

**Cognitive Abilities and Expert Assessment Practices in Fitness to Stand
Trial Evaluations: An Australian Study based on the Legal Standard of
*Presser***

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Abstract

Background: Fitness to stand trial (FST) is a cornerstone of western legal systems. Mental health experts play a crucial role in assisting the courts' fit or unfit determinations.

Research has identified psychiatric variables and cognition as important for FST. However, the specific cognitive abilities relevant to FST remains largely untested. Further, there is no research examining these variables within the Australian legal context.

Aims: The aim of the current body of research was to examine the role of cognition in FST assessments within an Australian context and in relation to the legal criteria of *R v Presser*.

Methods: The aim of the research reported in the present thesis was achieved by:

- 1) conducting a systematic literature review evaluating the evidence for specific cognitive abilities in predicting FST;
- 2) evaluating FST reports produced in NSW (2005-2010) in order to determine the evidence for specific cognitive abilities, psychiatric disorders and neurological dysfunction impacting FST and to inform expert assessment practices;
- 3) conducting semi-structured interviews with lawyers and forensic mental health experts in order to evaluate views regarding the role of neuropsychological assessment in FST cases and the relevance of cognitive abilities.

Results: Findings suggested that cognitive abilities, specifically verbal memory, nonverbal abilities and executive functioning, were relevant to the question of FST within the Australian legal context. Neurological disorders were also important in predicting a defendants' FST. Expert assessment techniques were highly variable. Reporting on the legal criteria of *Presser* was also variable. Finally, lawyers and mental health practitioners acknowledged an important role for neuropsychology within FST assessments; however understanding about the discipline of neuropsychology and its application was limited. Several key areas of improvement were identified and recommended.

Implications: Further research exploring the relationship between specific cognitive abilities and FST determinations is warranted as well as further education for both lawyers and forensic mental health experts conducting FST assessments in order to improve the quality and standard of FST reports.

Statement of Candidate

I hereby certify that the work presented in this thesis entitled, "Cognitive Abilities and Expert Assessment Practices in Fitness to Stand Trial Evaluations: An Australian Study based on the Legal Standard of *Presser*" has not previously been submitted for a higher degree to any other university or institution.

I also certify that this thesis is an original piece of research and that it has been written by me. Where appropriate, I have acknowledged any assistance provided to me by others in undertaking the research project and in preparing this thesis. I also certify that all sources of information and literature used in the preparation of this thesis have been indicated within the thesis and cited appropriately.

The research presented in this thesis was approved by the Macquarie University Human Research Ethics Committee (Reference: HE29MAY2009-D06597; dated 03/09/2009) and also by the Mental Health Review Tribunal of New South Wales (23/07/2010) and the Office of the Department of Public Prosecutions (10/06/2011). These approval letters appear in Appendix G.

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I wish to thank the MHRT of NSW and the Office of the Department of Public Prosecutions (ODPP) as well as the participants from the legal and forensic mental health community, who gave their time and shared their knowledge and experiences with me, without whom this thesis would not have been possible.

Finally, thank you to my family for your unwavering support. I am extremely grateful to my parents, John and Jan, and my Grandad, Bob, for their encouragement, love and generosity throughout my studies. To my extended family and friends, especially Dejan, Erin, Elian and Deepa, thank you for helping me through the really hard times and for your belief in my ability. Finally, to Sandy and Ellie, my "study buddies" who have never left my side and showered me with unconditional love. This thesis is dedicated to you.

Thesis Format

The current thesis is comprised of a general introduction chapter, including a section on the legal history of FST in Australia, followed by four empirical research papers and a final discussion chapter.

The general introductory chapter consists of a review of the existing literature. Justification for the current research is established and the general aims and hypotheses of the research are detailed. Similarly, the final discussion chapter is included to bring together the findings from each empirical paper and to relate these back to the overarching aims and hypotheses identified in the introduction.

The papers presented in chapters 3 to 6 were prepared in a format suitable for publication in peer-reviewed journals. At the time of submission, the journal articles presented in Chapters 3 and 4 have been published. Chapter 6 has been accepted for publication and is currently in press and due to be released online on 1st April 2015. The manuscript in Chapter 5 has been submitted for publication. Where possible, repetition of information is avoided. However, some repetition of information and references is unavoidable given the structure of the thesis by publication. In particular, the format and methodological details in Chapters 4 and 5 are similar. Tables and figures contained within each chapter have been re-numbered in consecutive order throughout the thesis for ease of reference. Copies of the published journal articles (Chapters 3 and 4) are presented in Appendices E and F.

References have been formatted in accordance with American Psychological Association (APA) 6th Edition. For ease of accessibility, the references for each of the stand alone published papers are included at the end of the chapter in which the published paper is presented. A penultimate reference list is included at the end of the thesis and appears as Chapter 8 for those references that do not appear in a standalone paper as well as those presented in a standalone paper.

The candidate's role in this research project comprised primary responsibility for all ideas, method selection, data collection including retrospective file review, participant recruitment and interviews, generating results and writing of all four papers (see table below) and introductory and discussion chapters.

Paper	Candidates Contribution		Supervisory Panel	
	(%)	Role	(%)	Role
The role of cognition in fitness to stand trial: A systematic review (Chapter 3)	90	Formulate research questions. Conduct literature searches. Evaluate literature. Preparation of manuscript.	10	Review drafts of manuscript.
The role of cognitive assessment in determining fitness to stand trial (Chapter 4)	90	Formulate research questions. Collection of all data. Analyses of data. Preparation of manuscript.	10	Review drafts of manuscript.
Fitness to stand trial in one Australian jurisdiction: The role of cognitive abilities, neurological dysfunction and psychiatric disorders in fit and unfit defendants (Chapter 5)	90	Formulate research questions. Collection of all data. Analyses of data. Preparation of manuscript.	10	Review drafts of manuscript.
Fitness to stand trial: Views of criminal lawyers and forensic mental health experts regarding the role of neuropsychological assessment. (Chapter 6)	90	Formulate research questions. Collection of all data. Analyses of data. Preparation of manuscript.	10	Review drafts of manuscript.

Publications and Conference Presentations

Components of this thesis have been published in peer-reviewed scientific journals. The citations for specific chapters have been provided with each relevant chapter heading; however the citations are also provided here for convenience.

- 1) White, A.J., Batchelor, J., Pulman, S., & Howard, D. (in press). Fitness to stand trial: Views of criminal lawyers and forensic mental health experts regarding the role of neuropsychological assessment. *Psychiatry, Psychology and Law*, DOI: 10.1080/13218719.2015.101540.
- 2) White, A.J., Batchelor, J., & Meares, S. (2013). The role of cognition in fitness to stand trial: A systematic review. *The Journal of Forensic Psychiatry and Psychology*, DOI: 10.1080/14789949.2013.868916.
- 3) White, A.J., Batchelor, J., Pulman, S., & Howard, D. (2012). The role of cognitive assessment in determining fitness to stand trial. *International Journal of Forensic Mental Health*, 11(2), 102-109.

Components of this thesis were also accepted for oral presentation in paper format at the following professional conferences. Presentations and conference details:

- 1) White, A.J., Batchelor, J., Pulman, S., & Howard, D. (2011) Neuropsychological assessment and fitness to stand trial in Australia: A preliminary analysis. *Australian Psychological Society, Forensic Psychology National Conference. The Outrigger, Noosa, Queensland*, 4-6 August 2011.

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Key Terminology

The following list comprises abbreviations and terms which appear in the body of the text. The list excludes psychological tests which are referred to in Tables. Explanation of these abbreviations appear as notes under the corresponding table.

AAPL	American Academy of Psychiatry and Law
ABA	American Bar Association
ABI	Acquired Brain Injury
AC	Adjudicative Competency
ADHD	Attention Deficit Hyperactive Disorder
APA	American Psychiatric Association
CAST-MR	Competence Assessment for Standing Trial for defendants with Mental Retardation
COWAT	Controlled Oral Word Association Test
CAI	Competency Assessment Instrument
CST	Competency to Stand Trial
DSM-IV-TR	Diagnostic and Statistical Manual- Fourth Edition- Text Revision
ECST-R	Evaluation of Competency to Stand Trial- Revised
FASD	Foetal Alcohol Spectrum Disorder
FIT-R	Fitness Interview Test- Revised
FSIQ	Full Scale Intelligence Quotient
FST	Fitness to Stand Trial
FST- AI	Fitness to Stand Trial - Assessment Instrument
GLMM	Generalised Linear Mixed Model
ID	Intellectual Disability
ILK	Inventory of Legal Knowledge
IQ	Intelligence Quotient
LOC	Loss of Consciousness

LRC	Law Reform Commission
MacCAT-CA	MacArthur Competency Assessment Tool- Criminal Adjudication
METFORS	Metropolitan Toronto Forensic Service
MFQ	Metropolitan Toronto Forensic Service Forensic Questionnaire
MH(FP)Act	Mental Health (Forensic Provisions) Act 1990
MHRT	Mental Health Review Tribunal
MMSE	Mini Mental State Examination
NFQ	Nussbaum Fitness Questionnaire
NGMI	Not Guilty by Mental Illness
NHMRC	National Health and Medical Research Council
NSW	New South Wales
ODPP	Office of the Director of Public Prosecution
PIQ	Performance Intelligence Quotient
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-analyses
PTA	Post Traumatic Amnesia
RAVLT	Rey Auditory Verbal Learning Test
RCFT	Rey Osterrieth Complex Figure Test
SDMT	Symbol Digit Modality Test
SIRS	Structured Interview of Reported Symptoms
SPSS	Statistical Package for the Social Sciences
TBI	Traumatic Brain Injury
TMT	Trail Making Test
TOMI	Test of Memory Incompetence
TOMI-G	Test of Memory Incompetence – General Knowledge
TOMI-L	Test of Memory Incompetence- Legal Knowledge
TOMM	Test of Memory Malingering
VIQ	Verbal Intelligence Quotient

WAIS	Wechsler Adult Intelligence Scale
WAIS-R	Wechsler Adult Intelligence Scale- Revised
WAIS-III	Wechsler Adult Intelligence Scale- Third Edition
WASI	Wechsler Abbreviated Scale of Intelligence
WMS	Wechsler Memory Scale
WMS-R	Wechsler Memory Scale- Revised
WMS-III	Wechsler Memory Scale- Third Edition

Dual diagnosis: two or more comorbid mental health conditions.

Forensic psychology: a specialised subfield of psychology exploring the role of psychology and the law, psychology of the law and psychology in the law.

Psychological assessment: any evaluation of an individual's behaviour, cognition and/or emotional status using clinical interview and/or objective tools conducted by a qualified psychologist (including forensic, neuropsychologist or clinical psychologist).

Psychological test: a measure of behaviour, cognition, personality or mood.

Cognitive test: any objective assessment tool used to evaluate an individual's cognitive capacity (including intellectual capacity), typically used in neuropsychological evaluations and frequently referred to in the literature as neuropsychological tests.

A distinction is made between psychology and neuropsychology in that although cognitive tests can be administered by any practicing psychologist, neuropsychologists bring a specialised body of knowledge of neuroanatomy and neurological dysfunction to the interpretation of test data. Not all reports reviewed herein are neuropsychological hence the term psychological reports is used throughout to accurately reflect the nature of the data.

The term effort is used within the published papers (2011-2015), however, is replaced by the term non-credible performance in the introduction and discussion chapters in accordance with changing terminology used within the neuropsychology literature.

In the published papers which appear in Chapters 3 and 4, the term FST tools is used. In the published paper which appears in Chapter 6, the term CAI (Competency Assessment Instrument) is used in accordance with the changing terminology used within the forensic psychology literature. However, this is replaced by the term Fitness to Stand Trial - Assessment Instrument (FST- AI) in the current thesis, in order to avoid confusion with a published American Competency to Stand Trial measure which is referred to via the acronym CAI.

CHAPTER 1:

Introduction

1.1 Opening Statement

Traditionally, the law and psychology operate along two distinct trajectories, however, fitness to stand trial (FST) is one area where these two disciplines intersect. Psychology uses different methods of conceptualisation and operationalisation to the law, often considering clinical questions on a continuum and according to empirical test. Despite this, psychology must be able to apply its principles in a meaningful way within the authoritative and rather prescriptive legal sphere in order to be effective in assisting the courts. Over the past 20 or so years, there has been increasing interest and research within the field of forensic psychology and FST. One avenue of research has been to examine the importance of specific cognitive abilities in relation to FST. Prior to exploring the psychological literature in this field, it is important to have a clear understanding of the legal definition of FST and the legal context in which this issue is addressed.

1.2 Fitness to Stand Trial: Legal Standards and Associated Cognitive Abilities

FST is the legally determined capacity of a defendant to proceed with criminal adjudication (Mossman, 2007). The terms “adjudicative competence”, “competence to proceed with adjudication,” “competence to stand trial” and “fitness to stand trial” are used throughout the literature to reflect this legal principle in accordance with the terminology used by different legal jurisdictions (Mossman, 2007; Mumley, Tillbrook, & Grisso, 2003). FST is based on a cardinal principle of the law that no person can be tried for an alleged offence unless they have the mental capacity to defend themselves (*R v Dashwood* [1943] 1 KB 1 at 4). It is fundamental to a defendant’s legal right to procedural fairness and justice (Howard and Westmore, 2010). The principle arose from 18th century English common law, whereby FST referred to defendants who were deaf or mute; however this has since been expanded to include physical, mental and behavioural issues, in keeping with our increased knowledge and understanding of human brain and behaviour relationships and social values (Grisso, 2003; Mackay, Mitchell, & Howe, 2007; Rogers, Blackwood, Farnham, Pickup & Watt, 2008). A defendant is presumed to be fit to stand trial unless found otherwise.

1.2.1 New South Wales

FST is a cornerstone of all western legal systems; however its definition differs across legal jurisdictions (Howard and Westmore, 2010). In Australia, the states and territories have each passed legislation specifically addressing FST. As such, the definition of FST and procedures for defendants found unfit to be tried vary within each legal jurisdiction in Australia (Howard & Westmore, 2010). In NSW, the relevant legislation is the Mental Health (Forensic Provisions) Act (the MH (FP) Act) 1990. However fitness, or unfitness, is not defined in the Act and hence regard must be had to the decided case for the meaning of these terms. The prevailing approach in NSW (which has consistently been affirmed by the High Court of Australia) has been to follow the decision of a Victorian

Supreme Court judge, Mr Justice Smith, in the case of *R v Presser* [1958] VR 45. The test of fitness is whether the accused has the ability to:

- (1) understand the nature of the charge;
- (2) plead to the charge and exercise the right to challenge;
- (3) understand generally the nature of the proceedings, namely that it is an inquiry as to whether the accused did what he or she was charged with;
- (4) follow the course of the proceedings so as to understand what is going on in court in a general sense;
- (5) understand the substantial effect of any evidence that may be given in support of the prosecution's case; and
- (6) make his or her defence or answer to the charge.

