-being and emphasized the moderating effect of
ISF strategies in managing this adversity. It is hoped that the results of this study will assist to inform the development of future psychological training programs and interventions aimed at ameliorating the negative effects of perceived workplace adversity on officer well-being and the organizations that employ them.
References


Denhof, M. D., & Spinaris, C. G. (2013). *Depression, PTSD, and comorbidity in United*
States corrections professionals: Prevalence and impact on health and functioning. Florence, CO: Desert Waters Correctional Outreach.


134


Sindicich, N., Mills, K. L., Barrett, E. L., Indig, D., Sunjic, S., Sannibale, C., ... Najavits,


SWA. (2013). *The incidence of accepted workers’ compensation claims for mental*
stress in Australia. Canberra, ACT: Safe Work Australia.


CHAPTER 7: DISCUSSION
7.1 Chapter Guide

The overarching goal of this thesis was to provide a new level of empirical insight into how correctional officers perceive and manage workplace adversity, and to utilise this empirical evidence to explore how officer responses to perceived workplace adversity may impact their psychological wellbeing and in turn the organisations that employ them. It was hoped that this investigation would provide a substantial contribution to the current scientific understanding of the antecedents of correctional officer psychological wellbeing and begin to fill this identified gap in the existing literature. To achieve this thesis goal, three empirical studies were conducted to address six underlying research aims. These research aims were to; a) identify if correctional officers perceive a high level of workplace adversity and whether this heightened perception of workplace adversity is associated with stress reactions, b) identify specific adversity factors that contribute to correctional officers’ perceptions of workplace adversity, c) identify the breadth of ways that correctional officers manage the adversity they face at work, d) identify a clear empirical link between perceived workplace adversity, officer psychological wellbeing and negative organisational impacts, e) identify if officers gravitated toward particular response styles when managing workplace adversity, and if so, clarify which response tendencies characterised each of these response styles, and f) clarify whether an officer’s response style moderates the relationship between perceived workplace adversity and officer psychological wellbeing, and whether this can in turn affect the organisation for which they work.

The following general discussion provides an overview and synthesis of the findings of each of the three empirical studies conducted. The specific hypotheses found within each empirical paper are not re-iterated here. In contrast to the discussions provided within each of the empirical chapters, this general discussion aims to present and discuss the study findings in relation to the greater thesis goal and stated research aims. Furthermore, this general discussion aims to extract and highlight the significant contributions made to the scientific literature by the body of work and discusses the potential implications of results in relation to the development of effective psychological training programs for correctional officers. Limitations of the research are discussed and future research directions are identified. The discussion chapter then concludes with a summary of the thesis findings.
7.2 Overview and Synthesis of Main Findings

This thesis explored correctional officers’ perceptions of adversity within their work environment, the ways in which they responded to heightened workplace adversity and the impact of these factors on their psychological wellbeing, and in turn, the organisations that employ them. The following section draws together the various research findings of the three empirical studies into a cohesive response to each of the broader research aims. In relation to each the six research aims outlined in Chapter 2 the following major findings emerged.

7.2.1 Findings Relating to Research Aim 1

Research aim 1 of this thesis was to determine if correctional officers perceived a high level of workplace adversity and whether this heightened perception of workplace adversity was associated with stress reactions. Study 1 was designed to specifically address this research aim. Results of Study 1 indicated that correctional officers did in fact perceive significantly more adversity within their work environment than those employed across a wide range of occupational roles that are found within the greater community. This finding is consistent with previous cross-occupational examinations of employee wellbeing that have suggested that correctional officers may experience high rates of work-related stress compared to other professions (S. Johnson et al., 2005; Kunst, 2011). Furthermore, Study 1 findings are consistent with industry-based statistics that indicate working as a correctional officer can be both highly stressful and potentially dangerous (Brower, 2013; Bureau of Labor Statistics, 2010, 2014b; Finn, 1998; Warchol, 1998). Establishing that correctional officers perceive a significantly higher level of workplace adversity than those in other occupations assists to fill this identified gap in the scientific literature (Dowden & Tellier, 2004; Huckabee, 1992). Furthermore, this finding may have a number of training and policy implications relating to the effective management of correctional employees (see section 7.3 for a detailed discussion of implications).

The results of Study 1 also revealed that correctional officers perceived a level of workplace adversity analogous to those working in other high-risk/high-intensity workplaces such as the police and emergency services. This is largely consistent with past research that has demonstrated these high-risk occupational settings to be highly
adverse for employees (Balmer, Pooley, & Cohen, 2013; Hourani et al., 2006; McFarlane & Bryant, 2007; Nijman, Bowers, Oud, & Jansen, 2005; Regehr et al., 2002). Furthermore, these findings are consistent with past research that has linked these high-risk occupational environments with many of the same negative employee health trends that have been observed within correctional officer samples (Basinska & Wiciak, 2012; Corneil, Beaton, Murphy, Johnson, & Pike, 1999; Hourani et al., 2006; Tartaglini & Safran, 1997; Wagner et al., 1998). Demonstrating that correctional officers perceive a similar level of perceived workplace adversity as those working in the police and emergency services suggests that working as a correctional officer should be considered as being as adverse as working in these associated professions. This may also have a number of training and policy implications (see section 7.3).

In addition to these findings, Study 1 also revealed a significant correlation between perceived workplace adversity and employee stress reactions. More importantly, the association between perceived workplace adversity and stress reactions (as measured by the Perceived Stress Scale) was significantly stronger for correctional officers than for those working in other occupational settings. It is important to note however, that these correlational findings offer no indication in relation to the causal direction of the relationship between the perception of workplace adversity and reported stress reactions, making interpretation of these findings difficult. The findings could indicate that high levels of perceived workplace adversity lead to increased stress reactions for employees and that the stress impact of perceived workplace adversity may be more substantial for correctional officers compared to those working in other occupational roles. Conversely, these findings may indicate that employees experiencing high levels of stress may, as a result, perceive their workplace as highly adverse and this impact may be particularly substantial in the case of officers.

No statistical methodology can by itself determine causality, however, it has been argued that SEM predictive modelling may offer the potential for tentative causal inferences to be made (Bullock, Harlow, & Mulaik, 1994; Pearl, 2012). Study 3 provides some empirical evidence that perceived workplace adversity may precede negative health outcomes for officers. It achieved this by successfully demonstrating an empirical link between perceived workplace adversity, psychological wellbeing and the occurrence of negative organisational impacts within a correctional officer sample using predictive modelling. Specifically, it determined that a heightened perception of workplace adversity predicted lowered psychological wellbeing for officers and that this
in turn predicted increased negative organisational impacts for the institutions that employed them. It should be noted however that without running alternate model comparisons or longitudinal investigations, causality remains difficult to establish with confidence. Additional research is needed to assist in establishing the directionality of this relationship. Future research that employs alternate model comparisons or longitudinal design are needed to fill this gap in the literature.

7.2.2 Findings Relating to Research Aim 2

Research aim 2 of this thesis was to identify the specific factors that contributed to correctional officers’ perception of workplace adversity. There is currently limited research that provides a deep empirical understanding of the specific environmental factors that contribute to the perception of workplace adversity for correctional officers (Trounson & Pfeifer, 2013). Furthermore, it has been argued that more research is needed that can identify pertinent workplace adversity factors (Nieuwenhuijsen et al., 2010). Study 1 (Chapter 4) of this thesis was designed to specifically address this research aim and fill this identified gap in the literature. It achieved this goal by providing valuable insight into the unique environmental context facing correctional officers through examining cross-occupational differences in relation to specific environmental factors that may contribute to employee perceptions of workplace adversity.

Interpretation of WREAS (Trounson et al., 2016) scores at the sub-scale level in Study 1 provided this deeper understanding in regard to the specific factors that contributed to perceived workplace adversity for officers. Correctional officers scored significantly higher than most other occupational categories on the Environmental Threat and Environmental Unpredictability sub-scales. Identifying officers as experiencing a heightened perception of environmental threat is consistent with previous research (Dowden & Tellier, 2004; Moon & Maxwell, 2004). Furthermore, the identification of a heightened perception of environmental unpredictability as an important correctional officer adversity factor is also consistent with past research (Cooperstein, 2001; Senol-Durak et al., 2006).

Officers also scored significantly higher on the Expectation of Workplace Trauma, Need for Vigilance and Action Consequence sub-scales. This suggests that correctional officers perceive their work environment as one in which they are highly
likely to experience traumatic events and one that warrants both a heightened level of constant vigilance and extreme caution in relation to their actions. These findings are also consistent with past research that has demonstrated correctional officers to perceive a high need for vigilance (Denhof et al., 2014; Kinman et al., 2014) and a heightened likelihood of being exposed to workplace trauma (Bureau of Labor Statistics, 2014b; Cooperstein, 2001; Rosine, 1992).

The fact that correctional officers scored significantly higher than most other occupational categories on each of these factors indicates that they are workplace adversity factors that are particularly relevant for correctional officers. More importantly, results of Study 1 revealed that these factors (with the exception of Need for Vigilance) were associated with increased stress reactions for officers. This implies that with the exception of the need for vigilance, each of these identified factors are not only highly relevant to officers but are also associated with the experience of stress for correctional employees. These findings may have a number of implications for officer training aimed at addressing workplace adversity in corrections (see section 7.3).

In contrast to the above findings, the differentiation between correctional officers and those working in other occupational roles was far less clear with regard to both their perception of their ability to achieve workplace respite, and their ability to effectively separate their work and home lives. These findings suggest that correctional officers may be no different than those in the general community when it comes to their ability to attain workplace respite and separate their home and work lives. Despite observing no identifiable difference between officers and those working in other occupational settings, the inability to achieve workplace respite and difficulty maintaining a separation between ones work and home lives were both associated with the reporting of stress reactions for officers. These findings are consistent with past research that has suggested that gaining respite from work duties is an important factor in maintaining employee wellbeing (Drach-Zahavy & Marzuq, 2013; Sonnentag & Bayer, 2005). Furthermore, these findings are consistent with past research that indicates the existence of a relationship between work stress and home life conflict for employees (Hämmig & Bauer, 2014) and specifically in regard to correctional officers (Crawley, 2002; Obidoa et al., 2011; Triplett, Mullings, & Scarborough, 1999). These findings indicate that addressing correctional officers’ inability to achieve respite at work and maintain a separation between their work and home lives may assist them to manage their level of stress more effectively.
7.2.3 Findings Relating to Research Aim 3

Research aim 3 of this thesis was to identify the breadth of ways that correctional officers manage the adversity they face at work. Study 2 of this thesis (Chapter 5) was developed to specifically address this research aim. Using a qualitative design, Study 2 drew upon the practical expertise of correctional officers to determine the range of response tendencies officers believed were used by other correctional officers when managing workplace adversity. Thematic analysis of data derived from a set of focus group discussions and semi-structured interviews revealed a range of officer-endorsed response tendencies used by officer when managing workplace adversity. Study 2 effectively categorised these response tendencies dependent on their shared characteristics. This resulted in the classification of each of the tendencies identified in Study 2 as being either cognitively, interpersonally or behaviourally based response strategies.

The cognitively based response tendencies identified by officers included engaging in psychological detachment, denying or repressing cognitions and/or feelings relating to difficult experiences at work, and the use of both trauma processing and physiological stress management skills. Participating correctional officers reported that the ability to effectively process difficult or traumatic experiences was a helpful and commonly employed response tendency when managing workplace adversity. The identification of trauma processing skills as an important response tendency used by officers when faced with workplace adversity may be a particularly relevant and useful finding considering the fact that Study 1 revealed officers reported a high expectation of workplace trauma and that this expectation is linked to the reporting of stress reactions by officers.

Past research examining the potential impact of traumatic events indicates that the larger the number of traumatic events experienced by an individual, the more likely they may be to experience PTSD and the less likely they may be to experience spontaneous remission from symptoms (Kolassa et al., 2010). Trauma processing skills and the provision of psycho-education regarding the symptoms and effects of trauma are often provided to individuals post-event to assist individuals to manage the potential effects of trauma exposure (Foa, Keane, Friedman, & Cohen, 2008). Furthermore, previous research supports the notion that trauma processing skills learnt prior to the eventuation of traumatic events may be a protective factor for individuals (Devilly &
Providing employees who will enter potentially traumatic work environments with trauma processing skills prior to engagement in duties may assist them to maintain their psychological wellbeing (Deahl et al., 2000). It stands to reason therefore that providing correctional officers with an opportunity to refine their trauma processing skills as part of a preventative psychological training program prior to engaging in duties may assist them to maintain their wellbeing and reduce their likelihood of experiencing PTSD. Such training is already available in other high-risk occupational settings such as the police (Arnetz et al., 2008) and military (Deahl et al., 2000). According to the participants in Study 2 some officers were better equipped than others at dealing with the adverse events they encountered and little formal training was provided that addressed the ability to cognitively process distressing situations or events. This may indicate the presence of a legitimate gap in officer training that may be worth addressing (see section 7.3).

Physiological stress management skills were also identified as an effective and commonly used response tendency when faced with adversity in the workplace. This finding is consistent with existing research that indicates physiological stress management skills such as controlled breathing (R. P. Brown & Gerbarg, 2005; Seppala et al., 2014), progressive muscle relaxation (Rausch, Gramling, & Auerbach, 2006), and mindfulness based techniques (Stanley, Schaldach, Kiyonaga, & Jha, 2011) can be effective in reducing both stress and psychological distress. Furthermore, this finding is consistent with previous research that has suggested training officers in managing their physiological responses to adversity in the workplace may result in positive health outcomes (Arnetz et al., 2008; Le Scanff & Taugis, 2002; McCraty et al., 2009; McCraty & Atkinson, 2012).

Officers also identified the use of psychological detachment as a commonly used response tendency in Study 2. Psychological detachment can be understood as the ability to refrain from job-related thoughts when away from the workplace (Sonnentag et al., 2010). The participants in Study 2 reported that the ability to cognitively disconnect or cognitively separate from difficult experiences that occurred at work was an important skill to have and one that was often used by officers when managing workplace adversity. This may be particularly important given that Study 1 revealed that an inability to achieve workplace respite and difficulty separating ones work and home lives were both related to the reporting of stress reactions for employees. The identification of psychological detachment as a potentially helpful response strategy
used by officers is consistent with past research that has indicated that psychological detachment may be a helpful strategy for managing workplace stress and adversity (Eden, 2001; Sonnentag & Bayer, 2005; Sonnentag et al., 2010) and that the inability to detach psychologically from work may have negative mental health consequences for employees (Hämägi & Bauer, 2014). Considering these findings, it may be prudent to provide correctional officers with training that includes assisting or encouraging them to effectively detach psychologically from their work when off-duty (see section 7.3).

Officers also identified the process of denying or repressing cognitions and/or feelings relating to difficult experiences at work as a commonly used response tendency. The denial or repression of cognitions and/or feelings should not be mistaken for psychological detachment, a construct that has shown some promising results in relation to managing workplace stress and adversity (Eden, 2001; Sonnentag & Bayer, 2005; Sonnentag et al., 2010). The frequent use of denial and repression of thoughts and feelings by correctional officers is consistent with past research examining correctional officer groups (Gould et al., 2013) and other associated high-intensity professions (Friedman & Higson-Smith, 2003; Riolli & Savicki, 2010). Furthermore, this finding is consistent with previous research that has suggested that correctional officers are highly cautious with the expression of their emotions and thoughts (Crawley, 2004; Ferdik, Smith, & Applegate, 2014; Tracy, 2004). Although the officers in Study 2 believed the repression of feelings and thoughts could be helpful (and in some cases necessary for the safe operation of the facility) in the short-term, such responses were viewed as largely unhelpful in the long-term management of workplace adversity. Previous research supports the contention that engaging in denial of cognitions and emotional detachment are unhelpful long-term strategies for managing stress and adversity (Gould et al., 2013; Regehr et al., 2002; Riolli & Savicki, 2010). Consequently, it may be beneficial to consider discouraging correctional officers from engaging in denial and repression when attempting to manage high levels of workplace adversity.

In addition to these cognitively based response tendencies, a number of interpersonally based tendencies were identified in Study 2. These included communication skills, conflict management skills, humour and emotional venting. The identification of humour as a commonly employed tendency is in line with past research that identifies humour as a frequently used coping strategy for those working in high-intensity work environments (Edward, 2005; Gould et al., 2013; B. J. Morgan & Garmon Bibb, 2011; Riolli & Savicki, 2010). Furthermore, in line with the beliefs of
participants in Study 2, there is some evidence that humour may function as a positive
coping mechanism in such environments (Crawley, 2004; Riolli & Savicki, 2010).
However, it should be noted that not all studies examining humour as a coping
mechanism have identified it as helpful. For example, in an examination of the
association between coping and correctional officer burnout humour was found to be an
unhelpful coping mechanism (Gould et al., 2013). Additional research is necessary to
clarify the role of humour in assisting employees to manage the ill effects of workplace
adversity.

Officers also reported emotional venting (i.e., the misdirected and often forceful
expression or release of pent-up feelings toward others) as another common
interpersonally based response tendency used by officers. The identification of venting
as an unhelpful coping mechanism for correctional officers when faced with workplace
adversity is consistent with previous research (S. P. Brown, Westbrook, & Challagalla,
2005; Carver, Scheier, & Weintraub, 1989; Gould et al., 2013). Furthermore, past
research indicates that emotional venting may result in negative psychological and
health outcomes for those working in highly adverse work environments (Riolli &
Savicki, 2010). Assisting officers to find healthier methods of communicating their
frustrations and relieving internal tension and stress may be beneficial.

The use of effective communication skills and conflict management skills were
also identified in Study 2 as response tendencies used by officers to manage workplace
adversity. Examination of the existing literature indicates that both of these skill sets
have been previously identified as important skills required by correctional officers to
successfully manage the adversity they may face at work (Leibling et al., 2010).
Furthermore, past research suggests that effective conflict management and
communication skills training can assist employees to reduce their level of job stress
(DeFrank & Ivancevich, 1998; Haraway & Haraway, 2005; McDonald et al., 2012).
Providing correctional officers with training that assists them to refine their conflict
management and communication skills may be beneficial.

In addition to these interpersonally based response tendencies, a number of
behaviourally based tendencies were identified. These included engaging in external
activities, help seeking behaviour, substance use, work-avoidance behaviour, engaging
in self-isolation and less commonly, acts of self-harm. In relation to the use of
substances as a response to workplace adversity, alcohol was reported as the most
common substance used. The use of alcohol as an avoidant and unhelpful response to
experiencing adversity or trauma is consistent with previous research (Gould et al., 2013; Hruska, Fallon, Spoonster, Sledjeski, & Delahanty, 2011; Riolli & Savicki, 2010). Furthermore, research indicates that the consumption of alcohol is likely an unhelpful coping strategy for those managing high levels of work-related adversity (Kohan & O’Connor, 2002). In fact, research has suggested that alcohol use may be positively associated with both the occurrence of critical incidents at work and the emergence of PTSD symptoms in related high-risk workplaces such as the police (Ménard & Arter, 2013). Consequently, interventions aiming to reduce the negative impact of workplace adversity on correctional officers may benefit from considering including content that assists officers to avoid problematic alcohol consumption.

Work avoidance was identified in Study 2 as a common form of avoidance coping used by officers when attempting to manage workplace adversity. Past research has demonstrated a link between work avoidance behaviour and a range of negative health outcomes for employees including increased reports of psychological distress and depression (Hardy, Woods, & Wall, 2003; Koeske et al., 1993). Thus, the reduction of work avoidance behaviour may be an appropriate goal for future interventions aimed at assisting officers to manage workplace adversity and maintain their psychological wellbeing. It should be noted however, that there is some evidence indicating that taking time off from work to refresh or recover from work stress may be beneficial to employee health (see e.g., Hackett & Bycio, 1996). These contrasting findings highlight the importance of establishing the functionality of time away from work for employees when considering the cost or benefit of work absence. Taking time away from work to simply avoid stressors (i.e., work avoidance) appears to be an unhelpful strategy for officers while taking time off to refresh and recover may assist employees to maintain aspects of their psychological wellbeing.

Self-isolating behaviours and self-harming behaviours were also identified as behaviourally based response tendencies used by correctional officers when facing workplace adversity. Self-isolating behaviours identified included reducing engagement in out of work social activities, limiting communication with others and avoiding situations that might involve social interaction while at work. Past research indicates that social isolation can result in lowered subjective wellbeing (Cacioppo, Reis, & Zautra, 2011; Shelley E Taylor & Stanton, 2007) and has been found to increase the negative health impact of job stress on employee health (J. V. Johnson, Hall, & Theorell, 1989).
In contrast, social support has been identified as playing an important role in the process of work stress (Viswesvaran, Sanchez, & Fisher, 1999). Furthermore, past research indicates that the sharing of work-related experiences with others and avoiding the use of distancing coping strategies are important resilience factors for those working in adverse working environments (Pole, Kulkarni, Bernstein, & Kaufmann, 2006). Research examining correctional officers indicates that social support within a prison can moderate the relationship between perceived physical health and psychological distress for correctional officers (Harvey, 2014) and may provide some preventative effect in reducing occupational stress and burnout (Dignam, Barrera, & West, 1986). These findings are in line with the reports of officers participating in Study 2 who identified help seeking behaviour as a helpful response tendency to use when facing workplace adversity. Unlike venting, which involves the misdirected and often forceful expression or release of pent-up feelings toward others, help seeking behavior involves seeking out the help of professionals, co-workers, family or friends to assist with managing workplace adversity. Examination of the existing literature indicates that engaging in help seeking behaviour is a useful coping strategy that can reduce job-related stress (Armstrong & Griffin, 2004), even in the face of substantial adversity or trauma (Riolli & Savicki, 2010). Unfortunately, research indicates that the percentage of correctional officers that actively engage in help seeking behaviour after workplace incidents is very low (Cashmore, Indig, Hampton, Hegney, & Jalaludin, 2012). It should also be noted that there is evidence to suggest that males may be less likely to engage in help seeking behaviours than females in high-intensity occupational settings (Berg, Hem, Lau, & Ekeberg, 2006). Considering the fact that many officers do not engage in help seeking behaviour and that a high proportion of correctional officers are male, help seeking behaviour may be a particularly important issue to address in the training of correctional officers. More specifically, providing effective training and education regarding the importance of help seeking behaviours may assist officers to manage work-related stress more effectively.

Engaging in external activities was identified in Study 2 as a commonly used response tendency for correctional officers. Engaging in leisure activities, social events, personal hobbies and physically active pursuits outside of work have been shown to be linked to reduced work-related stress and increased job satisfaction and wellbeing for employees (Drach-Zahavy & Marzuq, 2013; Kirkcaldy et al., 1994) and specifically in relation to correctional officers (Kielyl, 1990). Consequently, encouraging officers to
maintain their engagement in such activities may assist them to maintain their psychological and physical wellbeing.

7.2.4 Findings Relating to Research Aim 4

Research aim 4 of this dissertation was to identify a clear empirical link between perceived workplace adversity, officer psychological wellbeing and negative organisational impacts. Identifying an empirical link between these major thesis concepts was an important research aim and represents the first empirical study to use predictive modelling to examine the relationship between these constructs. Study 3 (Chapter 6) was designed to address this research aim using SEM. The results of Study 3 revealed that a heightened level of perceived workplace adversity was predictive of lowered psychological wellbeing in the form of increased report of psychological distress and reduced report of psychological thriving. Furthermore, the analytic model indicated that perceived workplace adversity indirectly impacted the occurrence of negative organisational outcomes through its effect on the psychological wellbeing of officers. More simply, officers reporting a heightened perception of workplace adversity were more likely to report low psychological wellbeing and in turn, were more likely to report high levels of job dissatisfaction and engage in both absenteeism and presenteeism.

The identification of an empirical link between perceived adversity, psychological wellbeing and negative organisational impacts is important for a number of reasons. Firstly, it builds upon the findings of Study 1, establishing further evidence that the working environment can negatively impact the psychological wellbeing of correctional officers. Secondly, it demonstrates how the deteriorating psychological wellbeing of officers can impact the organisations that employ them, leading to higher rates of absenteeism, presenteeism and job dissatisfaction. Since absenteeism (Camp & Lambert, 2006; E. G. Lambert et al., 2005), presenteeism and job dissatisfaction (Griffin et al., 2009) are long-standing operational issues within the correctional industry (Kelloway, Desmarais, & Barling, 2000; E. G. Lambert & Hogan, 2007; Stinchcomb & Leip, 2013) that cause substantial operational and financial burden (Stohr et al., 1992), these findings provide further grounds for the implementation of psychological interventions and a compelling financial argument to correctional organisations for the development and implementation of such initiatives. Thirdly, the
testing of this predictive model provides the scientific community with a more sophisticated understanding of how these important constructs interrelate.

Presently, the predictive relationships identified between each of the study constructs included in the tested model cannot be easily placed in the context of past research as no previous studies have examined the predictive relationship between all these constructs using SEM. However, it can be stated that the model results are largely consistent with the existing literature that has demonstrated an association between workplace stress and psychological distress (Ghaddar et al., 2008; Tennant, 2001), negative organisational outcomes and psychological distress (Hilton, Sheridan, Cleary, & Whiteford, 2009), and workplace stress with negative organisational outcomes (Finney et al., 2013; E. G. Lambert et al., 2005, 2010). It is hoped that future research can build upon the findings of Study 3 to further elucidate the complex interrelationships between these constructs and in turn provide the correctional industry with an even more comprehensive understanding of how workplace adversity impacts their staff and organisations. A discussion of the implications of these findings can be seen in section 7.3.

7.2.5 Findings Relating to Research Aim 5

Research aim 5 of this thesis was to identify if officers gravitated toward particular response styles when managing workplace adversity, and if so, clarify which response tendencies characterised each of these response styles. Study 3 (Chapter 6) was designed to specifically address this research aim. The results of Study 3 revealed that officer responses to workplace adversity could be effectively categorised into two underlying response styles, an ISF and an EA response style.

The ISF response style included a number of response tendencies that could be described as being either interpersonally or solution-focused based coping strategies. ISF response strategies included; a) a number of social strategies such as the use of humour, seeking social support through communicating with friends and co-workers, and engaging in social activities outside of work, b) a set of cognitive strategies such as the use of conflict management skills, trauma processing skills, problem solving skills and cognitive flexibility, and c) behavioural strategies such as taking time off work to refresh and recover. In contrast, the EA response style included response tendencies that could be classified as either emotional or avoidant strategies for managing workplace
adversity. EA response tendencies included drinking alcohol, emotional venting, self-isolating behaviours, emotional detachment, engagement in harmful or risky behaviours and lack of physiological stress management skills.

Comparison of the ISF and EA response styles reveals a number of important points of differentiation worth acknowledging. Unlike many of the interpersonally based ISF responses (e.g., seeking social support and engaging in social activities outside of work), the EA response tendencies were all individually based strategies. Furthermore, unlike the solution-focused based ISF responses that actively address workplace stressors facing the individual (e.g., the use of problem solving skills, trauma processing skills and cognitive flexibility), the EA response tendencies were largely avoidant strategies that may provide short-term relief from stress through assisting an individual to simply avoid the workplace stressor (e.g., drinking alcohol, self-isolation and emotional detachment) but may be unhelpful long-term strategies.

Review of the existing literature indicates that the response tendencies that comprise the ISF response style have generally been regarded as helpful strategies for managing adversity, while those affiliated with the EA response style have generally been considered as unhelpful coping strategies (see section 7.2.3 for a detailed account of associated previous literature). For example, ISF strategies such as the use of humour (Riolli & Savicki, 2010), taking time off to refresh and recover (Hackett & Bycio, 1996), seeking social support (Harvey, 2014; Pole et al., 2006), active problem-solving (van Rhenen, Schaufeli, van Dijk, & Blonk, 2008) and engaging in external activities (Drach-Zahavy & Marzuq, 2013; Kiely, 1990) have all been linked to positive health and/or organisational outcomes for employees. Furthermore, training in ISF response tendencies has been shown to result in positive health outcomes (McCraty et al., 2009; McCraty & Atkinson, 2012). In contrast the use of EA strategies such as drinking alcohol (Gould et al., 2013; Kohan & O’Connor, 2002), emotional venting (S. P. Brown et al., 2005; Gould et al., 2013), self-isolation (Cacioppo et al., 2011; J. V. Johnson et al., 1989; Shelley E Taylor & Stanton, 2007) and emotional detachment (Gould et al., 2013; Riolli & Savicki, 2010) have all been associated with negative outcomes for employees.

When considering coping styles in a broader sense, it has been argued that problem-focused coping may be more functional than emotion-focused coping at reducing psychological distress (Gould et al., 2013; Savicki, 2002). Furthermore, the use of avoidant coping has been identified as particularly unhelpful in reducing
psychological distress (Koeske et al., 1993; Shelley E Taylor & Stanton, 2007). These general findings are in line with the results of Study 3, which indicate an ISF response style may be a more helpful way to manage workplace adversity compared to an EA response style. However, it should be noted that the existing coping literature is vast and far from conclusive, with some studies providing evidence that emotion-focused strategies can also reduce distress (Levenson, Mishra, Hamer, & Hastillo, 1989) and in some contexts may be more effective than problem-focused coping strategies (Triplett et al., 1996). Research has also indicated that correctional officers working in different correctional environments may vary in the way they respond to stress and the effectiveness of these responses dependent on context (Tsirigotis et al., 2015). Despite these findings, the results of Study 3 suggest that assisting officers to engage more frequently in ISF related response strategies and reduce their use of EA related response strategies when faced with workplace adversity may be beneficial.

7.2.6 Findings Relating to Research Aim 6

Research aim 6 of this thesis was to determine whether an officer’s response style moderates the relationship between perceived workplace adversity and officer psychological wellbeing, and whether this can in turn affect the organisation for which they work. Study 3 (Chapter 6) was designed to specifically address this research aim. The findings of Study 3 revealed that an ISF response style does in fact moderate the relationship between perceived workplace adversity and officer psychological wellbeing, in turn impacting the frequency of negative organisational impacts. More simply, the use of an ISF response style by officers when faced with workplace adversity may weaken the negative effect of perceived workplace adversity on psychological wellbeing and in turn, reduce the frequency of negative organisational impacts. Consequently, ISF response strategies may be considered helpful strategies for officers to engage in when managing workplace adversity, especially as their perception of workplace adversity increases. This may have a number of useful implications for the development of wellbeing training for correctional officers. A deeper discussion of these implications can be found in section 7.3 of this thesis. Furthermore, a list of the identified ISF response strategies can be seen in Appendix K.

In contrast, no evidence was found to suggest that an EA response style moderated the relationship between perceived workplace adversity and officer
psychological wellbeing. This suggests that the use of an EA response style may not exacerbate or ameliorate the negative impact of perceived wellbeing on officer psychological wellbeing. However, the inability to find a moderating effect does not infer that the use of an EA response style does not impact officer psychological wellbeing or the organisations that employ them. Despite not finding evidence of a moderating effect in relation to the EA response style, inter-correlational analysis indicated that an increased reliance on EA response strategies was significantly associated with lowered psychological wellbeing and increased frequency of negative organisational impacts. Furthermore, a significant positive correlation was found between EA response style use and perceived workplace adversity. These findings suggest that when correctional officers are faced with high levels of workplace adversity they are more likely to engage in EA response strategies, officers using an EA response style are less likely to report psychological wellbeing and are more likely to report engaging in absenteeism, presenteeism and experience job dissatisfaction. Therefore, despite finding no moderating effect the EA response style and associated strategies may be considered unhelpful for officers to engage in when attempting to manage workplace adversity. These findings may have a number of useful implications for the development of wellbeing training for correctional officers. A deeper discussion of these implications can be found in section 7.3 of this thesis. Furthermore, a list of the identified EA response strategies can be seen in Appendix K.

