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## **DOCTORAL THESIS**

### **The Development and Validation of a Multi-strategy Test for Detection of Malingering of Posttraumatic Stress Disorder**

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Bond University

School of Humanities and Social Sciences

Department of Psychology

**The Development and Validation of a Multi-Strategy Test for Detection of  
Malingering of Posttraumatic Stress Disorder**

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A thesis submitted in fulfilment of the Doctor of Philosophy

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July 2011

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I, Jacqueline Susan Yoxall, acknowledge that this thesis, completed under the supervision of Assistant Professor Mark Bahr, results from my own work and the authorship of the document herein is mine.

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*Truth lives on in the midst of deception* (Friedrich Von Schiller)

**Author Note**

This thesis describes studies conducted as ongoing work towards a PhD dissertation. Parts of these studies have been presented at various national and international conferences over the period of 2007 to 2010. Parts of Study One (Chapter Four) have been published under the authorship of Yoxall, Bahr and Barling (2010). Acknowledgment is also made to Bond University School of Humanities and Social Sciences Research for research grants awarded to the author during PhD.

**Abstract**

In forensic practice a psychologist must be competent in detection of a specific form of purposeful lying for the purpose of obtaining an external incentive, that is, malingering. The malingering literature base has expanded considerably in the last 10 years and several strategies have been established as effective in differentiating feigning from genuine presentation (Bianchini, Mathias & Greve, 2001; Iverson & Lange, 2005; Rogers, 2008a). In the detection of malingered psychopathology the most notable developments are that of Rogers' response styles (Rogers, 1984; 2008a; Rogers & Bender, 2003) which form the theoretical basis of the best validated measure of feigned psychopathology, the Structured Interview of Reported Symptoms (Rogers, Bagby & Dickens, 1992). In the detection of malingered neurocognitive deficit, there is an array of strategies that have been validated in detecting insufficient effort or other forms of feigning of dysfunction (Bianchini, Mathias & Greve, 2001; Franzen, Iverson & McCracken, 1990; Slick, Sherman & Iverson, 1999).

In addition to these strategies, many researchers have proposed a range of clinical or behavioural markers that may be indicative of malingering (Garriga, 2007; Hall & Hall, 2006; Malone & Lange, 2007; Resnick, 1988). However many such approaches to detection of malingering are yet to be operationalised. Most malingering research has focused on the feigning of psychopathology in general. In recent years more attention has been given to the feigning of specific disorders.

Posttraumatic stress disorder is particularly vulnerable to malingering because of the subjective nature of the symptoms; the heterogeneity of the genuine clinical group and the appeal of this disorder to the legal fraternity because of the required link to an aetiological event (Hall & Hall, 2006; Lees-Haley, 1986; Rosen, 2004). The challenges in detection of malingered PTSD have generated increasing proposals of a multi-strategy approach to

detection of malingering and in particular, to the malingering of PTSD (Eakin, 2004; Guriel & Fremouw, 2003; Hall & Hall, 2006; Lebourgeois, 2007).

The goal of this research was two fold; firstly to explore current malingering detection practice, gaps in knowledge and strategies that may improve detection of malingering; and secondly, to apply a multi-strategy approach to detection of malingering within the scope of a specific disorder – that is, posttraumatic stress disorder.

The research goals were addressed through four interrelated studies. Study One estimated malingering prevalence and explored the current state of knowledge of Australian psychologists ( $n=102$ ) through a survey of current practices and beliefs in regard to malingering and the detection of malingering. Study Two analysed patterns of validity indices elevation on the Personality Assessment Inventory in a forensic sample ( $n=792$ ) to explore the manner in which negative distortion may be attempted. The results of these two studies, in addition to a comprehensive literature review, informed the establishment of a multi-strategy measure of malingering specific to the feigning of PTSD. Study Three critically investigated effective strategies for detection of malingering of general psychopathology, but also explored the utility of adaptation of strategies more commonly used to detect feigning of neurocognitive deficits. This study incorporated both research knowledge and applied psychological practice in a multi-pronged approach to the establishment of a new instrument for detection of feigning of PTSD.

Study Four comprised the initial validation of the new measure via a simulation study, incorporating a clinical PTSD sample, honest non-clinical respondents and naïve and coached simulators ( $n=105$ ). The thesis concludes with consideration of the utility of a multi-strategy approach to malingering and discussion of detection strategies found to be most effective in discriminating between simulators and those with genuine PTSD. Key findings are presented



and the limitations of the studies are reviewed before recommendations are made for future research.

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## Chapter One

“The prudent clinician will recall that any disorder can be feigned, and that highly subjective states...are particularly prone to simulation.”

(Hamilton Feldman & Cunnien, 2008, p133).