Smith J stated that "the person need not be versed with court procedure and need not have the mental capacity to make an able defence but must have sufficient capacity to be able to decide what defence will be relied upon and; to make his or her defence and his or her version of the facts known to the court and to his or her lawyer, if any" (at 48). Smith J said that the test to be applied was one of "common sense" (at 48). In 1994, the High Court of Australia reiterated that *Presser* represented the "minimum standards with which an accused person must comply before he or she can be tried without unfairness or injustice" (*Kesavarajah v The Queen* (1994) 181 CLR 230).

Fitness to plead is commonly referred to in the literature and legal practice and refers to the initial involvement of the accused in the plea making stage at the commencement of a trial. It is therefore incorporated under the principle of 'fitness to stand trial'. For a comprehensive review of the history of the development of the law of FST in Australia, see *R v Mailes* (2001) 53 NSWLR 251 para 112-114 Wood CJ at CL (Howard & Westmore, 2010; Law Reform Commission, 2010).

As outlined in the MH(FP) Act (1990) section 5, any party to the proceedings or the court can, at any time during the court proceedings, query a defendant's FST for an offence (see *R v Tier* (2001) 121 A Crim R 509). Since changes to the MH (FP) Act (1990) section 11 were instituted in 2006, the determination of a defendant's FST is made by the judge alone in a fitness hearing. A defendant's FST is considered to be outside the adversarial system (*Eastman v R* (2000) 203 CLR 1 at [295] Hayne J). Fitness is determined on the balance of probabilities and is dichotomous, i.e., either a defendant is determined to be fit to stand trial or unfit to stand trial (Veiel, 1999). Usually, expert evidence from forensic mental health practitioners, traditionally psychiatrists but increasingly also psychologists, is presented. Expert reports are typically provided by at least two experts, one retained by the defence and prosecution respectively (Grisso, 2003). There are no regulations regarding the expert's profession or number of FST assessments conducted in NSW. If a defendant is found fit to stand trial, the criminal proceedings are commenced (or resumed) in accordance with standard practices. However, in the event that a defendant is found unfit to stand trial, the matter is referred to the Mental Health Review Tribunal (MHRT) under the MH (FP) Act 1990 section 14.

Under s 16 of the Act, the MHRT is required to determine whether the defendant will become fit within 12 months. If it is determined that the defendant is likely to become fit within the next 12 months, the following must also be decided:

- a) whether or not the defendant is suffering from a mental illness, or a mental condition for which treatment is available in a hospital; and
- b) whether the defendant objects to being detained in a hospital.

In accordance with s 17 of the Act, if it is found that the defendant is likely to become fit within the next 12 months, they are referred back to the court, which may order that the defendant be taken to and detained in a hospital, another place, or released on bail—for a

period of up to 12 months. After such time, and provided that the defendant is found by the judge to have become fit to stand trial, the court process will resume.

Where a defendant is found by the MHRT to be unlikely to become fit within the next 12 months, and the DPP have advised that they wish for further proceedings to be taken, a special hearing is to be conducted by the court as nearly as possible if it were a trial of criminal proceedings (MH (FP) Act 1990 s 21). The verdicts available in a special hearing under s 22 include:

- a) not guilty;
- b) not guilty on the ground of mental illness; or
- c) a determination that the accused committed the offence on the limited evidence available

Based on the available evidence, if the accused is found guilty of committing an offence, the court is required to decide whether it would have imposed a gaol sentence during a regular trial. If so, the court must stipulate a term (known as a 'limiting term'), reflecting the most likely approximation of the total sentence that it would have imposed if it had of been a regular trial. Alternatively, the court may impose a different penalty or make any order that it could have made if the accused had been convicted of the offence. In the event that the court stipulates a limiting term, the defendant is referred back to the MHRT as a 'forensic patient' and a determination is made as to the most suitable place to detain them. A defendant who has been detained in a mental health facility, gaol or other place following a special hearing ceases to be a forensic patient upon the expiry of the limiting term, upon unconditional release, or upon the person being classified as an involuntary patient within the last six months of their limiting term (see s 53 and s 52 (2) of the MH (FP) Act, 1990).

Historically, prior to the introduction of the special hearing procedure, an unfit defendant was liable to be detained indefinitely and often served much longer periods in

custody than they may have otherwise served if they were fit to stand trial and found guilty of the offence (James, 2006). As such, many legal practitioners thought that a finding of unfit to stand trial was more disadvantageous to their client than allowing them to proceed to trial, even if they lacked the fundamental capacity to do so. As such, questions of FST were avoided for defendants where it may have otherwise been raised (Birgden and Thompson, 1999). Consequently, FST has been widely debated and reviewed in the literature over the years, with several bodies advocating for changes in this area. In 2010, the Law Reform Commission (LRC) launched a review of FST as part of a wider appraisal of mental impairment in the law.

Following extensive consultation, the LRC (2013) recommended a statutory fitness test for NSW, as in other Australian states. However, they noted that the common law test of *Presser* appeared to work well and no significant changes were proposed (LRC, 2013). Minor recommendations included that in addition to capacity to communicate with counsel, this should be expanded to include capacity to understand advice given by counsel. A requirement for decision making capacity, including the ability to use information as a part of a rational decision making process, was advocated. It was recommended that the inclusion of decisional capacity encompass some elements already outlined in *Presser* including capacity to challenge jurors, plead to the charge and make a defence. The statutory test recommended by the LRC (2013) was as follows:

A person is unfit to stand trial if the person cannot be afforded a fair trial because it is established on the balance of probabilities that the person is unable to do any one or more of the following:

- (a) understand the offence with which the person is charged;
- (b) understand generally the nature of the proceeding as an inquiry into whether it has been proved that the person committed the offence charged;

- (c) follow the course of proceedings and understand what is going on in a general sense;
- (d) understand the substantial effect of any evidence that may be given against the person;
- (e) understand the information relevant to the decisions that the person will have to make before and during the trial, and use that information as part of a rational decision making process;
- (f) communicate effectively with, and understand advice given by, legal representatives; and
- (g) provide the person's version of the facts to the court, if necessary.

In addition, it was recommended that courts take into account the likely length and complexity of a trial and whether the defendant is legally represented in making its decisions, consistent with current practices [for example see Birgden & Thompson, 1999; *Kesavarajah v The Queen* (1994) and *R v Aliwijaya* (2012)]. *Kesavarajah v The Queen* (1994) 181 CLR 230 at 246 highlighted that, in a lengthy trial, fitness can fluctuate and may need to be evaluated on more than one occasion. Therefore the LRC (2013) recommendations may be argued to be intending to increase the cognitive abilities required for FST by way of including a "rational decision making process" and amplifying the importance of other cognitive abilities such as language skills and understanding.

1.2.2 Other Australian Legal Jurisdictions

While commonalities across Australian legal jurisdictions exist and the most frequently utilised FST test is that set down in *R v Presser* [1958], there are procedural and definition differences. For example, procedurally, whilst in NSW and Western Australia, FST is determined by a judge alone, in the Northern Territory and Victoria, the issue is determined by a jury. In South Australia and Tasmania, FST is decided by a jury or judge alone (Scott, 2007). In Queensland, the Director of Mental Health, the Director of Public

Prosecutions, the trial judge, the defendant or the defendant's legal advisor may refer a defendant to the Mental Health Court. The Mental Health Court is tasked to determine whether a defendant is fit to stand trial if the issue arises prior to the defendant being called upon to plead to a charge (Scott, 2007). Further, in South Australia, the Northern Territory and Tasmania, legislation provides that if the defence and prosecution agree that a defendant is unfit, the court may enter a finding to that effect; thereby negating the need for a FST hearing (see LRC, 2010 for review).

In regard to definitional distinctions, in South Australia, the Criminal Law Consolidation Act 1935 (South Australia) s269H states an accused is unfit to stand trial on a charge if their mental processes are so disordered or impaired that they are:

- (1) unable to understand or respond rationally to the charge;
- (2) unable to exercise procedural rights; or
- (3) unable to understand the nature of the proceedings or follow the evidence or the course of the proceedings.

As such, the South Australian legislation has incorporated a rationality component in their statutory test for FST.

In Victoria, the Crimes (Mental Impairment and Unfitness to be Tried) Act 1997, states that an accused is unfit to stand trial for an offence if, because of their mental processes being disordered or impaired, they are or at some time during the trial will be unable to: understand the nature of the charge, the trial and the evidence, how to properly defend the charge, instruct her or his legal representative or enter a plea. The NSW LRC (2010) noted that the *Presser* criteria question a defendants' understanding but do not explicitly refer to the capacity to make *rational decisions* in the light of the understanding that they do have, in contrast to the Criminal Law Consolidations Act 1935 (South Australia) s269H and *Dusky v. United States*, 362 US 402 (1960).

1.2.3 United States of America

The most commonly referred to standard for FST used in the USA is set down in the case of *Dusky v United States* (1960). *Dusky* involves two key principles:

- 1) defendant's sufficient present ability to consult with his or her lawyer with a reasonable degree of rational understanding; and
 - 2) a rational as well as a factual understanding of the proceedings against him/her.
- The *Dusky* standard is commonly referred to across US states although variation exists, mostly in reference to the concept of rationality (see Mossman, 2007, table 3). A number of US states have adopted what may be termed a common-law standard of FST. Typically, the rationality in the common-law standard relates exclusively to a defendant assisting in their own defence or liaising with their lawyer but not in understanding the proceedings (Felthous, 2011).

The *Dusky* standard has been acknowledged with respect to the Sixth Amendment (which refers to the right to counsel and matters of procedural fairness in criminal prosecution) and a defendant's constitutional right to a fair trial (Bardwell, 2001). The American Bar Association (ABA) Standards for Criminal Justice (1989) combined the *Dusky* standard for FST with the Supreme Court's judgment in *Drope v Missouri* (1975). In that case, it was said that a defendant needed to be able to "assist in preparing his defence" (Ref. 13, p 171; 1975). A number of US states have since adopted the *Dusky* and *Drope* criteria, either in their original forms or with negligible changes (Buchanan, 2006).

In *Godinez v Moran* (1993), the Supreme Court stated that US states may amplify or expand the *Dusky* criteria for FST. The Supreme Court asserted that "all criminal defendants...may be required to make important decisions once criminal proceedings have been initiated" (Ref. 20, p 398), indicating what would appear to be endorsement for a requirement that a defendant have certain decision-making capacities in order to be fit to stand trial. For example, a defendant may be required to make choices about whether to have a jury trial, to testify and to cross-examine witnesses. It has been argued, that in

stating that the *Dusky* definition encompasses such decision-making, *Godinez* suggests that the courts (and therefore mental health expert assessors) may have to evaluate at least some of a defendant's decision-making abilities when providing opinion about a defendant's FST (Mossman et al., 2007). The threshold for participation in court proceedings in the United States differs to that in Australia. Some have argued that the Australian standard of *Presser* requires the defendant to have a less sophisticated understanding of court processes and proceedings and therefore may allow more mentally ill and intellectually disabled defendants to proceed to trial (Samuels, O'Driscoll, & Allnutt, 2007). However the Australian standard also requires the defendant to have the capacity to enter a plea, aligning with the theoretical reformulation proposed by Bonnie (1992).

Brookbanks and Simpson (2007) discussed the issue of decisional competence in FST above and beyond basic competencies such as competency to assist counsel. They stated that "while the common law on fitness to stand trial has traditionally affirmed a low threshold of trial competence based upon a rudimentary understanding of the trial process, more recent case law has tended to raise the bar on what constitutes acceptable trial capacity, suggesting the need for a more nuanced evaluation of a defendant's cognitive and functional abilities...". With the recent LRC (2013) review recommendations and states such as South Australia employing elements of rationality, the rationality component may increasingly become a consideration within Australian FST cases more broadly.

1.2.4 Canada

The Canadian criminal code states that unfit to stand trial means being "unable on account of mental disorder to conduct a defence at any stage of the proceedings before a verdict is rendered or to instruct counsel to do so, and, in particular, unable on account of mental disorder to understand the nature or object of the proceedings, understand the possible consequences of the proceedings, or communicate with counsel" (Criminal Code of Canada, section 2, 1992). Thus, in order to be found unfit, it must first be established

that a defendant has a mental disorder, and that mental disorder must directly affect the defendant's capacity to participate in the legal process. However, since *R. v. Taylor* (1992), who was diagnosed with chronic paranoid schizophrenia, Canadian courts have been observed to have adopted an increasingly narrow test of unfitness that requires the defendant to have only a "limited cognitive ability." (Wolf, van Marle, Mevis, & Roesch, 2010).

All Canadian legal jurisdictions use the term 'mental disorder'; however the term 'mental illness' is used in most Australian jurisdictions. In both countries, definitions of the term range from broad to comprehensive. For example, 'any illness or disorder of the mind' qualifies in South Australia and Ontario has a similar broad definition (Gray, McSherry, O'Rielly, & Weller, 2010). The Canadian standard does not use words such as "appreciate" or "rational" similar to the *Presser* test, unlike the *Dusky* standard in the US. Therefore, it would appear that the USA has a higher threshold for FST than Canada and Australia (O'Shaughnessy, 2007; Zapf & Roesch, 2009).

1.2.5 England and Wales

The common law case of *R v Pritchard* (1836) has been consistently upheld as the standard for determining FST in England and Wales (Mackay, 2007). In *Pritchard* three points were required to be evaluated:

- 1) whether the defendant is mute of malice or not;
- 2) whether the defendant can plead to the indictment or not; and
- 3) whether the defendant is of sufficient intellect to comprehend the course of the proceedings in the trial so as to make a proper defence, challenge potential jurors and comprehend the details of the evidence.

Therefore, the test is primarily framed as an intellectual one, around a defendant's level of comprehension and communication. An additional criterion, being capable of instructing legal advisors, derives from *Davies* (1853). The wording of the *Pritchard* test implies that

a threshold exists for being of sufficient intellect for making a proper defence (Exworthy, 2006; Mudathikundan, Chao, & Forrester, 2013). It is argued that the Australian FST standard of *Presser* is most akin to the England and Wales and Canadian standards of fitness, although there is debate that this threshold remains too low (Mackay, 2007). Further, there has been discussion about the importance of considering decisional competence and the ability of the person to act in their own best interests in addition to basic understanding (Brookbanks & Mackay, 2010).