### 7.3 Significant Contributions and Implications

The three empirical studies included within this dissertation have contributed to the existing scientific literature in a number of important ways. Study 1 entitled “Correctional officers and work-related environmental adversity: A cross-occupational comparison” was presented in Chapter 4 and has been published in the peer-reviewed journal of *Applied Psychology in Criminal Studies* (see Appendix L). This study aimed to add to the existing literature by identifying whether correctional officers perceived a significantly higher level of workplace adversity than those in other occupations found throughout the community. Furthermore, it aimed to empirically investigate whether perceived workplace adversity resulted in stress reactions for correctional officers and clarify which specific adversity factors contributed to their perception of workplace adversity. Despite the existence of a substantial literature examining correctional officer
wellbeing and related health outcomes (Brower, 2013), there has remained a relative paucity of cross-occupational research that empirically establishes that working as a correctional officer is more adverse and stressful than working within other occupational environments (Dowden & Tellier, 2004; Huckabee, 1992). Study 1 has begun to fill this gap in the literature by being one of the first cross-occupational studies of its kind to compare correctional officers with those in other occupational roles in regard to their level of perceived workplace adversity.

In addition to this contribution, Study 1 provided empirical evidence demonstrating perceived workplace adversity was associated with reported stress reactions for employees and that this association was significantly stronger for correctional officers than for the rest of the sample. This may also be considered as an important contribution to the existing scientific knowledge regarding the impact of the work environment on correctional officers. Finally, Study 1 has provided the scientific community with a new, psychometrically tested, self-report measurement tool capable of quantifying an employee’s level of perceived workplace adversity (i.e., the WREAS). It is hoped that the development of this tool will assist with the measurement of perceived workplace adversity in future investigations of adversity within occupational settings.

Study 2, entitled “Correctional officers and workplace adversity: Identifying interpersonal, cognitive and behavioral response tendencies” was presented in Chapter 5 of this thesis and is currently under peer review at the Journal of Correctional Health Care. This study aimed to clarify the range of responses correctional officers employed when attempting to manage the stress of workplace adversity. Study 2 was the first study of its kind to examine officer responses to workplace adversity using a mixed method qualitative design involving the conduct of both focus groups and semi-structured interviews. Furthermore, this study represents the first qualitative exploration of correctional officer responses to workplace adversity that draws directly from the practical expertise of officers to establish a set of officer-endorsed response tendencies used by officers when managing workplace adversity. Using thematic analysis, Study 2 revealed a range of commonly used response tendencies that could be classified as either cognitively, interpersonally or behaviourally based strategies. Providing the scientific community with a mixed method, qualitative exploration of officer-endorsed response tendencies may be considered an important contribution to the existing knowledge of correctional officer responses to adversity within the workplace. It is
hoped that future research will extend and build upon the findings of Study 2 to further develop our understanding of how officers react to workplace adversity.

Chapter 6 of this thesis presented the third and final study. Entitled “Perceived workplace adversity and correctional officer well-being: Examining the impact of officer response styles and identifying implications for training”, the paper is currently under peer review at the journal of Criminal Justice and Behavior. This study provides a significant contribution to the existing scientific literature in a number of ways. This study was the first of its kind to utilise SEM to examine the complex interrelationship between perceived workplace adversity, the psychological wellbeing of officers and the occurrence of a set of organisational impacts, namely absenteeism, presenteeism and job dissatisfaction. Furthermore, Study 3 was the first of its kind to examine the role of officer-endorsed response tendencies in moderating the relationship between perceived workplace adversity and officer psychological wellbeing. This may be considered an important contribution to the existing scientific knowledge as it not only provided a deeper understanding of the interrelationships between these study concepts, but also highlighted the role of officer response styles in the effective management of workplace adversity for correctional officers. It is hoped that future research can extend on these findings to provide both the scientific community and the correctional industry with a deeper understanding of how to assist officers to maintain their psychological wellbeing in the face of workplace difficulties.

When considered collectively, these individual contributions that emerged from the three empirical studies included in this thesis combine to form a significant contribution to the existing scientific literature. However, the thesis findings may also offer a set of practical implications that may collectively represent a significant industry-based contribution, specifically in regard to assisting correctional organisations to effectively support officers in maintaining their psychological wellbeing. These identified practical implications may also assist correctional organisations to reduce the occurrence of negative organisational issues such as absenteeism, presenteeism and job dissatisfaction and help to inform best-practice policy. Specifically, the findings of this thesis may contribute to the field of corrections by providing empirical information that can assist the development of effective, evidence-based, psychological interventions aimed at assisting correctional officers to maintain their psychological wellbeing. To provide some context to the discussion of these research implications the following sections first explore the current state of employee wellbeing interventions within high-
risk occupational settings, including in regard to the field of corrections. This is followed by a discussion of the potential implications of the findings of this thesis in regard to the future development of evidence-based, psychological interventions for officers including the provision of evidence-based recommendations in regard to program targeting and content.

7.3.1 Employee Wellbeing Interventions in High-Risk Workplaces

It has been argued that the literature within the related fields of policing, the emergency services and the military may represent a good starting point for the discussion of correctional officer psychological wellbeing program development and implementation (Brower, 2013). This is due to the fact that there are numerous parallels between the work environments of correctional officers and the work environments of military, police and emergency services personnel. For example, working in these environments can involve experiencing highly adverse events and can at times be both unpredictable and threatening (Balmer et al., 2013; Hourani et al., 2006; Trounson et al., 2016). Furthermore, these occupational fields share similar dilemmas in relation to maintaining the mental health of staff and high prevalence rates of psychological and physical illness (Basinska & Wiciak, 2012; Corneil et al., 1999; Hourani et al., 2006; Tartaglini & Safran, 1997; Wagner et al., 1998).

According to Brower (2013), other high-risk occupational fields have progressed substantially in their understanding of employee wellbeing and in their development and implementation of employee wellbeing initiatives. In comparison, correctional officers have limited resources designed to help them cope with the correctional working environment (R. D. Morgan et al., 2002). While many correctional institutions provide counselling services to staff that aim to treat mental health issues, Brower argues that it continues to be difficult for correctional facilities to find treatment providers that have in-depth, industry-specific knowledge and that are competent in best practices in relation to the field of corrections.

Within these related high-risk occupational fields there are numerous reactive and preventative services currently available and that are implemented to assist employees to maintain their wellbeing (Arnetz et al., 2008; Lester, McBride, Bliese, & Adler, 2011; McDonald et al., 2012; Shochet et al., 2011; Varker & Devilly, 2012; Weltman, Lamon, Freedy, & Chartrand, 2014). The following sections provide
information regarding the use of reactive and preventative initiatives implemented within related high-risk occupational settings and within the field of corrections.

There is currently a large array of reactive services available to employees within corrections and other high-risk occupations that are aimed at assisting them to maintain their sense of wellbeing. Employee Assistance Programs (EAP) are widely implemented in high-risk occupational settings and are designed to assist staff to identify and resolve a range of personal issues including mental health concerns (Brower, 2013). EAPs can involve the provision of a range of services from individual counselling, de-briefing, case management, financial advice and referrals to appropriate professional external services (EAPAA, 2016). Peer support programs (PSP) are also widely implemented throughout high-risk occupational fields. PSPs provide employees with support, easy to access assistance and a level of comfort that can be difficult for outside professionals to establish (Brower, 2013). Furthermore, PSPs can be an effective and cost effective alternative to formal EAPs (Roland, 2011).

Over the past few decades however, the high cost of workplace-related mental health problems has led to the recommendation that employers move from a reactive approach to addressing psychosocial conditions to a more proactive approach designed to promote employee wellbeing (Joyce, 2013; van der Velden, Kleber, Grievink, & Yzermans, 2010). As a result there has been a surge in the development and implementation of proactive psychological training programs aimed at ameliorating the potential negative effects of workplace environments, especially in those environments that are challenging such as the police force (e.g. Arnetz et al., 2008; Weltman et al. 2014), the military (e.g. Casey, 2011; Griffith & West, 2013), emergency services (Varker & Devilly, 2012) and psychiatric nursing (e.g. McDonald et al., 2012).

Existing evidence relating to the cost-effectiveness of interventions focusing on mental health promotion in the workplace indicates that these programs provide significant cost benefits in the long term despite initial costs (Brower, 2013; EU-OSHA, 2014; Finn, 2000). For example, one review examining the financial benefits of mental health initiatives showed that every €1 of expenditure in promotion and prevention programs generated net economic benefits up to €13.62 over a one year period in the European Union alone (Matrix, 2013). Furthermore, in a study evaluating the effectiveness of a preventative psychological training program for correctional officers it was estimated that implementation of the preventative program may reduce employee health expenditure by up to $1,179USD per officer annually (McCraty & Atkinson,
2012). These cost benefits are generally supported throughout the literature (Lamontagne et al, 2007) and indicate a sound case for the implementation of proactive/preventative psychological training for correctional officers.

7.3.2 Preventative Psychological Training in High-Risk Settings.

There is currently a range of existing employee training programs that have attempted to proactively address workplace adversity within high-risk occupational settings. The US military’s Comprehensive Soldier Fitness (CSF; http://csf2.army.mil/) program is one such initiative. The CSF program was designed by psychologist Martin Seligman and developed at the request of the US Military. According to the US military, Seligman’s program was aimed specifically at enhancing the resilience, readiness and the potential of US soldiers (Lester, Harms, Herian, Krasikova, & Beal, 2011). The overarching goal of implementing the CSF program was to attempt to address the unfortunately high prevalence of mental illness within the US Army and to do this by introducing a preventative approach to the problem that specifically encouraged the development of mental wellness (Casey, 2011). In late 2009, the US Army established the $125 million dollar Comprehensive Soldier Fitness Program and soon after, it was implemented as a new aspect of standard soldier training. It has been argued that the implementation of this program signified a theoretical shift in the US Army psychological health paradigm away from a traditionally intervention-based approach to mental illness and toward a prevention-based approach attempting to facilitate mental wellbeing (Cornum, Matthews, & Seligman, 2011).

Since the implementation of the CSF program, other military institutions have implemented their own resilience-based training programs (Bowles & Bates, 2010; B. J. Morgan & Garmon Bibb, 2011). For example, after a comprehensive independent review of mental health issues within the Australian Defence Force (ADF; Dunt, 2009), the Australian government committed $83 million dollars to a 4-year mental health reform (Department of Defence, 2009). The review stipulated that the Mental Health Strategy should specifically include components of resilience training. In response, the ADF has expanded their “BattleSMART”, Self-Management and Resilience Training program to improve the psychological resilience of ADF members (Boer, 2009). Other high-risk occupational fields such as a number of national police forces have begun to consider and implement preventative psychological training for staff. For instance,
preventative resilience training has been conducted in the Australian State and Federal police (Devilly & Varker, 2013), the US police force (McCraty & Atkinson, 2012; Weltman et al., 2014) and the Finland special forces (Andersen et al., 2015).

7.3.3 Correctional Officer Specific Initiatives.

It has been argued that although much can be gained from the literature found within related high-risk occupational fields, the inherent differences between the working environments of these professions requires the correctional field to develop occupationally-specific responses to the issue of employee wellbeing (Brower, 2013; Trounson & Pfeifer, 2016). The field of corrections needs to continue to adapt and evolve in relation to identifying and catering for correctional officer training needs (Mannering, 2012). Despite the well-known and longstanding employee and organisational challenges that face correctional organisations, there continues to be a dearth of empirical research relating to the efficacy of wellbeing and stress management programs within corrections, especially with regard to the development of training programs (Armstrong & Griffin, 2004; Brower, 2013; Schoenman, 2011).

In a review of stress-related interventions implemented within corrections Finn (1998) argued that there is a lack of evidence-informed initiatives and empirical evidence regarding the efficacy of programs aimed at assisting officers to maintain their psychological wellbeing. This is also reflected within the wider literature relating to the management of work-related stress, which has been criticised as being built upon a weak theoretical base (Cox et al., 2000).

The deficit identified by Finn needs to be addressed if such programs are to be executed widely as a standard aspect of officer training in corrections. It is an unfortunate reality that many programs are implemented within corrections without an evidence base (Petrosino et al., 2000). This lack of testing prior to implementation is highly concerning as it can leave the correctional industry vulnerable to unintentionally diverting funds and resources toward ineffective programs and away from effective programming (Petrosino et al., 2000). Furthermore, implementing programs that are not evidence-informed and built upon a sound evidence-base can potentially cause more harm than good. The well-intentioned Scared Straight program implemented in New Jersey in the 1970’s is one example. Implemented at Rahway State prison the program was initially heralded as a success, reducing crime and delinquency in a group of youth
at risk of offending. As a result of these claims many US states implemented similar programs despite the lack of an evidence-base for the program. However, in a meta-analysis of the results of a number of Scared Straight programs and other similar initiatives, it was found that they actively increased crime and delinquency (Petrosino et al., 2000).

As the prevalence of employee wellbeing programs has increased, so too has the call for the establishment of systematic evidence-based approaches regarding their development and implementation (Dunt, 2009; Eidelson, 2011, 2012; B. J. Morgan & Garmon Bibb, 2011). For example, despite the fact that the US military’s CSF program is highly innovative and progressive, the implementation has received its share of criticism from the scientific community (Eidelson, 2011, 2012). One of the major criticisms highlighted in regard to the CSF program has been the apparent lack of development of a sound evidence-base prior to its implementation. One of the major suppositions underlying the rationale for the development of the program was the assumption that US military personnel perceived their working environments as being highly adverse yet little empirical evidence was provided that demonstrated soldiers perceived a higher level of work-related environmental adversity than those working in other general community professions. Although one may argue that the workplace adversity faced by military personnel operating on front lines is high by definition and therefore needs no empirical proof, this is not necessarily the case for other occupations.

Despite these challenges, there has been a substantial increase in the implementation of preventative psychological programs in the last ten years in corrections to counter the negative impacts of workplace stress and adversity (e.g. Bravo-Mehmedbasic et al., 2009; Finn, 2000; Leo, 2011; McCraty et al., 2009; Shochet et al., 2011). The shift in the mindset of correctional administrators may indicate an increased understanding of the financial and organisational benefits of implementing such programs. Although this shift may be viewed as a positive step toward effectively addressing employee wellbeing within corrections, differentiating between effective and ineffective proactive training programs remains a challenge for correctional administrators. This challenge is compounded by the fact that no systematic reviews of correctional officer wellbeing programs currently exist within the academic literature and few existing programs have undergone peer-reviewed systematic evaluation. It should be noted that some aggregation of existing programs can be found within the grey literature such as government and institutional reports (see e.g., Brower, 2013;
Finn, 2000). However, these resources tend to be more descriptive than evaluative and lack the rigour of the peer-review process.

According to Finn (1998), many correctional officer training academies include material designed to assist officers to identify potential stressors, symptoms of stress and coping mechanisms. However, Finn argued that the majority of these modules were generic rather than corrections-specific and provided with little evidence of their effectiveness. Furthermore, Finn acknowledged that most prisons and large jails have in-house or externally contracted groups that respond after critical incidents, providing de-briefing, individual counselling, group therapy and other referral services. These reactive services are highly important components of a best practice in corrections in regard to maintaining employee wellbeing. However, it has been argued that preventative services should be provided to complement existing reactive interventions (Trounson & Pfeifer, 2016).

Currently there is little research available establishing the prevalence and effectiveness of correctional officer wellbeing initiatives. Despite the publication of a number of grey-literature reports and reviews regarding the development of such programs (Brower, 2013; Finn, 2000; Schoenman, 2011), few publications are evidence-based and even fewer are published within peer-reviewed academic journals (Trounson & Pfeifer, 2016). In a grey literature review of stress and wellbeing programs conducted by Finn (2000), seven staff initiatives were examined. Four of these identified services provided reactive services to employees offering services such as de-briefing, individual counselling and peer support programs. Only three of the reviewed services included staff training or preventative components as part of their approach. Despite a general lack of empirical evidence regarding wellbeing program effectiveness within corrections, such programs are widely implemented throughout correctional organisations, many with promising outcomes worthy of acknowledgement.

Road to Mental Readiness (R2MR) is one such program that has made substantial inroads in relation to assisting officers to better manage their psychological wellbeing within high-risk occupational settings. Originally developed by Canada’s Department of National Defence (DND), the program has now been implemented within the Canadian Police Services and is currently being trialled by Correctional Services Canada for use with correctional officers. The R2MR program is provided as a single 160 minute session that aims to: a) teach recruits basic mental health literacy, b) teach stress management skills, and c) change attitudes toward mental health problems.
and service use (Fikretoglu, Beatty, & Liu, 2014). The R2MR program has demonstrated some encouraging results in relation to uptake and effectiveness (Fikretoglu et al., 2014), however, little peer-reviewed research is available that can speak to the effectiveness of the program in assisting officers to maintain their psychological wellbeing.

HeartMath’s *Power to Change Performance* initiative is another preventative training program that has established some evidence-basis in regard to its effectiveness with correctional officers (McCraty et al., 2009). The program involved training in emotion self-regulation techniques and the utilisation of biofeedback technology. Examining 75 correctional officers, McCraty et al. (2009) found post program reductions in cholesterol, glucose, heart rate, blood pressure and reported psychological distress. Furthermore, participants reported increased productivity, motivation, goal clarity and positive outlook.

In a qualitative study of the benefits of an exercise program implemented for UK correctional officers it was found that officers who engaged in the program reported a range of positive benefits and self-reported reductions in stress (Kielyl, 1990). However, no quantitative measures were used and all participant reports were subjective in nature with no measures of stress employed. In a study conducted by Jette and Sidney (1991) that involved the evaluation of a 6.5 week exercise-based wellbeing program for correctional officers, favourable changes in sleep patterns, smoking and alcohol consumption and tolerance to stress were found.

In a report to the National Institute of Justice, Lagasse and McGarthy (2001) evaluated the *FOCUS* staff training program reporting positive results regarding program content. The *FOCUS* program involved a series of 1-hour workshops regarding managing stress and effective communication skills provided across four US correctional facilities. Despite reporting positive findings, the report was not published within a peer-reviewed journal and therefore the findings should be interpreted with a degree of caution.

In summary, there currently exists a substantial number of proactive and reactive wellbeing initiatives within the field of corrections. Although many of these are developed within respectable theoretical frameworks, not all have demonstrated their effectiveness through rigorous evaluation and even fewer can be classified as both evidence-based and evidence-informed. It is therefore argued that there is a need for the development of proactive/preventative psychological training programs for correctional
officers aimed at assisting officers to maintain their psychological wellbeing. Moreover, it is argued that such programs should be developed in a systematic process that ensures the program is both evidence-informed and ultimately evidence-based. This thesis provides the first steps toward establishing an evidence-based rationale for this preventative training. The following section describes how the findings of this thesis may inform the development of such programs in the future.

7.3.4 Implications for Correctional Officer Training

Currently, few correctional officer wellbeing training programs exist that can meet the requirement of being evidence-informed and evidence-based. Requiring new psychological training programs to meet these standards would ensure correctional officers receive the best training available and addresses criticisms that have been voiced in regard to the implementation of non-evidence based resilience and wellbeing training programs within other industries (Dunt, 2009; Eidelson, 2011, 2012). The results of this thesis provide the first steps toward building a sound empirical basis for evidence-informed, evidence-based, psychological wellbeing training programs for correctional officers. It is hoped that the development of this empirical basis will also help address the type of criticism directed toward other non-evidence based wellbeing programs and assist in the future implementation of an effective training program for correctional officers.

The demonstration of a clear need for training is a first and fundamental step in the process of intervention development (Allen, 2006; Gagne et al., 2005). When building a systematic evidence-base for the development of training programs designed to assist individuals in managing adversity, evidence must first be established that indicates that the intended recipients perceive their environment as highly adverse. The results of this thesis established evidence that correctional officers do in fact perceive their workplace as highly adverse, and significantly more so than those in many other professions found in the general community. This finding provides the initial foundations of an evidence-based rationale for the provision of preventative psychological training programs for correctional officers to assist them to manage this perceived adversity.
In addition, identifying which specific adversity factors contribute most to a heightened perception of workplace adversity for officers provides the scientific community and correctional industry with a deeper understanding of why working as an officer can be so psychologically challenging. These identified adversity factors may also function as potential treatment targets for future preventative training programs and provide relevant discussion points to build upon when discussing the challenges of the job with officers. The identification of helpful and unhelpful response tendencies and response styles also provides program developers with useful information that can be drawn upon in the development of training programs for officers. The following sections detail the specific implications of this thesis in regard to the targeting of training and the development of program content.

### 7.3.5 Implications for Program Targeting

Study 1 provided new understanding regarding the factors that contribute to perceived workplace adversity for officers. These findings may have a number of important implications for the development of interventions designed to assist correctional officers to manage perceived workplace adversity. Correctional officers were more likely than those working within the general community to perceive their working environment as highly unpredictable, threatening, and likely to result in the experience of workplace trauma. Furthermore, these factors were associated with heightened stress reactions. Targeting these adversity factors may result in a reduction in stress reactions for officers. Consequently, training programs aimed at assisting officers to maintain their psychological wellbeing may benefit from either directly addressing, or addressing the negative effects of, employees’ perceptions of workplace threat, their perception of environmental unpredictability and their heightened expectation of experiencing workplace trauma.

The findings from Study 1 also suggested that correctional officers do not experience more difficulty than those in other occupational environments in relation to achieving respite from their duties while at work or in regard to maintaining a separation between their work and home lives. Despite finding no significant difference, these adversity factors were found to be associated with the reporting of stress reactions by officers. This suggests that both adversity factors may still be important to target in the development of proactive psychological training programs. In contrast, although
correctional officers scored particularly high on the Need for Vigilance sub-scale, it was not significantly associated with self-reported stress reactions, suggesting that the need for hyper-vigilance may not be an effective target for preventative training programs.

### 7.3.6 Implications for Program Content

The findings of this thesis may also afford a number of important implications in regard to the development of program content for future preventative psychological training programs aimed at assisting correctional officers to manage workplace adversity and maintain their psychological wellbeing. Specifically, the following evidence-based recommendations are made in regard to program content. Firstly, the inclusion of relevant psycho-educational content may be beneficial. For example, educating officers in relation to the concepts of stress, perceived adversity, psychological wellbeing and how perceived adversity can impact psychological wellbeing. Furthermore, material that assists officers to identify when they begin to perceive heightened workplace adversity may aid them to implement useful strategies earlier thus reducing potential negative impacts.

Officers may also benefit from psycho-educational material that helps them to identify when they begin to experience symptoms related to psychological distress and content that aims to normalise the experience of psychological symptoms. Finally, providing psycho-educational material relating to important related concepts could be beneficial. For example, information regarding the concept of trauma, common responses to trauma, trauma related psychological conditions and trauma processing may assist officers to better manage perceived workplace adversity and maintain their psychological wellbeing. This thesis also provides evidence that suggests future preventative training programs may benefit from including psycho-educational content regarding officer response styles. This could include information regarding both the Interpersonal/Solution focussed (ISF) response style and Emotional/Avoidant (EA) response style, the strategies that comprise them and information regarding how the use of these strategies may impact reduce the impact of perceived workplace adversity on their psychological wellbeing.

Preventative psychological training programs may also benefit from including specific skill training for officers to assist them to in developing and refining coping strategies that have been identified within this thesis as helpful responses to perceived
workplace adversity. Skills that may be useful to consider either teaching or encouraging the use of within a training program include; a) effective communication skills, b) physiological control techniques aimed at assisting officers to calm themselves down (e.g., controlled breathing, progressive muscle relaxation, mindfulness techniques), c) effective conflict management skills, d) trauma processing skills, and e) effective problem solving skills.

Programs may also benefit from providing content that encourages officers to engage in helpful behaviours when managing perceived workplace adversity. Behaviours that may be worth encouraging include; a) help-seeking behaviour, b) maintaining social engagement, c) engaging in resource recovery (e.g., taking time off from work when resource depleted, and d) engaging in cognitive flexibility when managing problems at work. In addition to encouraging officers to engage in helpful behavioural responses to perceived workplace adversity, preventative psychological training programs may benefit from educating staff and encouraging them to avoid response strategies that have been linked to lowered psychological wellbeing for officers. Behaviours that may be useful for officers to avoid include; a) drinking alcohol, b) drug use, c) self- isolating behaviour, and d) self-harming behaviour.

Program content may also include psycho-educational training that encourages officers to avoid engaging in emotional disconnection and emotional venting, both of which have been shown to be related with lowered psychological wellbeing and increased negative organisational outcomes.

The findings of this thesis also indicated that cognitive flexibility may be helpful in managing perceived workplace adversity. This notion is also supported by past research that has demonstrated the continued use of any one type of coping strategy, irrespective of context, may lead to difficulties (Cheng, 2001). Therefore, preventative psychological training programs aimed to assist correctional officer to maintain their psychological wellbeing may be benefit from training officers in a range of coping skills and emphasising the importance of a broad skill set and a level of cognitive flexibility when selecting approaches.

Providing the correctional industry with assistance in developing more effective preventative psychological training programs is a worthy research initiative. It is hoped that the results of this thesis contribute to the development of a sound evidence base for such programs and positively impact future government policy in relation to training requirements, the development of future correctional training programs and in doing so,
potentially improve the lives of correctional officers. The importance of this goal is only made more apparent when considered alongside the overwhelming evidence within the scientific literature, which clearly demonstrates that correctional officers suffer from unacceptably high rates of a broad range of negative physical and psychological conditions (Brower, 2013; Finn, 1998; Morse et al., 2011; Spinaris et al., 2012). There are a number of research limitations however that need to be acknowledged in relation to this dissertation. The following section highlights a number of the more important research limitations and provides recommendations in regard to future research directions.

7.4 Limitations and Future Directions

There were a number of limitations worth acknowledging in relation to each of the studies that comprised this thesis. Firstly, the use of cross-sectional designs for each of the empirical studies that comprise this thesis precludes an appropriate examination of the cause and effect relationship between the study concepts. Therefore, all conclusions made within this thesis that infer any level of tentative causality must be considered with a degree of caution. Future studies are warranted that examine the study concepts using longitudinal designs to provide a clearer understanding of the cause and effect relationships between these constructs. In the absence of convincing longitudinal research a level of causality might be inferred through the use of SEM modelling to test alternate or equivalent models (Pearl, 2012) or through the conduct of newer statistical methods such as Bayesian Networks for Latent Variables method (BN-LV; Zheng & Pavlou, 2010).

It should be noted however, that many of the existing occupational stress models infer directionality, suggesting that psychosocial factors affect the wellbeing of employees (Elovainio, Heponiemi, Jokela, Hakulinen, & Presseau, 2015). Furthermore, the few existing longitudinal studies examining work-related stress and employee wellbeing indicate that heightened stress at work most likely precedes decreasing employee wellbeing (Elovainio et al., 2015). Future research is needed however, that tests the relationships identified within this thesis that provides a statistical analysis of alternate models to assist with establishing some level of causality.

The study sample sizes used in Study 1 and Study 3 may also be viewed as a limitation. Small sample sizes can increase the likelihood of a Type II error (Tabachnick
That is, increase the chance of failing to reject a false null hypothesis. The arguably small sample sizes used in Study 1 and Study 2 may have resulted in important relationships between study constructs not being identified as significant. Although Study 1 used an adequate sample size considering the type of statistical analysis chosen, the use of only 37 correctional officers in this study may have impacted the ability to effectively identify cross-occupational differences. For example, the inability to identify a statistically significant difference between officers and the rest of the sample in relation to the strength of the correlation between perceived workplace adversity and stress reactions as measured by the DASS-21, may be attributable to a lack of statistical power.

It is also important to note the issue of sample size in relation to Study 3. As part of the statistical analysis SEM was used to explore the relationship between perceived work-related environmental adversity, response tendency usage, wellbeing and organisational impacts. Due to the nature of SEM it requires substantial sample sizes to ensure the accuracy of results and to establish confidence of avoiding a Type II error (Wolf et al., 2013). Although the sample size of 174 may be considered small in comparison to the complexity of the specified model, it has been argued that SEM can in fact be used with small samples without compromising accuracy (Muthén & Muthén, 2009; Nevitt & Hancock, 2004). Furthermore, a number of strategies were employed to increase the parsimony of the specified model thus reducing the number of parameters requiring estimation. First, in line with recommendations a single indicator latent variable was used in relation to the organisational impacts measure to reduce model parameters (Wolf et al., 2013). As part of this process, the factor loading and error variance was specified for the latent variable to account for measurement error. Second, item parcelling was used to reflect the latent variables of officer distress and officer thriving effectively reducing the number of parameters and further increasing the parsimony of the specified model. Latent interaction terms were also used to increase model parsimony while examining the moderating effect of officer response styles (Steinmetz et al., 2011). Although these procedures effectively addressed the issue of sample size in Study 3, future research is needed that re-confirms the relationships identified within this study using larger sample sizes to increase confidence in these findings.

The use of subjective measures such as self-report data throughout each of the three empirical studies without inclusion of objective measures of adversity, wellbeing
or organisational outcomes may also be seen as a research limitation. While it can be argued that officers possess invaluable information and expertise in relation to correctional officers’ management of workplace adversity, it is likely that many important aspects relating to the management of workplace adversity may not be readily verbalized by officers or may lie outside their conscious knowledge. Therefore, the results of this thesis that rely on officer self-reporting should be interpreted with a degree of caution and considered as a merely a small piece of evidence that should be considered within the context of the existing research exploring how to best address workplace adversity for correctional officers.

This thesis examined the relationship between perceived workplace adversity, officer response tendencies, psychological wellbeing and a number of negative organisational impacts for frontline correctional officers. Although this provides a valuable contribution to the literature and an evidence basis for the development of preventative psychological training programs to assist frontline officers to maintain their psychological wellbeing, there is much more to be learnt about how we can help officers to manage the difficulty of the job. For example, it is unfortunate that no examination of gender differences between frontline officers was undertaken as part of the empirical papers that comprise this thesis. Post-submission examination of the data pertaining to Study 3 revealed that female frontline officers did not differ significantly from male officers in the level of overall workplace adversity they perceived or in relation to the seven underlying dimensions of perceived workplace adversity. However, female officers were significantly more likely to report engaging in venting as a way of managing workplace adversity, $F(134) = 6.21, p < .05$, significantly less likely to report being able to psychologically detach from work once they left their workplace, $F(134) = 5.14, p < .05$, and significantly less likely to report using problem solving skills to work their way through adverse situations at work than male officers, $F(134) = 9.91, p < .01$. These findings are important as they demonstrate that female officers may respond differently to male officers when managing workplace adversity and may be affected differently by their working environment.

The identification of gender differences is consistent with existing literature that indicates that there may be significant and substantial differences between male and female officers in relation to the way in which they experience their working environment, the level of job stress they report (E. G. Lambert, Cluse-Tolar, & Hogan, 2007; Mitchell, MacKenzie, Styve, & Gover, 2000), and the way in which it impacts
their wellbeing (Nieuwenhuijsen et al., 2010; Triplett et al., 1999; Zupan, 1986) and their behaviour as employees (E. G. Lambert et al., 2010). However, it should be noted that the research relating to gender-based differences in relation to job stress in correctional officer samples is far from conclusive, with many studies failing to identify significant gender differences in relation to stress (Dowden & Tellier, 2004; Griffin, 2015; Gross, Larson, Urban, & Zupan, 1994). Further research is warranted that explores gender differences in relation to perceived work-related environmental adversity, officer response tendencies, psychological wellbeing and the occurrence of negative organisational impacts. It is argued that by gaining a deeper understanding of such differences training programs can be developed that include more tailored program content such as gender-specific modules that allow for a more targeted and relevant training experience for all officers.