Wherever there is reliance upon subjective reports of function, there is opportunity for intentional distortion. Psychological assessment relies heavily upon honest reporting of a subjective experience. In forensic practice where external incentives are common (such as financial compensation or avoidance of custodial sentences), malingering is a form of purposeful lying that psychologists must be aware of.

A definition of malingering was first offered by the American Psychiatric Association in the Diagnostic Statistical Manual of Mental Disorders, Third Edition (DSM-III) in 1980, and has changed little over time (American Psychiatric Association, 1984; 1994; 2000). The current Diagnostic Statistical Manual for Mental Disorders, (4<sup>th</sup> Edition, Text Revision), also known as DSM-IV (TR) (American Psychiatric Association, 2000) identifies malingering as an *additional condition that may be a focus of clinical attention* and defines malingering as:

“...the intentional production of false or grossly exaggerated physical or psychological symptoms, motivated by external incentives such as avoiding military duty, avoiding work, obtaining financial compensation, evading criminal prosecution, or obtaining drugs”. (American Psychiatric Association, 2000, p739).

Similarly, the ICD-10 identifies malingering as “...the intentional production or feigning of either physical or psychological symptoms or disabilities, motivated by external

stresses or incentives” (World Health Organisation, 1999, p174). It is further noted that malingering is more prevalent in ‘legal and military circles’ rather than ‘ordinary civilian life’ (World Health Organisation, 1999, p174).

It must be emphasised that malingering is a deliberate behaviour and not a form of psychopathology. Malingering is fabrication of symptoms that are not present or an extreme exaggeration of symptoms that do exist. Thus, mild embellishment of symptoms by a patient who is anxious to be believed would not meet the definition of malingering (Rogers, 2008a). As it is currently conceptualised, malingering is differentiated from Factitious Disorder due to the presence of external incentives (American Psychiatric Association, 2000). Furthermore, malingering differs from Conversion Disorder or other Somatoform Disorders due to the deliberate nature of the behaviour (American Psychiatric Association, 2000). Malingering is variable across time and contexts. As Fauteck (1995) explained, ‘...malingering is dependent upon circumstances and qualifies as a state rather than a trait condition, whereas factitious disorders can more reasonably be considered trait conditions’ (p4).

Resnick (1997) has further proposed three forms of malingering - *partial malingering*, *pure fabrication* and *false imputation*. Whilst malingering could involve production of fake symptoms (known as pure fabrication), it can also include the exaggeration of existing psychopathology (known as partial malingering). An example of partial malingering is the individual who has experienced resolution of most symptoms of depression, but grossly exaggerates the severity of symptoms in order to achieve a desired outcome. Furthermore, dependent upon the requirement of the circumstances, Resnick suggested that malingering might also involve deliberate false attribution of symptoms to a specific cause. An example of this would be the individual who attributes his back pain to lifting a heavy box at work

rather than acknowledging an injury sustained later that same day whilst paying a social game of squash. Another example would be a woman who develops major depression as a result of marital distress could be deliberately and falsely attributed to the after effects of a motor vehicle accident<sup>1</sup>.

Malingering is a frequent consideration for forensic psychologists and the malingering literature base has expanded considerably in the last 10 to 15 years (Rogers, 2008a). Some accounts of confirmed malingerers have been published (Rosen, 1995) whilst other studies have exposed substantial malingering and fraud in particular populations (Burkett & Whitley, 1998; Frueh, Elhai, Grubaugh, Monnier, Kashdan & Sauvageot et al., 2005).

### **Malingering in Psychological Assessment**

Several conundrums exist in malingering detection research. First of all, that which cannot be reliably identified cannot be accurately measured. This is a substantial obstacle to determination of the prevalence of malingering. Prevalence of malingering is difficult to establish because in order to attain the desired outcome, malingerers seek to avoid detection. One could argue that those malingerers that are identified by health, or legal professionals, can be considered to be unsuccessful malingerers. That is, malingerers who have failed in their quest to convince others that they have a genuine disorder. In contrast, those malingerers who remain undetected can be considered to be successful malingerers (Grieve & Mahar, 2010). The dilemma for researchers and practitioners is that it is not clear whether

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<sup>1</sup> Whilst Resnick's considerations are valuable in conceptualising the various ways that an individual might malingering, differentiation of these types of malingering would be extraordinarily difficult in practice. With current malingering detection strategies such precision in differentiating between the three types of malingering as proposed by Resnick would seem an unrealistic goal.

successful malingerers got about their deception in a fundamentally different manner than those who are unsuccessful in malingering.