1.2.6 Applying the Legal Standard

Despite guidelines set out by each legal jurisdiction and case law adding clarification over the years, the question of FST remains a complex issue. Complications and debate include the application and interpretation of the legal standard in relation to individual cases as well as how FST is best assessed. Such problems are well documented throughout the legal and social sciences literature, as well as in legal case history itself and associated legal commentary. It has been argued the principle of FST has been misunderstood by legal and mental health professionals alike (Mumley, 2003).

Freckelton (1996) analysed the legal standards for FST in five English-speaking countries and noted that the various legal criteria provided little guidance for experts who assessed FST, in particular, countries where the element of rationality was not included e.g. Canada, England and Australia. Importantly, as with other forms of legal competence, FST is said to be “contextual” in that it depends on the circumstances in which the assessment takes place (Grisso, 2003). This has led to discussion about what factors should be considered to relate to the “context” and have the potential to change the quantity or quality of mental capacity necessary for FST. The most frequently identified consideration is the complexity of the case. Freckelton (1995, 1996) explained the inappropriateness of applying less onerous criteria in complex proceedings, or conversely, applying too onerous criterion in less complex or straightforward matters. The ABA (1989) and others have

suggested that complicated cases require more mental capacity, reflecting calls for a more demanding threshold in higher courts where the procedures can be more difficult to understand. Other common factors requiring consideration as discussed in the literature include the seriousness of the offence, complexity of the evidence and applicable law, and possible penalties for the accused (Freckelton, 1995; 1996). A difficulty for forensic mental health experts in any legal jurisdiction around the world is that FST evaluations require the application of clinical judgement to legal criteria. However, the final decision on fitness is in fact a legal one to be determined by the court.

The *Presser* standard indicates the need for a capacity for understanding as well as the ability to make decisions and communicate with the court and defence attorney (Freckelton, 1996). However, the criteria are general and do not indicate the level of adequacy or sufficiency required. Birgden and Thompson (1999) and Freckelton (1996) indicated that only one of the *Presser* criterion mention a sort of threshold, referring to the word 'substantial'. The remainder of the criteria only state what characteristics a defendant requires in order to be considered fit to stand trial; making it extremely difficult for the mental health expert to know what standard to apply. As Birgden and Thompson (1999) argued, depending on the defendant's plea (guilty or not guilty) and trial specifics, the required threshold for different court functions and *Presser* standard may change.

The range of causes leading to a possible determination of unfitness were discussed in *Eastman v R* (2000), where Gaudron J stated: "The question whether a person is fit to plead may arise for reasons other than mental illness. It may arise, for example, because a person is deaf and dumb or, more generally, because language difficulties make it impossible for him or her to make a defence (at 59)". The capacity of the accused for comprehension has been considered a critical issue over decades of case law, for example see *Eastman v R* (2000) 203 CLR 1 at [22] and *R v Pritchard* [(1836) 7 C & P 303]. In NSW, intellectual disability has also been specifically included as a potential basis for FST

(see *R v Mailes*, 2001). Overall, Australian legal thresholds for FST have traditionally been very low, implying that a large percentage of cases result in a determination of fitness despite some degree of cognitive, psychiatric, neurological or other disturbance.

In NSW, the number of defendants who undergo fitness assessments is unknown. While MHRT records indicate that approximately 40 new cases of unfit defendants are dealt with each year, not all are treated or housed in forensic hospital settings and an unfit defendant can be bailed pending trial (LRC, 2013). Further, this does not account for the number of defendants found fit, hence does not reflect the number of fitness hearings before the courts each year. Although the number of fitness matters in Australia is unknown, it is thought that the statistics are comparable to England and Wales and Canada (LRC, 2013). Fitness matters are considered a rarity and thus an additional obstacle for researchers in this area in these countries (Birgden & Thomson, 1999). This is in stark contrast to the USA, where over 60,000 FST evaluations are conducted annually (Melton, Petrila, Poythress, & Slobogin, 2007). It is estimated that one-fifth of cases are determined unfit to stand trial (Bonnie & Grisso, 2000; Mossman et al., 2007). Cochrane, Grisso and Fredrick (2001) analysed data from 1710 criminal defendants referred by US federal courts and found that 18% were unfit to stand trial. Of those defendants, persons with psychotic disorders were most likely to be found unfit (43%). Defendants with intellectual disability were found unfit 30% of the time and those with an organic mental disorder were found unfit 38% of the time. In England and Wales, historically findings of unfitness were largely due to mental illness, however between 1997 and 2001, findings of unfit were due to a wider range of causes: schizophrenia and associated conditions (31.6%), mental impairment (31.9%), dementia (4.3%), psychosis and mental impairment (6.7%), brain damage (6.7%) and depression/anxiety (4.6%)(Mackay, et al., 2007). Thus international studies suggest that cognitive impairment, regardless of definition or standard, is an important factor which may result in an individual being found unfit to stand trial.

CHAPTER 2:

Psychology and Fitness to Stand Trial

Expert forensic psychological assessments are conducted with the primary purpose of assisting the courts in their legal determination of FST by drawing on psychological resources and applying these appropriately to the legal context. Expert opinion (primarily from psychiatrists and psychologists) in FST matters is typically highly regarded (Grisso, 2003; Melton, Petrila, Poythress, & Slobogin, 2007). Studies show high rates of agreement between expert decisions and court judgements e.g., 99.7% (Zapf, Hubbard, Cooper, Wheelles, & Ronan, 2004) and 96.3% (Hart & Hare, 1992). However, as highlighted in the previous chapter, legal standards of FST do not typically define the specific abilities required to be fit to stand trial and judicial opinions have often manifested ambiguity or lack of consensus concerning which abilities to consider (Grisso, 2003). As discussed by Grisso (2003), if forensic psychological assessments were confined to examining the abilities specified in the relevant legal definition, the practical importance of other abilities external to the current legal perspective may be ignored. Psychological research may uncover new areas of importance to consider or conversely, prove the relative unimportance of current considerations. As such, psychologists have explored the concept of FST in several ways including:

- a) Developing theoretical models
- b) Applying psychological models and assessment tools
- c) Evaluating the role of forensic psychology and neuropsychology in this area

2.1 Theoretical Models

Numerous theoretical models examining FST have been developed. Given the high prevalence of FST cases in the USA compared to other western legal jurisdictions, it follows that the majority of this work has been conducted in the USA. While differences exist between these models, there are some common considerations.

Firstly, FST is a legal competence that is an open construct and context dependent (Birgden & Thomson, 1999; Roesch, Zapf, Golding, & Skeem, 1999). FST is considered a

complex and broad concept which is not conducive to a strict set of criteria. For example, trial complexity, length and other case variables would be unique for each trial. The interpretation of the standard required for FST can vary between and within cases and is open to a diverse range of operational definitions (Grisso, 2003). Secondly, FST is determined by a wide range of variables which only the decision maker, i.e., the judge or jury can consider, including legal, political, procedural, social and scientific issues (Poythress & Zapf, 2009).

As Birgden and Ward (2003) argued, any FST assessment should be functional, context-dependent and pragmatic. The expert should not expect any clinical evaluation, instrument or method to measure FST per se (Grisso, 2003). Hence the aim of forensic psychological assessment should be to provide information to the courts regarding a defendant's legal competency related abilities, otherwise known as their psycholegal ability (Grisso & Appelbaum, 1995).

The degree to which cognition is considered in models of FST can differ greatly; however, most recognise cognition in some capacity. For example, the cognitive complexity model by Rogers, Tillbrook and Sewell (2004) explicitly recognised the importance of cognition and separates the USA *Dusky* criteria into two components: (1) factual understanding and (2) rational abilities; based on the perceived cognitive load required in each. Rogers and colleagues (2004) argued that the first element involved learning and retention of factual information and semantic memory, whereas the second involved higher order cognitive processes, such as working memory, abstraction and problem solving skills.

The discrete abilities model (Grisso, 2003) incorporated direct wording from the USA *Dusky* criteria and has received wide empirical support (e.g., see Melton et al., 2007). The model has three elements: (1) rational ability to consult with counsel, (2) factual understanding of the proceedings, and (3) rational understanding of the proceedings.

Grisso (2003) acknowledged that varying degrees of cognitive complexity were required for each of the three elements of the discrete abilities model.

Grisso (2003) proposed a five stage model of competency, which could be utilised by the expert during assessment of relevant psychiatric disorders or cognitive factors and also in the development of any fitness to stand trial assessment instrument (FST- AI). The model consisted of five elements: (1) functional, (2) causal, (3) interactive, (4) judgemental, and (5) dispositional. Marcopulos, Morgan and Denney (2008) argued that within Grisso's model, neuropsychological assessment would be useful, if not critical, and could contribute to Grisso's causal and dispositional components of legal competency.

Despite differences between these models, all of them identified factual understanding, rational understanding or appreciation of the proceedings, assisting counsel and decisional capacity or decision making. Each of these require different cognitive abilities. The factual is related to rote learning of information e.g., the role of the judge. Rational appreciation requires abstraction and the application of knowledge to context specific situations. Assisting counsel requires the capacity to communicate both receptively and expressively, identify factors of relevance and follow and comprehend information throughout court proceedings, i.e., memory, attention, speed of processing and language (receptive and expressive) skills. Finally, decision making involves the capacity for abstraction, consequential thinking, rationalising and reasoning through options (Grisso, 2003; Grisso & Schwartz, 2000). However, there remains much debate about what level of cognitive ability is required for each of these psycholegal abilities.

2.2 Psychological Research in FST

Traditionally, forensic psychological research has aimed to improve the scientific validity of expert assessments by evaluating several different avenues including demographic and psychiatric variables and intelligence. Over the last 20 years, researchers have focused on the development of Fitness to Stand Trial Assessment Instruments (FST-

AIs) or psycholegal assessment tools as they are also known, to assist in such evaluations. Simultaneously, exploration of underlying cognitive constructs, mostly using cognitive tests, has been conducted. This would not only inform and assist in the future development of more relevant FST- AIs but inform experts about the use and applicability of cognitive tests in this arena. This is important, as part of the FST hearing is to determine why a person is unfit and inform opinions about possible competency restoration, as well as any compensatory aids that would enable the defendant to undergo a fair and just trial.

2.2.1 Demographic Variables and Psychiatric Disorders

There is a large body of literature exploring demographic variables and psychiatric disorders as predictive of FST predominantly from the 1980s and early 1990s (e.g., Nicholson & Johnson, 1991; Nicholson and Kugler, 1991). Aside from psychiatric diagnoses, most of these factors have been shown not be predictive of FST. In a recent meta-analysis, Pirelli, Gottdiener and Zapf (2011) reviewed 68 studies based in the USA or Canada published between 1967 and 2008 and evaluated the eight most commonly reported research variables: ethnicity, sex, marital status, employment status, psychiatric diagnosis, psychiatric hospitalisation history, FST evaluation history and current criminal charge. Only two variables (employment and psychiatric diagnosis) evidenced odds ratios above 2.0. An odds ratio represents a comparison between the odds of an event or outcome occurring in one group compared to another group (Tabachnick & Fidell, 2014). In this study, defendants who were unemployed were found to be twice as likely to be determined unfit to stand trial as those who were employed. Defendants diagnosed with a psychotic disorder were eight times more likely to be found unfit to stand trial than those without a diagnosed psychotic disorder. Unfit and fit defendants were comparable across a number of demographic variables. Specifically, the vast majority of all defendants were male and had a prior arrest history. Over half also had a current violent criminal charge and a mean of approximately 10 years of education (Pirelli, Gottdiener, & Zapf, 2011).

In a comprehensive study of over 8000 expert evaluations over a 12 year period in Virginia, USA, Warren and colleagues (2006) reported that defendants considered unfit to stand trial were more likely to have been diagnosed with a psychotic (by as much as four and a half times), organic (by four times), or intellectual/learning disorder (by more than three times) and less likely to be diagnosed with personality, attention or adjustment disorders than defendants who were considered fit to stand trial. Diagnosis accounted for the majority (19%) of the variance in predicting expert opinions (Warren, et al., 2006).

More recently, there has been increased focus on older defendants. In a recent 10 year FST research update (2001-2010), Fogel and colleagues (2013) identified four published papers that discussed or reported data on questions related to FST in geriatric defendants (Frierson, Shea, & Shea, 2002; Heck & Herrick, 2007; Lewis, Fields, & Rainey, 2006; Morris & Parker, 2009). Frierson, Shea, and Shea (2002) found that deficits in orientation and memory best distinguished unfit from fit geriatric defendants. Lewis, Fields and Rainey (2006) found much higher rates of unfit defendants in a geriatric sample (32.1%), which they interpreted as suggesting unfitness to stand trial was highly correlated with a diagnosis of dementia. Hence it may be that cognitive assessment may need to at least involve evaluation of memory abilities in older defendants whose FST has been queried.

2.2.2 Fitness to Stand Trial - Assessment Instruments (FST- AIs).

There are now over 12 FST- AIs available on the market, some undergoing revised publications (see Pirelli, Gottdiener and Zapf, 2011 for a review). The development of FST- AIs has traditionally taken two approaches: idiographic and nomothetic (Poythress & Zapf, 2009). Idiographic tools such as the Fitness Interview Test- Revised (FIT-R; Roesch, Zapf, Eaves, & Webster, 1998) and Evaluation of Competency to Stand Trial-Revised (ECST-R; Rogers, et al., 2004) utilise a semi-structured interview approach to explore FST based on the relevant legal criteria, whereby the nature and depth of questioning can

vary based on responses of the interviewer and interviewee. One of the limitations of this method is that it can lead to greater disparity between two evaluating experts as the degree of subjectivity may be elevated. Alternatively, nomothetic based tests, such as the MacArthur Competency Assessment Tool- Criminal Adjudication (MacCAT-CA; Hoge, Bonnie, Poythress, & Monahan, 1999), employ a structured and standardised set of interview questions. While this would minimise some of the issues with idiographic tools, including the degree of subjectivity and chance of a different rating between two experts, the nomothetic approach does not allow for the exploration of elements not included in the standardised battery. This is particularly relevant given that FST is an open construct. A common concern for all FST- AIs is that while they may be useful in examining concrete concepts, such as legal understanding, they are likely to have greater difficulty capturing and evaluating more fluid cognitive abilities such as abstraction, rationality and decision making skills. As such, many have argued that these tools cannot be used as standalone assessments of FST (Poythress & Zapf, 2009). Indeed, this is acknowledged in the MacCAT-CA manual (Poythress et al., 1999). Further, FST- AIs do not identify which psycholegal or cognitive abilities are relevant for fitness decisions in specific legal jurisdictions. The relevant abilities will vary across jurisdictions based on legal differences in the definition and standard of FST (Grisso & Appelbaum, 1996).