Further exploration of nationally based differences would also be a welcomed addition to the extant literature. As part of this thesis, no cross-national comparisons were made that may identify differences between national correctional systems. Cross-national differences have been identified however in past research examining work-related stress in correctional officer samples, although it has been argued that findings are largely mixed and tend to be sample specific (Dowden & Tellier, 2004). There may be many important national differences that have not been previously identified that may impact the development of preventative training programs.

It should also be acknowledged that there is likely to be considerable differences in the recruitment, hiring practices and training protocols implemented between facilities, states and nations. This thesis did not specifically examine differences in these practices or explore how such differences may impact the issue of correctional officer psychological wellbeing. Future research is warranted that accounts for such differences and that explores how these different practices may either benefit or negatively impact correctional employees’ psychological wellbeing.

Finally, it should be recognised that no baseline data was attained throughout the conduct of these studies that quantified the level of adverse events/trauma officers experienced prior to commencing working within the field of corrections. The attainment of such data would have been beneficial in accounting for cumulative trauma over time and in reducing measurement error in regard to the measurement of adversity. It is therefore recommended that future research examining adversity within correctional officer samples acknowledge this and consider attaining such baseline data.
7.5 Summary

In summary, the findings of this thesis provide a new level of empirical insight into how correctional officers perceive and manage workplace adversity. Furthermore, the new insight into how officers respond to perceived workplace adversity and how their choice of response style may impact their psychological wellbeing and in turn the organisations that employ them. It is hoped that this investigation has provided a substantial contribution to the current scientific understanding of the antecedents of correctional officer psychological wellbeing and has begun to fill this identified gap in the existing literature. Specifically, the results of this thesis indicated that correctional officers perceive their workplace as a highly adverse environment and that this perceived workplace adversity is a factor that can negatively impact an officer’s level of stress and their psychological wellbeing. Moreover, the findings revealed that this deterioration in psychological wellbeing can in turn, impact their likelihood to engage in negative organisational behaviours such as absenteeism, presenteeism and develop a sense of job dissatisfaction. In addition to these findings, the results revealed correctional officers engage in a range of cognitive, interpersonal and behavioural response strategies in an attempt to manage the workplace adversity they face, some of which are helpful and others that are largely unhelpful in assisting them to manage this adversity and maintain their psychological wellbeing. Specifically, using ISF strategies when responding to workplace adversity may assist officers to reduce the negative impact of perceived workplace adversity on their psychological wellbeing and in turn reduce the frequency of negative organisational outcomes such as absenteeism, presenteeism and job dissatisfaction. On the other hand, engaging in EA response strategies may also contribute to lowered psychological wellbeing, increased negative organisational outcomes and be more likely to be used when perceived adversity is high for officers.

The studies included within this thesis demonstrate an evidence-based need for the development and implementation of preventative psychological training programs aimed at ameliorating the impact of workplace adversity on officer wellbeing. Furthermore, the studies within this thesis provide the correctional field with some evidence-based guidance and recommendations in relation to potential content for a preventative training program. More specifically, such programs may benefit from including content that encourages officers to avoid EA response strategies and
encourages them to use ISF response strategies when faced with increasing workplace adversity. Furthermore, preventative training programs may benefit from addressing the workplace adversity factors identified as relevant to correctional officers in Study 1. It is hoped that the findings of this thesis may play some small part in the future development of effective psychological training programs for correctional officers aimed at assisting them to maintain their psychological wellbeing.


Psychology, 14, 177–193. doi: 10.1007/BF00911820


Fikretoglu, D., Beatty, E., & Liu, A. (2014). *Comparing different versions of Road to Mental Readiness to determine optimal content: Testing instruction type,*
homework, and intelligence effects at two timepoints. Ontario, Canada: Defence Research and Development Canada.


wellbeing survey. Luton, UK: University of Bedfordshire.


McDonald, G., Jackson, D., Wilkes, L., & Vickers, M. H. (2012). A work-based educational intervention to support the development of personal resilience in...


Petrosino, A., Turpin-Petrosino, C., & Finckenauer, J. O. (2000). Well-meaning programs can have harmful effects! Lesson from experiments of programs such as Scared Straight. *Crime and Delinquency, 46*(3), 354–379. doi: 0803973233


Learning.


Samak, Q. (2003). *Correctional officers of CSC and their working conditions: A questionnaire-based study*. Montreal, Canada: CSN.


SWA. (2013). *The incidence of accepted workers’ compensation claims for mental*
stress in Australia. Canberra, ACT: Safe Work Australia.


Appendix A: Ethics Approvals for all Studies

From: Sheila Hamilton-Brown
Sent: Wednesday, 21 November 2012 9:31 AM
To: Jeffrey Pfeifer; Justin Trounson
Cc: RES Ethics; FLSS Research
Subject: SUHREC Project 2012/273 Ethics Clearance

To: Dr Jeffrey Pfeifer/ Mr Justin Trounson; FLSS

Dear Jeffrey and Justin

SUHREC Project 2012/273 Measuring environmental stress and exploring the relationship between environmental stress, psychological resilience and perceived stress.
Dr Jeffrey Pfeifer, Mr Justin Trounson; FLSS
Approved Duration: 21/11/2012 To 30/11/2013 [Adjusted]

I refer to the ethical review of the above project protocol conducted on behalf of Swinburne's Human Research Ethics Committee (SUHREC) by a SUHREC Subcommittee (SHESC3). Your responses to the review, e-mailed in two parts on 19 November 2012 with attachments including revised consent information statement, were put to a SHESC3 delegate for consideration and feedback sent to you. Your response, as emailed on 20 November 2012 with flyer, accords with the feedback.

I am pleased to advise that, as submitted to date, the project has approval to proceed in line with standard on-going ethics clearance conditions here outlined.

- All human research activity undertaken under Swinburne auspices must conform to Swinburne and external regulatory standards, including the National Statement on Ethical Conduct in Human Research and with respect to secure data use, retention and disposal.

- The named Swinburne Chief Investigator/Supervisor remains responsible for any personnel appointed to or associated with the project being made aware of ethics clearance conditions, including research and consent procedures or instruments approved. Any change in chief investigator/supervisor requires timely notification and SUHREC endorsement.

- The above project has been approved as submitted for ethical review by or on behalf of SUHREC. Amendments to approved procedures or instruments ordinarily require prior ethical appraisal/clearance. SUHREC must be notified immediately or as soon as possible thereafter of (a) any serious or unexpected adverse effects on participants and any redress measures; (b) proposed changes in protocols; and (c) unforeseen events which might affect continued ethical acceptability of the project.

- At a minimum, an annual report on the progress of the project is required as well as at the conclusion (or abandonment) of the project.

- A duly authorised external or internal audit of the project may be undertaken at any time.

Please contact the Research Ethics Office if you have any queries about on-going ethics clearance or you need a signed ethics clearance certificate, citing the SUHREC project number. A copy of this clearance
email should be retained as part of project record-keeping.

Best wishes for the project.

Yours sincerely,

Sheila Hamilton-Brown
Secretary, SHESC3
*******************************************
Sheila Hamilton-Brown
Administrative Officer (Research Ethics & Biosafety)
(Tues, Wed & Fri)
Swinburne Research (H68)
Swinburne University of Technology
PO Box 218
HAWTHORN VIC 3122
Tel: 03 9214 5935
Fax: 03 9214 5267
Dear Jeffery and Justin,

**2014/019 Wellbeing and adaptation in adverse workplace environments**
Dr J Pfeifer, Mr J Trounson
Approved duration from 24-03-2014 To 24-03-2015 [Adjusted]

I refer to the ethical review of the above project protocol undertaken on behalf of Swinburne's Human Research Ethics Committee (SUHREC) by SUHREC Subcommittee (SHESC3) at a meeting held on 14 February 2014. Your responses as e-mailed on 26 February 2014 were reviewed.

I am pleased to advise that, as submitted to date, the project may proceed in line with standard on-going ethics clearance conditions here outlined.
- All human research activity undertaken under Swinburne auspices must conform to Swinburne and external regulatory standards, including the current National Statement on Ethical Conduct in Human Research and with respect to secure data use, retention and disposal.
- The named Swinburne Chief Investigator/Supervisor remains responsible for any personnel appointed to or associated with the project being made aware of ethics clearance conditions, including research and consent procedures or instruments approved. Any change in chief investigator/supervisor requires timely notification and SUHREC endorsement.
- The above project has been approved as submitted for ethical review by or on behalf of SUHREC. Amendments to approved procedures or instruments ordinarily require prior ethical appraisal/clearance. SUHREC must be notified immediately or as soon as possible thereafter of (a) any serious or unexpected adverse effects on participants and any redress measures; (b) proposed changes in protocols; and (c) unforeseen events which might affect continued ethical acceptability of the project.

- At a minimum, an annual report on the progress of the project is required as well as at the conclusion (or abandonment) of the project.
- A duly authorised external or internal audit of the project may be undertaken at any time. Please contact the Research Ethics Office if you have any queries about on-going ethics clearance. The SUHREC project number should be quoted in communication. Chief Investigators/Supervisors and Student Researchers should retain a copy of this email as part of project record-keeping.

Best wishes for project.

Yours sincerely,

Ann

____________________________________
Dr Ann Gaeth
Executive Officer (Research)
Swinburne Research (H68)
Swinburne University of Technology
P O Box 218
HAWTHORN VIC 3122
Ph +61 3 9214 8356
From: Astrid Nordmann  
Sent: Thursday, 15 January 2015 1:53 PM  
To: Jeffrey Pfeifer  
Cc: RES Ethics; Justin Trounson  
Subject: SHR Project 2014/312 - Ethics clearance

To: Assoc. Prof. Jeffrey Pfeifer, FHAD/Mr Justin Trounson  

Dear Prof Pfeifer,

SHR 2014/312 - Examining the relationship between perceived workplace adversity, response tendencies and wellbeing in correctional officers  
Assoc. Prof. Jeffrey Pfeifer, Mr Justin Trounson - FHAD  
Approved duration: 15/01/2015 to 15/01/2016 [adjusted]

I refer to the ethical review of the above project protocol by a Subcommittee (SHESC1) of Swinburne’s Human Research Ethics Committee (SUHREC). Your responses to the review, as per the email sent on 15 January 2015, were put to the Subcommittee delegate for consideration.

I am pleased to advise that, as submitted to date, the project may proceed in line with standard on-going ethics clearance conditions here outlined.

- All human research activity undertaken under Swinburne auspices must conform to Swinburne and external regulatory standards, including the current National Statement on Ethical Conduct in Human Research and with respect to secure data use, retention and disposal.

- The named Swinburne Chief Investigator/Supervisor remains responsible for any personnel appointed to or associated with the project being made aware of ethics clearance conditions, including research and consent procedures or instruments approved. Any change in chief investigator/supervisor requires timely notification and SUHREC endorsement.

- The above project has been approved as submitted for ethical review by or on behalf of SUHREC. Amendments to approved procedures or instruments ordinarily require prior ethical appraisal/clearance. SUHREC must be notified immediately or as soon as possible thereafter of (a) any serious or unexpected adverse effects on participants any redress measures; (b) proposed changes in protocols; and (c) unforeseen events which might affect continued ethical acceptability of the project.

- At a minimum, an annual report on the progress of the project is required as well as at the conclusion (or abandonment) of the project. Information on project monitoring, self-audits and progress reports can be found at: http://www.research.swinburne.edu.au/ethics/human/monitoringReportingChanges/

- A duly authorised external or internal audit of the project may be undertaken at any time.

Please contact the Research Ethics Office if you have any queries about on-going ethics clearance. The SHR project number should be quoted in communication. Researchers should retain a copy of this email as part of project recordkeeping.

Best wishes for the project.
Yours sincerely,
Astrid Nordmann  
SHESC1 Secretary

Dr Astrid Nordmann  
Research Ethics Executive Officer  
Swinburne Research (H68)  
Swinburne University of Technology  
PO Box 218, Hawthorn, VIC 3122  
Tel: +613 9214 3845  
Fax: +613 9214 5267  
Email: anordmann@swin.edu.au

---------------------------------------------
Appendix B: Ethics Adherence Declaration

Declaration of Adherence to Ethical Standards

In submitting this thesis as a requirement for the Doctor of Philosophy (Clinical Psychology) program at Swinburne University of Technology, I declare that:

1. Ethical standards were upheld throughout the conduct of this research.
2. All conditions pertaining to ethics clearance were properly met.
3. All final reports to the Swinburne University Human Research Ethics Committee have been submitted.

Signed:

Mr Justin Trounson
18/06/2016
### Appendix C: Ethics Applications for all Studies

#### Study 1 Application

**APPLICATION FOR ETHICS APPROVAL of a RESEARCH PROTOCOL**

#### SECTION A: GENERAL INFORMATION

- **Project Title:** Measuring environmental stress and exploring the relationship between environmental stress, psychological resilience and perceived stress.
- **Short Title:** Environmental stress, perceived stress and psychological resilience

#### Applicant Details

- **Name & Title:** Dr. Jeffery Pfeifer, Senior Lecturer in Psychology
- **Email:** jpfieffer@swin.edu.au
- **Tel No(s):** 9214 8578
- **Fax:**
- **Institutional Address:** PO Box 218, H24, Swinburne University of Technology, Hawthorn, Victoria, Australia, 3122

- **Main Student Investigator:** Mr. Justin Trounson
- **Email:** jstrounson@swin.edu.au
- **Tel No(s):** 9214 4682
- **Student ID Number:** 1227971
- **Degree Being Undertaken:** PhD (Clinical Psychology)

#### Proposed Period During Which Human Research Activity Requiring Ethics Approval is Needed:

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>01/11/2012</td>
<td>01/11/2013</td>
</tr>
</tbody>
</table>

#### Broad Category of Research

- **Select one category box which best fits the application:**
  - Social/Cultural/Humanities
  - Business/Management
  - Education/Training/Program Evaluation
  - Psychological/Brain/Neuro-sciences
  - Health/Safety
  - Engineering/Science/Technology
  - Other (please specify) ________________________________

- **[** For research involving Clinical Trials or Ionising Radiation, please contact the Research Ethics Officer.**]**

---

Human Research Ethics Committee

Human Research Risk/Review Classification

To enable a determination as to whether prima facie your research activity is Minimal Risk and/or Low Impact, please clarify by selecting [X] any one or more boxes below as to whether your research activity involves:

Vulnerable participants, children or those dependent on care
Indigenous Peoples or Special Cultural/Ethnic groups
Externally funded research requiring HREC-level clearance
Multi-centre/Other sites requiring HREC-level approval
Research conducted overseas
Conflicts of interest or dual researcher-professional roles
Data access/use without an individual’s prior consent
Data access/use subject to statutory guidelines &/or reporting
Identification of participant individuals/groups in research outcomes without full consent or there is unclear consent for this
Sensitive information/Issues vis-à-vis contact/impact (legal*, regulatory compliance*, commercial, professional, cultural, etc)
Personally intrusive/confronting or quite inconvenient/embarrassing questioning or other activity
Physically confining/invasive techniques or significant physical contact/stimulation (TMS*, X-ray*, CT scan*, MRI*, clothing change, etc)
Working in hazardous environments (asbestos dust*, infectious disease*, war or civil strife*, etc)
Handling hazardous substances (eg, asbestos*, radioactive material*, explosives*, etc) or equipment
Administration of medical/herbal substances*/treatments
Administration of other (non-medical) substances/treatments
Health/medical diagnosis/"therapy"
Non-minimal impact therapeutic or other devices* /activity*
Screening for healthy participant inclusion/exclusion
Medical or psychiatric assessment/conditions*
Serious psychological profiling, investigation or exploration
Withdrawal of treatment/services or use of placebo
Withdrawal/substitution of educational/professional/commercial/recreational/other programs or services
Deception or covert observation
Limited or non-disclosure of research information/procedures
Participant recruitment/selection via third party
Human research activity commenced without clearance
Participation incentives, prizes or significant payments
Research placing researchers/assistants at risk

PLEASE NOTE: If you have selected any one or more of the above boxes, your project will ordinarily be put for SUHREC ethical review. Items above marked * must be put to SUHREC proper. But in other cases, you may wish to put a case for expedited review by a SUHREC Sub-Committee (SHESC) in the (expandable) box below in relation to the criteria for determining risk/impact. If you put forward a case, then in the first instance your application will be put to the relevant SHESC; however, the relevant SHESC may still consider the project needs full SUHREC appraisal or SUHREC may review or override the SHESC decision.

Risk/Impact Checked with a Research & Ethics Advisor (REA)? Yes ☐ No ☐ REA Comment, Initials & Date:

[Blank Space]

Human Research Ethics Committee
This project is being undertaken as an integral research component of Mr Trounson’s PhD (Clinical Psychology) program. This project will help him gain invaluable skills in all areas of scientific research and assist him to complete his doctoral program successfully. The aim of this study is to examine the relationship between environmental stress, psychological resilience and self-reported experiences of stress. Past research has demonstrated that experiencing chronic stress is associated with numerous physical and psychological problems (NIOSH, 1999; Peltzer et al., 2009). Furthermore, research has indicated that functioning within high stress environments is associated with increased mental health problems, productivity loss and an increase in receipt of mental health treatment (Hourani, Williams & Kress, 2006). It is therefore important to conduct research aimed at identifying more effective ways to reduce the effects of stress on individuals living in high stress conditions.

Traditionally in psychological research, stress has often been measured using self-report measures aimed at quantifying the level of perceived stress experienced by a given individual. Such tools designed to measure perceived stress have been fundamental in gaining a better understanding of the effect of stress on the human body and mind. However, these tools tend not to account for the environmental context in which an individual is functioning. Perceived stress tools do not take into account that an individual’s capacity for coping with stress, whether healthy or unhealthy, may affect their self-reported stress levels. More simply, an individual under little environmental pressure may report experiencing an equivalent or greater level of stress than an individual functioning within a high stress environment (e.g., a waiter may report the same level of occupational stress as a marine currently on active duty or a prisoner within a high security prison). Developing a scale that can measure the level of continuous adversity an individual encounters in their day-to-day life may provide the scientific community with a tool by which to more effectively examine the effect of high-stress environmental contexts on mental wellbeing. Furthermore, the implementation of this scale may assist in enriching perceived stress research by providing an environmental context through which to view participants’ scores on self-report perceived stress scales. This study will develop and test a scale that can effectively measure the level of continuous adversity present in an individual’s life. It aims to provide a theoretically based tool that can differentiate between individuals in high-stress environmental contexts and those in low-stress environmental contexts.

Psychological resilience can be defined as an individual’s ability to maintain psychological wellbeing despite the experience of adversity or trauma (Campbell-Sills & Stein, 2007). In 2010, a psychological resilience program was implemented within the US army as a new aspect of standard soldier training (see http://csf.army.mil/). The implementation of this program has been justified as an attempt to proactively address the acknowledged high prevalence of mental health issues within US army personnel. Despite implementing such an innovative program, little research has been conducted examining the association between psychological resilience, perceived stress and environmental contexts. This study will explore the role of psychological resilience in the relationship between an individual’s environmental context and both their level of perceived stress and their mental wellbeing. It is hoped that this study will provide a clearer understanding of the function of psychological resilience in potentially reducing perceived stress and encouraging mental wellbeing.

References


**A2 WHAT - BRIEF DESCRIPTION OF PROJECT**

**In plain English**

The current project will involve developing a psychological measurement tool (i.e., a questionnaire) that can measure an individual’s environmental context (i.e., how stressful their everyday life/occupation is). The tool will then be distributed to voluntary participants within the general public to attain data to statistically examine the efficacy of the items in the scale. After an in-depth analysis of the utility of the items in the scale, it will be refined and provide the basis for an empirically based measurement tool for assessing stressful environmental contexts. Secondly, this study will explore the association between participant’s score on the newly developed scale and their levels of self-reported perceived stress, their psychological resilience and their overall mental wellbeing.

Firstly, it is expected that people in high-stress environmental contexts (i.e., those scoring highly on our developed scale) will also report high levels of perceived stress. Secondly, it is expected that those who live in high-stress environmental contexts and perceive high levels of stress are likely to be significantly lower in psychological resilience than those in high-stress environmental contexts reporting low levels of perceived stress. This research will provide empirical evidence demonstrating the function of psychological resilience in managing high-stress environmental contexts.

**A3 HOW - PROCEDURES**

Please detail clearly and sufficiently the proposed research/statistical method(s), procedures and instruments to be used in the project, including all screening and research ‘procedures’ to which the participants will be subjected, and asterisk those which may have adverse consequences. Please include an appendix of all screening instruments, questionnaires, interview protocols etc (at least in draft form if not finalised).

The project will optimally involve around 200 individuals recruited over the internet using online community noticeboards such as Facebook as a distribution platform and will be purely voluntary in nature. Participants will complete an online questionnaire (See Appendix A for a copy of the proposed questionnaire). The questionnaire will take approximately 15 minutes to complete. All participants will also read a consent information statement (Appendix B) prior to commencement, outlining the aims of the research and stating the voluntary nature of their participation and explaining they can withdraw from the survey at any point without repercussion. There will be no identifiable information in the questionnaires. It should be pointed out that none of the material in any of the measures is deemed to be of a sensitive nature and should not cause distress. However, in the event of participants experiencing unexpected distress from participation in this study, contact details for the Swinburne Student Services Counselling group, Swinburne Psychology Clinic and Lifeline will be supplied on the information sheet prior to commencement of the questionnaire.

All measures can be seen in Appendix A. Briefly they contain:

**Demographic background:**
Basic items such as age, gender and current occupation (See Appendix A: Section 1)

**Environmental Context Scale (ECS):** 40 items (See Appendix A: Section 2)
Environmental context will be measured using the 40 items developed for this study. Participants rate how much they agree with statements on a 7-point scale ranging from 1 = Do not agree at all to 7 = Strongly agree. An example item is “Compared to the average person I feel things in my life can be unpredictable”.

**Perceived stress:**
DASS-21 Stress sub-scale: 7 items (Lovibond & Lovibond, 1995)
Perceived stress will be measured using two measures, the DASS-21 stress sub-scale and the Perceived Stress Scale (see Appendix A: Section 3). In the DASS-21 stress sub-scale items (7 items in total) are rated by the respondent based on how they have felt over the past week. Respondents rate each item on a 4-point scale ranging from 0 (“Did not apply to me at all”) to 4 (“Applied to me very much, or most of the time”). An example item is “I felt that I was rather touchy”.

Perceived stress will also be measured using the 10-item Perceived stress scale (PSS; Cohen, Karmark & Mermelstein, 1983). Items ask participants to rate on a 5-point scale (0 = Never to 4 = Very often) how often they have felt or thought a certain way in the past month. An example item is “In the last month, how often have you felt nervous and stressed?”
Psychological Resilience:
Psychological resilience will be measured using two established measures, the CD-RISC (Connor & Davidson, 2003) and the Resilience Scale (RS; Wagnild & Young, 1993).

CD-RISC: 25 items (Connor & Davidson, 2003)
Psychological resilience will be measured using the Connor and Davidson’s 25-item CD-RISC scale (See Appendix A: Section 4). The scale items are rated by the respondent based on how they have felt over the past month. Respondents rate each item on a 5-point scale ranging from 0 (“Not true at all”) to 4 (“True nearly all the time”). An example item is “I feel like I can deal with whatever comes”.

The Resilience Scale: 25 items (Wagnild & Young, 1993)
Psychological resilience will also be measured using the Resilience Scale (See Appendix A: Section 4). The respondent’s are asked to rate how much they agree or disagree with each statement. Respondents rate each item on a 7-point scale ranging from 0 (“Disagree”) to 4 (“Agree”). An example item is “When I make plans I follow through with them”.

Mental Wellbeing: DASS-21 Depression and Anxiety sub-scales: 14 items (Lovibond & Lovibond, 1995)
Mental well-being will be measured using the depression and anxiety sub-scales of the DASS-21 (see Appendix A: Section 3). The two sub-scales (7-items each) are rated by the respondent based on how they have felt over the past week. Respondents rate each item on a 4-point scale ranging from 0 (“Did not apply to me at all”) to 4 (“Applied to me very much, or most of the time”). An example item for the depression sub-scale is “I felt that life was meaningless”. An example item for the anxiety sub-scale is “I felt I was close to panic”.

References

If you feel that it is necessary to include further material, please append.

A4 DESCRIBE ANY RISK THAT MAY ARISE TO THE PARTICIPANT / DONOR?

Some research activities may put the participant at risk through what is being done or simply through their participation.

Please describe the risk you perceive and the protective measures to be taken.

There should be no risk to the participants

A5 DESCRIBE ANY RISK THAT MAY ARISE TO THE RESEARCHER / ADMINISTRATOR?

Some research activities may put the researcher at risk through what is being done or simply through their participation.

Please describe the risk you perceive and the protective measures to be taken.

There should be no risk to the researcher

A6 WHAT BENEFITS ARE ANTICIPATED FROM THE PROJECT

Ethical principles would require that benefits flowed from the activities - but please avoid grandiose claims.

(a) To the Participant (what and how so):

Taking part in a psychological study aimed at developing a psychological scale may help participants to gain a better understanding of what is involved in a psychological study and also provide them with new insight into the process of psychological scale development.

(b) More generally (to society, profession, knowledge, understanding, etc. and how so.)
The development of an environmental adversity scale will hopefully contribute towards future research and add to the scientific literature relating to the effect of stress and adverse environmental contexts on psychological wellbeing. It is hoped that the results from this project will be published and assist in providing the scientific community with a functional and useful scale that can effectively differentiate individuals on the basis of the level of stress in their respective environmental contexts.

A7 POTENTIAL PROBLEMS
From time to time in the course of a research project important information, such as an individual found to be at risk, or entirely unforeseen events may come to pass. What procedures are in place to handle unexpected or particularly significant personal or other information that may come to light through the project, eg, unknown medical/psychiatric condition, a particularly distressed participant, civil or criminal liability, etc.

Participants who experience any distress from participating in the study are advised to contact Swinburne Student Services Counselling, Swinburne Psychology Clinic or Lifeline. The numbers for these services will be supplied on the information sheet.

A8 PROFESSIONAL/ETHICAL ABILITY & TRAINING (Researchers/Students/Assistants)

(a) Sufficiently detail what investigators/assistants will do in this project and their expertise/competence to do so.

The study will be supervised by Dr. Jeffery Pfeifer. Dr. Jeffery Pfeifer received his Ph.D. and M.Leg.St. (Master of Legal Studies) from the University of Nebraska and has been teaching and conducting research in forensic psychology for the past 15 years. He is currently employed by Swinburne University as a lecturer/researcher and has conducted numerous ethically sound studies. Dr. Pfeifer will supervise the entire study and provide direction where needed. Furthermore, participants who have any queries about the study are advised to contact Dr. Pfeifer.

Justin Trounson, a current PHD (Clinical Psychology) candidate, will conduct the study. Justin holds a degree in Psychology with Honours and has worked as a research assistant on a number of projects involving the consideration of ethical issues. Justin has also successfully designed, conducted and completed a study in 2011 with Swinburne University ethics approval. This study was conducted ethically and was completed without any ethical complications. In addition, Justin has undertaken training in ethics and professional issues as part of his Honours program. Under Dr. Pfeifer’s supervision Justin Trounson will issue the questionnaires to participants, collect, analyse and interpret the data.

(b) Sufficiently detail any further training/qualifications required for investigators/assistants to carry out the project.

No further training is required to carry out this project.

A9 FUTURE USE OF DATA
Will any of these data be used by yourself, your students or others for any purpose other than for this project as described in the protocol? If so please describe.

None is expected

A10 EXTERNAL INVolVEMENT
Is a body external to Swinburne involved in initiation or support of the project?

[ ] Yes Name of body/organisation

If an external body is associated with the project you must provide the HREC with detail of the arrangements, including details of any funding or other resources being provided. A copy of relevant pages from the contractual arrangements should be attached.

[ ] No

A11 EXTERNAL APPROVALS
Projects involving other organisations or entities may require approval from other institutions or their ethics committees, etc. for such things as access to prospective participants, contact lists, data, facilities, etc. A copy of such approvals may be required to be provided to the HREC at the time of application or be made available as soon as possible. In which case, the project may not commence, until such evidence is provided.

Institutional

[ ] Yes [ ] Documentation Attached [ ] to follow

Next of Kin (for special groups)

[ ] Yes [ ] Documentation Attached [ ] to follow

(estimate when likely to be obtained)

[ ] No (please explain)

Human Research Ethics Committee
No external approvals will be necessary in conducting this research

**A12 RESEARCHER / SPONSOR RELATIONSHIP**

Is there any relationship or association between the sponsor and any of the researchers listed in Section A of this form, for example are any of the researchers directors, officers, employees, shareholders or promoters of the sponsor or do they receive any personal benefits from the sponsor under any other contracts or arrangements?

☐ No
☐ Yes (please explain the relationship(s), including how a vested or a conflict of interest situation does not arise.)
### SECTION B: ETHICAL ISSUES OVERVIEW

#### B. ETHICAL ISSUES

[Double-click on □ YES/NO “check box” to select box, then enter Default Value as Checked ☑ or leaving as Not Checked ☐]

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Non-Limited Disclosure or Deception: Is any detail in relation to research purposes, methods or questions being withheld from participants? Or will deception of any kind be involved? Or any covert/undeclared observation? (Refer National Statement Chap 17)</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>(b) Does the data collection process involve access to confidential personal data (including access to data provided for a purpose other than this particular research project) without the prior consent of subjects?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>(c) Will participants have pictures taken of them, e.g., photographs, video recordings? If “YES”, please explain how you intend to retain confidentiality and ultimately dispose of the material.</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>(d) If interviews are to be conducted, will they be record by electronic device? If “Yes”, please explain how you intend to retain confidentiality and ultimately dispose of the material.</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>(e) Will participants be asked to perform any acts or make statements which might compromise them, diminish self esteem or cause them embarrassment or regret (minimal, moderate or significant)?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>(f) Might any aspect of your study reasonably be expected to place the participant at risk of criminal or civil liability (not just immediately or directly)?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>(g) Might any aspect of your study reasonably be expected to place the participant at risk of damage to their professional/social/cultural/financial standing or employability?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>(h) Will the research involve access to data banks subject to privacy legislation?*</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>(i) Will participants come into contact with any equipment which uses an electrical supply in any form e.g., audiometer, biofeedback, electrical stimulation, magnetic stimulation, etc.? If “YES”, please outline below what safety precautions will be followed.</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>(j) Will any treatment be used with potentially unpleasant or harmful side effects?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>(k) Does the research involve any stimuli, tasks, investigations or procedures which may be experienced by participants as stressful, noxious, aversive or unpleasant during or after the research procedures?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>(l) Will the research involve the use of placebo control conditions or the withholding/substitution of treatment, programs or services (health, educational, commercial, other)?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>(m) Will any samples of body fluid or body tissue be required specifically for the research which would not be required in the case of ordinary treatment?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>(n) Will participants be fingerprinted or DNA “fingerprinted”?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>(o) Are there in your opinion any other ethical issues involved in the research?</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

**NOTE:** If the answer to any of the above questions is “yes”, please explain and justify below in sufficient clear detail. (The box below will expand to fit your response.)

*Annual reporting to Government may be required on this item. For info: please contact the Research Ethics Officer.*

Attach further documents if appropriate.
SECTION C: PARTICIPANT DETAILS

C1 PARTICIPANT DETAILS
The composition of the participant group may, in some circumstances, distort and invalidate an outcome, and risks may arise through the composition of the participant group.

How many individual participants will be involved? (Number/number ranges for which approval is sought)

| Males: | 100 |
| Females: | 100 |
| Total participants | 200 |

Over what range of ages?

From (youngest): 18 To (oldest): 65

If there is a gender or age imbalance in the number of participants please explain why:

C2 RECRUITMENT

How will participants be recruited/selected?
Please outline the process in sufficient detail how this is to occur.