Those studies that have attempted to estimate the prevalence of malingering have generally relied upon the use of retrospective estimation of malingering. Participants in such studies are commonly forensic psychologists, neuropsychologists and other psychologists frequently engaged in psychological assessments where external incentives exist for the attainment of a diagnosis of psychopathology. Retrospective estimation studies conducted in North America have estimated the rate of malingering in psychological assessment to be between 8-39%, dependent on the context within which the assessment is conducted (Larrabee, 2003; Lees-Haley, 1997; Mittenberg, Patton, Canyock & Condit, 2002; Rogers, Sewell & Goldstein, 1994; Slick, Tan, Strauss & Hultsch, 2004). Given these figures, and several case studies where malingering has been proved through confession or unequivocal evidence of function (Rosen, 1995), it is reasonable to assume that malingering does occur at a sufficient rate to be an important consideration in psychological assessment. Furthermore, the prevalence of malingering may in fact be greater in many forensic contexts such as fitness to stand trial assessments or personal injury litigation where the stakes are often much higher (Lees-Haley, 1986; Palermo, Perracuti & Palermo, 1996; Rubenzer, 2011; Williams, Lees-Haley & Djanogly, 1999).

Although the prevalence of malingering is difficult to ascertain, it is clear that even a small incidence of malingering has a substantial impact upon individuals and society (Rogers, 2008a). For example, the financial impact of even a 10% rate of malingering on industry, government and individuals is substantial. In Australia, financial compensation for psychological injury can be accessed in broad and varied arenas, including, but not limited to: seven State and Territory based worker's compensation schemes; a federal workers' compensation scheme; various motor vehicle accident insurance schemes and State traffic

accident compensation funds; personal injury litigation; common law claims for psychological injury; service disability pensions; and victims of crime compensation.

In the State of Queensland alone, psychiatric and psychological workers' compensation claims accounted for only 2.4% of claims finalised in 2009/2010 (Q-Comp, 2010, p 36), but were the most expensive of all injury types, costing \$41.3 million in statutory claim payments (p23 & 36). These figures exclude the costs incurred from the 228 psychiatric and psychological injury claims that progressed to common law once the statutory claim was finalised (QComp, 2010, p 40). The reported average settlement cost of such claims for the 2009/2010 year was \$124,248 and defendant/ plaintiff cost was \$11, 844 (Q-Comp, 2010, p 41). These figures indicate a total cost of approximately \$72.3 million. A conservative estimate of a 10% rate of malingering within this group would account for more than \$7.2 million dollars in only *one* Australian State workers compensation scheme, in *one* financial year. Undetected malingering drains treatment resources and compensation that should be allocated to those with genuine dysfunction.

Psychology stands on the scientific method wherein empirical measurement is the foundation of the assessment of psychopathology (Gerrig & Zimbardo, 2010; Nolen-Hoeksema, 2011; Rogers, 1990a). The goal of psychology is to uncover the universal laws that are considered to underlie behaviour; and then to understand and measure such behaviour; in order to predict and control behaviour (Gerrig & Zimbardo, 2010). It can be argued then, that the capacity of the psychologist to accurately determine of the absence of a condition must be considered to be as fundamental as the capacity of that psychologist to accurately determine that a condition is present. These two competencies are merely the two sides of the same coin. The accurate differentiation between genuine and non-genuine psychopathology is essential to the preservation of the integrity of psychological assessment. When the diagnosis of a psychological disorder is directly related to financial gain or other

overt incentives, the potential for malingering must be acknowledged and investigated (Rosen, 2004a).

However, the detection of malingering is a complex and challenging matter, not least of all because mistakes in classification carry substantial negative consequences. A false positive determination of malingering is likely to destroy an individual's access to rightful compensation and or treatment and bring devastating disrepute. Furthermore, the incidence of criminal prosecution for fraud following determination of malingering is apparently increasing (Safety Institute Of Australia Inc., 2011).

Alternately, as already noted in the previous example of the potential cost of 10% prevalence of undetected malingering in a State workers compensation scheme, a false negative determination of malingering will create unnecessary cost to society. The consequences of undetected malingering may include elevation of insurance premiums; and additional burden to health care systems. In the criminal arena, undetected malingering may result in undeserving offenders receiving reduced punishment for their crimes.

Furthermore, failure to identify malingering impacts those with genuine disorders by reducing access to compensation and treatment. Put simply, false positive determination of malingering causes substantial cost to the individual, whereas false negative determinations of malingering cause substantial cost to society (Rogers, 2008a).

In addition to the impact on the individual or society, undetected malingering impacts upon our knowledge and expertise regarding assessment of psychopathology. Accurate detection of malingering ensures preservation of the validity of psychological assessment; protects research databases and ensures the upholding of the psychologist's position as a scientist practitioner (Rosen, 2004a). For these reasons, it has been proposed (Brussel &

Hitch, 1942) that in certain assessment contexts, malingering should be one of the first possibilities considered, but the last to be accepted.