Zapf and Roesch (2006) found that the MacCAT-CA understanding, reasoning and appreciation scales were correlated with estimates of Wechsler Adult Intelligence Scale-Revised (WAIS-R) Full Scale IQ scores. However, only one tool, the Competence Assessment for Standing Trial for Defendants with Mental Retardation (CAST- MR; Everington & Luckasson, 1992) has been developed and evaluated as a possible valid assessment method for individuals with an intellectual disability (Melton et al., 2007). Everington and Dunn (1995) reported a positive correlation between the CAST-MR and IQ. However, there has been some criticism of the CAST-MR's multiple choice format,

with suggestions that it does not reflect the real life court setting (Grisso, 2003). Further, Jurecska, Peterson and Millkey (2012) evaluated the CAST-MR in a forensic population of individuals with an intellectual disability (ID) and found a high false positive rate. They recommended that additional measures of IQ and cognition would be necessary to improve the reliability and validity of the FST- AI findings. A Canadian FST- AI, the Nussbaum Fitness Questionnaire (NFQ; Nussbaum, Hancock, Turner, Arrowood, & Melodick, 2008) has been shown to have good concurrent validity with the CAST-MR in a group of individuals with developmental delay, although it largely remains a research tool. It has also been noted that there has been a dearth of research examining the construct validity of FST- AIs such as the MacCAT-CA, in relation to cognitive impairments, such as those typically associated with Acquired Brain Injury (ABI) (Nussbaum, et al., 2008). It is likely that some cognitive limitations may prevent an individual from being able to complete a FST- AI. Further, in countries such as Australia where there is an ageing population, presentations of neurodegenerative conditions such as Alzheimer's disease are likely to be seen in increased rates over the coming decades which may warrant comprehensive cognitive assessment.

As such, several researchers have reported that integrating FST-AIs with other sources of information including the results of cognitive assessment (Rachel & Robert, 2009) and relating these to the legal standard would be likely to result in a more balanced, reliable and valid expert opinion about an individual's FST. This appears to be in line with general practice, for example, Looney (2009) in the USA reported that only one-third of mental health professionals utilised FST-AI's regularly and that there continued to be heavy reliance on psychological test instruments.

2.2.3 Generalisability of FST- AIs to Different Legal Jurisdictions

While some researchers have argued that FST- AIs developed in the USA should be applicable to all western jurisdictions without significant compromise to validity and

reliability (e.g., Chantler & Heseltine, 2007), this assumption remains largely untested. Australian researchers have recommended caution in applying international FST- AIs to the local context. Birgden and Thomson (1999) commented that differences between the FST standards in the USA and Australia may be problematic. Van der Winngaart, Hawkins and Golus (2014) reported on the case of *R v Stevens* [2009] (South Australia), wherein the presiding judge criticised the use of the ECST-R within the Australian legal context. The authors concluded that the use of FST- AIs was ill advised and inappropriate within the Australian legal context as they did not specifically relate to the Australian standard of FST or relevant legal procedures. There is currently no standardized FST- AI for FST that has been designed specifically for Australian use although some have indicated a need for such a tool (e.g., van der Wijngaart, et al., 2014).

2.2.4 Quality of Forensic Reports

Studies in the USA have repeatedly found that the quality of forensic reports has often fallen short of set standards and expectations (e.g., see Gowensmith, Murrie, & Boccaccini, 2012; Heilbrun & Collins, 1995; Nicholson & Norwood, 2000; Robinson & Acklin, 2010; Skeem, Golding, Cohn, & Berge, 1998). This is despite some guidelines for FST being developed, such as those by the American Academy of Psychiatry and Law (AAPL; Mossman, 2007).

One of the key underlying issues is whether forensic mental health experts form opinions about FST that are consistent and based upon the legal standards by which the court would determine fitness (Plotnick, Porter, & Bagby, 1998). Grisso (2010) identified the 10 most frequent errors in forensic reports from a sample of 62 reports in the USA. The number one error was expert opinion without sufficient explanation (56%), an error reported in earlier studies by Wettstein (2005) and Skeem and Golding (1998). This was followed closely by an unclear forensic purpose for the assessment (53%). Other common errors included poor organisation, inclusion of irrelevant data and opinions, failure to

consider alternative hypotheses and inadequate data. A study based in England and Wales reviewed psychiatric FST reports and found that a large percentage failed to address all relevant fitness criteria in accordance with the *Pritchard* standard (Rogers & Johansson-Love, 2009). Further, some reports did not answer the legal question of FST at all. Skeem and Golding (1998) highlighted a lack of sufficient specialist training as a major issue with the quality of forensic reports produced.

Reports of overall levels of agreement between experts regarding FST have been variable. In an Australian study, Large, Nielssen and Elliott (2009) evaluated 110 pairs of FST reports from NSW prepared between 2005 and 2007. They found that the level of agreement between experts regarding FST was fair-to-moderate and poorer than for other types of assessment, such as opinion on whether a defendant was not guilty by reason of mental illness. The authors concluded that the level of agreement suggested the need for restructure and improvement in the way FST assessments were conducted. They found defence experts were significantly less likely to find that the defendant was fit to stand trial than prosecution experts ($\chi^2 = 8.08; p = 0.004$), however, the authors stated that this could potentially be explained by the opinions about defendants who were assessed by more than one expert from the same side. The authors concluded little evidence of expert bias (Large, Nielssen & Elliot, 2009).

There have been even higher levels of discrepancy regarding the underlying psycholegal abilities and conditions resulting in unfitness. For example, Skeem and colleagues (1998) found that overall agreement on the issue of fit or unfit was high; however agreement on a range of specific competency related deficits averaged only 25%. Common issues of divisiveness included expert views about the psychiatric condition and competency abilities of a defendant (Zapf & Roesch, 2009).

A recent study evaluated expert bias toward referring agent. Forensic experts reviewed the same case files and scored the offender on two risk assessment instruments

(Murrie, Boccaccini, Guarnera, & Rufino, 2013). Half of the experts believed that they were consulting for the defence and the other half for the prosecution. Results found a bias towards referring agent, with those believing that they were consulting for the defence more likely to assign a lower risk score than those consulting for the prosecution. The results provided strong evidence of an allegiance effect among some forensic experts in adversarial legal proceedings (Murrie, et al., 2013).

There has been much less research evaluating the perceived quality of expert FST reports from a legal perspective. T. Rogers and colleagues (2009) conducted semi-structured interviews with criminal barristers in England and Wales in accordance with the *Pritchard* criteria. Survey responses suggested that FST was perceived to include a range of fairly separate abilities which loosely corresponded with the different stages of the legal process. A large number of disorders were thought to potentially affect these abilities differentially including cognitive impairment, psychotic symptomatology and developmental immaturity, in addition to the complexity of the charges the defendant faced. Viljoen, Wingrove and Ryba (2008) reviewed judges' opinions as to what competencies underpinned FST. Their results indicated that judges primarily viewed expert opinion on the ultimate issue and competency deficits as highly valuable. A large percentage (70%) considered psychological testing to be important.

2.3 The Role of Forensic Neuropsychology

The forensic neuropsychologist has the ability to contribute their understanding of neuroanatomy, neuropathology and objective cognitive assessment to address specific questions of the court that may arise for determination in a variety of proceedings including FST (Denney & Wynkoop, 2000; Lezak, Howison, & Loring, 2004; Martell, 1992; Simpler & Parmenter, 2011). A number of conditions which may benefit from neuropsychological assessment may be relevant in the forensic context and in fact many of these are likely to occur in higher rates than in the general population, including physical,

sexual or emotional abuse, neglect, Attention Deficit Hyperactive Disorder (ADHD), foetal alcohol spectrum disorder (FASD), borderline IQ, ID, learning disabilities, neurological dysfunction, substance abuse/dependence and Traumatic Brain Injury (TBI). Rates of ID in the criminal population are estimated to be between 4% and 10% in the USA (Petersilia, 2000) and 28% in Ireland (Murphy, Harrold, Carey, & Mulrooney, 2000). In Australia, the prevalence of ID within the prison population has been estimated to be approximately 10% (Parton, Day, & White, 2004) although some suggest this is as high as nearly 20% (Hayes, 2002). There is a fairly large body of research showing elevated rates of TBI in prison populations. According to the 2009 NSW self-report Inmate Health Survey, a lifetime history of TBI resulting in loss of consciousness (LOC) was reported by 49% (up from 44% in the 2001 survey). This finding was more prevalent for men than women (52% vs. 35%). One third of men (32%) reported two or more TBIs resulting in LOC compared to 21% of women; and 11% of men (5% of women) endorsed greater than five such head injuries. Importantly, 7% of the sample reported LOC of greater than 24 hours. Intracranial bleeding was reported by 25% of men and 17% of women, suggestive of a moderate or severe TBI (Indig et al., 2009). Hazardous or harmful levels of alcohol consumption were identified in 58% of respondents (within one year prior to imprisonment). More than one-third of men (35%) and 16% of women reported levels indicative of alcohol dependence (Indig, et al., 2009). There is also evidence of increased rates of dual diagnoses in forensic settings (e.g., see Vanny, Levy, Greenberg, & Hayes, 2009; Vanny, Levy, & Hayes, 2008).

TBI has been shown to be the most common reason for neuropsychological assessment, followed by substance abuse/dependence, learning disabilities and ADHD (Heilbronner & Waller, 2008). Given that these conditions can affect a range of cognitive abilities including attention, memory, executive functioning and processing speed, there is clearly a role for comprehensive cognitive assessment by a neuropsychologist in these

cases. However, not every cognitive ability assessed may be necessarily important in reference to a specific legal question, such as FST (Rogers, Blackwood, Farnham, Pickup, & Watts, 2008). The British Psychological Society guidelines cite several potentially relevant areas of cognitive assessment including: comprehension, reasoning ability, memory, concentration and attention and impulsivity as relevant to capacity assessments (Dooley et al., 2006).

Since the 1990s, there has been increased focus on how ID may impact FST (e.g., see Everington & Luckasson, 1992; Everington, Notario-Smull, & Horton, 2007; Kalbeitzner & Benedetti, 2009); however there continues to be a relative paucity of studies examining the impact of cognitive impairment on FST. This is despite research showing cognitive tests were used by a high number of experts in FST evaluations (McLaughlin & Kan, 2014). It has been argued that not only does neuropsychological assessment play an important role in indicating to the court the nature and severity of any cognitive deficits and how these relate to diagnosis and prognosis, but also in addressing the legal question at hand. Most importantly, the forensic neuropsychologist can do this in an objective manner (Sullivan, 2004).

Many published works have provided opinion as to which cognitive abilities are likely to underpin FST. For example, Rothchild, Erdmann & Parzeller (2007) opined that impairments in attention and concentration, new learning and memory, planning and organisational skills were important considerations. Kirkish and Sreenivasan (1999) argued that FST required a number of basic cognitive abilities including language skills (expressive and receptive), memory, attention and executive function (higher-order) abilities. Executive functions are primarily associated with the frontal lobes and relate to a person's capacity to engage in purposeful and autonomous activities, for example, planning, organisation, decision making, reasoning, judgement and behaviour monitoring (Kaczmarek, 1998; Lezak, et al., 2004). Robinson and Acklin (2010) reported that

cognitive tests assessing a range of cognitive abilities including information processing, expressive and receptive language skills, thought organisation and impulse control should be examined. However, fewer studies have empirically examined the role of cognitive abilities in FST assessments.

Pirelli, Gottdiener and Zapf (2011) conducted a meta-analysis of 68 studies (1967 to 2008) and evaluated papers which included scores on the Wechsler intelligence scales [Wechsler Abbreviated Scale of Intelligence (WASI), Wechsler Adult Intelligence Scale (WAIS), Wechsler Adult Intelligence Scale- Revised (WAIS-R), Wechsler Adult Intelligence Scale- Third Edition (WAIS-III)]. Although Wechsler tests were included in 36 studies, only eight provided data for comparison. Fit defendants scored 5 to 6 points higher than unfit defendants on Full Scale IQ, Verbal IQ and Performance IQ reflecting small-to-medium effect sizes. Pirelli and colleagues (2011) concluded that their review of the current research was favourable toward FST- AIs compared to psychological assessment methods (e.g., WAIS). Pirelli and colleagues (2011) indicated that as most cognitive tests other than Wechsler scales had been examined only in a single study, the results on those measures could not be analysed. The authors concluded that current research had not yet evaluated when and how cognitive tests could be utilised in fitness evaluations most effectively. They recommended additional research incorporating these measures (Pirelli, et al., 2011).

Nussbaum and colleagues (1998) administered a FST- AI (the METFORS Fitness Questionnaire; MFQ) in conjunction with cognitive tests assessing verbal attention, verbal functioning and impulsivity. Tests measuring attention and concentration, processing speed and verbal fluency statistically differentiated fit and unfit groups. The authors concluded that their findings provided “initial evidence that the legal fitness concept appears grounded within a cognitive psychological foundation (p. 59)”.

Nestor, Daggett, Haycock and Price (1999) evaluated 181 defendants (128 fit and 53 unfit) using cognitive tests and found those fit to stand trial scored higher on measures of intelligence, attention, memory (especially verbal), episodic memory and verbal and nonverbal social intelligence. There were no group differences on tests of semantic memory or academic achievement. Results suggested neuropsychological assessment using cognitive tests of intelligence, attention, speed of processing, verbal learning and memory, mental flexibility, spatial reasoning and decision making was important in determining an individual's FST.

Ryba (2011) evaluated the role of cognitive abilities: executive functioning, working memory, attention and processing speed, as well as psychiatric symptoms: psychoticism, withdrawal, depression and hostility in relation to the abilities of reasoning, appreciation and understanding as per Bonnie's (1992) model of FST. Results showed that attention was associated with all three fitness related abilities and working memory was associated with understanding and reasoning. Overall, cognitive abilities accounted for the highest proportion of variance in the scores on all three competency related abilities.

Everington, DeBerge and Mauer (2000) specifically investigated the role of language in FST using the Woodcock-Johnson Language Test. Results showed the total score and three subtests scores correlated with the CAST-MR (a CST- AI). They concluded that expressive language was essential for the communication of ideas related to FST and receptive language was crucial for understanding of legal proceedings.

2.3.1 Non-credible Performance

Significantly higher rates of non-credible performance are estimated in forensic settings compared to the clinical population (e.g., see Denney & Wynkoop, 2000; Lewis, Simcox, & Berry, 2002; Rogers & Correa, 2008). The Mittenberg et al. (2002) survey calculated non-credible performance for criminal referrals, with the mean falling between

19 and 23%. Vitacco (2007) reported non-credible performance in 21% of FST evaluations.