Note: Where participants are obtained from or through schools, hospitals, prisons or other institutions, appropriate institutional or other authority will probably be needed. If soliciting for participants by advertisement or poster please attach proposed copies or text.

(See also Project Information Consent Statements and Signed Consent Forms info at the end of this application form.)

The sample will be recruited voluntarily through the internet, utilising online community noticeboards as a distribution platform by which to alert individuals who may be interested in partaking.

C3 PRE-EXISTING CONDITIONS

In some situations an underlying medical or other significant condition of a participant may result in an otherwise relatively innocuous situation causing excessive stress and exacerbate the condition. Researchers must, therefore, be alert to such situations and be able to address the resulting issues.

Do participants have any medical or other significant condition of which you are aware, eg. diabetes, asthma, depression, epilepsy? What steps are in place to handle any resulting problems (you may need to correlate with A3, A4 and A7 of this form)?

Not that I am aware of. Medical conditions should not be an issue for this project.

C4 DISCLOSURE AND INFORMED CONSENT

How will participants be informed about the project in order to give valid consent:

- Consent Information Statement(s)/Letter(s) and Signed Consent Form(s) will be used.
- Consent Information Statement(s)/Letter(s) and consent implied by return of anonymous questionnaire
- Verbal advice (Please explain how and why)
- Other (Please explain how and why)

All participants will need to read a consent information sheet prior to commencing the questionnaire outlining all relevant issues regarding consent and the nature of the study. A fully completed submitted questionnaire will be regarded as implying consent.

Copies of appropriate consent instruments must be attached to your application. Please consult the Guide to Human Research Informed Consent Instruments in carefully preparing informed consent instruments.

C5 COMPENSATION

Consent to participate must be freely given and not induced through the level of reward, perceived reward, or power relationships

Provide details of any financial or other reward or inducement being offered to subjects for participation. Indicate the source of the funds.

No compensation or inducement will be used in this study

C6 RELATIONSHIP TO INVESTIGATOR(S)

Free consent may be difficult to ensure if the participant is dependent upon the investigator for employment, assessments etc:

Some relationships cause special ethical issues to arise

Are participants linked with the investigator through some particular relationship - eg. employees ultimately responsible to or superiors of the investigator, students of investigator, family members, friends etc.

All participant will be told that they are not obliged to participate and can withdraw at any stage. Those completing the questionnaire will be told their involvement will be anonymous and that no researcher will be able to acquire their identity.
C7 INVOLVEMENT OF SPECIAL GROUPS

Particular issues of consent may arise where special groups of participants are to be involved. There may be, for example, a need to obtain informed consent from persons other than the direct participant. Examples of such special groups include

- special cultural groups - eg. indigenous Australians;
- children and young persons (Guidelines section 4.2);
- groups with special circumstances - eg. persons with an intellectual or mental impairment (Guidelines s. 5).

Please identify and describe the nature of the groups and procedures used to obtain permission.

Note. Persons proposing research projects involving Indigenous Australians should consult with the relevant University manager of indigenous programs prior to finalising definition of the project.

No special groups will be actively sought.

C8 PRIVACY

The University is subject to the Victorian Information Privacy and Health Records Acts as well as the Commonwealth Privacy Act and, in particular, the Information/Health/National Privacy principles (IPPs/HPPs/NPPs) set out therein and is required to report annually on projects which relate to or utilise particular records. Does the research involve access to data which was collected by an organisation for its own purposes (ie. not specifically collected for this project) such as student records, other data banks, human pathology or diagnostic specimens provided by an institution(s)?

If yes, please indicate sources:

No, it does not involve access to data not specifically collected for this project

C9 LOCATION OF STUDY

Please indicate where the research will be carried out. If the research will not be on University premises permission of owner / occupier may be required. If so, please indicate what authority or permission may be required and how will be obtained.

NB: Where required, please attach to this application evidence of authority obtained or provide the Secretary, HREC as soon as practicable.

The study will be conducted at Swinburne University of Technology. Questionnaires will be filled out voluntarily online in any location the respondent is able to access the internet and in which they feel comfortable to respond freely.
**SECTION D: DATA & PUBLICATION ARRANGEMENTS**

Please consider carefully your responses to this section. You need to be clear as to what is occurring with respect to data collection, retention and disposal.

(Your responses should demonstrate familiarity with National Statement requirements for confidentiality, relevant Privacy Principles and Swinburne’s Policy on the Conduct of Research, eg, Sect 4, see URL: http://www.swinburne.edu.au/corporate/registrar/opd/docs/Policies/ConductOfResearch.pdf)

**D1 DATA COLLECTION/RECORDING**

Please note that, with any information or data collected/recorded, if any individual can reasonably be identified, the information can be deemed “personal information” or “health information” under National/Health/Information Privacy Principles (NPPs/HPPs/IPPs).

(a) How or in what form will data be collected/recorded?

Data will be collected using an online questionnaire created using psychsurveys.org software and will be coded and entered into SPSS version 20 for analysis.

(b) As regards any individual, in relation to any data collection or retention, you need to acknowledge either or both of the following:

- An Individual can be identified OR is Potentially Identifiable / Re-Identifiable
  - (An individual can be identified at some point or by the very nature of the data collected/retained: at time of an interview, by signed consent form, identified or labelled voice or image recording, pen-and-paper questionnaire, on-line survey instruments, etc. While data may not have (explicit) identifiers, an individual’s identity can still reasonably be worked out. Or data may have (explicit) identifiers removed and replaced by codes that permit matching of an individual with the data collected/retained, in which case it is possible to identify or re-identify the person to whom the data relates.)

- An Individual is Non-or Un-identifiable
  - (Data collected/recorded anonymously and with no reasonable possibility of being identified.)

Your acknowledgement may require further explanation or clarification: if so, please include in the following box.

Respondents names will not be recorded in the online questionnaire so anonymity is assured.

**D2 DATA SECURITY**

Please note that “data must be held for sufficient time to allow reference. For data that is published this may be for as long as interest and discussion persists following publication. It is recommended that the minimum period for retention is at least 5 years from the date of publication but for specific types of research, such as clinical research, 15 years (or more) may be more appropriate.” (Sect 4.3 of Swinburne’s Policy on the Conduct of Research)

Please indicate how data (all types of data, including, eg, signed consent forms) will be securely retained (eg, electronic form in password-protected disk drive, locked filing cabinet, etc) and where? With more than one type of data, will the types be separately stored?

In your explanation, you will need to make clear how due confidentiality and/or anonymity will be maintained.

(a) During the study

The data will be kept on a password protected external hard drive in a locked filing cabinet.

(b) Following completion of study

The data will be kept on a password protected external hard drive in a locked filing cabinet for 5 years after the study is completed.

**D3 PUBLICATION/OUTPUT**

Please explain in sufficient detail:

(a) What, if any, publication (conference, news media, academic journal, other journal, etc) is envisaged following on or in relation to this project, both in terms of data proper and/or analysis of data?

(b) Will participants be informed about any envisaged research publication/outcome? (This information is normally to be included in the information given prior to obtaining informed consent.)

(c) Would any participants be able to be identified through the publication of data proper or research findings? If so, explain why this is necessary.

Human Research Ethics Committee
(a) Refereed journal articles
(b) Participants will be informed of research publications through the use of the recruiting online community noticeboard
(c) No, data would only be presented at a group level

D4 INDIGENOUS ISSUES
Storage arrangements for data relating to research into Indigenous matters must be determined in compliance with the Policy on the Conduct of Research after consultation with the communities involved. What consultation has taken place and what arrangements have been made.

No research into Indigenous matters will be undertaken

D5 OTHER ISSUES (Revised Aug 2007)
Are there any other issue relating to data collection, retention, use or disclosure which the ethics committee should be made aware of and, if so, please explain how you are to deal with this.
(Eg, Research outcomes unduly impacting on any individual or group not directly participating, etc.)

No
SECTION E: SUBSTANCES & CLINICAL ISSUES

No matters in this section are applicable to the study

E1 ADMINISTRATION OF SUBSTANCES/AGENTS

<table>
<thead>
<tr>
<th>Name of substance(s)</th>
<th>Dosage per administration</th>
<th>Frequency of administration</th>
<th>Total amounts to be administered</th>
</tr>
</thead>
</table>

Anticipated effects:

NOTE: If the research involves administration of foreign substances or invasive procedures, please attach a statement accepting responsibility for those procedures by a medical or paramedical practitioner with indemnity insurance.

STATEMENT ATTACHED

E2 BODY FLUIDS OR TISSUE

What fluids or tissue? How will be samples be obtained?

Frequency and volume

How are samples to be stored?

How will samples be disposed of?

Who will take the samples?

What are their qualifications for doing so?

Do participants carry, as far as you know, the Hepatitis B or HIV virus? If so how will the risks be handled?

Do participants carry, as far as you know, any other contagious diseases or viruses? If so how will the risks be handled?
**SECTION F  Declarations for Signature 1 2 3**

1. With respect to this project, I / We, the undersigned Investigator(s)/Assistant(s) agree:

- To undertake human research activity or handle data confidentially in accordance with Swinburne requirements, including any standard or special ethics clearance conditions, under the proper direction of the responsible Swinburne manager and/or principal Swinburne (or other) researcher/supervisor.

<table>
<thead>
<tr>
<th>NAME: (block letters)</th>
<th>SIGNATURE:</th>
<th>DATE:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All listed applicants must sign. The Chief Investigator/Supervisor is also responsible for personnel subsequently joining the project. Expand this table or duplicate this page as required. NB This information is subject to Swinburne or external audit.

*Please note that Projects must not commence without prior written approval from the Human Research Ethics Committee (SUHREC) or its appropriate Subcommittee (SHESC)*

2. Declaration of Compliance by Chief Investigator(s)/Student Supervisor(s).

I declare that the above project has been developed and will be conducted in accordance with relevant Swinburne standards, policies and codes of practice, including any standard or special conditions for on-going ethics clearance. I further declare that all listed and subsequently appointed researchers or assistants involved in this project will be made aware of the conditions of ethics approval as communicated to me, including approved documentation and procedures.

Signature & Date:  …………………………………………………………………………………

Name of Signatory & Position:  ………………………………………………………………………

(Optional) Form checked by a Research & Ethics Advisor (REA)? Yes ☐ No ☐ REA Initials & Date:  ………………

3. Endorsement of Head of Academic Unit (or Delegate) or Above.

I declare that this project: has been developed and will be conducted in accordance with relevant Swinburne standards, policies and codes of practice; and has research merit, adequate resourcing and appropriate leadership/supervision.

Signature & Date:  …………………………………………………………………………………

Name of Signatory & Position:  ………………………………………………………………………

*(Please note: This endorsement must be given by an authorised official who is not also a chief or co-investigator of the project and who is not also the supervisor of a student investigator with an interest in the project.)*

---

Human Research Ethics Committee
HUMAN RESEARCH ETHICS COMMITTEE
APPLICATION FOR ETHICS APPROVAL
of a
RESEARCH PROTOCOL

SECTION A: GENERAL INFORMATION

[No This application form should not be used for research involving clinical trials or ionising radiation. See below.”]

PROJECT FULL TITLE
Identifying common markers of wellbeing and adaptive responses to workplace adversity in correctional officers.

SHORT TITLE
Resilience in Corrections

APPLICANT DETAILS

Name & Title/Position: A/Prof Jeffery Pfeifer
Tel No(s) 9214 8578
Email jpfeifer@swin.edu.au
Fax

FACULTY / SCHOOL / CENTRE / INSTITUTE: Faculty of Health and Design
Swinburne Status: □ Swinburne Staff Member □ Adjunct Staff Member
Address for correspondence:
P.O. Box 218, H24, Swinburne University of Technology, Hawthorn, Victoria, Australia, 3122.

Please complete as clearly as possible. (For Honours, higher degree and discrete student projects.)

Main Student Investigator(s): Mr Justin Trounson
Email: jstrounson@swin.edu.au
Tel No(s) 9214 8851
Student ID Number: 1227971
Fax
Degree Being Undertaken: PHD (Clinical Psychology)

List below the names of other Chief/Associate Investigators and Research Assistants (including those with access to identifiable data). (Add (copy/paste) cells as required for additional investigators/assistants. Append Student lists for class projects.)

Name & Title:
Institutional Address:
Tel No(s)

Name & Title/Position:
Institutional Address:
Tel No(s)

Proposed Period During Which Human Research Activity Requiring Ethics Approval is Needed:

From 01 03 2014 to 31 02 2015

[Double-click on YES/NO ‘check box’ to select box, then enter Default Value as Checked □ or leaving as Not Checked □]

TYPE OF ACTIVITY
(Select as many boxes as applicable)

☐ Research by Staff Member
☐ Contract Research (Attach copy of contract)
☐ Supervised Postgraduate Research
☐ Supervised Undergraduate Research
☐ Supervised Class Projects:
No of students involved:
Subject Code & Short Title:

Broad Category of Research
Select one category box which best fits the application:

☐ Social/Cultural/Humanities
☐ Business/Management
☐ Education/Training/Program Evaluation
☐ Psychological/Brain/Neuro-sciences
☐ Health/Safety
☐ Engineering/Science/Technology
☐ Other (please specify) .................................................................

[** For research involving Clinical Trials or Ionising Radiation, please contact the Research Ethics Officer.]

Human Research Ethics Committee
### Human Research Risk/Review Classification

(Nb Checking to be consistent with published risk criteria.)*

To enable a determination as to whether prima facie your research activity is Minimal Risk and/or Low Impact, please clarify by selecting [X] any one or more boxes below as to whether your research activity involves:

1. **Vulnerable participants, children or those dependent on care**
2. **Indigenous Peoples** or Special Cultural/Ethnic groups
3. **Externally funded research requiring HREC-level clearance**
4. **Multi-centre/Other sites requiring HREC-level approval**
5. **Data access/use without an individual’s prior consent**
6. **Data access/use subject to statutory guidelines &/or reporting**
7. **Identification of participant individuals/groups in research outcomes without full consent or there is unclear consent for this**
8. **Sensitive information/issues vis-à-vis context/impact (legal*, regulatory compliance*, commercial, professional, cultural, etc)**
9. **Personnel intrusive/confronting or quite inconvenient/embarrassing questioning or other activity**
10. **Physically confining/invasive techniques or significant physical contact/stimulation (e.g., TMS, X-ray, CT scan, MRI, clothing change, etc)**
11. **Working in hazardous environments (asbestos dust*, infectious disease*, war or civil strife*, etc)**
12. **Handling hazardous substances (e.g., asbestos*, radioactive material*, explosives*, etc) or equipment**
13. **Administration of medical/herbal substances* treatments**
14. **Administration of other (non-medical) substances/treatments**
15. **Health/medical diagnosis*therapy**
16. **Screening for healthy participant inclusion/exclusion**
17. **Serious psychological profiling, investigation or exploration**
18. **Withdrawal/substitution of educational/professional/commercial/recreational/other programs or services**
19. **Deception or covert observation**
20. **Limited or non-disclosure of research information/procedures**
21. **Participant recruitment/seletion via third party**
22. **Human research activity commenced without clearance**
23. **Participation incentives, prizes or significant payments**
24. **Research placing researchers/assistants at risk**

PLEASE NOTE: If you have selected any one or more of the above boxes, your project will ordinarily be put for SUHREC ethical review. Items above marked * must be put to SUHREC proper. But in other cases, you may wish to put a case for expedited review by a SUHREC Sub-Committee (SHESC) in the (expandable) box below in relation to the criteria for determining risk/impact. If you put forward a case, then in the first instance your application will be put to the relevant SHESC. However, the relevant SHESC may still consider the project needs full SUHREC appraisal or SUHREC may review or override the SHESC decision.

---

**Risk/Impact Checked with a Research & Ethics Advisor (REA)?**  
**Yes** ☑  **No** ☐  
REA Comment, Initials & Date:  

---

**Human Research Ethics Committee**  
A1 WHY IS THE PROJECT TO BE UNDERTAKEN
Summarise in sufficient detail why the project is being undertaken. If references are quoted, full citations should be given. Include the educational and/or scientific aims of the project. (Boxes will expand for your text)
The primary aim of this study is to gain a better understanding of the how correctional officers manage workplace adversity and to identify relevant and quantifiable indicators of correctional officer wellbeing. Recent research indicates that correctional officers experience a heightened perception of workplace adversity as compared to other individuals working within the general community (Trounson & Pfeifer, 2013). In fact, correctional officers perceive elevated levels of workplace adversity akin to that seen in police and emergency service worker samples (Trounson & Pfeifer, 2013). Past research also suggests that experiencing chronic stress may be associated with numerous physical and psychological problems (NIOSH, 1999; Peltzer et al., 2009) and that functioning within high stress environments may be associated with increased mental health problems, productivity loss and an increase in receipt of mental health treatment (Hourani, Williams & Kress, 2006). These findings have been replicated in correctional officer samples with sustained levels of work stress being associated with both psychological and physical deterioration (Senol-Durak, Durak, & Gencoz, 2006). Despite scientific research repeatedly demonstrating the link between self-reported work stress and both psychological and occupational wellbeing in correctional officer samples, little is known about the specific adaptive strategies used by correctional officers to combat work stress and perceived adversity (known from herein as Adaptive Response Tendencies). It is hoped that this study can fill the gap in the scientific literature by providing new insight into what types of Adaptive Response Tendencies are common amongst correctional officers managing workplace adversity. It is also hoped that this study will provide a better understanding of the unhealthy strategies commonly employed amongst correctional officers managing workplace adversity.

Review of the relevant literature also revealed that studies examining wellbeing in correctional officer samples tend to use generalised measurement tools that are not specifically designed to measure wellbeing but rather have been developed to measure the presence or absence of mental illness. Furthermore, few currently used measurement tools are designed to account for the unique environmental context in which correctional officers work within on a day-to-day basis. This study aims to begin to address this gap in the literature by identifying relevant potential markers of wellbeing specific to correctional officer groups. It is hoped that this process will form the basis of the later development of more effective and industry specific measurement tools to be used in research into correctional officer wellbeing. Furthermore, it is hoped that this study can lay the foundations for the later development of effective training programs for correctional officers. This study will provide the scientific community with a deeper understanding of the Adaptive Response Tendencies (e.g., social support seeking behaviour, use of controlled breathing techniques to combat stress, effective emotion regulation skill use) commonly utilised by correctional officers when attempting to manage workplace adversity. It will also provide the scientific community with a new understanding of how to measure wellbeing in correctional officer samples.

To achieve this, two focus group discussions with 6-8 correctional officers in each will be run. The aim of these focus groups is to identify what correctional officers believe are the most adaptive responses for officers and to identify what they believe are the best markers of officer wellbeing. Focus group discussions will run for no longer than 60 minutes and will be structured so as to gain only general information regarding these specific topics (officer-wide trends). Officers will not be asked about their personal experiences or about what they believe may cause adversity in their workplaces.

References


A2 WHAT - BRIEF DESCRIPTION OF PROJECT

In plain English

The current project will involve conducting focus groups consisting of 6-8 correctional officers in each. The focus groups will involve the conduct of a semi-structured, group-based discussion in relation to the study aims. More specifically, the focus group discussions will be aimed at (a) identifying strategies commonly employed by correctional officers to manage workplace adversity (ART’s), and (b) identifying relevant markers of correctional officer wellbeing. Please note that focus group discussions will be run in a manner so as to only elicit very general information regarding common practices amongst correctional officers. Participants will be asked to refrain from discussing any personal experiences or anything other topics outside of the tight scope of the study aims. Semi-structured interviews will also be conducted.

Focus groups and interviews will be facilitated by Mr Justin Trounson (current PhD candidate and provisional psychologist) with the assistance of A/Prof Jeff Plefeer. As a provisional psychologist, Mr Justin Trounson has previous experience working directly with correctional officers and with running both therapeutic groups and focus group discussions. Focus groups will run for approximately 30-45 minutes depending on the participants’ requirements and requests. Notes will be taken throughout the focus group discussions to assist with later identifying relevant Adaptive Response Tendencies and potential markers of correctional officer wellbeing elucidated by the group discussions.

A3 HOW - PROCEDURES

Please detail clearly and sufficiently the proposed research/statistical method(s), procedures and instruments to be used in the project, including all screening and research 'procedures' to which the participants will be subjected, and asterisk those which may have adverse consequences. Please include as appendices all screening instruments, questionnaires, interview protocols etc (at least in draft form if not finalised).

The project will optimally involve around 50 correctional officers. Invitations to participate in the focus groups will be distributed through the Port Phillip Prison correctional facility newsletter and through relevant online discussion forums and noticeboards (See Appendix D). Individuals showing interest will be contacted by the researchers via email and provided with Information Sheets (Appendix A) and details regarding the proposed time and location of the focus group if they wish to consider participating. An initial information session will be conducted prior to the group discussions that will specifically detail the parameters of focus group involvement and provide an opportunity for further questions regarding the purpose of the study and issues regarding participation. Those that are still willing to participate will be provided with Consent forms to sign prior to the beginning of the focus group (See Appendix B). Semi-structured interviews will be conducted in the same manner. The contextual information that will be provided to participants, along with the questions that will be posed can be seen in Appendix C. Focus groups will be conducted with each group consisting of 6-8 correctional officers. Each focus group discussion will run for up to 60 minutes in total and will involve discussion strictly around the set of study specific questions outlined in Appendix C. Participants will be asked to provide their opinion of officer-wide trends rather than to speak from a personal standpoint.

It should be pointed out that none of the material in any of the measures is deemed to be of a sensitive nature and should not cause distress. However, in the event of participants experiencing unexpected distress from participation in this study, contact details for low cost counselling services, Lifeline and other accessible resources will be supplied on the information sheet prior to commencement of both the online questionnaire and the focus groups.

All measures can be seen in the Appendices. Briefly they contain:

Consent Information Statement: (See Appendix A)

Signed Consent Form: (See Appendix B)

Demographic information:
Three basic items (age, gender and length of time as a correctional officer; See Appendix D).

Focus Group Discussion Material: (See Appendix C)

Focus groups and interviews will be run by Mr Justin Trounson who is a registered Provisional Psychologist with specific experience working with correctional officers and with facilitating group discussions. All discussion questions/topics can be seen in Appendix C.

Invite to Participate: (See Appendix D)
A4 DESCRIE ANY RISK THAT MAY ARISE TO THE PARTICIPANT / DONOR?

How to participate (and its rationale) can be real but does not need to be physical. This includes such as self esteem, regret, embarrassment, civil or criminal liability, disease, physical harm, loss of employment or professional standing, etc. Please consider such possibilities carefully.

Some research activities may put the participant at risk through what is being done or simply through their participation. Please describe the risk you perceive and the protective measures to be taken.

There should be no risk to the participants

A5 DESCRIBE ANY RISK THAT MAY ARISE TO THE RESEARCHER / ADMINISTRATOR?

Some research activities may put the researcher at risk through what is being done or simply through their participation. Please describe the risk you perceive and the protective measures to be taken.

There should be no risk to the researcher

A6 WHAT BENEFITS ARE ANTICIPATED FROM THE PROJECT

Ethical principles would require that benefits flowed from the activities, but please avoid grandiose claims.

(a) To the Participant (what and how so)

Taking part in a psychological study may help participants to gain a better understanding of what is involved in psychological research. Furthermore, participation may also provide them with new insight into their use of healthy and unhealthy coping strategies within their own workplace and a clearer idea of what markers constitute wellbeing in correctional officers.

(b) More generally (to society, profession, knowledge, understanding, etc, and how so)

The project will hopefully contribute towards future research pathways and add to the scientific literature relating to Adaptive Response Tendencies and wellbeing markers in correctional officers. It is also hoped that this research will provide us with a deeper understanding of the adversity faced within correctional settings and provide new insight into how to combat such adversity. The results from this project will be published within an academic journal and be available to the wider scientific community.

A7 POTENTIAL PROBLEMS

From time to time in the course of a research project important information, such as an individual's/face to be at risk, or entirely unforeseen events may come to pass. What procedures are in place to handle unexpected or particularly significant personal or other information that may come to light through the project, eg, unknown medical/psychiatric condition, a particularly distressed participant, civil or criminal liability, etc.

Participants who experience any distress from participating in the study are advised to contact their respective facility health services or alternatively contact the Swinburne Psychology Clinic and Lifeline. The numbers for these services will be supplied on the information sheet.

A8 PROFESSIONAL/ETHICAL ABILITY & TRAINING (Researchers/Students/Assistants)

NS 1.5 It Research must be conducted or supervised only by persons or teams with experience, qualifications and competence appropriate to the research ... using (appropriate) facilities ... (and with appropriate skills and resources for dealing with any contingencies...

(a) Sufficiently detail what investigators/assistants will do in this project and their expertise/competence to do so.

The study will be supervised by A/Prof Jeffery Pfeifer. A/Prof Jeffery Pfeifer received his Ph.D. and M.Leg.St. (Master of Legal Studies) from the University of Nebraska and has been teaching and conducting research in forensic psychology for the past 17 years. He is currently the Chair of the Department of Psychological Sciences and Statistics and has conducted numerous ethically sound studies throughout his career. A/Prof Pfeifer will supervise the entire study and provide direction where needed. Furthermore, participants who have any queries about the study are advised to contact A/Prof Pfeifer.

Mr Justin Trounson, a current PHD (Clinical Psychology) candidate, will conduct the study. Justin holds a degree in Psychology with Honours and has worked as a research assistant on a number of projects involving the consideration of ethical issues. He is a current provisional psychologist and has experience in conducting focus group discussions and working within the field of corrections. Justin has also successfully designed, conducted and completed studies in 2011, 2012 and 2013 with Swinburne University ethics approval. The studies were conducted ethically and were completed without any ethical complications. In addition, Justin has undertaken training in ethics and professional issues as part of his Honours program and as part of his post graduate studies.

Under A/Prof Pfeifer’s supervision, Justin Trounson will conduct the focus groups, and collect, analyse and interpret the data.

(b) Sufficiently detail any further training/qualifications required for investigators/assistants to carry out the project.

No further training is required to carry out this project.
A9 FUTURE USE OF DATA
Will any of these data be used by yourself, your students or others for any purpose other than for this project as described in the protocol? If so please describe.

None is expected

A10 EXTERNAL INVOLVEMENT
Is a body external to Swinburne involved in initiation or support of the project?

☐ Yes Name of body/organisation. ........................................................................................................

If an external body is associated with the project you must provide the HREC with detail of the arrangements, including details of any funding or other resources being provided. A copy of relevant pages from the contractual arrangements should be attached.

☐ No

A11 EXTERNAL APPROvals
Projects involving other organisations or entities may require approval from other institutions or their ethics committees, etc. for such things as access to prospective participants, contact lists, data, facilities, etc. A copy of such approvals may be required to be provided to the HREC at the time of application or be made available as soon as possible. In which case, the project may not commence, until such evidence is provided.

Please indicate, as appropriate, if formal clearance/permission has been obtained or sought:

Institutional Yes ☐ Documentation Attached ☐ or to follow ☐

Next of Kin (for special groups) Yes ☐ Documentation Attached ☐ or to follow ☐

(estimate when likely to be obtained)

☐ No (please explain)

No external approvals will be necessary in conducting this research

A12 RESEARCHER / SPONSOR RELATIONSHIP
Is there any relationship or association between the sponsor and any of the researchers listed in Section A of this form, for example are any of the researchers directors, officers, employees, shareholders or promoters of the sponsor or do they receive any personal benefits from the sponsor under any other contracts or arrangements?

☐ No

☐ Yes (please explain the relationship(s), including how a vested or a conflict of interest situation does not arise.)
SECTION B: ETHICAL ISSUES OVERVIEW

B ETHICAL ISSUES

(Double-click on YES/NO "check box" to select box, then enter Default Value as Checked ☑ or leaving as Not Checked ☐)

(a) Non-/Limited Disclosure or Deception: Is any detail in relation to research purposes, methods or questions being withheld from participants? Or will deception of any kind be involved? Or any covert/undeclared observation? (Refer National Statement Chap 17)

(b) Does the data collection process involve access to confidential personal data (including access to data provided for a purpose other that this particular research project) without the prior consent of subjects?

(c) Will participants have pictures taken of them, e.g., photographs, video recordings?

(d) If "YES", please explain how you intend to retain confidentiality and ultimately dispose of the material.

(e) If interviews are to be conducted, will they be record by electronic device?

(f) Will participants be asked to perform any acts or make statements which might compromise them, diminish self esteem or cause them embarrassment or regret (minimal, moderate or significant)?

(g) Might any aspect of your study reasonably be expected to place the participant at risk of criminal or civil liability (not just immediately or directly)?

(h) Might any aspect of your study reasonably be expected to place the participant at risk of damage to their professional/social/cultural/financial standing or employability?

(i) Will the research involve access to data banks subject to privacy legislation?*

(NOTE: Annual reporting to Government may be required on this item. For info: please contact the Research Ethics Officer.)

(j) Will participants come into contact with any equipment which uses an electrical supply in any form e.g., audiometer, biofeedback, electrical stimulation, magnetic stimulation, etc.? If "YES", please outline below what safety precautions will be followed.

(k) Will any treatment be used with potentially unpleasant or harmful side effects?

(l) Does the research involve any stimuli, tasks, investigations or procedures which may be experienced by participants as stressful, noxious, aversive or unpleasant during or after the research procedures?

(m) Will the research involve the use of placebo control conditions or the withholding/substitution of treatment, programs or services (health, educational, commercial, other)?

(n) Will any samples of body fluid or body tissue be required specifically for the research which would not be required in the case of ordinary treatment?

(o) Are there in your opinion any other ethical issues involved in the research?

NOTE: If the answer to any of the above questions is "yes", please explain and justify below in sufficient clear detail. (The box below will expand to fit your response.)

It is plausible that participant's may find the experience of being part of the study an unpleasant experience. To address this possibility, focus groups and interviews will be conducted by Justin Trounson, a provisional psychologist with previous experience in working with correctional officers, facilitating focus group discussions and refined counselling skills. Participants will also be informed prior to commencement that the discussion will be kept to identifying officer-wide trends and will be asked to refrain from approaching the discussion from a personal standpoint. Furthermore, all participants will be provided with information regarding how to access counselling resources, how to contact A/Prof Pfeifer and how to contact the Swinburne Research Ethics Officers. The information will be provided to them prior to participation.

Attach further documents if appropriate.
SECTION C: PARTICIPANT DETAILS

C1 PARTICIPANT DETAILS
The composition of the participant group may, in some circumstances, distort and invalidate an outcome, and risks may arise through the composition of the participant group.

How many individual participants will be involved? (Number/number ranges for which approval is sought)
- Males: 40
- Females: 10
- Total participants: 50

Over what range of ages?
- From (youngest): 15
- To (oldest): 65

If there is a gender or age imbalance in the number of participants please explain why.

The gender imbalance simply reflects the gender imbalance found naturally in correctional officer populations.

C2 RECRUITMENT

How will participants be recruited/selected?

Please outline the process in sufficient detail how this is to occur.

Note: Where participants are obtained from or through schools, hospitals, prisons or other institutions, appropriate institutional or other authority will probably be needed. If soliciting for participants by advertisement or poster please attach proposed copies or text.

(See also Project Information Consent Statements and Signed Consent Forms info at the end of this application form.)

Participants will be recruited through the Port Phillip Prison newsletter. Invitations to participate will also be posted on relevant online community noticeboards and discussion forums and social networks will also be utilised.

C3 PRE-EXISTING CONDITIONS

In some situations an underlying medical or other significant condition of a participant may result in an otherwise relatively innocuous situation causing excessive stress and exacerbate the condition. Researchers must, therefore, be alert to such situations and be able to address the resulting issues.

Do participants have any medical or other significant condition of which you are aware, eg. diabetes, asthma, depression, epilepsy? What steps are in place to handle any resulting problems (you may need to correlate with A3, A4 and A7 of this form)?

Not that I am aware of. Medical conditions should not be an issue for this project.