One of the challenges facing psychologists is that some disorders are relatively easy to feign (Resnick, 1984; Ziskin, 1984). For example, malingering of depression requires an individual to feign a flat or low mood, lack of motivation and energy, poor concentration and to report problems with sleep, appetite and other well know symptoms of the condition. With adequate research and observation of others with depression, one can make a reasonable attempt to feign this common condition. However, it's comparatively harder to malingering retrograde amnesia, mania, or catatonic schizophrenia due to the extraordinary concentration or physical exertion that would be required to simulate such a condition.

The emergence of the World Wide Web and associated technological advances have meant that information about psychological conditions is more readily available to most people and thus the task of learning to successfully malingering is somewhat easier now than in previous years. In developed countries, millions of people now have access to highly specialised information about aetiological models, symptoms, diagnosis and treatment of hundreds of psychological disorders (Resnick, 2008; Ruiz, Drake, Glass, Marcotte & van Gorp, 2002). Whereas the sourcing of a current copy of the DSM or a psychological test manual may have been a protracted or even impossible process for a would-be malingerer twenty years ago, before the World Wide Web, there are now a number of websites dedicated to the DSM-IV TR available via a quick Google search, (for example, [www.psyweb.com](http://www.psyweb.com)).

Substantial information about psychopathology is provided to the public through health education on the internet, television, radio and in print-based media. The depiction of trauma and mental illness in mainstream media, (such as documentaries about psychological recovery from natural disasters and terrorist attacks) has increased substantially



(Angermeyer & Matschinger, 2003; Dietrich, Heider, Matschinger & Angermeyer, 2006; Pirkis, Dare, Blood, Rankin, Williamson, Burgess et al. 2009).

In addition to improving public knowledge about mental illness, the ever increasing volume of this publicly available information also serves to provide models of psychological disorders for those motivated to mangle. What is intended as education quickly becomes a 'how to' manual for a potential malingerer (Resnick & Knoll, 2005; Rogers 2008b). An example can be seen in the immensely successful 'Beyond Blue' project which has benefited many in terms of education, and understanding of depression and access to treatment. The site offers lists of symptoms, self check lists, personal accounts of the depicted disorders and more (see <http://www.beyondblue.org.au>). However, a potential malingerer can 'study up' on the disorder and relevant symptoms and can even test him or herself on self-scoring depression inventories. These types of websites are a formidable 'candy shop' of information freely and easily available for the individual who, for example, may be motivated to mangle depression or other psychological conditions in a worker's compensation claim.

As well as providing information on symptomatology of specific disorders, some websites provide updates of malingering research and malingering detection techniques for professionals engaged in forensic practice (see <http://deception.crimepsychblog.com>). Such sites are developed for the purpose of disseminating knowledge amongst psychologists, psychiatrists and researchers. However the vulnerability of such information to misuse is self-evident. Websites that disseminate detailed information about purpose, content and scoring of widely used psychometric measures, represent a serious threat to psychological test security and have potential to render well validated measure as vulnerable to malingering. For example, the current Wikipedia entry for the Rorschach test provides 10 original ink blots

and information about the most common responses to these items. (see <http://en.wikipedia.org/wiki/Rorschach>).

The use of such information to aide malingering is confirmed in various forums and blogs where effective strategies for faking a psychological disorder or ‘beating’ a psychological test are regularly discussed. Some websites are transparent in their encouragement of individuals to feign psychopathology to achieve desired outcomes in forensic contexts. For example, a north American group advocating for the rights of separated parents has posted tips on their website to assist others to achieve a specific outcome as a consequence of undergoing psychological assessment with a Rorschach test (Separated Parenting Access & Resource Center, n.d.) Another website, <http://prison talk.com>, offers a virtual meeting place where individuals can discuss an array of issues relating to their experience of having a loved one incarcerated, including advice to each other about ways that they can assist their partner in prison to ‘beat the MMPI-2 in order to obtain parole. Some sites reveal not only the items on the a major psychometric measure (such as the MMPI-2 (see <https://falseallegations.com>) but also direct the reader to published professional texts for instructions regarding scale development, administration, scoring and interpretation. Contributors to such forums claim that such information allows people to practice their answers so that an MMPI-2, Rorschach, TAT or other test cannot be *used against them* in an assessment.

Whilst the overall benefit of technology and expansive health education to the general population is not questioned, it is important for psychologists to be aware that information can be used for many purposes and in the area of detection of malingering, the current era of advanced information technology brings with it a new set of complex challenges

Information available suggests that people do use such information to assist them to gain a desired outcome in a psychological assessment. Ruiz, Drake, Glass, Marcotte and van Gorp (2002) investigated the accessibility of web-based information to assist in successful malingering. The authors found that with limited information and time, students were easily able to access websites that present direct threat to security of psychological tests.