It has been discussed in the literature that one of the key roles for objective neuropsychological assessment is to examine an individual's performance validity. Non-credible performance on tests of cognitive ability and/or psychiatric symptoms can be as a result of psychiatric disorder and/or neurological dysfunction and hence assessment of both is important. There is evidence to suggest a dissociation between cognitive and psychiatric performance validity (Ruocco et al., 2008) and hence it is recommended that experts test as many cognitive abilities and psychiatric domains as is practicable in order to establish which specific cognitive or psychiatric symptoms might be non-credible (Ruocco, et al., 2008). In addition, experts have suggested that every forensic mental health assessment, regardless of the referral question, should include an assessment of response style or performance validity (Larrabee, 2012; McLaughlin & Kan, 2014; Melton, et al., 2007). It has also been recommended that assessment of performance validity utilise multiple standardised measures as well as multimethod approaches (Bush et al., 2005; Heilbronner et al., 2009; Larrabee, 2003; Larrabee, 2012, 2014).

The evaluation of performance validity in relation to FST also presents a special challenge - determining the defendant's true cognitive and psycholegal abilities (Soliman & Resnick, 2010). As shown in a study by Everington and colleagues (2007), even individuals with significant intellectual impairment, who may genuinely lack FST, can feign a greater degree of impairment than actually exists.

Slick, Sherman and Iverson (1999) proposed diagnostic criteria for non-credible neurocognitive dysfunction that included possible, probable, and definite classifications. Their multidimensional approach incorporated several criteria including evidence from neuropsychological testing. In the criteria it is stated that psychologists evaluating non-credible cognitive performance should utilise psychometric indicators as these were the

most valid approach to identifying performance validity (Heilbronner et al., 2009). Ardorf, Denney and Houston (2007) reviewed data from 105 pre-trial and pre-sentence defendants in relation to the Slick et al. (1999) criteria. Participants constituted a diverse group of neurocognitive associated diagnoses. Using Slick et al.'s (1999) criterion, the rate of combined probable and definite non-credible neurocognitive performance was 54.3%. This suggested rates of non-credible performance were even higher in sub populations of criminal defendants with neurocognitive associated diagnoses, heightening the importance of including validity testing in these assessments.

There are a number of dedicated objective measures, standalone and inbuilt, to examine performance validity of both psychiatric and neurocognitive symptoms. For example, the Structured Interview of Reported Symptoms (SIRS), Test of Memory Malingering (TOMM) and Wechsler embedded measures. The TOMM (Tombaugh, 1996) and the Rey 15-Item Test (Rey, 1964; Lezak, 2004) have been two of the five most commonly used tests for evaluating cognitive abilities in FST assessments (Lally, 2003; Paradis, Solomon, Owen, & Brooker, 2013; Weinborn, Orr, Woods, Conover, & Feix, 2003).

Most CST- AIs, with the exception of the ECST-R, do not have embedded measures or scales of response style (Norton & Ryba, 2010). There are a few performance validity measures specifically designed for FST assessments. For example, the Inventory of Legal Knowledge (ILK; Musick & Otto, 2006) is a brief measure designed to inform opinions about the response style of defendants undergoing competency evaluation. The ILK's internal consistency and test-retest reliability have been found to be acceptable. The Test of Malingering Incompetence (TOMI) is specific to FST and consists of two forced choice 25-item independent scales- General Knowledge (TOMI-G) and Legal Knowledge (TOMI-L) (Colwell, Colwell, Perry, Wasieleski, & Billings, 2008). In an initial study of 30 inpatients in a forensic state hospital in Arkansas, the TOMI was positively correlated with

other validity performance measures including the TOMM and Rey 15-Item Test (Colwell, et al., 2008). However, these specific tests of performance validity for legal knowledge have been designed in relation to the US legal standard and hence there is question about whether they apply to other legal jurisdictions.

2.4 FST in Australia

It has been argued that FST is perhaps the most studied area of mental health law, yet there has been sparse research conducted within the Australian context. While there has been support for the development of standardised assessment criteria for FST within the Australian context (e.g., Birgden & Thomson, 1999; Freckelton, 1996; van der Wijngaart, et al., 2014), there has been acknowledgement of the inherent difficulties in undertaking such a task. This is likely to be, in part, due to the relative rarity of FST matters in comparison to other countries, such as the USA (Melton, Petrila, Poythress, & Slobogin, 2007; Birgden & Thomson, 1999). Freckelton (1996) argued that the law, through legislation and case law, should aim to provide sufficient guidance to experts to enable them to work within defined parameters and assist in standardising and increasing the reliability of FST expert assessments. At present, within Australia, FST assessments are typically based on non-standardised methods, psychological assessment tools and experts' clinical judgement.

Allan, Martin and Allan (2000; see also Martin, Allan, & Allan, 2001) surveyed 79 forensic psychologists conducting court assessments in Australia and reported that one of the key areas in which respondents felt that their training was inadequate was in regard to performing FST evaluations. Regarding test usage, 7 of the 10 most frequently used tests in forensic assessments were cognitive tests [WAIS, Rey Osterrieth Complex Figure Test (RCFT), Rey Auditory Verbal Learning Test (RAVLT), Trail Making Test (TMT), Controlled Oral Word Association Test (COWAT), Wechsler Memory Scales (WMS), and Symbol Digit Modality Test (SDMT)]. For example, 58.4% of respondents reporting

frequently using the RCFT. Just under half (48.1%) reported frequently utilising the RAVLT and the TMT (44.2%). The results suggested that experts thought that cognitive tests were useful in forensic assessments, including FST. However, there is a need to ensure practitioners are competent in test usage, administration and interpretation, adhere to specialist rules of expert testimony and do not step outside their area of expertise. The authors noted some respondents confused terms, for example FST with insanity, suggesting further training would be useful. This reiterated the findings of Hogg (1997) that psychologists had insufficient knowledge of the legal criteria for FST.

Day and colleagues (2000) examined the views of South Australian court magistrates based on expert reports received over a six months period for a range of issues. The majority of respondents favoured psychiatric assessments. Nearly one quarter of reports (24%) were in regard to FST. In FST assessments, magistrates most commonly wanted information about mental health history and diagnosis (19% respectively) and brain impairment (12%). The authors were surprised by the perceived limited involvement of psychologists in these assessments and argued that psychologists were underutilised within this area.

In one of the only known papers to discuss the basis for unfitness within the Australian context, Scott (2007) referred to FST as a construct which required understanding, reasoning, decision making and communication skills. Scott (2007) commented that because expert FST assessments in Australia were non-standardised, comparison was extremely difficult. A large proportion of reports did not reference the results of psychometric testing, making research endeavours more challenging and increasing the subjectivity of the assessments. Frequently, expert reports neglected to explicitly address the specific capacity issues relevant to the question of "fitness". This was in keeping with earlier unpublished work by Birgden and Thompson (as cited in Birgden & Thomson, 1999) who reviewed 51 FST cases and found most were conducted by

psychiatrists (92%). One-fifth (20%) of all expert opinions were based on interview alone and 6% utilised standardised assessment alone. Only a small percentage (11.7%) of reports directly addressed all of the *Presser* criteria. Scott (2007) recommended further research and the development of guidelines for FST assessments.

2.5 Study Rationale

The contribution of forensic neuropsychology to the FST literature has been minimal and much more work could be conducted to capitalise on the unique skills of this discipline. FST is potentially affected by a range of different psychiatric disorders and conditions resulting in neurological dysfunction which can be associated with impairment in intellectual functioning and cognitive abilities. There is little empirical research to support the relevance of particular cognitive abilities in FST assessments in relation to the legal criteria. In the Australian context, FST research is lacking and there is limited information about assessment practices; although there is research suggesting the standards of assessment require further development and improvement. At present, Australian FST assessments are primarily guided by international research based on different legal criteria, which may have important ramifications within the local context. Research suggests that current practices should be informed by local research, given the legal differences in FST criteria and legal process.

2.6 Aims

The overarching aim of the research reported in the current thesis was to assist in informing expert FST assessments and in particular, cognitive evaluations (in the published papers this has been referred to as neuropsychological evaluations) relating to FST within the Australian legal context, in order to ultimately assist in the development of responsible, professional, high quality, reliable and objective evaluations of FST and maximise the benefit of such assessments to the courts. The aim of the research reported in the following chapters was to examine the role of cognitive abilities and cognitive assessment in FST

determinations within an Australian context and in relation to the legal criteria of *R v Presser*. Specifically, the objectives were to:

1. Systematically review the empirical literature specifically investigating cognition and FST in order to document the nature of any relationship between specific cognitive abilities and FST, with a view to informing expert forensic practice in assessing FST.
2. Retrospectively review expert FST reports in order to inform current assessment practices, explore differences between fit and unfit defendants and examine the role of cognitive abilities and cognitive assessment and the associated implications of neurological dysfunction and psychiatric disturbances.
3. Interview key stakeholders from the disciplines of forensic psychiatry, psychology and law in order to gain further insights about the current level of understanding of neuropsychological assessments, cognitive abilities and FST assessment practices.

2.7 Hypotheses

The following hypotheses were developed in relation to the aims presented above:

1. Within the Australian context FST assessment practices will vary, with many failing to meet best practice standards of reporting of all psychometric data and legal criteria;
2. An important role for cognitive assessment exists in FST assessments as evidenced by a substantial number of psychological reports that included cognitive assessment of specific abilities including memory, processing speed, attention, language and executive functioning as well as intelligence. These cognitive abilities will be demonstrated to be important in relation to

the *Presser* criteria as reported by experts and cognitive test scores which will differentiate fit and unfit groups;

3. Interviews with key stakeholders will indicate that there is currently limited understanding about the potential role of neuropsychology and cognition in FST within the Australian context.

CHAPTER 3:

The Role of Cognition in Fitness to Stand Trial: A Systematic Review

This review has been published as:

White, A.J., Batchelor, J., & Meares, S. (2013). The role of cognition in fitness to stand trial: A systematic review. *The Journal of Forensic Psychiatry and Psychology*, DOI: 10.1080/14789949.2013.868916.

The published article is included in Appendix E.

Note: Section 3.7 of this chapter entitled "Literature Update" does not appear in the published article.

3.1 Abstract

The aim of the current paper was to systematically review the quality and design of the literature examining cognition and fitness to stand trial (FST). Ten empirical studies published between 1970 and July 2013 met the inclusion criteria. All studies utilised cross sectional designs and six were prospective. Study quality was appraised based on Pirelli, Zapf, and Gottdiener's (2011) FST research guidelines. The study quality was highly variable. Intelligence was controlled statistically in only half of the included studies. Cognitive processes, specifically, processing speed, verbal memory, and visuoperceptual skills differentiated fit and unfit groups. Aspects of executive functioning, including social knowledge and abstract thinking, influenced FST. Future studies should use prospective consecutive designs and multivariate statistical strategies that control for potential confounds. Comprehensive assessment across a number of cognitive domains is needed in order to validate research conducted to date and guide forensic assessment of FST.

3.2 Introduction

It is widely acknowledged that cognition is an important factor in determining an individual's fitness to stand trial (FST; Kirkish & Sreenivasan, 1999; Melton, Petrila, Poythress, & Slobogin, 2007; Mossman, 2007). FST (also known as competency to stand trial or adjudicative competency) is a fundamental legal principle, derived from old English common law, implemented to ensure integrity and fairness in the legal system. Although state and international legal jurisdictions vary on the precise requirements and threshold for FST (for example see *R v. Pritchard* (1836) in England and Wales; *Dusky v. United States* (1960) in the United States; and *R v. Presser* [1958] in Australia), all universally relate to a defendant's level of capacity to understand, comprehend, and assist counsel, in order to allow a satisfactory level of participation in the court process. The role of cognition in determinations of FST and, in particular, the importance of language, memory, attention, and executive functioning, has been posited in several key textbooks and published papers (Kirkish & Sreenivasan, 1999; Martell, 1992; Melton, et al., 2007; Nestor, Daggett, Haycock, & Price, 1999). Expressive and receptive language skills are reported to be crucial for instructing counsel (Everington, Deberge, & Mauer, 2000; Mossman, 2007). Attention and memory are proposed to be essential for an individual to follow court proceedings (Rothschild, Erdmann, & Parzeller, 2007). Methodologically rigorous empirical studies are required in order to validate these purported relationships and ensure evidence-based clinical practice. Further, understanding the cognitive constructs underpinning FST is important for the development and application of functional FST assessment tools.

A number of authors have examined the relationship between intellectual functioning and FST and reported that defendants with lower intelligence are at a higher risk of being unfit to stand trial (Everington & Dunn, 1995; Hoge et al., 1996; Nicholson & Kugler, 1991; Otto et al., 1998; Rogers, Ustad, Sewell, & Reinhardt, 1996). In a recent

meta-analysis of research into FST, Pirelli, Gottdiener, and Zapf (2011) evaluated findings from 10 independent studies that had used the Wechsler Adult Intelligence Scales (Wechsler, 1981, 1997a, 1999) and in which Full Scale IQ, Performance IQ, and/or Verbal IQ scores were reported. Small to medium effect sizes were reported (Cohen's *d*: range 0.32-0.38), with competent defendants scoring approximately 5 to 6 points higher than incompetent defendants across all three IQ indices.

Intellect, however, does not represent the primary impairment characterising many neurological conditions such as traumatic brain injury (TBI), which occur in high rates in forensic populations (Schofield et al., 2006; Shiroma, Ferguson, & Pickelsimer, 2010). A recent meta-analysis reported an estimated TBI prevalence rate of 60.25% in the offender population (Shiroma et al., 2010). Following TBI, intelligence is often less affected than other aspects of cognition such as attention, processing speed, new learning, retention, and executive function (Ponsford, Sloan, & Snow, 2013). These cognitive constructs, although correlated with intelligence, are considered distinct from IQ (e.g., Lezak, Howieson, & Loring, 2004; Wechsler, 2008a, 2008b). As such, cognitive impairment resulting from any neurological condition may not be detected on an IQ test but may still significantly impact on a person's ability to comprehend, communicate, and actively partake in legal proceedings. The precise impact of facets of cognition, other than intelligence, on FST requires determination. Within this context, it is necessary to ensure that any specific cognitive deficit is uniquely contributing to FST and is not solely a consequence of lower general intellectual capacity.

Pirelli, Gottdiener, and Zapf (2011) listed seven studies that had utilised cognitive tests other than intelligence measures, however, results on those measures were not analysed within their review. The aims of the current systematic review were (1) to determine and describe the quality and design of empirical studies specifically investigating cognition and FST within an adult forensic population, and (2) to document

the nature of any relationship between specific cognitive domains and FST, with a view to informing clinical practice in assessing FST.