C4 DISCLOSURE AND INFORMED CONSENT

How will participants be informed about the project in order to give valid consent:
- Consent Information Statement(s)/Letter(s) and Signed Consent Form(s) will be used.
- A copy must be attached to your application. A guide to consent instruments is given at the end of this form.
- Consent Information Statement(s)/Letter(s) and consent implied by return of anonymous questionnaire
- Verbal advice (Please explain how and why)
- Other (Please explain how and why)

All participants involved in focus groups will need to read an Information Sheet and sign a Consent Form prior to engaging in the focus group. All consent documents are included within the Appendices.

Copies of appropriate consent instruments must be attached to your application. Please consult the Guide to Human Research Informed Consent Instruments in carefully preparing informed consent instruments.

C5 COMPENSATION

Consent to participate must be freely given and not induced through the level of reward, perceived reward, or power relationships.

Provide details of any financial or other reward or inducement is being offered to subjects for participation. Indicate the source of the funds.

No compensation or inducement will be used in this study.

C6 RELATIONSHIP TO INVESTIGATOR(S)

Free consent may be difficult to ensure if the participant is dependent upon the investigator for employment, assessments etc.

Are participants linked with the investigator through some particular relationship - eg. employees ultimately responsible to or superiors of the investigator; students of investigator; family members, friends etc.

All participants will be told that they are not obliged to participate and can withdraw at any stage. No identifiable information will be acquired with the exception of signed consent statements and participant age, gender and length of working as a correctional officer. All signed consent statements will be kept separately to study data to ensure anonymity.
C7 INVOLVEMENT OF SPECIAL GROUPS

Particular issues of consent may arise where special groups of participants are to be involved. There may be, for example, a need to obtain informed consent from persons other than the direct participant. Examples of such special groups include special cultural groups - eg. indigenous Australians; children and young persons (Guidelines section 4.2); groups with special circumstances - eg. persons with an intellectual or mental impairment (Guidelines s. 5).

Please identify and describe the nature of the groups and procedures used to obtain permission.

Note. Persons proposing research projects involving Indigenous Australians should consult with the relevant University manager of indigenous programs prior to finalising definition of the project.

No special groups will be actively sought.

C8 PRIVACY

The University is subject to the Victorian Information Privacy and Health Records Acts as well as the Commonwealth Privacy Act and, in particular, the Information/Health/National Privacy principles (IPPs/HPPs/NPPs) set out therein and is required to report annually on projects which relate to or utilise particular records such as student records, other data banks, human pathology or diagnostic specimens provided by an institution/s? If yes, please indicate sources.

No

C9 LOCATION OF STUDY

Please indicate where the research will be carried out. If the research will not be on University premises permission of owner / occupier may be required. If so, please indicate what authority or permission may be required and how will be obtained. NB: Where required, please attach to this application evidence of authority obtained or provide the Secretary, HREC as soon as practicable.

The study will be conducted at Swinburne University of Technology. Focus groups will be conducted on university campus or at a specific correctional facility depending on numbers and the ease of participants.
SECTION D: DATA & PUBLICATION ARRANGEMENTS (Nb Section D Revised Aug 2007)

>Please consider carefully your responses to this section. You need to be clear as to what is occurring with respect to data collection, retention and disposal.

(Your responses should demonstrate familiarity with National Statement requirements for confidentiality, relevant Privacy Principles and Swinburne’s Policy on the Conduct of Research, eg Sect 4, see URL:

D1 DATA COLLECTION/RECORDING (Nb Section D1 Revised Aug 2007)

Please note that, with any information or data collected/retained, if any individual can reasonably be identified, the information can be deemed “personal information” or “health information” under National/Health/Information Privacy Principles (NPPs/HPPs/IPPs).

(a) How or in what form will data be collected/recorded?

Data will be collected through note taking throughout group sessions and analysed with Nvivo qualitative software.

(b) As regards any individual, in relation to any data collection or retention, you need to acknowledge either or both of the following:

- An Individual can be identified OR is Potentially Identifiable / Re-identifiable

  (An individual can be identified at some point or by the very nature of the data collected/retained: at time of an interview, by signed consent form, identified or labelled voice or image recording, pen-and-paper questionnaire, on-line survey instruments, etc.

  Whilst data may not have (explicit) identifiers, an individual’s identity can still reasonably be worked out.

  Or data may have (explicit) identifiers removed and replaced by codes that permit matching of an individual with the data collected/retained, in which case it is possible to identify or re-identify the person to whom the data relates.)

- An Individual is Non- or Un-identifiable

(Data collected/retained anonymously and with no reasonable possibility of being identified.)

Your acknowledgement may require further explanation or clarification; if so, please include in the following box.

As signed consent forms will be used in this study it is possible participants may be identifiable. Once signed, consent forms will be kept securely with A/Prof Pfeifer in a separate locked filing cabinet to any session notes. The only demographic information collected in this study will be age, gender and length of time working as a correctional officer. This demographic information will be kept with the signed consent forms and separate from any data. Please note that as the study is focussed on identifying only general officer-wide trends, notes taken within the group will not involve identifying any contributors or the noting of any direct quotes of participants.

D2 DATA SECURITY (Nb Section D2 Revised Aug 2007)

Please note that “data must be held for sufficient time to allow reference. For data that is published this may be for as long as interest and discussion persists following publication. It is recommended that the minimum period for retention is at least 5 years from the date of publication but for specific types of research, such as clinical research, 15 years (or more) may be more appropriate.” (Sect 4.3 of Swinburne’s Policy on the Conduct of Research)

Please indicate how data (all types of data, including, eg, signed consent forms) will be securely retained (eg, electronic form in password-protected disk drive, locked filing cabinet, etc) and where? With more than one type of data, will the types be separately stored?

In your explanation, you will need to make clear how due confidentiality and/or anonymity will be maintained.

(a) During the study

The data will be kept on a password protected external hard drive in a locked filing cabinet. A/Prof Pfeifer and Mr Trounson will ensure that signed consent forms are kept within a locked filing cabinet separate to group notes.

(b) Following completion of study

The data will be kept on a password protected external hard drive in locked filing cabinets for 5 years after the study is completed.

D3 PUBLICATION/OUTPUT (Nb Section D3 Revised Aug 2007)

Please explain in sufficient detail:

Human Research Ethics Committee
(a) What, if any, publication (conference, news media, academic journal, other journal, etc.) is envisaged following on or in relation to this project, both in terms of data proper and/or analysis of data?

(b) Will participants be informed about any envisaged research publication/outcome? (This information is normally to be included in the information given prior to obtaining informed consent.)

(c) Would any participants be able to be identified through the publication of data proper or research findings? If so, explain why this is necessary.

(a) Refereed journal articles, international conference papers

(b) Participants will be informed of research publications through the use of the recruiting online community noticeboards and through informing the facilities from which participants were derived.

(c) No, data would only be presented at a group level with no direct quotes used. The aim of the study is simply to identify relevant officer-wide ART's and general markers of correctional officer wellbeing.

D4 INDIGENOUS ISSUES

Storage arrangements for data relating to research into Indigenous matters must be determined in compliance with the Policy on the Conduct of Research after consultation with the communities involved.

What consultation has taken place and what arrangements have been made.

No research into Indigenous matters will be undertaken

D5 OTHER ISSUES (Nb Section D5 Revised Aug 2007)

Are there any other issue relating to data collection, retention, use or disclosure which the ethics committee should be made aware of and, if so, please explain how you are to deal with this.

(Eg, Research outcomes unduly impacting on any individual or group not directly participating, etc.)

No
### SECTION E: SUBSTANCES & CLINICAL ISSUES

**No** matters in this section are applicable to the study  

<table>
<thead>
<tr>
<th>E1 ADMINISTRATION OF SUBSTANCES/AGENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of substance(s)</td>
</tr>
<tr>
<td>Dosage per administration</td>
</tr>
<tr>
<td>Frequency of administration</td>
</tr>
<tr>
<td>Total amounts to be administered</td>
</tr>
</tbody>
</table>

Anticipated effects:

**NOTE:** If the research involves administration of foreign substances or invasive procedures, please attach a statement accepting responsibility for those procedures by a medical or paramedical practitioner with indemnity insurance.

STATEMENT ATTACHED

<table>
<thead>
<tr>
<th>E2 BODY FLUIDS OR TISSUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>What fluids or tissue? How will be samples be obtained?</td>
</tr>
<tr>
<td>Frequency and volume</td>
</tr>
<tr>
<td>How are samples to be stored?</td>
</tr>
<tr>
<td>How will samples be disposed of?</td>
</tr>
<tr>
<td>Who will take the samples?</td>
</tr>
<tr>
<td>What are their qualifications for doing so?</td>
</tr>
<tr>
<td>Do participants carry, as far as you know, the Hepatitis B or HIV virus? If so how will the risks be handled</td>
</tr>
<tr>
<td>Do participants carry, as far as you know, any other contagious diseases or viruses? If so how will the risks be handled</td>
</tr>
</tbody>
</table>
### SECTION F Declarations for Signature

1. With respect to this project, I/We, the undersigned Investigator(s)/Assistant(s) agree:

- To undertake human research activity or handle data confidentially in accordance with Swinburne requirements, including any standard or special ethics clearance conditions, under the proper direction of the responsible Swinburne manager and/or principal Swinburne (or other) researcher/supervisor.

<table>
<thead>
<tr>
<th>NAME: (block letters)</th>
<th>SIGNATURE:</th>
<th>DATE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A/Prof Jeffrey Pfeifer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr Justin Trounson</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All listed applicants must sign. The Chief Investigator/Supervisor is also responsible for personnel subsequently joining the project. Expand this table or duplicate this page as required. NB This information is subject to Swinburne or external audit.

**Please note that:**

PROJECTS MUST NOT COMMENCE WITHOUT PRIOR WRITTEN APPROVAL from the Human Research Ethics Committee (SUHREC) or its appropriate Subcommittee (SHESC)

---

2. Declaration of Compliance by Chief Investigator(s)/Student Supervisor(s).

I declare that the above project has been developed and will be conducted in accordance with relevant Swinburne standards, policies and codes of practice, including any standard or special conditions for on-going ethics clearance. I further declare that all listed and subsequently appointed researchers or assistants involved in this project will be made aware of the conditions of ethics approval as communicated to me, including approved documentation and procedures.

**Signature & Date:** ………………………………………………………………………

**Name of Signatory & Position:** ……………………………………………………………

(Optional) Form checked by a Research & Ethics Advisor (REA)? Yes [ ] No [ ] REA Initials & Date: ………………

---

3. Endorsement of Head of Academic Unit (or Delegate) or Above.

I declare that this project has been developed and will be conducted in accordance with relevant Swinburne standards, policies and codes of practice; and has research merit, adequate resourcing and appropriate leadership/supervision.

**Signature & Date:** …………………………………………………………………

**Name of Signatory & Position:** ……………………………………………………

(Please note: This endorsement must be given by an authorised official who is not a chief or co-investigator of the project and who is not also the supervisor of a student investigator with an interest in the project.)
**HUMAN RESEARCH ETHICS COMMITTEE**

**APPLICATION FOR ETHICS APPROVAL**

of a

**RESEARCH PROTOCOL**

---

### SECTION A: GENERAL INFORMATION

<table>
<thead>
<tr>
<th>PROJECT FULL TITLE</th>
<th>Examining the relationship between perceived workplace adversity, response tendencies and wellbeing in correctional officers.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>SHORT TITLE (If applicable)</th>
<th>Responses to Adversity in CO’s</th>
</tr>
</thead>
</table>

#### APPLICANT DETAILS

**RESPONSIBLE SWINBURNE FIRST INVESTIGATOR / SUPERVISOR**

(Where project is part of student research degrees or dissertations, Senior Swinburne Supervisor must still be listed as the first investigator)

Name & Title/Position: **A/Prof Jeffery Pfeifer**

Tel No(s): 9214 8578

Email: jpfiefer@swin.edu.au

Fax

**Faculty / School / Centre / Institute:** Faculty of Health, Arts and Design

Swinburne Status: □ Swinburne Staff Member  □ Adjunct Staff Member

Address for correspondence:

PG Box 219, H24, Swinburne University of Technology, Hawthorn, Victoria, Australia, 3122.

**Main Student Investigator(s): Mr Justin Trounson**

Email: jstrounson@swin.edu.au

Tel No(s): 9214 8851

Fax

Student ID Number: 1227971

Degree Being Undertaken: PhD (Clinical Psychology)

List below the names of other Chief/Associate Investigators and Research Assistants (including those with access to identifiable data).

(Add (copy/paste) cells as required for additional investigators/assistants. Append Student lists for class projects.)

**Name & Title:**

Institutional Address:

Tel No(s):

**Name & Title/Position:**

Institutional Address:

Tel No(s):

---

**Proposed Period During Which Human Research Activity Requiring Ethics Approval is Needed:**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/12/2014</td>
<td>10/12/2015</td>
</tr>
</tbody>
</table>

---

**TYPE OF ACTIVITY** (Select as many boxes as applicable)

- [ ] Research by Staff Member
- [ ] Contract Research (Attach copy of contract)
- [ ] Supervised Postgraduate Research
- [ ] Supervised Undergraduate Research
- [ ] Supervised Class Projects: No of students involved:

**Subject Code & Short Title:**

---

**Broad Category of Research**

- [ ] Social/Cultural/Humanities
- [ ] Business/Management
- [ ] Education/Training/Program Evaluation
- [ ] Psychological/Brain/Neuro-sciences
- [ ] Health/Safety
- [ ] Engineering/Science/Technology
- [ ] Other (please specify) ………………………………………………………………………

[** For research involving Clinical Trials or Ionising Radiation, please contact the Research Ethics Officer.**]

---

Human Research Ethics Committee

Human Research Risk/Review Classification (Nb Checking to be consistent with published risk criteria.)

To enable a determination as to whether prima facie your research activity is Minimal Risk and/or Low Impact, please clarify by selecting [X] any one or more boxes below as to whether your research activity involves:

- Vulnerable participants, children or those dependent on care *
- Indigenous Peoples * or Special Cultural/Ethnic groups
- Externally funded research requiring HREC-level clearance *
- Multi-centre/Other sites requiring HREC-level approval *
- Research conducted overseas
- Conflicts of interest or dual researcher-professional roles
- Data access/use without an individual’s prior consent *
- Data access/use subject to statutory guidelines &/or reporting *
- Identification of participant individuals/groups in research outcomes without full consent or there is unclear consent for this *
- Sensitive information/Issues vis-à-vis context/Impact (legal *, regulatory compliance *, commercial, professional, cultural, etc)
- Personally intrusive/confronting or quite inconvenient/embarrassing questioning or other activity
- Physically confining/invasive techniques or significant physical contact/stimulation (TMS *, X-ray *, CT scan *, MRI *, clothing change, etc)
- Working in hazardous environments (asbestos dust *, infectious disease *, war or civil strife *, etc)
- Handling hazardous substances (eg, asbestos *, radioactive material *, explosives *, etc) or equipment
- Administration of medical/herbal substances * /treatments *
- Administration of other (non-medical) substances/treatments
- Health/medical diagnosis */therpay *
- Non-minimal impact therapeutic or other devices */activity *
- Screening for healthy participant inclusion/exclusion
- Medical or psychiatric assessment/conditions *
- Serious psychological profiling, investigation or exploration
- Withdrawal of treatment/services or use of placebo
- Withdrawal/substitution of educational/professional/commercial/recreational/other programs or services
- Deception or covert observation
- Limited or non-disclosure of research information/procedures
- Participant recruitment/selection via third party
- Human research activity commenced without clearance
- Participation incentives, prizes or significant payments
- Research placing researchers/assistants at risk

PLEASE NOTE: If you have selected any one or more of the above boxes, your project will ordinarily be put for SUHREC ethical review. Items above marked * must be put to SUHREC proper. But in other cases, you may wish to put a case for expedited review by a SUHREC Sub-Committee (SHESC) in the (expandable) box below in relation to the criteria for determining risk/impact. If you put forward a case, then in the first instance your application will be put to the relevant SHESC. However, the relevant SHESC may still consider the project needs full SUHREC appraisal or SUHREC may review or override the SHESC decision.

Risk/Impact Checked with a Research & Ethics Advisor (REA)? Yes ☐ No ☐ REA Comment, Initials & Date:

Human Research Ethics Committee
## A1 WHY IS THE PROJECT TO BE UNDERTAKEN

Summarise in sufficient detail why the project is being undertaken. If references are quoted, full citations should be given. Include the educational and/or scientific aims of the project. (Boxes will expand for your text)
The primary aim of this study is to examine the relationship between perceptions of workplace adversity, the use of positive and negative response tendencies (i.e., healthy and unhealthy coping strategies used to manage adversity), and the maintenance of wellbeing within correctional officers. It is hoped that this study will assist in laying the foundations for the development of a pre-emptive, resilience-based training program designed to assist correctional officers to manage workplace adversity more effectively. This study will also add to the existing scientific literature by developing an occupation-specific wellbeing measurement tool for use with correctional officers (i.e., the Trounson Officer Wellbeing Scale) and a scale designed to measure an individual’s use of response tendencies.

Research has demonstrated that correctional officers may experience a heightened perception of workplace adversity compared to other individuals working within the general community (Trounson & Pfeifer, 2013). In fact, correctional officers have been shown to perceive a level of workplace adversity akin to those working in other high-risk occupational sectors such as the police and emergency services (Trounson, Pfeifer, & Critchley, 2014). Past research has also highlighted the link between the experience of workplace stress and the development of numerous physical and psychological conditions (NIOSH, 1999; Peltzer et al., 2009), increased mental health problems, productivity loss and an increase in receipt of mental health treatment (Hourani, Williams & Kress, 2006). Research into correctional officer samples have returned similar findings, suggesting that sustained levels of work stress may be associated with both psychological and physical deterioration (Senol-Durak, Durak, & Gencoz, 2006).

A review of the related scientific literature revealed that although studies have been able to demonstrate psychological and physical deterioration within correctional officer samples, few effective measurement tools have been developed that specifically measure the wellbeing of correctional officers. In fact, it is not uncommon for correctional officer wellbeing to be simply inferred by the absence of indicators of psychological and physical illness. We argue that this approach may be too simplistic, failing to take into account the potential role of other factors that contribute to the experience of wellness. This study will address this gap in the scientific literature by developing a new occupation-specific wellbeing measurement tool, the Trounson Officer Wellbeing Scale (TOWS). The TOWS is theoretically based on the findings of the unpublished exploratory study conducted by Trounson and Pfeifer (2014).

Recent research has also demonstrated that correctional officers may have a tendency to use certain response tendencies to attempt to manage the adversity they experience (Trounson & Pfeifer, 2014): These can include Positive Response Tendencies (PRT’s; e.g., seeking social support, use of controlled breathing techniques, effective emotional regulation skill use) and Negative Response Tendencies (NRT’s; e.g., substance use, problem avoidance behaviour, internalising emotions). Currently, there are no measurement tools that are designed specifically for correctional officers that are able to effectively quantify their use of PRT’s and NRT’s. This study will be the first study to use the Adaptive Response Tendency Scale – Correctional (ARTS-C) to measure use of PRT’s and NRT’s in correctional officers. The ARTS-C is based on the findings of an unpublished exploratory study conducted by Trounson and Pfeifer (2014). Finally, this study will be the first of its kind to examine the relationship between perceived workplace adversity, use of PRT’s/NRT’s and correctional officer wellbeing. This study will provide the scientific community with a deeper understanding of PRT/NRT usage amongst correctional officers when attempting to manage workplace adversity. It is hoped that identifying such occupational trends will assist in the future development of an industry-specific, evidence-based, pre-emptive psychological training program for correctional officers.

References


A2 WHAT - BRIEF DESCRIPTION OF PROJECT

The current project will involve the distribution of an online survey to correctional officers. The focus of the survey will be to examine the relationship between perceived workplace adversity, Negative Response Tendencies (ART’s), Positive Response Tendencies (URT’s), and wellbeing. Firstly, it is expected that high levels of perceived workplace adversity will be associated with lowered wellbeing. More simply, we expect that correctional officers perceiving higher levels of adversity at work will report lower wellbeing. Secondly, it is expected that the relationship between perceived workplace adversity and wellbeing will be affected by the officers’ use of PRT’s and NRT’s. More simply, we expect that if correctional officers use more PRT’s and less NRT’s they are likely to report higher wellbeing. To do this effectively, we hope to gain participation from 500 correctional officers. Participation will be, voluntary, anonymous and will simply involve completing the online survey.

A3 HOW - PROCEDURES

The project will optimally involve around 500 correctional officers completing the online survey. Invites to participate in the online survey will be distributed to the greater community through online social networks (e.g., facebook, myspace, online forums, email) and through the assistance of the International Corrections and Prison’s Association (ICPA). This process will be overseen and assisted by the Staff Training and Development Committee of the ICPA. Participants will complete an online questionnaire (See appendix B for a copy of the proposed questionnaire), which will take approximately 30 minutes to complete. All participants will also read a consent information statement (Appendix A) prior to commencement, outlining the aims of the research and stating the voluntary nature of their participation. The statement will also explain to participants that they can withdraw from the survey at any point without repercussions. There will be no identifiable information in the questionnaires.

It should be pointed out that none of the material in any of the measures is deemed to be of a sensitive nature and should not cause distress. However, in the event of participants experiencing unexpected distress from participation in this study, contact details for low cost counselling services, Lifeline and other accessible resources will be supplied on the information sheet prior to commencement of the online questionnaire and within the debriefing statement at the conclusion of the survey.

All measures can be seen in the Appendices. Briefly they contain:

Consent Information Statement: (See Appendix A)

Demographic background items:
Basic items such as age, gender, country of origin, occupational status, type of facility etc. (See Appendix B: Section 1).

The Work-related Environmental Adversity Scale (WREAS; Trounson & Pfeifer, 2013):
Workplace adversity will be measured using the 36-item WREAS (See Appendix B: Section 2). Participants rate how much they agree with statements on a 7-point scale ranging from 1 = Strongly Disagree to 7 = Strongly Agree. An example item is “Compared to the average person I feel things in my life can be unpredictable”.

Adaptive Response Tendency Scale - Correctional (ARTS-C):
The 20-item ARTS-C has been developed for the purposes of this study and is designed to measure the use of Positive Response Tendencies and Negative Response Tendencies by correctional officers. The scale is based on the unpublished explorative study conducted by Trounson and Pfeifer in 2014. See Appendix B: Section 3 for a copy of the ARTS-C scale.

Trounson Officer Wellbeing Scale (TOWS):
The 20-item TOWS has been developed for the purposes of this study and is designed to measure a set of correctional officer specific indicators of wellbeing based on the unpublished explorative study conducted by Trounson and Pfeifer in 2014 (See Appendix B: Section 4).
Workplace Impacts: 5 items designed for this study to measure workplace impacts of lowered wellbeing (Appendix B: Section 5).

References


If you feel that it is necessary to include further material, please append.

A4 DESCRIBE ANY RISK THAT MAY ARISE TO THE PARTICIPANT / DONOR?

Some research activities may put the participant at risk through what is being done or simply through their participation. Please describe the risk you perceive and the protective measures to be taken.

There should be no risk to the participants.

A5 DESCRIBE ANY RISK THAT MAY ARISE TO THE RESEARCHER / ADMINISTRATOR?

Some research activities may put the researcher at risk through what is being done or simply through their participation. Please describe the risk you perceive and the protective measures to be taken.

There should be no risk to the researcher.

A6 WHAT BENEFITS ARE ANTICIPATED FROM THE PROJECT

Ethical principles would require that benefits flow from the activities but please avoid grandiose claims.

(a) To the Participant (what and how so):

Taking part in a psychological study may help participants to gain a better understanding of what is involved in psychological research. Furthermore, participation may also provide respondents with a greater awareness of their use of both positive and negative response tendencies within their own workplace.

(b) More generally (to society, profession, knowledge, understanding, etc. and how so):

The project will hopefully contribute towards future research pathways and add to the scientific literature relating to the effect of adverse environmental contexts on psychological wellbeing in correctional settings. It is also hoped that this research will provide us with a deeper understanding of the adversity faced within correctional settings and provide new insight into how to combat such adversity. The results from this project will be published within an academic journal and be available to the wider scientific community.

A7 POTENTIAL PROBLEMS

From time to time in the course of a research project important information, such as an individual found to be at risk, or entirely unforeseen events may come to light. What procedures are in place to handle unexpected or particularly significant personal or other information that may come to light through the project, e.g., unknown medical/psychiatric condition, a particularly distressed participant, civil or criminal liability, disease, physical harm, loss of employment or professional standing, etc. Please consider such possibilities carefully.

Some research activities may put the participant at risk through what is being done or simply through their participation. Please describe the risk you perceive and the protective measures to be taken.

A8 PROFESSIONAL/ETHICAL ABILITY & TRAINING (Researchers/Students/Assistants)

(a) Sufficiently detail what investigators/assistants will do in this project and their expertise/competence to do so.

The study will be supervised by A/Prof Jeffery Pfeifer. A/Prof Jeffery Pfeifer received his Ph.D. and M.Leg.St. (Master of Legal Studies) from the University of Nebraska and has been teaching and conducting research in forensic psychology for the past 17 years. He is currently the Chair of the Department of Psychological Sciences and Statistics and has conducted numerous ethically sound studies throughout his career. A/Prof Pfeifer will supervise the entire study and provide direction where needed. Furthermore, participants who have any queries about the study are
advised to contact A/Prof Pfeifer.

Mr Justin Trounson is a current PHD (Clinical Psychology) candidate and registered provisional psychologist. Mr Trounson will conduct all aspects of the study under the direct supervision of A/Prof Jeffrey Pfeifer. He holds a degree in Psychology with Honours and has worked as a senior research assistant on a number of projects involving the consideration of ethical issues. Mr Trounson has also successfully designed, conducted and completed studies in 2011, 2012 and 2013 with Swinburne University ethics approval. These studies were conducted ethically and were completed without any ethical complications. In addition, Mr Trounson has undertaken training in ethics and professional issues as part of his Honours program and as part of his post graduate studies. Under A/Prof Pfeifer’s supervision, Mr Trounson will co-ordinate the distribution of surveys to participants, collect, analyse and interpret the data.

(b) Sufficiently detail any further training/qualifications required for investigators/assistants to carry out the project.

No further training is required to carry out this project.

A9 FUTURE USE OF DATA

Will any of these data be used by yourself, your students or others for any purpose other than for this project as described in the protocol? If so please describe.

None is expected

A10 EXTERNAL INVOLVEMENT

Is a body external to Swinburne involved in initiation or support of the project?

☐ Yes Name of body/organisation. ....................................................... ....................................................... .............................

If an external body is associated with the project you must provide the HREC with detail of the arrangements, including details of any funding or other resources being provided. A copy of relevant pages from the contractual arrangements should be attached.

☐ No

A11 EXTERNAL APPROVALS

Projects involving other organisations or entities may require approval from other institutions or their ethics committees, etc. for such things as access to prospective participants, contact lists, data, facilities, etc. A copy of such approvals may be required to be provided to the HREC at the time of application or be made available as soon as possible. In which case, the project may not commence, until such evidence is provided.

Please indicate, as appropriate, if formal clearance/permission has been obtained or sought:

Institutional Yes [ ] Documentation Attached [ ] or to follow [ ]

Next of Kin (for special groups) Yes [ ] Documentation Attached [ ] or to follow [ ]

(estimate when likely to be obtained)

☐ No (please explain)

No external approvals will be necessary in conducting this research

A12 RESEARCHER / SPONSOR RELATIONSHIP

Is there any relationship or association between the sponsor and any of the researchers listed in Section A of this form, for example are any of the researchers directors, officers, employees, shareholders or promoters of the sponsor or do they receive any personal benefits from the sponsor under any other contracts or arrangements?

☐ No

☐ Yes (please explain the relationship(s), including how a vested or a conflict of interest situation does not arise.)
SECTION B: ETHICAL ISSUES OVERVIEW

B ETHICAL ISSUES

(Double-click on 'YES/NO' checkbox to select box, then enter Default Value as Checked ☑ or leaving as Not Checked ☐)

(a) Non/Limited Disclosure or Deception: Is any detail in relation to research purposes, methods or questions being withheld from participants? Or will deception of any kind be involved? Or any covert/undeclared observation? (Refer National Statement Chap 17)

(b) Does the data collection process involve access to confidential personal data (including access to data provided for a purpose other than this particular research project) without the prior consent of subjects?

(c) Will participants have pictures taken of them, e.g., photographs, video recordings?

(d) If interviews are to be conducted, will they be record by electronic device?

(e) Will participants be asked to perform any acts or make statements which might compromise them, diminish self esteem or cause them embarrassment or regret (minimal, moderate or significant)?

(f) Might any aspect of your study reasonably be expected to place the participant at risk of criminal or civil liability (not just immediately or directly)?

(g) Might any aspect of your study reasonably be expected to place the participant at risk of damage to their professional/social/cultural/financial standing or employability?

(h) Will the research involve access to data banks subject to privacy legislation?*

(i) Will participants come into contact with any equipment which uses an electrical supply in any form e.g., audiometer, biofeedback, electrical stimulation, magnetic stimulation, etc.? If "YES", please outline below what safety precautions will be followed.

(j) Does the research involve any stimuli, tasks, investigations or procedures which may be experienced by participants as stressful, noxious, aversive or unpleasant during or after the research procedures?

(k) Will the research involve the use of placebo control conditions or the withholding/substitution of treatment, programs or services (health, educational, commercial, other)?

(l) Will any samples of body fluid or body tissue be required specifically for the research which would not be required in the case of ordinary treatment?

(m) Will participants be fingerprinted or DNA "fingerprinted"?

(n) Are there in your opinion any other ethical issues involved in the research?

NOTE: If the answer to any of the above questions is "yes", please explain and justify below in sufficient clear detail. (The box below will expand to fit your response.)

It is plausible that participant’s may find the experience of completing the survey an unpleasant experience. To address this possibility all participants will be provided with information regarding how to access counselling resources, how to contact A/Prof Pfeifer and how to contact the Swinburne Research Ethics Officers. The information will be provided to them prior to participation within the consent information statement.

Attach further documents if appropriate
SECTION C: PARTICIPANT DETAILS

C1 PARTICIPANT DETAILS

The composition of the participant group may, in some circumstances, distort and invalidate an outcome, and risks may arise through the composition of the participant group.

How many individual participants will be involved? (Number/number ranges for which approval is sought)

<table>
<thead>
<tr>
<th>Males</th>
<th>Females</th>
<th>Total participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>350</td>
<td>150</td>
<td>500</td>
</tr>
</tbody>
</table>

Over what range of ages?

From (youngest): 18   To (Oldest): 65

If there is a gender or age imbalance in the number of participants please explain why.

The gender imbalance simply reflects the gender imbalance found naturally in correctional officer populations.

C2 RECRUITMENT

How will participants be recruited/selected?

Please outline the process in sufficient detail how this is to occur.

Note: Where participants are obtained from or through schools, hospitals, prisons or other institutions, appropriate institutional or other authority will probably be needed. If soliciting for participants by advertisement or poster please attach proposed copy or text.

(See also Project Information Consent Statements and Signed Consent Forms info at the end of this application form.)

The sample will be recruited voluntarily through the greater community using online social networking sites (e.g., Facebook, MySpace, email invites). The Staff Training and Development Committee of the International Corrections and Prisons Association (ICPA) have also demonstrated interest in assisting with the distribution of the invitation to potentially interested individuals within their organisation.

C3 PRE-EXISTING CONDITIONS

In some situations an underlying medical or other significant condition of a participant may result in an otherwise relatively innocuous situation causing excessive stress and exacerbate the condition. Researchers must, therefore, be alert to such situations and be able to address the resulting issues.