Some individuals receive coaching from their legal representatives in order to present with a psychological impairment and benefit financially. This provision of information to assist malingering by the legal fraternity is not as uncommon as mental health practitioners may believe. Wetter and Corrigan (1995) surveyed 70 practicing lawyers and 150 law students and found that 42% of the lawyers and 22% of the students believed that clients should receive as much information as possible about testing before referral for psychological evaluation. Furthermore, 47-48% of the lawyers and thirty-six percent of the students believed that they should always inform clients referred for a psychological evaluation about validity scales on tests. Thirty-six percent of the law students were of the same opinion. Other research has also confirmed that some lawyers provide information about specific disorders, including DSM criteria and research articles, or more subtle suggestions that presentation of certain symptoms may result in a lucrative diagnosis. For example, Rosen (1995) reported admissions from claimants who had survived a ship sinking that their lawyers had given them varied degrees of coaching in the symptoms of PTSD. Youngjohn (1995) reported a case where a lawyer admitted to a judge that he had coached his client before the client underwent psychological testing. Aronson, Rosenwald & Rosen (2001) gave a sobering reminder that the client-attorney privilege provides a degree of protection and confidentiality around lawyer-client discussions or coaching before psychological assessment. Although psychologists are bound by a strong code of ethics regarding psychological test security (American Psychological Association, 2010; Australian Psychological Society,

2007), lawyers are not held to the same in regard to psychological test security (Aronson, Rosenwald & Rosen, 2001).

Other evidence from malingering and lie detection literature suggests that psychologists' confidence in their capacity to detect deceit may not be consistent with their actual ability and accuracy (Bourg, Conner & Landis, 1995; Ekman & O'Sullivan, 1991; Ekman, O'Sullivan & Frank, 1999). In short, there is evidence that some psychologists may be overly confident about their capacity to identify feigning. It is somewhat alarming then that many psychologists continue to state in their clinical reports and in their research papers that they have *ruled out* the chance of malingering on little more than the subjective appraisal that the individual is presenting in an 'honest' manner (Rosen, 2004b).

The malingering literature is rich with suggestions of behavioural or clinical clues of malingering. These clues are sometimes referred to as *red flags* of assessment, and include a list of verbal and non-verbal behaviours that may be indicative of deception; together with specific factors present in the individual's current personal circumstances; along with the reported employment, health, litigation or criminal history (Hall & Hall, 2006; 2007; Resnick, 1988; 1993; 1995; 2003; 2007). Whilst there may be merit in use of some such clues to malingering, many proposed 'indicators' of malingering have not been operationally defined or empirically tested. Variations in the acceptance of these cues reflect different theoretical perspectives on what motivates malingering and how people go about malingering. However, there are practical difficulties in the operationalisation of such theories into strategies, not the least being that these 'indicators' have been devised in clinical and legal settings which do not lend themselves to thorough research evaluation. Thus the lack of standard definitions or assessment procedures renders this approach to detection of malingering to have little utility. Given this, it is not surprising that malingering research has repeatedly shown that reliance on unstructured interviews and or clinical judgement alone

produces poor rates of accurate malingering detection (Blanchard & Hickling, 2004; Hickling, Blanchard, Mundy & Galovski, 2002; Rogers, 2008a).

In the last two decades, much progress has been made in identifying strategies that are effective in accurate differentiation of malingering from genuine presentation. A strategy for malingering detection is defined by Rogers, (2008b) as an approach to malingering detection which has a conceptual basis that can be empirically tested across measures, usually via both simulation and or known-groups studies.

Several strategies, such as symptom validity testing, or the use of the floor effect have been established and validated in the detection of malingering of neurocognitive deficits (Bianchini, Mathias & Greve, 2001; Slick, Sherman & Iverson, 1999). However, the malingering of neurocognitive deficits is markedly different from the malingering of psychopathology, most notably because the feigning of a psychological disorder requires the role play or *creation* of psychopathology whereas feigning of neurocognitive deficit requires suboptimal performance or *flat lining*, which may be easier to achieve. Consequently the detection strategies developed in each domain of malingering detection (neurocognitive deficit or psychopathology) are substantially different.

Several strategies for detection of malingered psychopathology have been devised and validated (Franklin & Thomson, 2005; Rogers, 1984; 2008b; Rogers & Bender, 2003; Rogers, Jackson, Sewell & Salekin, 2005). Most notably, the response style of over-endorsement (amplification) and or presentation of odd or unusual symptoms, not seen in the genuine population (unlikely symptoms) have been repeatedly observed in those who attempt to feign psychopathology. Detection of such response styles in structured interviews and self report inventories has consistently differentiated between simulators and genuine clinical samples

and between suspected malingerers and genuine clinical groups, across a range of conditions (Rogers, 2008b; 2008c).

Malingering detection strategies for malingering of neurocognitive deficit and psychopathology have developed concurrently, but remained relatively independent. Most research studies to date have focused upon either the detection of malingered cognitive impairment, or the detection of malingering of general psychopathology (Sellers, Byrne & Golus, 2006). A few studies have employed symptom validity testing, (traditionally a neuropsychological strategy for detection of malingering), in the detection of malingered psychopathology, namely posttraumatic stress disorder, with promising results (Morel, 1998; Rosen & Powel, 2003).