3.3 Method

3.3.1 Search Procedure

This review was guided by the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) statement (Liberati et al., 2009; Moher, Liberati, Tetzlaff, Altman, & PRISMA Group, 2009). A search for publications and dissertations produced between 1970 and July 2013 was conducted within the following electronic databases: Academic Search Premier, Medline, PsycArticles, PsycINFO, Pubmed, Scopus, and Proquest Dissertation. See Appendix A for the search strategy. Only work published in English was searched. In addition, references listed in retrieved articles and books were manually searched as were relevant journals (American Journal of Forensic Psychology; Behavioral Sciences and the Law; International Journal of Forensic Mental Health; International Journal of Law and Psychiatry; Journal of Forensic Neuropsychology; Journal of Forensic Psychiatry and Psychology; Journal of Forensic Psychology Practice; Journal of the American Academy of Psychiatry and Law; Law and Human Behavior; Professional Psychology: Research and Practice; Psychiatry, Psychology and Law; Psychology, Public Policy & Law).

All results were placed in an Endnote database and duplicate papers were voided through automated and manual checks. Articles were then assessed to determine eligibility. If the title of the article clearly revealed the paper did not address the topic, the article was excluded. The remaining articles were then assessed in terms of their relevance based on the Abstract and further exclusions were made. Shortlisted articles were appraised to determine whether they met the inclusion criteria as detailed below. Figure 1 presents a flow diagram of this process.

Essential requirements for inclusion were (1) measurement of one or more cognitive domains other than or in addition to intelligence, with intelligence measured by Verbal, Performance, or Full Scale intelligence index scores; (2) an adult forensic population (18 years and above); (3) inclusion of a comparison group (i.e., fit versus unfit); (4) population was not restricted to individuals with an intellectual disability (defined as those with an IQ score below 70); and (5) when the same data/participants were used in more than one publication only one paper was included.

The search yielded a total of 1450 results. Articles that were clearly irrelevant based on their title ($n = 583$) or that focused on malingering ($n = 116$) were excluded. A further 656 records were excluded upon reading the Abstract. In all, 95 full-text articles were considered directly relevant to the research question and were reviewed. Of the 95 articles, 85 were excluded (see Figure 1).

3.3.2 Data Extraction and Analysis

Data from the included studies that related to (1) methodological quality and study design, and (2) measurement of specific cognitive domains was extracted and analysed. The procedure relating to each of these points is discussed below.

3.3.3. Methodological Quality and Design

Pirelli, Zapf, and Gottdiener (2011) published 13 key guidelines specifically for researchers conducting comparative research of fit and unfit defendants. The guidelines are applicable to research conducted across any legal jurisdiction. Although these guidelines were produced after the publication of the papers reviewed herein, it was hypothesised that they would provide a useful and uniform framework to systematically evaluate each of the studies, taking into account issues specific to the question of FST. The guidelines also have the potential to assist in comparisons with future research. Guidelines 1 and 11 were not considered relevant to the studies herein, as they related to the publication of multiple manuscripts from one dataset or studies of malingering. Guideline

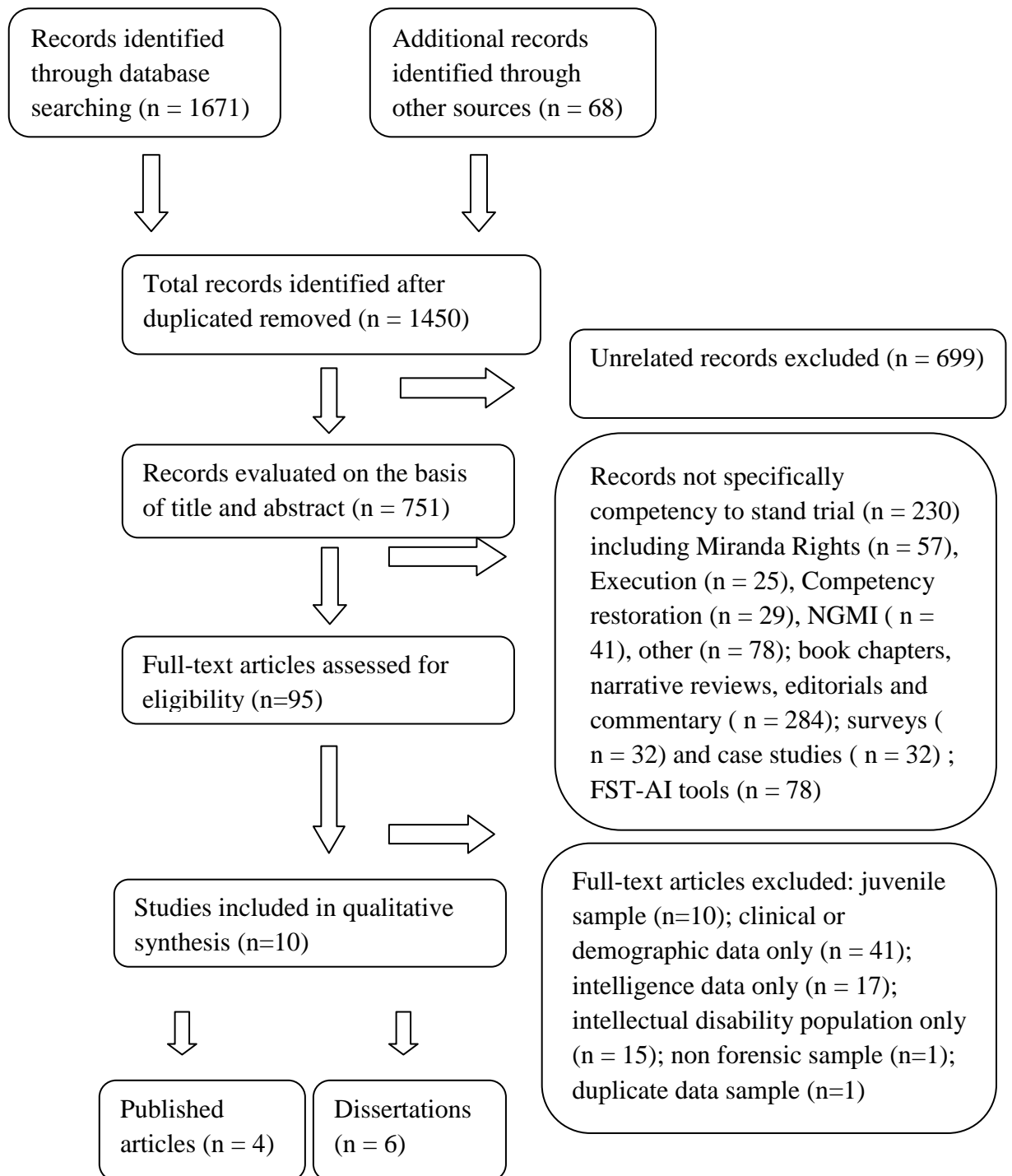


Figure 1. Systematic review process for studies evaluating cognition and fitness to stand trial.

12 referred to the inclusion of a 'questionably fit' group and was also excluded, as the purpose of the current review was to examine differences between fit and unfit defendants only. As such, only 10 of the 13 competency (FST) research guidelines detailed by Pirelli,

Zapf, and Gottdiener (2011) were employed. These were: (2) presentation of (a) means, (b) standard deviations, and (c) effect sizes; (3) provision of information regarding significant and non-significant findings; (4) data presented continuously where possible; (5) investigation of potential differences between participants and non-participants; (6) use of a suitable competent comparison group; (7) coding of potentially moderating variables; (8) analyses conducted using all available competency criteria; (9) data presented comparatively by competency status and other dichotomies; (10) documented relevant findings for the total sample in addition to the fit and unfit samples; (13) provision of comparative data consistently across (a) static defendant characteristics: (i) age; (ii) ethnicity; (iii) sex; (iv) level of education; (v) employment status; (vi) marital status; (vii) psychiatric diagnosis; (viii) psychiatric history; (ix) competency history; (x) legal history; and (b) study specific variables: (i) date range of data collection; (ii) origin of initial competency decision; (iii) origin of competency decision used for comparison; (iv) composition of competent comparison group; (v) names and data from assessment tools used; (vi) study setting; (vii) sample's country of origin; (viii) process of participant recruitment; and (ix) sample type. See Pirelli, Zapf, and Gottdiener (2011) for a detailed description of each guideline.

Given the range of variables included in the guidelines and the variability in the number of requisite elements required to meet each of the 10 guidelines, it was deemed necessary to consider each of the individual aspects identified above as separate entities (i.e., 30 guidelines). Further, it was recognised that each of these variables when used to consider study quality may not be as important as others. The lead author of the published guidelines (Pirelli, Zapf, & Gottdiener, 2011) was contacted and methods of weighting each of the guidelines was discussed (personal communication 2012, 2 October). In order to objectively weight each of these guidelines, 10 leading experts in the field of forensic psychology and FST research, who were independent to the development of the original

guidelines, were contacted and asked to weight the importance of each of the guidelines on a 5-point scale (0 = *no importance*; 1 = *minimal importance*; 2 = *some importance*; 3 = *high importance*; 4 = *critical importance*). The experts were selected based on a literature search and examination of the number of publications and citations in the FST field and, in particular, reference to cognition and FST over a period of the last 15 years. Eight responses were received. One expert declined to participate, citing a lack of current involvement in the field. Seven of the 10 experts rated the importance of each of the guidelines. See Appendix B for the questionnaires. Permission to perform the study was obtained from the Macquarie University Ethics Committee.

All experts were highly qualified with PhD level training in psychology and a mean of 24.12 years ($SD = 9.22$; range 12-35 years) work experience in the field of FST. Four were professors and two were associate professors. Six conducted the majority of their FST work in the USA (2 = South, 2 = South and North Eastern, 1 = West, and 1 = North Eastern geographical regions) and one in Canada. Most ($n = 4$) were familiar with the Pirelli, Zapf, and Gottdiener (2011) guidelines. Nearly all ($n = 6$) agreed the guidelines should be evaluated independently.

Inter-rater reliability between experts for each guideline was calculated using intraclass correlation coefficients (ICC). Overall agreement of scores among the seven experts on 22 of the guidelines was high ($ICC = .85, p < .001$). One expert responded that eight of the guidelines were "dependent on study". Consensus on two guidelines (13a(ix): competency history and 13a(x): legal history) ranged from 1 to 4, and therefore these guidelines were excluded from further analysis or evaluation of the literature. The inter-rater reliability for the remaining six guidelines across six experts was moderate ($ICC = .64, p < .05$).

A final weighted score for the 28 guidelines was determined based on the median expert score. Guidelines with a median of 2 or higher, which indicated that over 70% of the

experts considered the guideline to be of at least of *some importance* were extracted and weighted. Guidelines with a median score of 2 or 2.5 (i.e. *some importance*) were weighted 0.5 ($n = 3$). Guidelines with a median score of 3 or higher (i.e., *high importance* or *critical importance*) were weighted 1 ($n = 24$). Two guidelines (13a(v): employment status and 13a(vi): marital status) were reviewed by the majority of the experts to be of *no importance* or *minimal importance* (i.e. weighted 0) and were excluded. Therefore, a total of 26 guidelines were utilised to evaluate the quality of the FST literature. Included studies were rated on each guideline and the corresponding weighted score was applied. An overall score of study quality (out of a possible score of 24.5) was derived (see Table 1).

In addition to utilising the Pirelli, Zapf, and Gottdiener (2011) guidelines, the design of each study was evaluated as per the convention for a systematic review (National Health and Medical Research Council, NHMRC, 2009). The NHMRC (2009) guidelines indicate that a prospective cohort forms the highest level of study design, whereas cross-sectional or case series designs represent the lowest level of study design. Higher level designs provide more confidence in the study results.

3.3.4 Cognitive Domains

Neuropsychological tests and their related statistics were extracted and used to evaluate FST across studies. Results were grouped to extrapolate information about specific cognitive domains and their relationship to FST. Cognitive domains (i.e., working memory, processing speed, memory, visuosperceptual skills, language, and executive functioning) and classification of neuropsychological tests was determined in accordance with neuropsychological texts by Lezak et al. (2004) and Strauss, Sherman, & Spreen (2006) and respective test manuals (Wechsler, 2008a, 2008b).

Table 1. *Evaluation of Studies According to Pirelli, Zapf, and Gottdiener's (2011) “Competency Research Guidelines”*

Guideline	Expert Weight	Author and Year									
		Simon (1987)	Gannon (1989)	Lesser (1989)	Sachsenmaier (1990)	Nussbaum (1998)	Nestor (1999)	Grandjean (2004)	Shields (2004)	Klein (2010)	Ryba (2011)
2a	1	1	1	1	0	1	1	1	1	1	0
2b	1	1	1	1	0	1	1	1	1	1	0
2c	1	0	0	0	0	1	1	1	1	1	0
3	1	1	1	0	1	1	1	1	1	1	1
4	1	1	1	1	1	1	1	1	1	1	1
5	1	0	0	1	0	0	0	0	0	0	0
6	1	1	0	1	1	1	1	0	1	1	1
7	0.5	0	0.5	0.5	0	0.5	0.5	0	0	0	0.5
8	0.5	0	0	0.5	0	0	0	0	0	0	0
9	1	0	0	0	1	0	0	0	1	1	1
10	0.5	0	0.5	0.5	0	0.5	0	0	0	0	0
13a(i)	1	0	1	1	0	0	1	1	0	1	1
13a(ii)	1	0	1	1	0	0	0	1	0	1	1
13a(iii)	1	0	1	1	0	0	1	1	0	1	1
13a(iv)	1	0	1	1	0	0	1	1	0	0	1
13a(vii)	1	0	0	1	0	0	0	0	0	0	1
13a(viii)	1	0	0	0	0	0	0	0	0	0	1
13b(i)	1	0	0	1	1	0	1	0	0	1	1
13b(ii)	1	0	1	1	1	1	1	0	0	1	1
13b(iii)	1	1	1	1	1	0	1	1	1	1	1
13b(iv)	1	0	1	1	0	1	1	1	0	1	1
13b(v)	1	1	1	1	1	1	1	1	1	1	1
13b(vi)	1	0	1	1	1	1	1	1	1	1	1
13b(vii)	1	0	1	1	1	1	1	1	1	1	1
13b(viii)	1	1	1	1	1	1	1	1	1	1	1
13b(ix)	1	1	1	1	1	1	1	1	1	1	1
Total	24.5	9	17	20.5	12	14	18.5	16	13	19	19.5

3.4 Results

3.4.1 Included Studies

A total of 10 empirical studies (6 dissertations, 4 published articles) met the inclusion criteria. The characteristics of each study are described in Table 2.