Do participants have any medical or other significant condition of which you are aware, eg. diabetes, asthma, depression, epilepsy? What steps are in place to handle any resulting problems (you may need to correlate with A3, A4 and A7 of this form)?

Not that I am aware of. Medical conditions should not be an issue for this project.

C4 DISCLOSURE AND INFORMED CONSENT

How will participants be informed about the project in order to give valid consent:

- Consent Information Statement(s)/Letter(s) and Signed Consent Form(s) will be used. A copy must be attached to your application. A guide to consent instruments is given at the end of this form.
- Consent Information Statement(s)/Letter(s) and consent implied by return of anonymous questionnaire
- Verbal advice (Please explain how and why)
- Other (Please explain how and why)

All participants involved in the online survey will need to read a consent information sheet prior to commencing the questionnaire outlining all relevant issues regarding consent and the nature of the study. A fully completed submitted questionnaire will be regarded as implying consent. The Consent Information Statement is included within the Appendices.

Copies of appropriate consent instruments must be attached to your application. Please consult the Guide to Human Research Informed Consent Instruments in carefully preparing informed consent instruments.

C5 COMPENSATION

Consent to participate must be freely given and not induced through the level of reward, perceived reward, or power relations. Provide details of any financial or other reward or inducement is being offered to subjects for participation. Indicate the source of the funds.

No compensation or inducement will be used in this study.

C6 RELATIONSHIP TO INVESTIGATOR(S)

Free consent may be difficult to ensure if the participant is dependent upon the investigator for employment, assessments etc. Some relationships cause special ethical issues to arise.

Are participants linked with the investigator through some particular relationship - eg. employees ultimately responsible to or superiors of the investigator, students of investigator, family members, friends etc.
All participants will be told that they are not obliged to participate and can withdraw at any stage. Those completing the survey will be told their involvement will be anonymous and that no researcher will be able to acquire their identity.

C7 INVOlVEMENT OF SPECIAL GROUPS

Particular issues of consent may arise where special groups of participants are to be involved. There may be, for example, a need to obtain informed consent from persons other than the direct participant. Examples of such special groups include special cultural groups - eg. indigenous Australians, children and young persons (Guidelines section 4.2); groups with special circumstances - eg. persons with an intellectual or mental impairment (Guidelines s. 5)

Please identify and describe the nature of the groups and procedures used to obtain permission.

Note. Persons proposing research projects involving Indigenous Australians should consult with the relevant University manager of Indigenous programs prior to making definition of the project.

No special groups will be actively sought.

C8 PRIVACY

The University is subject to the Victorian Information Privacy and Health Records Acts as well as the Commonwealth Privacy Act and, in particular, the Information/Health/National Privacy principles (IPPs/HPPs/NPPs) set out therein and is required to report annually on projects which relate to or utilise particular records.

Does the research involves access to data which was collected by an organisation for its own purposes (ie. not specifically collected for this project) such as student records, other data banks, human pathology or diagnostic specimen provided by an institution?

If yes, please indicate source/s.

No, it does not involve access to data not specifically collected for this project

C9 LOCATION OF STUDY

Please indicate where the research will be carried out. If the research will not be on University premises permission of owner / occupier may be required. If so, please indicate what authority or permission may be required and how will be obtained. NB: Where required, please attach to this application evidence of authority obtained or provide the Secretary, HREC as soon as practicable.

The study will be conducted at Swinburne University of Technology. Surveys will be filled out voluntarily online in any location the respondent is able to access the internet and in which they feel comfortable to respond freely.
**SECTION D: DATA & PUBLICATION ARRANGEMENTS**

Please consider carefully your responses to this section. You need to be clear as to what is occurring with respect to data collection, retention and disposal.

(Your responses, you should demonstrate familiarity with National Statement requirements for confidentiality, relevant Privacy Principles and Swinburne’s Policy on the Conduct of Research, eg. Sect 4, see URL: http://www.swinburne.edu.au/corporate/registrar/ppd/docs/Policies/theConductsResearch.pdf)

<table>
<thead>
<tr>
<th>D1 DATA COLLECTION/RECORDING</th>
<th>(Nb Section D1 Revised Aug 2007)</th>
</tr>
</thead>
</table>
| Please note that, with any information or data collected/retained, if any individual can reasonably be identified, the information can be deemed “personal information” or “health information” under National/Health/Information Privacy Principles (NPPs/HPPs/IPPs).

(a) How or in what form will data be collected/recorded?

| Data will be collected using an online questionnaire created using psychsurveys.org software and will be coded and entered into SPSS version 21 for analysis. |

(b) As regards any individual, in relation to any data collection or retention, you need to acknowledge either or both of the following:

- **An Individual can be identified OR is Potentially Identifiable / Re-Identifiable**
  - An individual can be identified at some point or by the very nature of the data collected/retained: at time of an interview, by signed consent form, identified or labelled voice or image recording, pen-and-paper questionnaire, on-line survey instruments, etc.
  - What data may not have (explicit) identifiers, an individual’s identity can still reasonably be worked out.
  - Or data may have (explicit) identifiers removed and replaced by codes that permit matching of an individual with the data collected/retained, in which case it is possible to identify or re-identify the person to whom the data relates.

- **An Individual is Non- or Un-identifiable**
  - Data collected/retained anonymously and with no reasonable possibility of being identified.

Your acknowledgement may require further explanation or clarification; if so, please include in the following box.

| Respondents' names will not be recorded in the online questionnaire so anonymity is assured. |

<table>
<thead>
<tr>
<th>D2 DATA SECURITY</th>
<th>(Nb Section D2 Revised Aug 2007)</th>
</tr>
</thead>
</table>
| Please note that “data must be held for sufficient time to allow reference. For data that is published this may be for as long as interest and discussion persists following publication. It is recommended that the minimum period for retention is at least 5 years from the date of publication but for specific types of research, such as clinical research, 15 years (or more) may be appropriate.” (Sect 4.3 of Swinburne’s Policy on the Conduct of Research)

Please indicate what data (all types of data, including, eg, signed consent forms) will be securely retained (eg, electronic form in password-protected disk drive, locked filing cabinet, etc) and where? With more than one type of data, will the types be separately stored?

In your explanation, you will need to make clear how due confidentiality and/or anonymity will be maintained.

(a) During the study

| The data will be kept on a password protected external hard drive in a locked filing cabinet. |

(b) Following completion of study

| The data will be kept on a password protected external hard drive in a locked filing cabinet for 5 years after the study is completed. |

<table>
<thead>
<tr>
<th>D3 PUBLICATION/OUTPUT</th>
<th>(Nb Section D3 Revised Aug 2007)</th>
</tr>
</thead>
</table>
| Please explain in sufficient detail:

(a) What, if any, publication (conference, news media, academic journal, other journal, etc) is envisaged following on or in relation to this project, both in terms of data proper and/or analysis of data?

(b) Will participants be informed about any envisaged research publication/outcome? (This information is normally to be included in the information given prior to obtaining informed consent.)

(c) Would any participants be able to be identified through the publication of data proper or research findings? If so, explain why this is necessary.
(a) Refereed journal articles, international conference papers

(b) Participants will be informed of research publications through the use of the recruiting online community noticeboard and through informing the ICPA of any publications.

(c) No, data would only be presented at a group level

### D4 INDIGENOUS ISSUES
Storage arrangements for data relating to research into Indigenous matters must be determined in compliance with the Policy on the Conduct of Research after consultation with the communities involved.
What consultation has taken place and what arrangements have been made.

| No research into Indigenous matters will be undertaken |

### D5 OTHER ISSUES (No Section D5 Revised Aug 2007)
Are there any other issue relating to data collection, retention, use or disclosure which the ethics committee should be made aware of and, if so, please explain how you are to deal with this.
(Eg. Research outcomes unduly impacting on any individual or group not directly participating, etc.)

| No |
## SECTION E: SUBSTANCES & CLINICAL ISSUES

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>☒ No matters in this section are applicable to the study</td>
<td></td>
</tr>
</tbody>
</table>

### E1 ADMINISTRATION OF SUBSTANCES/AGENTS

<table>
<thead>
<tr>
<th>Name of substance(s)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage per administration</td>
<td></td>
</tr>
<tr>
<td>Frequency of administration</td>
<td></td>
</tr>
<tr>
<td>Total amounts to be administered</td>
<td></td>
</tr>
</tbody>
</table>

**Anticipated effects:**

```
NOTE: If the research involves administration of foreign substances or invasive procedures, please attach a statement accepting responsibility for those procedures by a medical or paramedical practitioner with indemnity insurance.
```

### E2 BODY FLUIDS OR TISSUE

<table>
<thead>
<tr>
<th>What fluids or tissue? How will be samples be obtained?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency and volume</td>
<td></td>
</tr>
</tbody>
</table>

**How are samples to be stored?**

```
How will samples be disposed of?
```

**Who will take the samples?**

```
What are their qualifications for doing so?
```

**Do participants carry, as far as you know, the Hepatitis B or HIV virus? If so how will the risks be handled**

```
Do participants carry, as far as you know, any other contagious diseases or viruses? If so how will the risks be handled
```

---

Human Research Ethics Committee

(Aug 2004: Form amended August 2007)
### SECTION F Declarations for Signature

1. With respect to this project, I/We, the undersigned investigator(s)/assistant(s) agree:

- To undertake human research activity or handle data confidentially in accordance with Swinburne requirements, including any standard or special ethics clearance conditions, under the proper direction of the responsible Swinburne manager and/or principal Swinburne (or other) researcher/supervisor.

<table>
<thead>
<tr>
<th>NAME: (block letters)</th>
<th>SIGNATURE:</th>
<th>DATE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A/Prof Jeffrey Pfeifer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr Justin Trounson</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All listed applicants must sign. The Chief Investigator/Supervisor is also responsible for personnel subsequently joining the project. Expand this table or duplicate this page as required. NB This information is subject to Swinburne or external audit.

**Please note that***

PROJECTS MUST NOT COMMENCE WITHOUT PRIOR WRITTEN APPROVAL from the Human Research Ethics Committee (SUHREC) or its appropriate Subcommittee (SHESC)

2. Declaration of Compliance by Chief Investigator(s)/Student Supervisor(s).

I declare that the above project has been developed and will be conducted in accordance with relevant Swinburne standards, policies and codes of practice, including any standard or special conditions for on-going ethics clearance. I further declare that all listed and subsequently appointed researchers or assistants involved in this project will be made aware of the conditions of ethics approval as communicated to me, including approved documentation and procedures.

**Signature & Date:** .................................................................

**Name of Signatory & Position:** .................................................................

(Optional) Form checked by a Research & Ethics Advisor (REA)? **Yes** ☐ **No** ☐ REA Initials & Date: .................................

3. Endorsement of Head of Academic Unit (or Delegate) or Above.

I declare that this project has been developed and will be conducted in accordance with relevant Swinburne standards, policies and codes of practice; and has research merit, adequate resourcing and appropriate leadership/supervision.

**Signature & Date:** .................................................................

**Name of Signatory & Position:** .................................................................

(Please note: This endorsement must be given by an authorised official who is not also a chief or co-investigator of the project and who is not also the supervisor of a student investigator with an interest in the project.)

Human Research Ethics Committee

Appendix D: Consent Information Statement Study 1

Appendix 1

CONSENT INFORMATION STATEMENT
Environmental stress, perceived stress and psychological resilience

Mr Justin Trounson – PhD (Clinical Psychology) Candidate
Dr Jeffery Pfeifer - Supervisor

We are conducting a study to develop a scale for measuring the level of adversity in people’s working environment. We also hope to form a better understanding of the effect of people’s everyday environment on their perceptions of stress and their mental wellbeing. This information sheet is designed to cordially invite you to take part in this study and to clearly explain what participation would involve. To take part in this study you must be over 18 years of age. If you choose to participate in the study, you will be asked to complete an online questionnaire relating to your working environment and about how you have been feeling over the past month. The questionnaire will mainly involve responding to a series of statements. Some items in the questionnaire will ask for you to report general information about yourself, such as your age, education and current occupation, these items are necessary for describing the sample used in this study but will in no way make you identifiable. Your responses to all questions within the questionnaire will be completely anonymous and confidential.

The questionnaire will take approximately 20 minutes to complete and it is important that you complete the questionnaire honestly. Many of the items are similar and it is important to respond them all as conscientiously as possible, but without spending too much time on any one item, your first response is probably the most accurate. Results of the study may be published in an academic journal but only as group data, not as the results of any individual. It should be noted that this project is primarily being undertaken to fulfill the requirements of Mr Trounson’s PhD (Clinical Psychology) program. If you are interested in participating in this Australian project from outside of Australia, you should be alert to any local or government restrictions on involvement in on-line or foreign research activity.

The completion and submission of your questionnaire online will be viewed as an indication of your voluntary consent to participate in this study and for your data to be used accordingly. Your participation in this study is completely voluntary. Participation does not stop you from discontinuing and you are free to withdraw from the questionnaire at any point. All data will be kept on a password protected hard drive and made accessible only to the researchers named above. For more information regarding psychsurveys.org’s privacy and terms of conditions please refer to: http://www.psychsurveys.org/help?pagenum=11. Your interest in this study would be greatly appreciated. If you would like further information about the project please contact:

Dr Jeffery Pfeifer (Student supervisor)
Tel (03) 9214 8578 or jpfeifer@swin.edu.au
Swinburne University of Technology, PO Box 218, (H24), Hawthorn, Victoria, Australia, 3122.

Although unlikely, the questionnaire may raise some concerns for you because of some personal experiences or questions. If you reside within Australia and would like to discuss these with a counsellor, you could ring the Swinburne Centre for Psychological Services on 9214 8653 (a low-cost counseling service) or Lifeline on 131 114. Alternatively, if you do not live in Australia you can access online counseling at http://www.lifeline.org.au/Get-Help. This project has been approved by or on behalf of Swinburne’s Human Research Ethics Committee (SUHREC) in line with the National Statement on Ethical Conduct in Human Research. If you have any concerns or complaints about the conduct of this project, you can contact:

Research Ethics Officer, Swinburne Research (H68), Swinburne University of Technology, P O Box 218, HAWTHORN VIC 3122. Tel (03) 9214 5218 or +61 3 9214 5218 or resethics@swin.edu.au

Version 4: 23/03/13
Appendix E: Study 1 Questionnaire

SECTION 1

The following information is needed so that we can gain a general description of the participants in this study. Please indicate your current status by filling in the blanks or circling the answer that best suits you.

1. What is your age? ________

2. Please circle your gender. Male or Female

3. Please circle the category that best describes your highest level of education.
   i. Secondary school not completed
   ii. Completed secondary school
   iii. Currently undertaking an undergraduate degree
   iv. Completed an undergraduate degree or higher

4. Are you currently employed full time? (working 35+ hours per week)
   YES  NO

(If you answered YES to question 4 please continue to question 5, if you answered NO please move on to Section 2)

5. What is your job title?

______________________________________

8. Please describe the kind of work you do below.

_____________________________________________________________________
_____________________________________________________________________
____________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
Please choose an occupational category that you feel best represents the type of work you engage in.

1) Teacher (includes primary and secondary teachers)
2) Prison Officer (includes front-line officers only)
3) Police Officer (includes front-line officers and detectives only)
4) Emergency Services Worker (includes nurses, doctors, paramedics, ambulance, fire-fighters, emergency room doctors and other emergency services personnel)
5) Military Personnel
   a) Currently deployed and engaged in active missions
   b) Currently deployed but not engaged in active missions
   c) Never engaged in active missions
6) Management (includes those within occupations where their main role is the management of other employees, projects or aspects of an organisation. Includes office managers, project managers, CEO’s, team leaders, architects, marketing, and other professionals etc.)
   a) Entry level
   b) Middle Management
   c) Upper Management
7) Tradesperson (includes electricians, plumbers, construction workers, builders, carpenters etc.)
8) Administrative/Clerical (includes secretaries, data entrants, personal assistants etc.)
9) Sales (includes individuals working in automotive sales, hospitality, real estate, retail etc.)
10) Other (includes all occupations that do not fit into the above categories. If you have chosen other please ensure that you have provided your job title and a description of what your job entails)
SECTION 2

Please think about your working environment (i.e., the environment in which you spend the majority of your time at work). With this in mind, please rate how much you agree with each of the following statements by circling a number between 1 and 7 (1 = Strongly Disagree to 7 = Strongly Agree).

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

WREAS

1) I believe that my working environment is one in which there is a constant possibility for situations to occur that threaten my personal safety.

2) When I finish work I feel mentally exhausted.

3) It is common in my working environment for situations to arise that are highly unpredictable.

4) In my working environment it is common to see or hear things that most people would find distressing.

5) In my working environment it is hard to know what will happen next.

6) I tend to include my occupation when I describe myself to other people.

7) I believe that in my working environment I have to always be cautious of my surroundings.

8) I believe that my working environment is one that leaves me susceptible to harm.

9) When at work it is hard to relax.

10) I find myself thinking about the bad things that have happened at work even when I am not there.

11) When I finish work I often feel like it is first time I get a chance to mentally separate from my working environment.

12) I find that even when I leave work it still seems to be on my mind.
<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

13) I believe that in my working environment there is a constant need to be ready to react quickly to unexpected events.

14) In my working environment it is hard to be prepared for what is going to happen.

15) I believe that the time spent in my working environment has had a negative impact on the way I see things in my everyday life.

16) In my working environment threats to my safety can be hard to clearly identify.

17) I believe that in my working environment physical harm is a constant possibility.

18) In my working environment I need think carefully before acting.

19) In my working environment you need to be prepared to see things that might be difficult to deal with.

20) I believe that the time spent in my working environment has had a negative impact on how I view the world.

21) I believe that in my working environment my actions can often result in serious consequences.

22) I find that my workplace is difficult to escape from mentally even when I get home.

23) I believe that my role at work makes up a large part of who I am.

24) I believe that in my working environment there is a constant possibility of psychological distress.

25) I believe that in my working environment situations can arise in which my actions can become the difference between life and death.

26) It is common in my working environment for serious events to arise without warning.

27) I believe that in my working environment I need exercise care to ensure my safety.

28) In my working environment it is common to be exposed to situations that are violent.

29) I find that the negative things that happen at work affect my personal life.

30) I believe that in my working environment my safety is not assured.
<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>31)</td>
<td>I believe that my working environment is one in which careless actions can result in physical harm coming to myself and/or others.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32)</td>
<td>I find it difficult to transition from my work role to my personal life.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33)</td>
<td>I believe that my working environment can often be highly tense.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34)</td>
<td>When at work it is hard to find time to unwind.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35)</td>
<td>In my working environment things can change very quickly without much warning.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36)</td>
<td>I believe that in my working environment I need to be constantly aware of my surroundings.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37)</td>
<td>In my working environment it is important to identify threats to my safety.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38)</td>
<td>When at work it is hard to get mental relief from my working environment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39)</td>
<td>When at work there are few opportunities to step away from my role.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40)</td>
<td>I believe that in my working environment there is a constant need to be looking and listening for trouble.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>41)</td>
<td>I believe that in my working environment there is a constant need to assess the environment for potential threats.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42)</td>
<td>In my working environment I am often surrounded by identifiable threats to my safety.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>43)</td>
<td>In my working environment anything could happen at any time.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>44)</td>
<td>When at work it is hard to get downtime.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45)</td>
<td>I believe that in my working environment, my own safety can be directly affected by my actions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>46)</td>
<td>My work environment is one in which I am on call even when I get home.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>47)</td>
<td>I believe that my working environment is unsafe.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48)</td>
<td>I believe that in my working environment it is important not to let my guard down.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>49)</td>
<td>I believe that my working environment is one in which there can be serious consequences for even the most routine task.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>6</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

50) I believe that in my working environment there is a constant potential for serious harm coming to myself.

51) In my working environment there is a constant possibility that I will be exposed to traumatic events.

52) In my working environment it is common to see disturbing things happen.

53) I believe that in my working environment it is common to feel uneasy.

54) I believe that in my working environment I have to carefully consider the actions I take.

55) I believe that my working environment is dangerous.

56) I believe that in my working environment it is common to see things that are visually shocking.

57) Even when completing routine tasks at work there is a constant potential for things to change very quickly.
SECTION 3
The questions in this scale ask you about your feelings and thoughts during the last month. In each case, please indicate how often you felt or thought a certain way.

Never  Almost never  Sometimes  Fairly often  Very often
0       1           2          3          4

1. In the last month, how often have you been upset because of something that happened unexpectedly?

Never  Almost never  Sometimes  Fairly often  Very often
0       1           2          3          4

2. In the last month, how often have you felt that you were unable to control the important things in your life?

Never  Almost never  Sometimes  Fairly often  Very often
0       1           2          3          4

3. In the last month, how often have you felt nervous and "stressed"?

Never  Almost never  Sometimes  Fairly often  Very often
0       1           2          3          4

4. In the last month, how often have you felt confident about your ability to handle your personal problems?

Never  Almost never  Sometimes  Fairly often  Very often
0       1           2          3          4

5. In the last month, how often have you felt that things were going your way?

Never  Almost never  Sometimes  Fairly often  Very often
0       1           2          3          4
6. In the last month, how often have you found that you could not cope with all the things that you had to do?

<table>
<thead>
<tr>
<th>Never</th>
<th>Almost never</th>
<th>Sometimes</th>
<th>Fairly often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

7. In the last month, how often have you been able to control irritations in your life?

<table>
<thead>
<tr>
<th>Never</th>
<th>Almost never</th>
<th>Sometimes</th>
<th>Fairly often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

8. In the last month, how often have you felt that you were on top of things?

<table>
<thead>
<tr>
<th>Never</th>
<th>Almost never</th>
<th>Sometimes</th>
<th>Fairly often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

9. In the last month, how often have you been angered because of things that were outside of your control?

<table>
<thead>
<tr>
<th>Never</th>
<th>Almost never</th>
<th>Sometimes</th>
<th>Fairly often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

<table>
<thead>
<tr>
<th>Never</th>
<th>Almost never</th>
<th>Sometimes</th>
<th>Fairly often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
SECTION 4

Please read each statement and circle a number 0, 1, 2 or 3, which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

*The rating scale is as follows:*
0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree, or a good part of time
3 Applied to me very much, or most of the time

1. I found it hard to wind down.
   0 1 2 3

2. I was aware of dryness of my mouth.
   0 1 2 3

3. I couldn’t seem to experience any positive feeling at all.
   0 1 2 3

4. I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion).
   0 1 2 3

5. I found it difficult to work up the initiative to do things.
   0 1 2 3

6. I tended to over-react to situations.
   0 1 2 3

7. I experienced trembling (e.g., in the hands).
   0 1 2 3
8. I felt that I was using a lot of nervous energy.
   0 1 2 3

9. I was worried about situations in which I might panic and make myself.
   a fool of myself.
   0 1 2 3

10. I felt that I had nothing to look forward to.
    0 1 2 3

11. I found myself getting agitated.
    0 1 2 3

12. I found it difficult to relax.
    0 1 2 3

13. I felt down-hearted and blue.
    0 1 2 3

14. I was intolerant of anything that kept me from getting on with what I was doing.
    0 1 2 3

15. I felt I was close to panic.
    0 1 2 3

16. I was unable to become enthusiastic about anything.
    0 1 2 3

17. I felt I wasn't worth much as a person.
    0 1 2 3
18. I felt that I was rather touchy.

0  1  2  3

19. I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat).

0  1  2  3

20. I felt scared without any good reason.

0  1  2  3

21. I felt that life was meaningless.

0  1  2  3

Congratulations! You are now finished with the survey. Thank you for participating in our study.
Appendix F: 36-Item WREAS

Work-related Environmental Adversity Scale (WREAS)


Please think about your working environment (i.e., the environment in which you spend the majority of your time at work). With this in mind, please rate how much you agree with each of the following statements by circling a number between 1 and 7 (1 = Strongly Disagree to 7 = Strongly Agree).

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

1) I believe that my working environment is one in which there is a constant possibility for situations to occur that threaten my personal safety. (1)

2) In my working environment it is common to see or hear things that most people would find distressing. (5)

3) In my working environment it is hard to know what will happen next. (2)

4) I believe that my working environment is one that leaves me susceptible to harm. (1)

5) When at work it is hard to relax. (6)

6) I find myself thinking about the bad things that have happened at work even when I am not there. (7)

7) I find that even when I leave work it still seems to be on my mind. (7)

8) I believe that in my working environment there is a constant need to be ready to react quickly to unexpected events. (4)

9) In my working environment you need to be prepared to see things that might be difficult to deal with. (5)

10) I believe that in my working environment my actions can often result in serious consequences. (3)

11) I find that my workplace is difficult to escape from mentally even when I get home. (7)

12) I believe that in my working environment situations can arise in which my actions can become the difference between life and death. (3)

13) It is common in my working environment for serious events to arise without warning. (2)

© Copyright by Justin Scott Trounson, 2016
All Rights Reserved
<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

14) I find that the negative things that happen at work affect my personal life. (7)

15) I believe that in my working environment my safety is not assured. (1)

16) I believe that my working environment is one in which careless actions can result in physical harm coming to myself and/or others. (3)

17) I find it difficult to transition from my work role to my personal life. (7)

18) When at work it is hard to find time to unwind. (6)

19) In my working environment things can change very quickly without much warning. (2)

20) I believe that in my working environment I need to be constantly aware of my surroundings. (4)

21) When at work it is hard to get mental relief from my working environment. (6)

22) When at work there are few opportunities to step away from my role. (6)

23) I believe that in my working environment there is a constant need to be looking and listening for trouble. (4)

24) In my working environment I am often surrounded by identifiable threats to my safety. (1)

25) In my working environment anything could happen at any time. (2)

26) When at work it is hard to get downtime. (6)

27) I believe that in my working environment, my own safety can be directly affected by my actions. (3)

28) I believe that my working environment is unsafe. (1)

29) I believe that in my working environment it is important not to let my guard down. (4)

30) I believe that my working environment is one in which there can be serious consequences for even the most routine task. (3)

31) I believe that in my working environment there is a constant potential for serious harm coming to myself. (1)

32) In my working environment there is a constant possibility that I will be exposed to traumatic events. (5)
33) In my working environment it is common to see disturbing things happen. (5)

34) I believe that my working environment is dangerous. (1)

35) I believe that in my working environment it is common to see things that are visually shocking. (5)

36) Even when completing routine tasks at work there is a constant potential for things to change very quickly. (2)

Scale Notes:
Numbers in parentheses indicate sub-scale affiliation. Sub-scale total scores are calculated by aggregating scores on all sub-scale items and then averaging. Full scale score calculated by aggregating scores on all items and dividing by number of items responded to.

Sub-scales:
1 = Environmental Threat Sub-scale (7 items)
The perception that one’s environment is threatening (1, 4, 15, 24, 28, 31, 34)

2 = Environmental Unpredictability Sub-scale (5 items)
The perception that one’s environment is unpredictable (3, 13, 19, 25, 36)

3 = Action Consequence Sub-scale (5 items)
The perception that one’s action can have serious consequences (10, 12, 16, 27, 30)

4 = Need for Vigilance Sub-scale (4 items)
The perception of the need to remain constantly vigilant (8, 20, 23, 29)

5 = Expectation of Workplace trauma Sub-scale (5 items)
The perceived likelihood that one will be exposed to traumatic events at their workplace (2, 9, 32, 33, 35)

6 = Inability to Achieve Workplace Respite Sub-scale (5 items)
The perception of a lack of reprieve from one’s occupational environment or occupational role while at work (5, 18, 21, 22, 26)

7 = Workplace/life Separation Sub-scale (5 items)
The perception that work invades one’s personal life (6, 7, 11, 14, 17)


© Copyright by Justin Scott Trounson, 2016
All Rights Reserved
Appendix G: Study 2 Briefing and Discussion Prompts

Focus Group Briefing and Interview questions

At commencement of the focus groups

“Thank you for your voluntary participation in today’s focus group discussion. Today we hope to hold an open discussion with you to gain a better understanding of the ways in which correctional officers manage the workplace adversity they experience. It is important that you know that I will be taking notes throughout the session, however these notes will only be accessible by myself and A/Prof Jeff Pfeifer who is collaborating on this project. Your identity will remain anonymous to others and your individual opinions will remain largely confidential as we are specifically interested in your perspective in relation to how correctional officers manage workplace adversity as a group and not on an individual level. Therefore it is important that everyone is aware that we are asking for your opinion on general officer-wide trends and not asking for you to provide input from a personal standpoint. We kindly request that everyone refrain from recounting past personal experiences and that we do not identify any individuals when responding to the focus group questions.

Also, please respect each other’s opinions and we ask that you respect each other’s right to confidentiality by not discussing what happens within this group discussion outside of the group. I will provide the group with a number of questions that we as researchers are interested in hearing your opinion in regard to and we respectfully ask that we attempt to keep the discussion within the bounds of the study questions. Please remember that if you decide to withdraw your participation at any point you are welcome to do so. Are there any concerns or questions that I can address prior to the commencement of the focus group discussion?”

At conclusion of focus groups

“Thank you very much for your time everybody and thank you all for your contributions. Before we conclude the focus group discussion I would like to provide you all with an opportunity to ask any other questions that you would like to ask and provide an opportunity to address any concerns anyone may have regarding the study and their experience as being part of the focus group. After this we will conclude the session.”
Discussion prompts and Interview Questions

1. What are some of the common ways that correctional officers respond to adversity in the workplace?

2. What are some of the **healthy** ways correctional officers respond to workplace adversity?

3. What are some of the **unhealthy** ways correctional officers respond to workplace adversity?

4. Can you think of any other ways that correctional officers deal with workplace adversity that we haven’t already discussed?

5. In a recent study we conducted we found that correctional officers have a heightened perception of threat in their working environment compared to others in the general community. In general, how do you think correctional officers manage this feeling?

6. In the same study we found that correctional officers experience a heightened perception of unpredictability in their working environment compared to others in the general community. In general, how do you think correctional officers manage this feeling?

7. We also found that correctional officers experience strong need to remain hyper-vigilant in their working environment compared to others in the general community. In general, how do you think correctional officers manage this feeling?

8. We also found evidence that correctional officers have a heightened need to be constantly aware of the consequences of their actions compared to others in the general community. In general, how do you think correctional officers manage this experience?

9. In addition, we have found some evidence that correctional officers have a heightened expectation for workplace trauma compared to others in the general community. In general, how do you think correctional officers manage this experience?
Focus Group Demographic Questions

Demographic items for focus group participants

1. GENDER ______

2. AGE ______

3. How many years of experience do you have working as a correctional officer? ______
Appendix H: Consent Information Statement Study 2

CONSENT INFORMATION STATEMENT

Resilience in Corrections
Mr Justin Trounson – PHD (Clinical Psychology) Candidate
Dr Jeffery Pfeifer – Supervisor

We are conducting a study to examine how people manage the adversity they face in their working environment. This information sheet is designed to cordially invite you to take part in this study and to clearly explain what participation would involve. To take part in this study you must be over 18 years of age and be a correctional officer/prison officer. If you choose to participate in the study, you will be asked to be part of a focus group discussion relating to your working environment and how correctional officers manage the workplace adversity they face. The focus group will involve an open discussion with a small number of other correctional officers. It is important that you are aware that all participants are asked to respect each other’s opinions and respect each other’s right to confidentiality by not discussing what happens within this group discussion outside of the group.

In order to participate, you will need to sign a consent form and will be asked to provide your gender, age, and length of time as a correctional officer however, no other identifiable information will be collected about you. These items are necessary for describing the sample used in this study but will in no way make you identifiable. Your responses to all questions within the focus group will be completely anonymous and confidential.

The focus group discussion will run for up to 60 minutes and it is important that you contribute honestly. Please note that results of the study may be published in an academic journal but only as group data, not involving quotes from any individual. It should also be noted that this project is primarily being undertaken to fulfil the requirements of Mr Trounson’s PHD (Clinical Psychology) program.