Despite advancement in the conceptualisation of malingering over the last 20 years, and the development of various malingering detection instruments (Rogers, 1997) research indicates that most psychologists lack knowledge or skills in malingering detection (Cunnien, 1997; Rogers, 2008a). If the state of play is such that malingering does occur in some contexts and psychologists' capacity to detect malingering varies greatly, then further research into malingering detection strategies is warranted.

Overall there has been no development of a systematic approach to the detection of malingering. However, the identification of the different approaches to detection of malingering provides an opportunity to explore the utility of a multiple strategy approach to detection of malingering and potentially to develop an empirical standard for evaluating malingering. Indeed in recent years, the call for consideration of a multi-strategy approach to detection of malingering has been recognised (Eakin, 2005; Guriel & Fremouw, 2003; Lebourgeois, 2007; Rosen, 1995; 2005). However there has been limited research exploring the validity and potential benefit of such an approach.

A primary aim of this investigation is to explore the use of multiple malingering detection strategies to identify which are best able to differentiate malingering from genuine presentation and also, to provide insight into the behaviour of malingering. This will allow the rejection of strategies which fail to discriminate malingerers from genuine clients and identify useful strategies for detecting malingering. If, as may be expected, several different strategies illuminate different aspects of malingering, then this will provide an opportunity to enhance detection of malingering. The convergence of multiple sources of evidence presents increased confidence in the validity of a measure, which in turn allows confidence in clinical interpretations. In order to consider the multi-strategy approach to detection of malingering overall, it may be useful to focus on the feigning of a particular type of disorder that presents with both psychological and cognitive symptoms. One such disorder is posttraumatic stress disorder (PTSD).

### **Malingering of posttraumatic stress disorder**

It is somewhat ironic that the only DSM-IV TR condition that requires a specific event in its aetiology (and is therefore a lucrative diagnosis in compensation claims), is also one of the disorders that is most easy to mangle. Posttraumatic stress disorder had a controversial birth in the psychological literature, nearly 30 years ago, when it was initially included in the DSM-III (American Psychiatric Association, 1980), and it remains one of the most contentious psychological diagnoses.

By current definition, PTSD is an anxiety disorder that arises from exposure to a traumatic event, wherein the individual experienced subjective distress. Between 39-70% of the population are likely to experience a traumatic event across the course of their lifetime (Breslau, Davis, Andreski & Peterson, 1991; Breslau, Kessler, Chilcoat, Schulz, Davis & Andreski, 1998; Kessler et al., 1995; Resnick, Kilpatrick, Dansky, Saunders & Best, 1993) dependent on various factors. However, only some individuals who are exposed to trauma

will go on to develop PTSD. Lifetime prevalence of PTSD has been consistently measured at between 7-12% in response to most types of traumatic events (Breslau, et al, 1998; Kessler et al, 1995, Resnick et al., 1993). However the prevalence of PTSD following certain traumas, such as combat or rape may be as high as 30 to 80% (Kessler et al., 1999; Resnick, Falsetti, Kilpatrick & Freedy, 1996).

The gateway criterion for diagnosis of PTSD is the experience of a traumatic event and associated significant distress. Changes to the definition of Criterion A for the diagnosis of PTSD over the last 30 years has seen broadening of the definitions of the aetiological event required for diagnosis of PTSD from the extreme experience of war, natural disasters or similar extreme traumas to more common daily stressors such as motor vehicle accidents or even workplace sexual harassment (McNally, 2003; Rosen, 2005). The legal fraternity identify PTSD as a potentially lucrative diagnosis, as by definition it links an event with a specific form of injury (Rosen, 2006). The requirement of an aetiological event for diagnosis and, the acceptance of this broader definition of trauma, has resulted in the diagnosis of PTSD being established as highly lucrative in the pursuit of financial compensation in a range of legal arenas (Resnick, 2003; Rosen & Taylor, 2006). Similarly, the diagnosis can have a significant impact to the criminal process by providing suggestions of diminished capacity at time of offence, diminished capacity to stand trial and providing mitigation in sentencing (Sparr & Atkinson, 1986; Rosen, 1995).

The actual condition of PTSD involves a range of complicated and variable symptoms (Litz, Miller, Ruef & McTeague, 2002). Once the exposure criterion is met and the individual meets the threshold for subjective distress, a specific combination of six or more symptoms, out of seventeen symptoms, is required for diagnosis. Thus, the genuine PTSD population is highly heterogeneous. Diagnosis of PTSD is heavily dependent upon self-report



because many symptoms (such as nightmares) are not able to be observed in a clinical interview.