All except one study (Nussbaum, Mamak, Tremblay, Wright, & Callaghan, 1998) was based in the USA and relied upon the legal standard set forth in *Dusky v United States* (1960). The majority of studies had greater numbers of fit defendants ($M = 112.2$, $SD = 113.49$; range 18-348) than unfit defendants ($M = 46.5$, $SD = 38.19$; range 7-126). The majority of defendants were men, with a mean age of 34.4 years (range 17-85), and a mean of 10.3 years education (range 1-21 years). In over half ($n = 6$) of the studies, expert forensic evaluation and/or court decision was used to determine group allocation. In three studies, FST was determined by expert forensic opinion and a fitness to stand trial assessment instrument (FST -AI) (Gannon, 1989; Grandjean, 2004; Sachsenmaier, 1990). One study relied solely on a FST-AI (Nussbaum et al., 1998). Most samples were restricted to psychiatric remand inpatients.

3.4.2 Study Quality and Design

Out of a maximum score of 24.5 for each study, the mean was 15.9 ($SD = 3.7$). The range was 9 to 20.5 as shown in Table 1. Six studies scored above the mean (Gannon, 1989; Grandjean, 2004; Klein, 2010; Lesser, 1989; Nestor et al., 1999; Ryba & Zapf, 2011). Four scored below the mean (Nussbaum et al., 1998; Sachsenmaier, 1990; Shields, 2004; Simon, 1987). The median score was 16.5 (IQR: 13-19). Simon (1987) and Sachsenmaier (1990) were in the first quartile and more than one standard deviation below the mean. The study by Lesser (1989) was the highest ranked with a score greater than one standard deviation above the mean.

Table 2.

Study Characteristics

Study	Study Population	Legal Code	Data Collection (yrs)	Sample Size	Age Range/ Mean (<i>M</i>) & <i>SD</i>	Sex	Education (yrs)	Group Determination Process	Unfit (Study) Group	Fit (Control) Group
Simon (1987)	USA	Dusky v United States, 1960		25F; 11UF				Staff decision	Criminal defendants referred for FST and CR ^a	Criminal defendants referred for FST and CR ^a
Gannon (1989)	USA	Dusky v United States, 1960		23F; 17UF	20-71yrs (<i>M</i> =33.9yrs; <i>SD</i> =10.1)	M	1-19 (<i>M</i> =11.1; <i>SD</i> =3.2)	CAI; clinic assessment	Psychiatric remand patients found IST and ordered for treatment ^b	Psychiatric remand patients found IST and ordered for treatment ^b
Lesser (1989)	USA	Dusky v United States, 1960	1984-1987	83F; 52UF	<i>M</i> =31.3yrs; <i>SD</i> =9.5	M	<i>M</i> =10.4; <i>SD</i> =2.4	Court determination & forensic assessment	Psychiatric remand patients found IST or NGRI or civil committed ^c	Psychiatric remand patients found IST or NGRI or civil committed ^c

Table 2.

Continued

Study	Study Population	Legal Code	Data Collection (yrs)	Sample Size	Age Range/ Mean (<i>M</i>) & <i>SD</i>	Sex	Education (yrs)	Group Determination Process	Unfit (Study) Group	Fit (Control) Group
Sachsenmaier (1990)	USA	Dusky v United States, 1960	1984-1989	348F; 97UF		418 M; 35 F		CAI & clinical evaluation	Criminal defendants referred for FST and CR ^d	Criminal defendants referred for FST and CR ^d
Nussbaum et al. (1998)	Canada	Criminal Code of Canada, 1993		29F; 7UF; 8Q				MFQ	Inpatients ^e	Inpatients ^e
Nestor et al. (1999)	USA	Dusky v United States, 1960	1987-1995	128F; 53UF	17-80yrs (<i>M</i> =32.7yrs; <i>SD</i> =12.3)	M	3-17 (<i>M</i> =10.7; <i>SD</i> =2.7)	Staff psychiatric evaluation	Psychiatric remand patients referred for FST evaluations ^f	Psychiatric remand patients referred for FST evaluations ^f

Table 2.

Continued

Study	Study Population	Legal Code	Data Collection (yrs)	Sample Size	Age Range/ Mean (<i>M</i>) & <i>SD</i>	Sex	Education (yrs)	Group Determination Process	Unfit (Study) Group	Fit (Control) Group
Grandjean (2004)	USA	Dusky v United States, 1960		18F; 30UF	<i>M</i> =37.7yrs; <i>SD</i> =12.9	39 M; 9 F	<i>M</i> =9.0; <i>SD</i> =5.4	Staff psychiatric evaluation; SADS-C; ECST-R	Psychiatric inpatients referred for FSTR ^g	Psychiatric inpatients referred for FSTR ^g
Shields (2004)	USA	Dusky v United States, 1960		183F; 35UF	18-85yrs (<i>M</i> =34.6; <i>SD</i> =N/A)	180 M; 38 F	1-21 (<i>M</i> =9.7; <i>SD</i> =N/A)	Psychiatric forensic evaluation	Psychiatric remand patients referred for pre-trial FST evaluation ^h	Psychiatric remand patients referred for pre-trial FST evaluation ^h
Klein (2010)	USA	Dusky v United States, 1960	1995-2008	245F; 126UF	<i>M</i> =30.0yrs; <i>SD</i> =8.4	M		Psychiatric forensic evaluation	Psychiatric remand patients referred for FST evaluations ^f	Psychiatric remand patients referred for FST evaluations ^f

Table 2.

Continued

Study	Study Population	Legal Code	Data Collection (yrs)	Sample Size	Age Range/ Mean (<i>M</i>) & <i>SD</i>	Sex	Education (yrs)	Group Determination Process	Unfit (Study) Group	Fit (Control) Group
Ryba & Zapf (2011)	USA	Dusky v United States, 1960	2002-2003	40F; 37UF	18-85yrs (<i>M</i> =40.9; <i>SD</i> =13.1)	M	4-18 (<i>M</i> =10.8; <i>SD</i> =2.6)	Court determination	Psychiatric remand patients found IST and ordered for restoration ⁱ	Psychiatric remand patients previously found FST and NGRI ⁱ

Note. M = Mean; SD = Standard Deviation; F = Fit; UF = Unfit; FST = Fit to Stand Trial; CR = Criminal Responsibility; CAI = Competency Assessment Instrument (McGarry, 1973); IST = Incompetent to Stand Trial; NGRI = Not Guilty by Reason of Insanity; Q = Questionable Fitness; MFQ = METFORS Fitness Questionnaire (Nussbaum, Mamak, Tremblay, Wright, & Callaghan, 1998); SADS-C = Schedule for Affective Disorders and Schizophrenia- Change version (Endicott & Spitzer, 1978); ECST-R = Evaluation of Competency to Stand Trial- Revised (Rogers, Tillbrook, & Sewell, 2004); FSTR = Fitness to Stand Trial Restoration.

^a Arkansas Mental Health Services, Arkansas, USA

^b Atascadero State Hospital (ASH), California, USA

^c Forensic Unit, Florida State Hospital, Florida, USA

^d Montana State Hospital, Montana, USA

^e Metropolitan Toronto Forensic Service Brief Assessment Unit, Clarke Institute of Psychiatry, Canada

^f Bridgewater State Forensic Hospital, Massachusetts, USA

^g North Texas State Hospital, Wichita Falls Texas, USA

^h Kentucky Correctional Psychiatric Centre (KCPC), LaGrange Kentucky, USA

ⁱ Taylor Hardin Secure Medical Facility, Tuscaloosa Alabama, USA

The number of studies that explicitly addressed each of the 26 guidelines was highly variable (range 1-10; see Table 1). In general, study specific variables (guidelines 13b(i) to 13b(ix) inclusive) were regularly described (range 5-10). Defendant characteristics (guidelines 13a(i) to 13a(viii) inclusive) were reported in fewer studies (range 1-6). Eight studies reported means and standard deviations for fit and unfit groups. The presentation of significant and non-significant results, continuous data (where possible), and the use of a suitable comparison group were reported in most studies (at least 8 of the 10 studies). Only one study conducted analyses using all available competency criteria or presented statistics comparing non-participants to participants, to ensure there was no selection bias and that the included sample was representative of the FST population. Five studies conducted multivariate statistical analyses that controlled for at least one potential confound (e.g., IQ, age, education, or mood) (Gannon, 1989; Lesser, 1989; Nestor et al., 1999; Nussbaum et al., 1998; Sachsenmaier, 1990). Two of these examined subsamples within their total sample to cross-validate variables associated with fit and unfit groups (Lesser, 1989; Sachsenmaier, 1990). Another (Ryba & Zapf, 2011) examined the relationship of cognitive variables and psychological symptoms in court determined fit and unfit groups to abilities that have been associated with FST (understanding, appreciation, and reasoning; see Poythress et al., 1999). In three studies multivariate analyses were conducted but there was no control for potential confounds (Grandjean, 2004; Klein, 2010; Shields, 2004). One study performed group comparisons (Simon, 1987).

All of the included studies were cross-sectional designs, the lowest level of study design (NHMRC, 2009). Data was collected prospectively (concurrently) in five studies (Gannon, 1989; Lesser, 1989; Nussbaum et al., 1998; Ryba & Zapf, 2011; Simon, 1987) and retrospectively in four (Klein, 2010; Nestor et al., 1999; Sachsenmaier, 1990; Shields, 2004). It was unclear how the defendants that participated in the study by Grandjean

(2004) were recruited. Research examining the role of cognition in FST is restricted in terms of the experimental design due to the legal issues and setting from which participants are available.

3.4.3 Cognitive Domains Assessed

Studies were heterogeneous in terms of the methodology, tests administered, outcome measures examined, and statistical analysis. Table 3 details the cognitive domains, neuropsychological tests, and associated significant findings.

The Attention and Concentration Index on older versions of the Wechsler scales (WAIS-R; WMS; WMS-R) is now conceptualised as working memory (Wechsler, 1997a, 2008a).

Therefore results on tests described as attention and concentration were considered under the cognitive domain of working memory. In accord with the current literature, results from any measure of processing speed were considered under the cognitive domain of processing speed (e.g., Lezak et al., 2004; Strauss et al., 2006). No study explicitly assessed expressive or receptive language skills. There were isolated reports of differences on verbal functioning subtests such as Vocabulary (WAIS-III, 1997a; Grandjean, 2004) and Information (WAIS-R, 1981; Sachsenmaier, 1990). However, in the absence of controlling for IQ and education respectively, which are highly correlated with performance on these tests (e.g., see Wechsler, 2008a), those results were not included within this review.

Importantly, although most studies indicated whether IQ differed between fit and unfit groups, IQ was not held constant in half of the included studies (Grandjean, 2004; Klein, 2010; Ryba & Zapf, 2011; Shields, 2004; Simon, 1987). Therefore, it was not possible to determine whether between group differences on measures of specific cognitive domains were moderated by IQ. As such, the results of those studies should be interpreted with caution. Results for studies which did and did not control for intelligence are presented in turn for each cognitive domain.

Table 3.

Cognition and Fitness to Stand Trial

Cognitive Domain	Simon (1987)	Gannon (1989)	Lesser (1989)	Sachsenmaier (1990)	Nussbaum (1998)	Nestor (1999)	Grandjean (2004)	Shields (2004)	Klein (2010)	Ryba (2011)
Working Memory				WAIS-R: DS, A	WMS: O***, MC**	WMS-R: ACI	CPT-IP	WAIS-III: DS**, A*	WAIS-III: DS, A, LNS	WAIS-III: WMI*; BTA
Processing Speed			WAIS-R: DS-C	WAIS-R: DS-C***	TMT (A)***	TMT (A)***	TMT (A)	WAIS-III: DS-C*	WAIS-III: DS-C, SS	WAIS-III: PSI
Intelligence	QT	WAIS-R: FSIQ*	WAIS-R: FSIQ, VIQ**, PIQ***	WAIS-R: FSIQ, VIQ, PIQ	NART*	WAIS-R: FSIQ**, VIQ**, PIQ**	WASI: FSIQ*, VIQ*, PIQ	WAIS-III: VIQ*, PIQ**	WAIS-III: FSIQ, VIQ, PIQ	
Memory						WMS-R: GMI**, AMI**, VMI*, LM*, VR	WMS-III: AMI*, ADI, ARDI*, VR		WMS-III: LM*, Fa, FP, VPA**, AMI*, VMI, IMI, ADI*, VDI, GMI*, ARDI*	

Table 3.