The completion and submission of a signed consent form will be viewed as an indication of your voluntary consent to participate in this study and for your data to be used accordingly. Your participation in this study is completely voluntary. Participation does not stop you from discontinuing and you are free to withdraw from the focus group discussion at any point. All data will be kept on a password protected hard drive and made accessible only to the researchers named above. Your interest in this study would be greatly appreciated. If you would like further information about the project please contact:

Dr Jeffery Pfeifer (Student supervisor)
Tel (03) 9214 8578 or jpfiefer@swin.edu.au
Swinburne University of Technology, PO Box 218, (H24), Hawthorn, Victoria, Australia, 3122.

Although unlikely, involvement in the focus group may raise some concerns for you because of some personal experiences or discussion topics. If you would like to discuss these with a counsellor, you could ring the Swinburne Centre for Psychological Services on 9214 8653 (a low-cost counselling service) or Lifeline on 131 114. This project has been approved by, or on behalf of, Swinburne’s Human Research Ethics Committee (SUHREC) in line with the National Statement on Ethical Conduct in Human Research. If you have any concerns or complaints about the conduct of this project, you can contact:

Research Ethics Officer, Swinburne Research (H68), Swinburne University of Technology, P O Box 218, HAWTHORN VIC 3122. Tel (03) 9214 5218 or +61 3 9214 5218 or resethsco@swin.edu.au.
Resilience in Corrections

Please note that this consent form will be stored separately from any focus group data in order to ensure your anonymity.

1. I consent to participate in the project named above. I have been provided with a copy of the Consent Information Statement and this consent form and any questions I have asked have been answered to my satisfaction.

1. Please tick or cross your response to the following:
   - I agree to participate in the project named above  ☐ Yes  ☐ No

3. I acknowledge that:
   (a) my participation is voluntary and that I am free to withdraw from the project at any time without explanation;
   (b) the project is for the purpose of research and not for profit;
   (c) any personal information about me which is gathered in the course of and as the result of my participating in this project will be (i) collected and retained for the purpose of this project and (ii) accessed and analysed by the researcher(s) for the purpose of conducting this project;
   (d) my confidentiality is preserved and I will not be identified in publications or otherwise without my express written consent.

By signing this document I agree to participate in this project.

Name of Participant: …………………………………………………..

Signature: …………………………………………………………………

Date: …………………
Appendix I: Consent Information Statement Study 3

CONSENT INFORMATION STATEMENT

Correctional Officers and the Workplace

Mr Justin Trounson – PHD (Clinical Psychology) Candidate

Dr Jeffery Pfeifer – Supervisor

We are conducting a study to examine how people manage the adversity they face in their working environment. This information sheet is designed to cordially invite you to take part in this study and to clearly explain what participation would involve. To take part in this study you must be over 18 years of age and be a correctional officer/prison officer. If you choose to participate in the study, you will be asked to complete an online questionnaire relating to your working environment, how you have been feeling lately and some of the things you do when you are dealing with adversity at work. The questionnaire will mainly involve responding to a series of statements. Some items in the questionnaire will ask for you to report general information about yourself such as your age, country of origin and gender. These items are necessary for describing the sample used in this study but will in no way make you identifiable. Your responses to all questions within the questionnaire will be completely anonymous and confidential.

The questionnaire will take approximately 20 minutes to complete and it is important that you complete the questionnaire honestly. Many of the items are similar and it is important to respond them all as conscientiously as possible, but without spending too much time on any one item, your first response is probably the most accurate. Results of the study may be published in an academic journal but only as group data, not as the results of any individual. It should be noted that this project is being undertaken to fulfil the requirements of Mr Trounson’s PHD (Clinical Psychology) program. If you are interested in participating in this Australian project from outside of Australia, you should be alert to any local or government restrictions on involvement in online or foreign research activity.

The completion and submission of your questionnaire online will be viewed as an indication of your voluntary consent to participate in this study and for your data to be used accordingly. Your participation in this study is completely voluntary. Participation does not stop you from discontinuing and you are free to withdraw from the questionnaire at any point. All data will be kept on a password protected hard drive and made accessible only to the researchers named above. For more information regarding psychsurveys.org’s privacy and terms of conditions please refer to: http://www.psychsurveys.org/help?pagenum=1. Your interest in this study would be greatly appreciated. If you would like further information about the project please contact:

Dr Jeffery Pfeifer (Student supervisor)
Tel (03) 9214 8578 or pfeifer@swin.edu.au
Swinburne University of Technology, PO Box 218, (H24), Hawthorn, Victoria, Australia, 3122.

Although unlikely, the questionnaire may raise some concerns for you because of some personal experiences or questions. If you reside within Australia and would like to discuss these with a counsellor, you could ring the Swinburne Centre for Psychological Services on 9214 8653 (a low-cost counselling service) or Lifeline on 131 114. Alternatively, if you do not live in Australia you can access online counselling at http://www.lifeline.org.au/Get-Help. This project has been approved by, or on behalf of, Swinburne’s Human Research Ethics Committee (SUHREC) in line with the National Statement on Ethical Conduct in Human Research. If you have any concerns or complaints about the conduct of this project, you can contact:

Research Ethics Officer, Swinburne Research (H68), Swinburne University of Technology, P O Box 218, HAWTHORN VIC 3122. Tel (03) 9214 5218 or +61 3 9214 5218 or researchethics@swin.edu.au

281
Appendix J: Study 3 Questionnaire

Study 3 Survey

Thank you for your willingness to participate in this survey. As you know, correctional officers often face high levels of stress and adversity in their jobs. We’re very interested in learning how to help officers effectively deal with these issues. This survey is designed to identify ways in which officers (such as yourself) manage the workplace adversity they face. It is important to know that your responses to this survey will remain anonymous, confidential and that participation is completely voluntary in nature. Analysis will be conducted on a group level so please note that no single person’s responses will be discussed/assessed in its own right.

The following information is needed so that we can gain a general description of the participants in this study. Please indicate your current status by filling in the blanks or selecting the answer that best suits you.

1. Do you manage inmates within a custodial setting?
   - [ ] YES, I am a correctional officer/Prison officer
   - [ ] YES, I am a deputy or hold another position in which I manage inmates within a custodial setting
   - [ ] NO, I do not manage or supervise inmates within a custodial setting

   If you answered NO to this question you are not eligible to participate in this study.

2. Age: ________

3. Gender: [ ] Male [ ] Female

4. In what country are you working as a correctional officer? ____________

5. What state, province or jurisdiction do you work in? _______________

6. Do you work full-time, part-time, or casually?
   - [ ] Full Time
   - [ ] Part Time
   - [ ] Casual

7. Please now select from the list below which category of Correctional Officer/Custodial Employee best describes the work that you do.
   - [ ] General Correctional Officer/Custodial Employee - defined as an officer whose position mostly involves interaction with inmates
   - [ ] Supervising Correctional Officer/Custodial Employee

Version 3. 09/06/15
Correctional Officer/Custodial Employee with limited interaction with inmates (e.g., Officers working in an administrative role with limited interaction with inmates)

8. How would you define the kind of custodial facility you work in?

☐ Minimum Security
☐ Medium Security
☐ Maximum Security
☐ Other: ____________________

9. Please indicate whether you currently work in any of the following environments:

☐ Psychiatric Unit
☐ Management Unit
☐ Protection Unit
☐ Specialised Unit (e.g., youth units, intellectually impaired units)
☐ Other type of unit not specified above

10. Please indicate if you work predominantly with male or female inmates

☐ Male inmates
☐ Female inmates

Please rate how much you agree with the following statements by selecting a number between 1 and 7 (1 = Strongly Disagree to 7 = Strongly Agree).

11. I often hide how I’m truly feeling while at work

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

12. While at work I intentionally display different emotions than I am actually truly feeling

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

13. The stress I experience at work negatively affects my life outside of work

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

14. I feel that I have begun to care less about the inmates I supervise

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>
Please think about your working environment (i.e., the environment in which you spend the majority of your time at work). With this in mind, please rate how much you agree with each statement by selecting a number between 1 and 7 (1 = Strongly Disagree to 7 = Strongly Agree).

<p>| | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I believe that my working environment is one in which there is a constant possibility for situations to occur that threaten my personal safety.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>2. In my working environment it is common to see or hear things that most people would find distressing.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>3. In my working environment it is hard to know what will happen next.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>4. I believe that my working environment is one that leaves me susceptible to harm.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>5. When at work it is hard to relax.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>6. I find myself thinking about the bad things that have happened at work even when I am not there.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>7. I find that even when I leave work it still seems to be on my mind.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>8. I believe that in my working environment there is a constant need to be ready to react quickly to unexpected events.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>9. In my working environment you need to be prepared to see things that might be difficult to deal with.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>10. I believe that in my working environment my actions can often result in serious consequences.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>11. I find that my workplace is difficult to escape from mentally even when I get home.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>12. I believe that in my working environment situations can arise in which my actions can become the difference between life and death.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>
13. It is common in my working environment for serious events to arise without warning.  
   | Strongly Disagree | Strongly Agree |
   | 1  | 2  | 3  | 4  | 5  | 6  | 7  |

14. I find that the negative things that happen at work affect my personal life.  
   | Strongly Disagree | Strongly Agree |
   | 1  | 2  | 3  | 4  | 5  | 6  | 7  |

15. I believe that in my working environment my safety is not assured.  
   | Strongly Disagree | Strongly Agree |
   | 1  | 2  | 3  | 4  | 5  | 6  | 7  |

16. I believe that my working environment is one in which careless actions can result in physical harm coming to myself and/or others.  
   | Strongly Disagree | Strongly Agree |
   | 1  | 2  | 3  | 4  | 5  | 6  | 7  |

17. I find it difficult to transition from my work role to my personal life.  
   | Strongly Disagree | Strongly Agree |
   | 1  | 2  | 3  | 4  | 5  | 6  | 7  |

18. When at work it is hard to find time to unwind.  
   | Strongly Disagree | Strongly Agree |
   | 1  | 2  | 3  | 4  | 5  | 6  | 7  |

19. In my working environment things can change very quickly without much warning.  
   | Strongly Disagree | Strongly Agree |
   | 1  | 2  | 3  | 4  | 5  | 6  | 7  |

20. I believe that in my working environment I need to be constantly aware of my surroundings.  
   | Strongly Disagree | Strongly Agree |
   | 1  | 2  | 3  | 4  | 5  | 6  | 7  |

21. When at work it is hard to get mental relief from my working environment.  
   | Strongly Disagree | Strongly Agree |
   | 1  | 2  | 3  | 4  | 5  | 6  | 7  |

22. When at work there are few opportunities to step away from my role.  
   | Strongly Disagree | Strongly Agree |
   | 1  | 2  | 3  | 4  | 5  | 6  | 7  |

23. I believe that in my working environment there is a constant need to be looking and listening for trouble.  
   | Strongly Disagree | Strongly Agree |
   | 1  | 2  | 3  | 4  | 5  | 6  | 7  |

24. In my working environment I am often surrounded by identifiable threats to my safety.  
   | Strongly Disagree | Strongly Agree |
   | 1  | 2  | 3  | 4  | 5  | 6  | 7  |

25. In my working environment anything could happen at any time.  
   | Strongly Disagree | Strongly Agree |
   | 1  | 2  | 3  | 4  | 5  | 6  | 7  |

26. When at work it is hard to get downtime.  
   | Strongly Disagree | Strongly Agree |
   | 1  | 2  | 3  | 4  | 5  | 6  | 7  |

27. I believe that in my working environment, my own safety can be directly affected by my actions.  
<p>| Strongly Disagree | Strongly Agree |
| 1  | 2  | 3  | 4  | 5  | 6  | 7  |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>28. I believe that my working environment is unsafe.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>29. I believe that in my working environment it is important not to let my guard down.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>30. I believe that my working environment is one in which there can be serious consequences for even the most routine task.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>31. I believe that in my working environment there is a constant potential for serious harm coming to myself.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>32. In my working environment there is a constant possibility that I will be exposed to traumatic events.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>33. In my working environment it is common to see disturbing things happen.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>34. I believe that my working environment is dangerous.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>35. I believe that in my working environment it is common to see things that are visually shocking.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>36. Even when completing routine tasks at work there is a constant potential for things to change very quickly.</td>
<td>Strongly Disagree</td>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>
The environment in which you work is often challenging and can involve facing a range of unique difficulties and challenges. When responding to the following questions, think carefully about how you tend to respond when things are particularly tough at work. You may find that you use a range of ways to manage the challenges you face depending on what is going on at work but try to think about what you seem to do when work is particularly challenging. Don’t answer on the basis of whether it seems to be working or not, just whether or not you're doing it.

Please rate how often you do the following things when work has been particularly challenging by selecting a number between 1 and 7 (1 = Never, to 7 = Always).

“When things are tough at work and I am feeling overwhelmed…

<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I drink alcohol as a way to cope.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>2. I smoke cigarettes as a way to cope.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>3. I use drugs as a way to cope.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>4. I take time off to avoid the situation.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>5. I tend to close up.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>6. I engage in behaviours that I know are harmful to myself.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>7. I tend to avoid thinking about how I am feeling.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>8. I try not to think about the tough experiences I have at work.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>9. I have confrontations with my loved ones.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>10. I turn to friends to talk about it.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>
### When things are tough at work and I am feeling overwhelmed…

<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>11. I speak with workmates to help me manage.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>12. I look to others to help me manage.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>13. I turn to counselling or other professional support services to help me manage.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>14. I am able to keep the things that happen at work separate from my life.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>15. I take the time to try and make sense of the things that have happened.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>16. I rely on my ability to communicate with others to get me through.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>17. I continue to engage in social activities as a way to manage.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>18. I make sure that I take the time to engage in physical activity.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>19. I rely on humour to manage.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>20. I am able to calm myself down easily.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>21. I make sure that I take things one thing at a time.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>22. I take time off work to refresh and recover.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>23. I try to think about different ways I might be able to tackle the problems I face.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>24. I try to use my problem solving skills to work my way through the situation.</td>
<td>Never</td>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

Version 3. 09/06/15
We would like to ask you some questions about how you feel you have been affected by your work. With this in mind, please select a number between 1 and 7 (1 = Never to 7 = Always) that you feel reflects how much you have been feeling the following states due to your work.

**“How much has your work made you feel...”**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Never</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>That it was difficult for you to enjoy things.</td>
<td>Never</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>2.</td>
<td>Down.</td>
<td>Never</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>3.</td>
<td>Stressed.</td>
<td>Never</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>4.</td>
<td>Anxious.</td>
<td>Never</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>5.</td>
<td>Angry.</td>
<td>Never</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>6.</td>
<td>Your mood was out of your control.</td>
<td>Never</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>7.</td>
<td>Like you don't feel much at all.</td>
<td>Never</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>8.</td>
<td>Overwhelmed.</td>
<td>Never</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>9.</td>
<td>Like the bad things that happen at work are all your fault.</td>
<td>Never</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>10.</td>
<td>Like you can’t stop thinking about the bad things that happen in your life.</td>
<td>Never</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>11.</td>
<td>Distracted.</td>
<td>Never</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>12.</td>
<td>Unengaged with your duties while working.</td>
<td>Never</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>13.</td>
<td>Like you are having difficulty sleeping.</td>
<td>Never</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>14.</td>
<td>Unmotivated.</td>
<td>Never</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>15.</td>
<td>Like you find it difficult to get things done in a timely manner.</td>
<td>Never</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>16.</td>
<td>Content.</td>
<td>Never</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

*Version 3. 09/06/15*
Please take a moment to think about the following statements and rate your agreement with each statement by selecting a number between 1 and 7 (1 = Strongly Disagree, to 7 = Strongly Agree).

<table>
<thead>
<tr>
<th>Statement</th>
<th>Never</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I feel my physical health has suffered due to my work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I take time off work even when I am well enough to come to work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I find it hard to stay mentally attentive when I am at work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I feel I am burnt-out at work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I feel my relationships with others have suffered due to my work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. I feel a sense of satisfaction due to my work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Congratulations! You are now finished with the survey. Thank you for participating in our study.

Version 3. 09/06/15
## Appendix K: List of ISF and EA Response Strategies

### Table 13.

*List of Interpersonal/Solution Focused (ISF) Response Strategies and Emotional/Avoidant (EA) Response Strategies*

<table>
<thead>
<tr>
<th>ISF Strategies</th>
<th>EA Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Skills</td>
<td>Drinking Alcohol</td>
</tr>
<tr>
<td>Conflict Management Skills</td>
<td>Self-isolation</td>
</tr>
<tr>
<td>Help Seeking</td>
<td>Self-harm</td>
</tr>
<tr>
<td>Trauma Processing Skills</td>
<td>Emotional Disconnection</td>
</tr>
<tr>
<td>Social Engagement</td>
<td>Venting</td>
</tr>
<tr>
<td>Humour</td>
<td>Lack of Physiological Response Control</td>
</tr>
<tr>
<td>Resource Recovery</td>
<td></td>
</tr>
<tr>
<td>Cognitive Flexibility</td>
<td></td>
</tr>
<tr>
<td>Problem Solving Skills</td>
<td></td>
</tr>
</tbody>
</table>

*Note. These response strategies were identified within empirical Study 3 using Exploratory Factor Analysis.*
CORRECTIONAL OFFICERS AND WORK-RELATED ENVIRONMENTAL ADVERSITY: A CROSS-OCCUPATIONAL COMPARISON

Justin S. Trounson, Jeffrey E. Pfeifer, and Christine Critchley
Swinburne University of Technology

This study explores differences in perceived work-related environmental adversity between correctional officers and those in other occupations in order to gain a clearer understanding of how prisons may impact those who work there. The Work-Related Environmental Adversity Scale (WREAS) was developed in order to assess the perceptions of employees across a range of occupations, including correctional officers. The instrument was completed by 440 participants and, as hypothesized, results indicate that correctional officer perceptions of work-related environmental adversity were significantly higher than the perceptions of those employed in all other occupations assessed (with the exception of police and emergency service workers). Further analyses of sub-scales indicated that correctional workers identify a number of specific environmental factors that impact their perceptions and subsequent well-being. The results of this study identify the importance of empirically assessing occupational workplace adversity as a component of the overall understanding of correctional officer well-being.

Keywords: well-being; occupation; prison; personnel; stress; wellness

Like many other frontline service personnel, correctional officers often work within a highly stressful work environment (Kunst, 2011). Among other things, it has been suggested that prison settings require officers to continually manage a range of unique, stressful, and often unpredictable workplace difficulties as part of their role (Ghadar, Mateo, & Sanchez, 2008; Harrell, 2011). Within this environment, officers can at times be exposed to highly traumatic or dangerous situations and, as a result, are a group with one of the highest rates of workplace-related injury and illness of any occupation in the United States (Bureau of Labor Statistics, 2014). For example, compared to those in the greater community, correctional officers have a higher prevalence of negative physical and psychological consequences related to workplace stress (see e.g., Johnson et al., 2009). Specific consequences include higher rates of depression (Sui et al., 2014); post-traumatic stress (Spinaris, Denhof, & Kellaway, 2012); substance abuse (see e.g., Svenson et al., 1995);

Author note: This research was made possible in part by Linkage Grant LP140100397 from the Australian Research Council. We would like to acknowledge Alfie Oliva, Rebecca Lacey, Joe Greet, Stephanie Louise, and Charlotte Boyce who were instrumental in providing assistance on a number of aspects of the project. We would also like to thank G4S for their continued support and collaboration throughout this study.

Correspondence concerning this article should be addressed to Justin Trounson, Department of Psychological Sciences and Statistics, Swinburne University of Technology, Hawthorn, Victoria, Australia 3122. E-mail: jstrounson@swin.edu.au

© Applied Psychology in Criminal Justice, 2016, 12(1)
heart disease (see e.g., Harenstam, Palm, & Theorell, 1988); and a heightened risk of developing a range of stress-related conditions (see e.g., Anson, Johnson, & Anson, 1997; Cheek & Miller, 1983; Harenstam et al., 1988). Given these findings, it is not surprising that correctional officers tend to engage in significant levels of absenteeism and other related, negative behaviors (Lambert, Edwards, Camp, & Saylor, 2005) as well as have one of the highest occupational burn-out rates of any profession (Hurst & Hurst, 1997; Keinan & Malach-Pines, 2007).

Given the above, it is not surprising that there has been a substantial increase in the development and implementation of preventative programs aimed at addressing the negative impacts of workplace stress and adversity across numerous high-risk occupational environments including: the police service (see e.g., Arnetz, Nevedal, Lumley, Backman, & Lublin, 2008), the military (see e.g., Griffith & West, 2013), emergency services (see e.g., Varker & Devilly, 2012) and nursing (see e.g., McDonald, Jackson, Wilkes, & Vickers, 2012). Similar initiatives have also begun to be implemented within correctional settings (see e.g., Bravo-Mehmedbasic et al., 2009; Finn, 2000; Leo, 2011; McCraty, Atkinson, Lipsenthal, & Arguelles, 2009; Shochet et al., 2011). As the prevalence of these programs has increased, however, so too has the call for evidence-based confirmation of their applicability and effectiveness (Dunt, 2009; Eidelson, 2011, 2012; Morgan & Garmon Bibb, 2011).

This call for evidence-based confirmation is not surprising given that the demonstration of a clear need for any training program is a first and fundamental step in the process of intervention development (Allen, 2006; Gagne, Wager, Gola, & Keller, 2005). As such, it may be argued that training programs designed to assist individuals in managing adversity must first provide evidence that the intended recipients actually perceive their environment as particularly adverse (Trounson & Pfeifer, 2013). Cross-occupational studies that specifically examine differences in perceived work-related environmental adversity may be one method of addressing this issue. Findings from such research would contribute to an evidence-based rationale for implementation and would provide guidance as to the types of occupational environments most in need of such training programs.

Despite the existence of a substantial literature examining correctional officer well-being and related health outcomes (Brower, 2013), there still remains a relative paucity of cross-occupational research that empirically establishes that working as a correctional officer is more adverse and stressful than working within other occupational environments (Dowden & Tellier, 2004). It appears that there is also a limited amount of research providing a deeper understanding of the specific environmental factors that contribute to the perception of workplace adversity for correctional officers (Trounson & Pfeifer, 2013). As such, conducting comparative research examining cross-occupational differences in relation to specific environmental factors that contribute to perceptions of workplace adversity will provide valuable insight into officers’ unique environmental context. Such research is pivotal to informing the development of future workplace initiatives aimed at addressing workplace adversity in corrections.
One current difficulty in examining perceived work-related environmental adversity across occupations is the lack of an appropriate measurement instrument. Although numerous self-report questionnaires are available that examine the impact of an individual’s working environment on their physical and psychological health (see e.g., Aust, Rugulies, Skakon, Scherzer, & Jensen, 2007; McCusker, Dendukuri, Cardinal, Katofsky, & Riccardi, 2005), there are very few instruments that assess the level of perceived adversity existing within one’s workplace (see e.g., Andrews et al., 2012). In addition, most measurement instruments are often either occupation-specific (Biggam, Power, Macdonald, Carcary, & Moodie, 1997; Lambert, Benight, Harrison, & Cieslak, 2012; Senol-Durak, Durak, & Gençöz, 2006) or event-specific (see e.g., Tehrani, Cox, & Cox, 2002), limiting their applicability to general cross-occupational comparisons and their ability to inform specifically the development of workplace initiatives for correctional officers.

In addition to the above, a review of the literature indicates that there is also a lack of self-report measurement instruments that can effectively evaluate employees’ perceptions of adversity within their work environment in a way that negates individual perceptions of the impact of the environment on one’s psychological or physical well-being. This is particularly important to consider when measuring perceived adversity within high-risk work environments, as individuals working in such situations (e.g., correctional officers) may be more likely to deny or underplay their experience of workplace stress due to a desire to present a ‘tough image’ (Cheek & Miller, 1983; Veneziano, 1984).

In order to address these limitations, a new measure of work-related environmental adversity was developed as part of this study. Unlike existing instruments, the current measure was designed to reduce the type of response bias described above by encouraging respondents to consider their working environment from a depersonalised viewpoint, requesting respondents to evaluate the nature of their working environment rather than report their personal stress reactions. Furthermore, the measure was designed to be used cross-occupationally and provides a general measure of work-related adversity that is not limited to any single event.

This study aims to fill two specific gaps in the existing literature. First, it aims to develop a valid and reliable measure of perceived work-related environmental adversity (i.e., the Work-Related Environmental Adversity Scale; WREAS). Second, the current study also aims to address the gap in the literature identified by Dowden and Tellier (2004) by assessing whether correctional officers perceive a greater level of work-related environmental adversity than those in other occupational roles and, if so, whether it is associated with a heightened level of stress reactions. The collection and analyses of these perceptions will subsequently assist with the systematic development of a sound evidence-base for the implementation of proactive psychological training within the field of corrections.

Based on the above, a number of specific hypotheses may be identified. First, given that previous research indicates that perception of adverse psychosocial factors in the workplace is related to an elevated risk of subsequent stress reactions (Gilbert-Ouimet, Trudel, Brisson, Milot, & Vezina, 2014), it is hypothesized that scores on the WREAS will...
positively correlate with established measures of perceived stress. More specifically, it is predicted that scores on the refined WREAS will be significantly and positively related to scores on the Perceived Stress Scale (Cohen, Kamarek, & Mermelstein, 1983) as well as the stress sub-scale of the DASS-21 (Lovibond & Lovibond, 1995).

Second, it is hypothesized that correctional officers will perceive significantly more work-related environmental adversity than those in other general community occupational roles, as measured by the WREAS. Finally, it is predicted that a significant positive correlation will exist between perceived workplace adversity and reported stress reactions in the correctional officer sample and that this association will be stronger for correctional officers than for those working in other general community occupational roles.

**METHOD**

**Participants**
A total of 461 participants completed the online survey. Respondents who completed less than 70% of the WREAS items were excluded from analysis, resulting in a final sample of 440. The sample consisted of 202 males and 238 females ranging in age from 18 to 67 years ($M = 35.81, SD = 10.63$). The average number of hours worked per week was 37.33 ($SD = 11.68$), with approximately 59.1% of all participants having attained a university degree.

**Materials**
After responding to a number of demographic items (e.g., gender, age, level of education, occupational affiliation, number of hours worked per week), respondents completed the Perceived Stress Scale (PSS; Cohen et al., 1983), DASS-21 (Lovibond & Lovibond, 1995), and the WREAS.

**Work-related Environmental Adversity Scale (WREAS)**
The WREAS was designed to measure differences in perceived workplace adversity across occupational categories to assist in the establishment of an evidence base for the implementation of proactive psychological training programs within correctional settings. The concept of adversity was defined as the experience of hardship or suffering associated with trauma, distress, difficulty, or a tragic event (Luthar, Cicchetti, & Becker, 2000; Luthar & Cicchetti, 2000; Rutter, 1999). For the purposes of the current study, perceived work-related environmental adversity was defined as an individual’s view of their work environment as one in which such markers of adversity are likely to occur.

The WREAS is comprised of seven distinct concepts that have been previously associated with the experience of stress or adversity and have been examined across a range of occupational environments. As such, these seven factors were considered relevant and important markers of the presence of workplace adversity. Factors identified included perceived environmental threat (Rasmussen, Hogh, & Andersen, 2013); environmental unpredictability (Brodsky, 1984); need for vigilance (Warm & Parasuraman, 2008); expectation of workplace trauma (Denhof, Spinaris, & Morton, 2014; Rasmussen et al., 2013);
work-life separation (Armstrong, Atkin-Plunk, & Wells, 2015; Hämmig & Bauer, 2014); inability to achieve workplace respite (Drach-Zahavy & Marzuq, 2013); and the preoccupation with potential negative consequences of one’s actions (Pabst, Brand, & Wolf, 2013).

Items were designed to be unidirectional and easy to understand as well as encourage respondents to consider their working environment from a depersonalised viewpoint. Items were presented as statements to which respondents indicated their level of agreement on a 7-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). The WREAS was designed to allow interpretation of either the total scale score or at the sub-scale level, providing a more detailed profile of the factors contributing to respondents’ perception of work-related environmental adversity. Examination of the psychometric properties of the WREAS on item, sub-scale, and full-scale levels resulted in the development of a refined WREAS scale consisting of 36 final items (see results section for refinement process).

The refined 36-item WREAS measures an individual’s perception of workplace adversity by assessing respondents’ perceptions in relation to the seven aforementioned underlying adversity factors. The Environmental Threat sub-scale consists of seven items measuring the level of perception that one’s safety is compromised within one’s work environment. Environmental Unpredictability is measured with five items and can be conceptualised as the perception that one’s work environment is unpredictable. The Action Consequence sub-scale comprises five items designed to quantify the perception that one’s actions can result in serious negative consequences while at work. Need for Vigilance is measured with four items and can be understood as the perception of the need for continued, heightened attentiveness or hyper-awareness within one’s work environment. Five additional items comprise the Expectation of Workplace Trauma sub-scale and are designed to measure the level of perceived likelihood that one will be exposed to traumatic events in their work environment. The Inability to Achieve Workplace Respite sub-scale consists of five items measuring the level of perceived lack of reprieve from one’s occupational environment or occupational role at work. Finally, the Workplace/Life Separation sub-scale (five items) measures the perception that work invades one’s personal life.

A full-scale score can be determined by aggregating an individual’s score on each item and dividing it by the number of items to which they responded. Thus, full-scale scores range from 1-7, with higher scores indicating higher levels of perceived work-related environmental adversity. Sub-scale scores are derived in a similar manner, providing total sub-scale scores ranging from 1 to 7, with higher scores indicating a heightened perception of workplace adversity on any given sub-scale.

**Perceived Stress Scale (PSS)**. The PSS (Cohen et al., 1983) was used to assess the convergent validity of the WREAS. The PSS is a self-report measure designed to quantify participants’ level of perceived stress and has been shown to be a reliable and valid measure (Cohen et al., 1983; Lavoie & Douglas, 2011). The 10-item version of the PSS has demonstrated good internal reliability (α = .84 to .86) and construct validity in past studies (Cohen, Tyrrell, & Smith, 1991; 1993; Cohen & Williamson, 1991).
Depression Anxiety Stress Scale (DASS-21). The DASS-21 (Lovibond & Lovibond, 1995) is a well-established, standardized measure of depression, anxiety, and stress that also was used to assess the convergent validity of the WREAS. The stress sub-scale of the DASS-21 comprises seven items on which respondents rated the level of stress-related symptoms they experienced over the past week. Past research has demonstrated the DASS-21 to be a reliable and valid measure (Antony, Bieling, Cox, Enns, & Swinson, 1998; Henry & Crawford, 2005; Sinclair et al., 2012).

Education and Occupation. Level of education was used to assess the discriminant validity of the WREAS while criterion validity was assessed through examination of score differences between high-risk (e.g., police and correctional officers) and low-risk (e.g., sales and administrative staff) occupational categories.

RESULTS

Psychometric Properties of the WREAS

As this study is the first to use the WREAS, the refinement process and psychometric properties of the final 36-item instrument are first presented, followed by the results comparing level of perceived work-related environmental adversity across occupational categories. Based on scale-development recommendations outlined by Clark and Watson (1995), a systematic process was implemented in both the development and refinement of the item pool. To assess the discriminability of the proposed items, all 57 were initially screened for evidence of floor and ceiling effects, extreme standard deviation, and severe skewness and/or kurtosis. To assess the underlying factor structure of each of the seven sub-scales of the WREAS and to assist in the item refinement process, a set of one-factor congeneric confirmatory factor analytic measurement models for each sub-scale were then run using AMOS version 20. Items demonstrating weak factor loadings (i.e., λ < .35) with their respective sub-scale as well as weak inter-correlations with other items within each sub-scale (i.e., < .35) were identified for potential exclusion. The potential impact of item deletion on sub-scale alpha levels was then examined to assess the impact of item exclusion. These processes resulted in the identification of 13 items that displayed a range of psychometric properties indicative of poor fit with other related sub-scale items. These 13 items were excluded from the scale due to their poor psychometric properties and possible redundancy.