Adding to the complexity of the clinical picture is co morbidity. Posttraumatic stress disorder has a high rate of co morbidity. In their well-known National Comorbidity Study, Kessler et al., (1995) found that in the US population, persons with PTSD were more likely to have a co morbid disorder, than those with any other primary diagnosis. Common co morbid conditions to a primary diagnosis of PTSD include mood disorders, other anxiety disorders and substance abuse (Creamer, Burgess & McFarlane, 2001; Kessler et al., 1995). This level of co morbidity results in multiplicity of symptoms, which is both a challenge to the assessor, and an opportunity for the malingerer. It is easier to malingering a disorganised range of psychological symptoms than to closely mimic a well-defined disorder (Rogers, 2008b). Rather than raise suspicions of malingering, variability in feigned symptoms may well be misattributed by a psychologist to the complexity of genuine posttraumatic stress disorder. When these factors are considered, it is not surprising that claims for psychological injury in disability pensions, insurance or personal injury litigation, have escalated since the inclusion of PTSD in the DSM-III (Resnick, 1997, 2003; Rosen, 1995; 2004b).

There are several factors that render the condition of PTSD vulnerable to malingering. The first is the broad definition of trauma and the subjective nature of the 'gateway' criterion of the experience of distress. A second factor is the heavy reliance upon self-report for diagnosis. Another factor is the linkage of the condition to an aetiological event, a feature that makes PTSD unique in the DSM-IV TR and exceptionally appealing to lawyers. Furthermore, genuine PTSD involves a highly variable clinical picture with both cognitive symptoms and psychological symptoms. High rates of co morbidity also contribute to a complicated clinical picture which is much easier to feign than other conditions which are more narrowly defined. Finally, public interest in human response to trauma and the

construct of PTSD has led to extensive public health education regarding this condition and frequent representation of the condition in popular literature, movies and media. Thus, there is substantial information available to individuals on how to feign a disorder that can be extremely lucrative in some forensic settings (Burgess & McMillan, 2003; Calhoun, Earnst, Tucker, Kirby & Beckham, 2000; Frueh et al., 2005; Hickling et al., 2002; Resnick, 1993, 1997; Rosen, 2004b).

The vulnerability of PTSD to malingering was identified shortly after the inclusion of the disorder in the DSM. In 1986, Lees-Haley (1986) noted the subjectivity of the diagnosis and the applicability of the aetiologic event to the legal pursuit of compensation. He subsequently predicted that the disorder would be favoured in legal circles when he stated, “If mental disorders were listed on the New York stock exchange, PTSD would be the growth stock to watch.” (Lees-Haley, 1986, p17). The concern regarding malingering wasn’t acknowledged by the American Psychiatric Association until 1994 when a malingering caution was included in the diagnostic considerations for PTSD in the fourth edition of the DSM (American Psychiatric Association, 1994). The DSM-IV then warned that malingering should be ruled out prior to any diagnosis of PTSD (American Psychiatric Association, 1994; Rosen, 2006). This caution remains in place in the current DSM-IV TR (American Psychiatric Association, 2000). The cautionary guideline states, “Malingering should be ruled out in those situations in which financial remuneration, benefit eligibility, and forensic determinations play a role” (American Psychiatric Association, 2000, p.467). Psychologists engaged in both clinical and forensic work are frequently requested to conduct psychological assessment to evaluate the impact of trauma and diagnosis of PTSD (Resnick, 2003; Rogers, 1997). However, given the lack of a gold standard measure of detection of malingered PTSD (Guriel & Fremouw, 2003; Rosen & Powel, 2003) it is not surprising that research has indicated that both researchers and practitioners working with individuals with reported

PTSD, have largely ignored the malingering caution or the recommendation to only diagnose PTSD when malingering has been ruled out (Cunniën, 1997; Rosen & Taylor, 2006).

Several malingering detection strategies have proved effective in the detection of malingering of general psychopathology (Rogers, 1997), but are less effective in detecting malingering of PTSD (Guriel & Fremouw, 2003). Furthermore, those measures that do utilise validated detection strategies are often time consuming; do not explore genuine presentations of genuine PTSD; or produce an unacceptable false positive rate (Eakin, 2005; Elhai, Gray, Naifeh, Butcher, Davis, Falsetti, et al., 2005).

If it is accepted that malingering does occur in a significant proportion of certain populations, both in Australia and overseas; and that PTSD is particularly vulnerable to malingering, then the capacity of psychologists to accurately detecting malingering of PTSD must be addressed. Psychologists need to develop and practice effective detection of malingering during psychological assessment, particularly when there is a claim of exposure to trauma. In order to investigate these problems, the following study is proposed.

### **The Purpose**

There are several goals in this investigation. The first goal is to explore current practice in detection of malingering. The second is to identify gaps in knowledge strategies that may improve detection of malingering. The third goal is to develop and apply a multi-strategy approach to the detection of malingering of PTSD. These goals are addressed through four interrelated studies.