A multifactorial seven-factor model was then tested through Confirmatory Factor Analysis (CFA) using the remaining 44 items. A second order CFA was run with adversity set as a higher factor predicting all seven latent adversity factors. The results revealed that the model was not an acceptable fit with the data, \( \chi^2(895) = 3001.48, p < .001, \text{CFI} = .86, \text{TLI} = .86, \text{RMSEA} = .07, \text{estimate 90\% CI} (.07, .08), \text{SRMR} = .09 \). Examination of the modification indices suggested the inclusion of a correlational pathway between the Work/Life Separation and Inability to Achieve Workplace Respite sub-scales and between the Environmental Threat and Action Consequence sub-scales. These correlational pathways were included, and the revised model was then tested. Although inclusion of correlational pathways increased the model fit, the results indicated that the model was still not an ac-
ceptable fit with the data. Examination of the modification indices, squared multiple correlations and standardized residuals revealed eight, poorly-fitting items. All 8 were omitted from the final WREAS, and a final CFA was conducted using the remaining 36 items. Results indicated that the revised 36-item model was an acceptable fit with the data, \( \chi^2 (585) = 1526.21, p < .001 \), CFI = .92, TLI = .92, RMSEA = .06, estimate 90% CI (.06, .06), SRMR = .06. The final 36-item WREAS displayed acceptable psychometric properties on full scale, sub-scale, and item levels. Standardized regression weights, standard errors, and significance levels for each of the 36 items comprising the final WREAS are presented in Table 1. Means, standard deviations, theoretical ranges, and Cronbach’s alpha for the full scale WREAS and each of the seven sub-scales are presented in Table 2.

**Construct Validity for the WREAS**

A number of construct validity analyses were conducted in order to provide preliminary evidence of both convergent and discriminant validity for the WREAS.

**Convergent Validity.** Positive (albeit weak), significant correlations were found between WREAS full-scale scores and both the PSS \((r = .15, n = 368, p < .01)\) and the DASS-21 stress sub-scale \((r = .14, n = 366, p < .01)\) when examined across the whole sample irrespective of occupational affiliation. Furthermore, when examined solely within the correctional officer sample, these correlations between WREAS scores and both the PSS \((r = .67, n = 37, p < .001)\) and DASS-21 stress sub-scale \((r = .40, n = 37, p < .05)\) increased substantially in strength. Fisher’s r-z transformation was computed to assess whether the difference between correlations for correctional officers and the rest of the sample were significant. Results indicated that there was in fact a significant difference between officers and the rest of the sample in relation to the strength of the correlation between perceived work-related environmental adversity and the PSS, \(z = 3.26, p < .01\). No significant difference was identified between officers and the rest of the sample in relation to the strength of the correlation between perceived work-related environmental adversity and the DASS-21 stress sub-scale, \(z = 1.28, p > .05\).

**Discriminant Validity.** Participants’ level of education was used as a measure of discriminant validity for the WREAS. As expected, no significant relationship was found between WREAS full-scale scores and respondents’ level of education \((p > .05)\), providing preliminary evidence of discriminant validity.
Table 1. Standardized Regression Weights, Standard Errors and Significance Levels for Each of the 36 Items of the Work-related Environmental Adversity Scale (WREAS)

<table>
<thead>
<tr>
<th>Item number</th>
<th>β</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Threat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 1</td>
<td>.86*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 4</td>
<td>.88*</td>
<td>.01</td>
</tr>
<tr>
<td>Item 15</td>
<td>.86*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 24</td>
<td>.88*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 28</td>
<td>.80*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 31</td>
<td>.90*</td>
<td>.01</td>
</tr>
<tr>
<td>Item 34</td>
<td>.90*</td>
<td>.01</td>
</tr>
<tr>
<td>Environmental Unpredictability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 3</td>
<td>.73*</td>
<td>.03</td>
</tr>
<tr>
<td>Item 13</td>
<td>.87*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 19</td>
<td>.85*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 25</td>
<td>.86*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 36</td>
<td>.88*</td>
<td>.02</td>
</tr>
<tr>
<td>Action Consequence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 10</td>
<td>.66*</td>
<td>.03</td>
</tr>
<tr>
<td>Item 12</td>
<td>.85*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 16</td>
<td>.86*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 27</td>
<td>.78*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 30</td>
<td>.85*</td>
<td>.02</td>
</tr>
<tr>
<td>Need for Vigilance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 8</td>
<td>.74*</td>
<td>.03</td>
</tr>
<tr>
<td>Item 20</td>
<td>.83*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 23</td>
<td>.87*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 29</td>
<td>.77*</td>
<td>.03</td>
</tr>
<tr>
<td>Expectation of Workplace Trauma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 2</td>
<td>.83*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 9</td>
<td>.75*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 32</td>
<td>.93*</td>
<td>.01</td>
</tr>
<tr>
<td>Item 33</td>
<td>.93*</td>
<td>.01</td>
</tr>
<tr>
<td>Item 35</td>
<td>.88*</td>
<td>.02</td>
</tr>
<tr>
<td>Inability to Achieve Workplace Respite</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 5</td>
<td>.72*</td>
<td>.03</td>
</tr>
<tr>
<td>Item 18</td>
<td>.88*</td>
<td>.01</td>
</tr>
<tr>
<td>Item 21</td>
<td>.90*</td>
<td>.01</td>
</tr>
<tr>
<td>Item 22</td>
<td>.78*</td>
<td>.03</td>
</tr>
<tr>
<td>Item 26</td>
<td>.88*</td>
<td>.02</td>
</tr>
<tr>
<td>Work/Life Separation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 6</td>
<td>.71*</td>
<td>.03</td>
</tr>
<tr>
<td>Item 7</td>
<td>.80*</td>
<td>.03</td>
</tr>
<tr>
<td>Item 11</td>
<td>.91*</td>
<td>.02</td>
</tr>
<tr>
<td>Item 14</td>
<td>.69*</td>
<td>.03</td>
</tr>
<tr>
<td>Item 17</td>
<td>.76*</td>
<td>.03</td>
</tr>
</tbody>
</table>

Note. * = p < .001.
Table 2. Means, Standard Deviation, Theoretical Ranges, and Cronbach’s Alpha for the Full-scale and each of the Seven Sub-scales of the WREAS

<table>
<thead>
<tr>
<th>Sub-scale</th>
<th>M</th>
<th>SD</th>
<th>α</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>WREAS Full Scale</td>
<td>3.52</td>
<td>1.38</td>
<td>.97</td>
<td>383</td>
</tr>
<tr>
<td>Environmental Threat</td>
<td>2.69</td>
<td>1.74</td>
<td>.95</td>
<td>428</td>
</tr>
<tr>
<td>Environmental Unpredictability</td>
<td>3.78</td>
<td>1.78</td>
<td>.92</td>
<td>427</td>
</tr>
<tr>
<td>Action Consequence</td>
<td>3.58</td>
<td>1.85</td>
<td>.90</td>
<td>433</td>
</tr>
<tr>
<td>Need for Vigilance</td>
<td>4.12</td>
<td>1.77</td>
<td>.87</td>
<td>427</td>
</tr>
<tr>
<td>Expectation of Workplace Trauma</td>
<td>3.36</td>
<td>1.96</td>
<td>.94</td>
<td>432</td>
</tr>
<tr>
<td>Inability to Achieve Workplace Respite</td>
<td>4.23</td>
<td>1.63</td>
<td>.92</td>
<td>423</td>
</tr>
<tr>
<td>Work/Life Separation</td>
<td>3.56</td>
<td>1.49</td>
<td>.88</td>
<td>430</td>
</tr>
</tbody>
</table>

Note. N = 440. α = Cronbach’s alpha co-efficient.

Occupational Differences on the WREAS

Means and standard deviations for the WREAS scores according to occupational category are presented in Table 3. A one-way, between groups ANOVA was conducted to compare perceptions of work-related environmental adversity across occupational categories. Occupational category was used as the independent variable, while full-scale total scores on the WREAS were used as the dependent variable. Levene’s test of Homogeneity of Variances was found to be insignificant (p > .05), suggesting equal variance between occupational groups. There was a significant difference between occupational categories in perceived work-related environmental adversity, $F(12, 382) = 28.83, p < .001$. Post-hoc comparisons using Tukey’s HSD test indicated that correctional officers scored significantly higher than all other occupational categories, with the exception of police and emergency services personnel (see Table 3). 

© Applied Psychology in Criminal Justice, 2016, 12(1)
Table 3. Mean Total Scores and Standard Deviations for the 36-item Work-related Environmental Adversity Scale (WREAS) by Occupational Categories

<table>
<thead>
<tr>
<th>Occupational Category</th>
<th>M</th>
<th>SD</th>
<th>Range</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correctional officers</td>
<td>5.36</td>
<td>.86</td>
<td>3.81-6.81</td>
<td>37</td>
</tr>
<tr>
<td>Police officers</td>
<td>5.51</td>
<td>.76</td>
<td>4.28-6.64</td>
<td>18</td>
</tr>
<tr>
<td>Emergency services personnel</td>
<td>4.87</td>
<td>.96</td>
<td>2.44-6.25</td>
<td>19</td>
</tr>
<tr>
<td>Military personnel</td>
<td>3.20*</td>
<td>1.25</td>
<td>1.44-5.39</td>
<td>18</td>
</tr>
<tr>
<td>Healthcare professionals</td>
<td>3.96*</td>
<td>1.07</td>
<td>1.42-5.89</td>
<td>24</td>
</tr>
<tr>
<td>Managerial personnel</td>
<td>3.03*</td>
<td>1.02</td>
<td>1.28-5.81</td>
<td>71</td>
</tr>
<tr>
<td>Tradespersons</td>
<td>3.92*</td>
<td>1.06</td>
<td>1.36-6.64</td>
<td>34</td>
</tr>
<tr>
<td>Teachers</td>
<td>3.22*</td>
<td>1.10</td>
<td>1.25-5.33</td>
<td>41</td>
</tr>
<tr>
<td>Admin/Clerical personnel</td>
<td>2.56*</td>
<td>.96</td>
<td>1.11-4.61</td>
<td>31</td>
</tr>
<tr>
<td>Sales personnel</td>
<td>3.01*</td>
<td>1.14</td>
<td>1.11-5.22</td>
<td>26</td>
</tr>
<tr>
<td>Science and research personnel</td>
<td>2.57*</td>
<td>.96</td>
<td>1.00-4.50</td>
<td>25</td>
</tr>
<tr>
<td>IT personnel</td>
<td>2.35*</td>
<td>1.01</td>
<td>1.19-4.81</td>
<td>19</td>
</tr>
<tr>
<td>Other</td>
<td>3.02*</td>
<td>.79</td>
<td>1.86-4.67</td>
<td>20</td>
</tr>
</tbody>
</table>

Note: * = Total WREAS mean scores found to be significantly different to correctional officers at $p < .001$ level.

A set of one-way, between groups ANOVA's were then performed to explore differences between occupational groups on each of the seven sub-scales of the WREAS. Means and standard deviations for each of the sub-scales of the WREAS by occupational category are presented in Table 4. Post hoc comparisons using the Tukey’s HSD test indicated significant differences were found between correctional officers and other occupational categories on all sub-scales of the WREAS at the $p < .001$ level (see Table 4).
Table 4. Means and Standard Deviations for Each of the Seven Sub-scales of the WREAS by Occupational Category and Significant Differences in Mean Scores between Correctional Officers and all other Occupational Categories

<table>
<thead>
<tr>
<th>Occupational Category</th>
<th>ET</th>
<th>EU</th>
<th>AC</th>
<th>NV</th>
<th>WT</th>
<th>WR</th>
<th>WL</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correctional officers</td>
<td>5.40</td>
<td>6.12</td>
<td>5.81</td>
<td>6.29</td>
<td>5.73</td>
<td>5.14</td>
<td>3.21</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>(1.14)</td>
<td>(.74)</td>
<td>(.98)</td>
<td>(.76)</td>
<td>(1.01)</td>
<td>(1.37)</td>
<td>(1.55)</td>
<td></td>
</tr>
<tr>
<td>Police officers</td>
<td>5.01</td>
<td>5.95</td>
<td>5.95</td>
<td>5.75</td>
<td>6.21</td>
<td>5.12</td>
<td>4.50</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>(1.21)</td>
<td>(1.18)</td>
<td>(1.07)</td>
<td>(.85)</td>
<td>(.87)</td>
<td>(1.16)</td>
<td>(1.30)</td>
<td></td>
</tr>
<tr>
<td>Emergency services personnel</td>
<td>3.46*</td>
<td>5.64</td>
<td>5.66</td>
<td>5.69</td>
<td>6.09</td>
<td>4.74</td>
<td>3.89</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>(1.69)</td>
<td>(1.23)</td>
<td>(1.12)</td>
<td>(1.23)</td>
<td>(.97)</td>
<td>(1.68)</td>
<td>(1.38)</td>
<td></td>
</tr>
<tr>
<td>Healthcare professionals</td>
<td>2.76*</td>
<td>4.43*</td>
<td>3.83*</td>
<td>3.97*</td>
<td>4.88</td>
<td>4.45</td>
<td>3.76</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>(1.46)</td>
<td>(1.38)</td>
<td>(1.40)</td>
<td>(1.36)</td>
<td>(1.66)</td>
<td>(1.71)</td>
<td>(1.36)</td>
<td></td>
</tr>
<tr>
<td>Tradespersons</td>
<td>3.81*</td>
<td>4.02*</td>
<td>5.03</td>
<td>4.87*</td>
<td>3.19*</td>
<td>3.86*</td>
<td>3.21</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>(1.34)</td>
<td>(1.28)</td>
<td>(1.24)</td>
<td>(1.21)</td>
<td>(1.28)</td>
<td>(1.38)</td>
<td>(1.40)</td>
<td></td>
</tr>
<tr>
<td>Military personnel</td>
<td>2.41*</td>
<td>3.35*</td>
<td>3.61*</td>
<td>3.95*</td>
<td>2.77*</td>
<td>3.44*</td>
<td>3.09</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>(1.44)</td>
<td>(1.36)</td>
<td>(1.86)</td>
<td>(1.72)</td>
<td>(1.34)</td>
<td>(1.43)</td>
<td>(1.09)</td>
<td></td>
</tr>
<tr>
<td>Managerial personnel</td>
<td>1.79*</td>
<td>3.11*</td>
<td>2.51*</td>
<td>3.44*</td>
<td>2.54*</td>
<td>4.28</td>
<td>3.85</td>
<td>71</td>
</tr>
<tr>
<td></td>
<td>(1.05)</td>
<td>(1.37)</td>
<td>(1.17)</td>
<td>(1.42)</td>
<td>(1.48)</td>
<td>(1.52)</td>
<td>(1.55)</td>
<td></td>
</tr>
<tr>
<td>Teachers</td>
<td>1.89*</td>
<td>3.36*</td>
<td>2.88*</td>
<td>3.94*</td>
<td>2.40*</td>
<td>4.58</td>
<td>4.22*</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>(1.18)</td>
<td>(1.51)</td>
<td>(1.41)</td>
<td>(1.75)</td>
<td>(1.12)</td>
<td>(1.72)</td>
<td>(1.40)</td>
<td></td>
</tr>
<tr>
<td>Admin/Clerical personnel</td>
<td>1.61*</td>
<td>2.93*</td>
<td>2.20*</td>
<td>2.98*</td>
<td>2.35*</td>
<td>3.80*</td>
<td>3.16</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>(1.02)</td>
<td>(1.38)</td>
<td>(1.12)</td>
<td>(1.32)</td>
<td>(1.69)</td>
<td>(1.69)</td>
<td>(1.61)</td>
<td></td>
</tr>
<tr>
<td>Sales personnel</td>
<td>2.38*</td>
<td>3.18*</td>
<td>3.27*</td>
<td>4.07*</td>
<td>2.64*</td>
<td>4.51</td>
<td>2.96</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>(1.40)</td>
<td>(1.76)</td>
<td>(1.74)</td>
<td>(1.79)</td>
<td>(1.50)</td>
<td>(1.81)</td>
<td>(1.34)</td>
<td></td>
</tr>
<tr>
<td>Science and Research personnel</td>
<td>1.89*</td>
<td>2.60*</td>
<td>3.04*</td>
<td>2.90*</td>
<td>2.78*</td>
<td>2.86*</td>
<td>2.88</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>(1.08)</td>
<td>(1.28)</td>
<td>(1.59)</td>
<td>(1.60)</td>
<td>(1.54)</td>
<td>(1.51)</td>
<td>(1.29)</td>
<td></td>
</tr>
<tr>
<td>IT personnel</td>
<td>1.53*</td>
<td>2.40*</td>
<td>2.02*</td>
<td>2.99*</td>
<td>1.95*</td>
<td>3.43*</td>
<td>3.11</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>(.89)</td>
<td>(1.41)</td>
<td>(1.08)</td>
<td>(1.76)</td>
<td>(1.40)</td>
<td>(1.57)</td>
<td>(1.59)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>1.99*</td>
<td>3.00*</td>
<td>2.65*</td>
<td>3.42*</td>
<td>2.24*</td>
<td>4.19</td>
<td>4.09</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>(.95)</td>
<td>(1.52)</td>
<td>(1.27)</td>
<td>(1.53)</td>
<td>(1.54)</td>
<td>(1.09)</td>
<td>(1.15)</td>
<td></td>
</tr>
</tbody>
</table>

Note. * = WREAS sub-scale mean scores found to be significantly different for correctional officers at \( p < .001 \) level. ET = environmental threat, EU = environmental unpredictability, AC = action consequence, NV = need for vigilance, WT = expectation of workplace trauma, WR = inability to achieve workplace respite, WL = workplace/life separation.

DISCUSSION

This study provides a number of unique contributions to the existing literature on occupational well-being, especially with regard to correctional officers. First, it offers the possibility of a new self-report instrument capable of quantifying an individual’s perception of adversity within their working environment. Second, the results provide a preliminary examination of the psychometric properties of the WREAS as well as identifying a number of specific sub-components related to perceived workplace adversity (e.g., envi-
ronmental threat, need for vigilance). The results also provide empirical support for the hypothesis that correctional officers perceive their working environment as more adverse than those working in a number of other professions and analogous to those working within other high-risk professions, such as police and emergency services. The present study also provides a deeper understanding of the specific adversity factors that may lead correctional officers to perceive their working environment as particularly challenging. Finally, the findings offer some preliminary evidence that perceptions of workplace adversity may be more strongly associated with reported stress reactions for officers than those in other general community professions.

**Psychometric Properties of the WREAS**

Overall, the psychometric properties of the 36-item WREAS appear to be largely satisfactory. In terms of reliability, the total scale and each of the seven sub-scales were found to be internally consistent. Confirmatory Factor Analysis indicates that the proposed theoretical model was a reasonable fit for the data. In terms of validity, the WREAS displayed acceptable criterion validity values. As predicted, a significant (albeit weak) positive correlation was identified between WREAS scores and scores on both the PSS and the stress sub-scale of the DASS-21. However, these results were reflective of the type of tangential relationship assumed to exist between perceived work-related environmental adversity and self-reported stress reactions. Work-related adversity is likely to be only one of numerous factors that contribute to the development of stress reactions in employees, which may explain the weakness of the observed correlation between WREAS scores and existing measures of perceived stress. Furthermore, the fact that respondents working within high-risk work environments (i.e., correctional officers, police, and emergency service workers) scored high on the WREAS provides further evidence of the validity of the instrument. Finally, in line with predictions, preliminary evidence of discriminant validity also was attained through demonstrating no significant relationship between WREAS scores and respondent’s level of education.

**Occupational Differences**

Comparing levels of perceived work-related environmental adversity between correctional officers and other occupational categories provided several valuable insights. When compared at the full-scale level, correctional officers scored significantly higher on the WREAS than all other occupational categories assessed, with the exception of police and emergency services personnel. These findings provide support for the hypothesis that correctional officers perceive significantly more work-related environmental adversity than those in other general community occupational roles. Furthermore, these findings are consistent with past research (see e.g., Kunst, 2011) and with current available industry statistics (see e.g., Bureau of Labor Statistics, 2014) that identify the occupation as one that often involves high levels of risk to personal safety.

It is particularly notable that correctional officers scored significantly higher than military personnel on the full-scale and all seven sub-scales of the WREAS. In fact, examination of mean scores across occupational categories indicated that military personnel scored more similarly to that of the general community than any of the high-risk occupation-
These findings are inconsistent with past research that has indicated that military personnel demonstrate heightened prevalence rates of stress-related illnesses (Hourani, Williams, & Kress, 2006) and are prone to experience adverse and traumatic events within their working environment. Although there are several potential factors that may have contributed to this unexpected finding it is most likely due to sampling issues. Of the 18 military personnel sampled in the study, 14 had not been deployed to a theatre of war or engaged in war-like service. This provides important contextual information and a potential explanation for the relatively low WREAS scores attained for military personnel. It is likely that the duties of military personnel when not deployed may resemble the duties found in other community occupations, such as those found in administrative or office-based occupational roles.

The results of the current study provide evidence that correctional officers perceive a significantly heightened level of work-related environmental adversity compared to those working in other general community occupations and akin to those working in police and emergency service sectors. Furthermore, it should be noted that the correlations between WREAS scores and established measures of physical and psychological manifestations of stress were significantly stronger for correctional officers than for the rest of the sample. These findings further highlight the need for industry-based training and provide the foundations for an evidence-based rationale for the implementation of preventative psychological training programs aimed at addressing the effects of workplace adversity within the correctional industry.

The rationale for the implementation of such programs is strengthened by the fact that similar initiatives already function within other occupational groups found to perceive high levels of work-related environmental adversity (i.e., police and emergency services). For instance, in 2009 the US Army established the $125 million dollar Comprehensive Soldier Fitness (CSF) program, which was quickly adopted as part of standard soldier training. The goal was to address the high prevalence of mental illness amongst US Army personnel introducing a preventative approach that encouraged the development of mental wellness through fostering psychological resilience (Casey, 2011). Since the implementation of the CSF program, other military institutions have implemented their own resilience-based training programs (Bowles & Bates, 2010; Morgan & Garmon Bibb, 2011). For example, after a comprehensive independent review of mental health issues within the Australian Defence Force (ADF; Dunt, 2009), the Australian government committed $83 million dollars to a four-year mental health reform (Department of Defence, 2009). The review stipulated that the Mental Health Strategy should specifically include components of preventative resilience training. In response, the ADF expanded their “BattleSMART,” Self-Management and Resilience Training program to improve the psychological resilience of ADF members (Boer, 2009). The correctional industry may benefit from considering the implementation of similar, evidence-based, preventative, training programs designed specifically for correctional settings (Trounson & Pfeifer, in press).

The sub-scale level results outlined in the present study also provide valuable insight into how correctional officers view their work environment and the specific factors...
that may contribute to their heightened perception of work-related environmental adversity. The findings suggest that correctional officers perceive their work environment as being both highly threatening and unpredictable. Furthermore, correctional officers appear to perceive their work environment as one in which they are highly likely to experience traumatic events and one which warrants a heightened level of both constant vigilance and extreme caution in relation to their actions. Moreover, correctional officers endorsed these perceptions more strongly than those in other general community occupational roles. In contrast, the differentiation between correctional officers and those working within general community occupational roles was far less clear with regard to both their perception of their ability to achieve workplace respite at work, and their ability to effectively separate their work and home lives.

These findings may have a number of important implications for the development of interventions designed to assist correctional officers to manage perceived work-related environmental adversity. For example, training programs designed for correctional officers may benefit from either directly addressing, or addressing the negative effects of, employees' perceptions of workplace threats, their perception of environmental unpredictability, and their heightened expectation of experiencing workplace trauma. It should be noted, however, that although correctional officers scored more similarly to the general public on both the Work/Life Separation and Inability to Achieve Workplace Respite sub-scales, both were found to be associated with the self-reporting of stress reactions within the correctional officer sample. This suggests that both factors still may be important to address in the development of proactive psychological training programs, despite officers scoring similarly to those in the greater community. Furthermore, although correctional officers scored particularly high on the Need for Vigilance sub-scale, it was not significantly associated with self-reported stress reactions, suggesting that the need for hyper-vigilance may not be an effective target for preventative training programs.

There were a number of limitations inherent in the present study that warrant acknowledgement. Although the PSS and stress subscale of the DASS-21 were included as convergent validity measures, it may have been appropriate to also include an established measure of work stress to assist with further establishing the convergent validity of the WREAS, and future research should address this. Secondly, as the current study predominantly sampled non-deployed military personnel as compared to deployed personnel actively engaged in war-like duties, comparisons between correctional officers and military personnel should be interpreted with a high degree of caution.

Further research is warranted that can examine differences in perceived work-related environmental adversity between military personnel engaged in war-like services and those non-deployed military personnel to provide a deeper understanding of the association between deployment and workplace adversity in a military context. Moreover, further research providing a comprehensive examination of the unique psychometric properties of the 36-item WREAS would be useful. In addition, further research examining intra-occupational differences in work-related environmental adversity would be a welcome addition to the literature. For example, an exploration of the impact of proximity to inmates on both
full-scale and sub-scale WREAS scores within correctional officer samples may prove a valuable extension of the current study.

In conclusion, this research has provided new insight into the ways in which the working environment of correctional officers may differ from the working environments of other professions found within the general community. It demonstrated that correctional officers perceive a heightened level of work-related environmental adversity compared with those in other professions and akin to that observed in police and emergency service workers. It has also provided a deeper understanding of the types of factors that may underpin the work-related environmental adversity perceived by correctional officers. Furthermore, this study provides the scientific community with a new self-report questionnaire capable of measuring an individual’s perception of work-related environmental adversity. It is hoped that the results of this study will encourage a deeper exploration of work-related environmental adversity and provide an evidence-based rationale for the development and implementation of preventative, psychological training programs aimed at assisting correctional officers to better manage the adversity they face in the workplace.

REFERENCES


CORRECTIONAL OFFICERS AND WORK-RELATED ENVIRONMENTAL


Received: 7/2015
Accepted: 3/2016


© Applied Psychology in Criminal Justice, 2016, 12(1)
Appendix M: Authorship Indication Forms
Swinburne Research

Authorship Indication Form
For PhD (including associated papers) candidates

NOTE
This Authorship Indication form is a statement detailing the percentage of the contribution of each author in each associated paper. This form must be signed by each co-author and the Principal Coordinating Supervisor. This form must be added to the publication of your final thesis as an appendix. Please fill out a separate form for each associated paper to be included in your thesis.

DECLARATION
We hereby declare our contribution to the publication of the paper entitled:

Corrections Officers and Workplace Adversity: Identifying Interpersonal, Cognitive & Behavioral Response Tendencies

First Author
Name: Justin Trounson
Signature: [Signature]
Percentage of contribution: 95 %
Date: 11/05/2016
Brief description of contribution to the ‘paper’ and your central responsibilities/role on project:

Second Author
Name: Jeffrey Pfeifer
Signature: [Signature]
Percentage of contribution: 5 %
Date: 11/05/2016
Brief description of your contribution to the ‘paper’:

Third Author
Name: [Name]
Signature: [Signature]
Percentage of contribution: ___ %
Date: ___ / ___ / ___
Brief description of your contribution to the ‘paper’:

Fourth Author
Name: [Name]
Signature: [Signature]
Percentage of contribution: ___ %
Date: ___ / ___ / ___
Brief description of your contribution to the ‘paper’:

Principal Coordinating Supervisor: Jeff Pfeifer
Signature: [Signature]
Date: 11/05/16

In the case of more than four authors please attach another sheet with the names, signatures and contribution of the authors.

Authorship Indication Form 1 of 1
Swinburne Research

Authorship Indication Form
For PhD (including associated papers) candidates

NOTE
This Authorship Indication form is a statement detailing the percentage of the contribution of each author in each associated paper. This form must be signed by each co-author and the Principal Coordinating Supervisor. This form must be added to the publication of your final thesis as an appendix. Please fill out a separate form for each associated paper to be included in your thesis.

DECLARATION
We hereby declare our contribution to the publication of the 'paper' entitled:

Perceived Workplace Adversity and Correctional Officer Well-being: Examining the Impact of Officer Response Styles and Identifying Implications for Training.

First Author
Name: Justin Tronson
Signature: [Signature]
Percentage of contribution: 90 %
Date: 11/05/2014
Brief description of contribution to the 'paper' and your central responsibilities/role on project:

Second Author
Name: Jeffrey Pfeifer
Signature: [Signature]
Percentage of contribution: 5 %
Date: 30/05/16
Brief description of your contribution to the 'paper':

Third Author
Name: Jason Skues
Signature: [Signature]
Percentage of contribution: 5 %
Date: 30/05/16
Brief description of your contribution to the 'paper':

Fourth Author
Name: [___]
Signature: [Signature]
Percentage of contribution: [___]
Date: [___]
Brief description of your contribution to the 'paper':

Principal Coordinating Supervisor: Name: [___]
Signature: [Signature]
Date: 30/05/16

In the case of more than four authors please attach another sheet with the names, signatures and contribution of the authors.

Authorship indication Form 1 of 1
Copyright Declaration

“I warrant that I have obtained, where necessary, permission from the copyright owners to use any third party copyright material reproduced in the thesis (such as artwork, images, unpublished documents), or to use any of my own published work (such as journal articles) in which the copyright is held by another party (such as publisher, co-author).”

Signed

Mr Justin Trounson
18/06/2016
Appendix O: Summary Table of Work-related Stress Impacts

Table 14.  
*Summary Table of the Impact of Work-related Stress on Societal, Industry and Individual Levels*

<table>
<thead>
<tr>
<th>Financial Costs Related to:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Societal Impacts</strong></td>
</tr>
<tr>
<td>• Absenteeism</td>
</tr>
<tr>
<td>• Presenteeism</td>
</tr>
<tr>
<td>• Reduced productivity</td>
</tr>
<tr>
<td>• Increased mental health claims</td>
</tr>
<tr>
<td>• National/State health system burden</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financial Costs Related to:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Correctional Industry Impacts</strong></td>
</tr>
<tr>
<td>• Job Stress</td>
</tr>
<tr>
<td>• Burnout</td>
</tr>
<tr>
<td>• Reduced institutional safety</td>
</tr>
<tr>
<td>• High staff turnover rates</td>
</tr>
<tr>
<td>• Reduced job satisfaction</td>
</tr>
<tr>
<td>• Increased overtime payments and staff shortages</td>
</tr>
<tr>
<td>• Reduced organisational commitment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Physical health issues including:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Individual Officer Impacts</strong></td>
</tr>
<tr>
<td>• Heart Disease</td>
</tr>
<tr>
<td>• Hypertension</td>
</tr>
<tr>
<td>• Obesity</td>
</tr>
<tr>
<td>• Musculoskeletal Issues</td>
</tr>
<tr>
<td>• Chronic Pain</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Psychological health issues including:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Individual Officer Impacts</strong></td>
</tr>
<tr>
<td>• Depressive symptoms</td>
</tr>
<tr>
<td>• PTSD-related symptoms</td>
</tr>
<tr>
<td>• Anxiety-related symptoms</td>
</tr>
<tr>
<td>• Increased work/family conflict</td>
</tr>
<tr>
<td>• Decreased life satisfaction</td>
</tr>
<tr>
<td>• Interpersonal issues</td>
</tr>
<tr>
<td>• Substance use/abuse</td>
</tr>
<tr>
<td>• Sleep disorders</td>
</tr>
<tr>
<td>• Risk of suicide and self-harm</td>
</tr>
</tbody>
</table>