### **Study One**

In Study One, the prevalence of malingering within an Australian forensic population will be identified. and to identify attitudes, beliefs and practices of psychologists that may significantly influence malingering detection. Further to this, the study investigates gaps in

knowledge and practice as pertains to malingering detection. To achieve this, an existing Canadian survey instrument (Slick et al., 2003) is adapted to explore Australian psychologists' attitudes, beliefs and practices in regard to malingering detection. The survey sample includes psychologists currently engaged in psychological assessment within a psycho-legal or forensic context. The survey reviews Australian psychologists' conceptualisation of malingering and their perceptions regarding clinical indicators of malingering. The survey also explores the detection strategies most commonly employed by psychologists and the decision-making processes undertaken in screening for malingering. The survey also seeks clinicians' retrospective estimations of malingering prevalence in Australian practice.

### **Study Two.**

Study Two further explores indicators of negative response distortion in a forensic sample. This is achieved through a review of the frequency of elevation of the malingering scales on the Personality Assessment Inventory (PAI; Morey, 1991) in a mixed forensic sample and a large workers compensation pre-liability sample. The Negative Impression Management Scale (NIM) of the PAI incorporates the unlikely symptoms detection strategy whilst the Malingering Index (MAL) utilises patterns of unlikely and amplified symptoms. Rogers' Discriminant Function (RDF) employs a statistical strategy of discriminant function to separate malingerers from honest respondents. The performance of each of these validity scales is analysed in an archival dataset drawn from cases assessed for worker's compensation, personal injury or criminal matters within three psychology practices in Queensland and New South Wales. This study provides valuable information about the manner in which individuals may attempt to present a negative profile of functioning on psychometric measures and the utility of a multiple strategy approach to analysis of suspected

response distortion. The results of these first two studies inform the third and fourth study in this research.

### **Study Three**

In Study Three effective strategies for detection of malingering of general psychopathology and malingering of neurocognitive deficits are critically investigated. The utility of these strategies are explored in the context of detection of malingering of PTSD. This study incorporates both research knowledge and applied psychological practice in a multi-pronged approach to the establishment of a new instrument for detection of malingering of PTSD. The multi-strategy method for detection of malingering of PTSD incorporates strategies found to be effective in detection of malingering of general psychopathology (Rogers 1984; 1997) and in detection of malingered cognitive deficits (Merten, 2005). An initial item pool is established, covering each of the strategies. This is further refined through an expert panel review. A final item pool is established which forms the new multi-strategy measure of PTSD and malingering of PTSD, named the *M4PTSD*.

### **Study Four**

Study four consists of a simulation study to explore the validity and reliability of the new multi-strategy measure in differentiating genuine from malingered PTSD. The experimental design incorporates both healthy participants without PTSD and participants with diagnosed PTSD. The healthy participants were allocated to one of three conditions, those being: honest responding, naïve simulation and coached simulation. Participants with diagnosed PTSD and the honest responder group of healthy participants are instructed to attend to test items in an honest and forthright manner. Healthy participants allocated to the simulation conditions are instructed to feign PTSD. Those in the coached simulation group are provided with written information about symptoms of PTSD.

The simulation study allows measurement of the capacity of the new multi-strategy measure to accurately differentiate between groups. Inclusion of established and validated measures of PTSD, depression, drug and alcohol in the test battery allows for determination of convergent and discriminant validity.

### **Development of Thesis**

In order to provide a background for the studies, a literature review of malingering detection strategies is undertaken in Chapter Two. The review includes the historical conceptualisation of malingering, the significance of explanatory model of malingering and the development of specific detection strategies. The literature review also addresses research concerns unique to the study of malingering, before exploring the utility of a multi-strategy approach to the detection of malingering.

The constructs of posttraumatic stress disorder and the malingering of PTSD are examined in Chapter Three. The review addresses the conceptualisation of the disorder throughout history, the complexity of PTSD symptomatology and the vulnerability of the diagnosis to malingering. The chapter addresses specific challenges in detection of malingered PTSD and detection strategies that have potential for adaptation to this task.

The survey of Australian psychologists' beliefs and practices regarding detection of malingering (Study One) is described in Chapter Four. The archival file review of elevations of validity scales on the Personality Assessment Inventory in a forensic sample (Study Two) is described in Chapter Five. Chapter Six presents the argument for multi-strategy assessment of malingering and describes the development of the new multi-strategy measure for detection of malingering of PTSD. Chapter Seven describes the initial validation of the measure. Chapter Eight concludes the thesis with exploration of each hypothesis in relation to the application of outcomes. Key findings are presented and the limitations of the studies

are reviewed, before recommendations are made for future research. Finally, the appendices section includes tables, figures, a copy of the measure and other relevant materials used.