Continued

Cognitive Domain	Simon (1987)	Gannon (1989)	Lesser (1989)	Sachsenmaier (1990)	Nussbaum (1998)	Nestor (1999)	Grandjean (2004)	Shields (2004)	Klein (2010)	Ryba (2011)
Visual Perceptual Skills			WAIS-R: BD***, PC; BG***	WAIS-R: BD***, PC***, OA***	ROCF		WASI: BD	WAIS-III: BD, PC	WAIS-III: BD, PC	
Academic						WRAT-R: OR, Sp, WA				
Executive Functioning	PT***	WAIS-R: C, S; PT***; CFS; CT		WAIS-R: C, S, PA***	CIT; COWA (P,S); WAIS-R: SA	WAIS-R: C**,S*,P A***; WCST; TMT (B)	WAIS-III: C**,PA; WASI: MR, S**; SKQ**;COW AT (F,A,S)**; WCST	WAIS-III: C**, S, PA**, MR***	WAIS-III: C*, S, PA, MR	TMT (B)

Note. The results reported by Sachsenmaier (1990) represented significant findings reported for all subsample comparative analyses groups. The results reported for Ryba & Zapf (2011) represented significant findings across all three competence- related abilities (understanding, appreciation, and reasoning). WAIS-R = Wechsler Adult Intelligence Scale- Revised (Wechsler, 1981); DS = Digit Span subtest; A = Arithmetic subtest; WMS = Wechsler Memory Scales (Wechsler, 1974); O = Orientation subtest; MC = Mental Control subtest; WMS-R = Wechsler Memory Scale- Revised (Wechsler, 1987); ACI = Attention and Concentration Index; CPT-IP = Continuous Performance Test- Identical Pairs (Cornblatt, Risch, Faris, Friedman, & Erlenmeyer-Kimling, 1995); WAIS-III = Wechsler Adult Intelligence Scale- Third edition (Wechsler, 1997a); Letter-Number Sequencing subtest; WMI = Working Memory Index; BTA = Brief Test of Attention (Schretlen, 1996); DS-C = Digit-Symbol Coding subtest; TMT(A) = Trail Making Test, Part A (Reitan & Wolfson, 1985); SS = Symbol Search subtest; PSI = Processing Speed Index; QT = The Quick Test (Ammons & Ammons, 1962); FSIQ = Full Scale Intelligence; VIQ = Verbal Intelligence; PIQ = Performance Intelligence; NART = National Adult Reading Test (Nelson & Willison, 1991); WASI = Wechsler Abbreviated Scale of Intelligence (Wechsler, 1999); GMI = General Memory Index; AMI= Auditory Memory Index; VMI = Visual Memory Index; LM = Logical Memory subtest; VR = Visual Reproduction subtest; WMS-III

= Wechsler Memory Scales- Third edition (Wechsler, 1997b); ADI = Auditory Delayed Memory Index; ARDI = Auditory Recognition Delayed Memory Index; Fa = Faces subtest; FP = Family Pictures subtest; VPA = Verbal Paired Associates subtest; IMI = Immediate Memory Index; VDI = Visual Delayed Index; BD = Block Design subtest; PC = Picture Completion subtest; BG = Canter Bender Gestalt Test (Canter, 1976); OA = Object Assembly subtest; ROCF = Rey-Osterreith Complex Figure Test (Meyers & Meyers, 1995); WRAT-R = Wide Range Achievement Test- Revised (Jastak & Wikinson, 1984); OR = Oral Reading subtest; Sp = Spelling subtest; WA = Written Arithmetic subtest; PT = Proverbs Test (Gorham, 1956); C = Comprehension subtest; S = Similarities subtest; CFS = Weigl-Goldstein-Scheerer Color-Form Sorting Test (Lezak et al., 2004); CT = Categories Test (Halstead, 1947); PA = Picture Arrangement subtest; CIT = Common Item Test (Wright & Stuss, 1992) ; COWAT = Controlled Oral Word Association Test (Strauss et al., 1998); SA = Sentence Arrangement subtest WCST = Wisconsin Card Sort Test (Heaton, 1981); TMT(B) = Trail Making Test, Part B (Reitan & Wolfson, 1985); MR = Matrix Reasoning subtest; SKQ= Social Knowledge Questionnaire (McEvoy et al., 1996).

* $p < .05$; ** $p < .01$; *** $p < .001$

3.4.3.1 Working memory. Seven studies examined the role of working memory. Three controlled for intelligence. Nussbaum and colleagues (1998) reported in their prospective and moderately ranked study that working memory was predictive of FST, univariate analyses revealing that the unfit group performed significantly worse than the fit group. This finding was not replicated in the retrospective studies conducted by Sachsenmaier (1990), which was of a low rank, or by Nestor et al. (1999) in a higher ranked study.

Of the four studies that did not control for intelligence, two reported working memory was predictive of FST (Grandjean, 2004; Shields, 2004). Grandjean (2004) reported that working memory accounted for over 19% of the variance between the fit and unfit groups. Shields (2004) reported fit defendants performed significantly better on working memory tests than unfit defendants; however, that finding was not replicated by Klein (2010). Ryba and Zapf (2011) in a highly ranked prospective study reported working memory was associated with abilities associated with FST (understanding, appreciation, and reasoning).

3.4.3.2 Processing speed. Three of four studies reported significant group differences on measures of processing speed over and above intelligence. Significant between group differences on the Trail Making Test, Part A (Reitan & Wolfson, 1985) were reported by Nussbaum et al. (1998) and Nestor et al. (1999), with unfit groups performing significantly worse than fit groups. Sachsenmaier (1990) found similar significant group differences on the Digit-Symbol Coding subtest from the WAIS-R (1981); however, this was not replicated by Lesser (1989), in the highest ranked prospective study in this systematic review.

Mixed support for processing speed measures was found across four studies that did not account for intelligence. Shields (2004) reported significant group differences in the same direction for the Digit Symbol Coding subtest (WAIS-III; Wechsler, 1997a);

however, two higher ranked studies Klein (2010) and Ryba and Zapf (2011) reported no significant results on measures of processing speed (Wechsler, 1997a). The moderately ranked study by Grandjean (2004) found no group differences on the Trail Making Test, Part A (Reitan & Wolfson, 1985).

3.4.3.3 Memory. Three studies of moderate to high rank evaluated the role of memory in relation to FST. Nestor and colleagues (1999) in a retrospective study reported significant differences between fit and unfit groups across auditory and visual memory tests, with their unfit group performing significantly worse across all composite measures on the Wechsler Memory Scales-Revised (WMS-R; Wechsler, 1987), even after accounting for IQ. Although Grandjean (2004) and Klein (2010) did not control for IQ, a significant difference between fit and unfit groups in auditory memory was reported by both using a later version of the Wechsler Memory Scales (WMS-III; Wechsler, 1997b).

3.4.3.4 Visuo perceptual skills. After controlling for IQ, Lesser (1989) in a highly ranked study, and Sachsenmaier (1990) in a moderately ranked study, reported significantly better visuoconstructional and visuospatial skills in fit compared to unfit defendants on the Wechsler Adult Intelligence Scales- Revised (1981). This finding was not replicated by Nussbaum and colleagues (1998) in a prospective and moderately ranked study examining the copy of a complex figure. Three additional studies of moderate to high quality that did not control for intelligence (Grandjean, 2004; Klein, 2010; Shields, 2004) reported no significant group differences on the nonverbal measures included in later versions of the Wechsler Adult Intelligence Scales (WASI; Wechsler, 1999; WAIS-III; Wechsler, 1997a).

3.4.3.5 Academic abilities. Nestor and co-authors (1999) evaluated participants' reading, spelling, and written abilities on the Wide Range Achievement Test (Jastak & Wilkinson, 1984). In this moderately ranked retrospective study, no significant group

differences in academic skills were found when controlling for intelligence, with both groups performing within the well below average to low average ranges.

3.4.3.6 Executive functioning. Nine of the 10 studies examined a range of executive or higher order functions. Four controlled for intelligence. Understanding of social knowledge and abstract verbal reasoning skills differentiated fit and unfit groups in Nestor et al.'s (1999) moderately ranked retrospective study (as measured by the Comprehension and Similarities subtests; Wechsler Adult Intelligence Scales 1981, 1997a); however the finding was not replicated in two lower ranked studies (Gannon 1989; Sachsenmaier 1990). Support for the role of sequential reasoning (Picture Arrangement subtest; Wechsler Adult Intelligence Scales 1981, 1997a) was reported in two retrospective studies (Sachsenmaier, 1990; Nestor et al., 1999). The Proverbs Test: Abstraction (metaphorical) and Concrete (literal thinking in the absence of generalisations) measures (Gorham, 1956) differentiated fit and unfit groups in Gannon's (1989) moderately ranked prospective study, with the fit group having greater capacity for abstraction and being less concrete. There were no significant group differences reported across studies for other measures of conceptual reasoning, verbal fluency, context appropriate decision making and judgement, or mental flexibility.

The five studies which did not control for intelligence and were of low to high ranking supported the role of executive functions that included social knowledge (Grandjean, 2004; Klein, 2010; Shields, 2004), verbal fluency (Grandjean, 2004), and abstraction (Simon, 1987). Mixed support was found for verbal abstract reasoning and verbal fluency (Grandjean, 2004), as well as for sequential reasoning and nonverbal reasoning (Shields, 2004). No support for mental flexibility was reported in regard to competence-related abilities (Ryba & Zapf, 2011).

3.4.3.7 Intelligence. The majority of studies examined the relationship between intelligence measures and FST ($n = 9$) and reported significant group differences between

fit and unfit defendants. The strongest support was found for Verbal IQ across studies that were moderately to highly ranked (Lesser, 1989 see also Carbonell, Heilbrun & Friedman, 1992; Nestor et al., 1999; Grandjean, 2004; Shields, 2004). Fit defendants performed significantly better on measures of verbal intelligence than unfit defendants in two-thirds of studies. Half of the studies that examined Performance IQ reported unfit defendants had significantly lower Performance IQ than fit defendants (Lesser, 1989 see also Carbonell, Heilbrun & Friedman, 1992; Nestor et al., 1999; Shields, 2004), other studies reported no significant group differences (Sachsenmaier, 1990; Grandjean, 2004; Klein, 2010). Half of the studies that examined Full Scale IQ reported fit defendants had significantly higher intellectual functioning than unfit defendants (Gannon, 1989; Grandjean, 2004; Nestor et al., 1999; Nussbaum et al., 1998).

3.5 Discussion

A systematic review of the empirical literature evaluating cognition and FST was conducted. Of the 10 studies that met the inclusion criteria, four were peer-reviewed published studies and the remainder were dissertations.

3.5.1 Strengths and Limitations of the Systematic Review Procedure

The systematic review included a rigorous method of searching and evaluating the relevant literature. However, the possibility of missing eligible studies could not be entirely excluded and non-English studies were not included. Study quality was evaluated utilising the guidelines proposed by Pirelli, Zapf, and Gottdiener (2011) for FST research, which proved a useful framework to evaluate methodological quality. Pirelli, Zapf, and Gottdiener (2011) acknowledge that these guidelines are not exhaustive but rather, represent an initial set of considerations for researchers undertaking FST research in which fit and unfit defendants are compared. The guidelines had not previously been utilised to examine study quality and hence expert feedback was obtained. In the current study seven

expert respondents rated the majority of guidelines as being of at least *some importance* in evaluating FST comparison group studies.

3.5.2 Methodological Limitations of Included Studies

While all studies were cross-sectional and therefore considered the lowest level of study design based on the NHMRC guidelines (NHMRC, 2009), research examining the role of cognition in FST is restricted in terms of experimental design due to the legal context and setting from which participants are available. This constraint is a limiting factor, however most likely to be unavoidable if the research is to involve real-life defendants. However, several studies have examined FST within a prospective sample, increasing the level of confidence in their results.

Despite these limitations there was considerable variability in the methodological ratings. Greater confidence was placed in the studies that obtained higher ratings based on the Pirelli, Zapf, and Gottdiener (2011) guidelines, when data were collected prospectively (concurrently), and where analyses were performed using multivariate strategies that controlled for potential confounds. A number of Pirelli, Zapf, and Gottdiener's (2011) guidelines assessed report quality (e.g., criterion 13: reporting of defendant characteristics and study specific variables) as opposed to design quality (e.g., criterion 6: use of a suitable competent comparison group). Therefore when interpreting the overall rankings (low, moderate, and high) based on the Pirelli, Zapf, and Gottdiener (2011) criteria, it is important to be aware the ratings include a combination of both report and design quality.

Across studies, the detail provided regarding subjects was highly variable. For example, defendant characteristics which may influence cognitive functioning (e.g., level of education) were not routinely reported. The exclusion of defendants with low IQ and/or reading ability (e.g., Simon, 1987), may have altered the representativeness of the defendant population. For instance, Simon (1987) indicated that 65% of criminal

defendants in their prospective sample population had been excluded due to intellectual ability and/or reading level.

Most studies focused on psychiatric populations remanded in psychiatric facilities; potentially limiting the generalisability of results to other populations. Nine of the 10 studies were conducted in the USA and were based on the respective FST legal criteria of *Dusky v United States* (1960). As such, findings may not be consistent across different legal jurisdictions that utilise different legal standards.

3.5.3 Limitations Related to Cognitive Predictors

Most importantly, five studies did not control for IQ (and several other potential confounds) when examining the relationship between cognition and FST, reducing confidence in reports of any relationship between specific cognitive domains and FST.

There was no uniform coding of tests and associated cognitive domains across studies. Heterogeneity in terms of test selection, outcome measures, and reported results limited direct comparison across studies. As such, analyses of the relevance of individual cognitive tests to FST was unable to be performed.

Research has shown that the validity of both cognitive and psychiatric symptoms is an important consideration in forensic contexts, including FST, and that assessments should include standardised tests of effort (e.g., Ardorf, Denney, & Houston, 2007; Denney, 2008; Green, 2010; Stimmel, Green, Belfi, & Klaver, 2012). Although effort was not the focus of the current systematic review, it is notable that only one paper (Grandjean, 2004) reported results from tests designed to assess cognitive as well as psychiatric effort. Half of the included studies did not report any consideration of effort (Gannon, 1989; Klein, 2010; Nestor et al., 1999; Nussbaum et al., 1998; Ryba & Zapf, 2011).

3.5.4 Cognition and Fitness to Stand Trial

The current systematic review provided support for the hypothesis that cognition plays an important role in determining FST. Over and above intelligence, the cognitive

domains of memory (particularly verbal memory), processing speed, and visuoperceptual skills differentiated fit and unfit groups. Fit groups tended to have greater memory capacity, faster processing speed, and better visuospatial abilities compared to unfit groups. Partial support was also found for the cognitive domains of working memory and aspects of executive functioning including social knowledge, abstraction, and verbal fluency in differentiating fit and unfit groups. Language was not assessed in any included study. Finally, there was support for intelligence in differentiating between groups, with fit groups having a higher level of intelligence (particularly verbal intelligence) than unfit groups, in keeping with the previous literature (e.g., Pirelli, Gottdiener, & Zapf, 2011). As previous authors have opined, cognition appears to be an essential component of fitness (Pirelli, Gottdiener, & Zapf, 2011; Zapf, 1999). The current research suggests that a defendant's cognitive abilities should be considered by mental health experts when conducting FST assessments. In addition to assessment of intellectual functioning, comprehensive cognitive assessment and, in particular, examination of verbal memory, processing speed, visuoperceptual abilities, working memory, aspects of executive functioning, and effort may be beneficial when evaluating FST. Additional research is required in order to provide definitive conclusions about the relative value of specific measures of these cognitive constructs within the context of FST assessments.

3.5.5 Recommendations for Future Research

Further research is needed to clarify the contribution of specific cognitive processes in determining FST within and across different legal jurisdictions. Prospective consecutive studies utilising multivariate statistical analyses that control for potential moderating factors are necessary. Studies that fulfil the criteria comprising the Pirelli, Zapf, and Gottdiener (2011) guidelines would permit meta-analytic review of the literature. With regard to FST and cognition, accurate assessment requires that a) the precise cognitive constructs that contribute to that capacity be identified, and b) that the measures used to

evaluate each of those constructs be both valid and reliable. Comprehensive assessment of several cognitive domains within the one cohort is necessary to examine the relative contribution of specific cognitive processes on FST. It is essential that IQ and other potential confounds (e.g., mood) are statistically controlled to ensure that any significant effects are not reflective of those factors. How cognitive constructs such as executive functioning are defined and measured needs to be considered. Given the high incidence of developmental disorders, ADHD, TBI, and alcohol related cognitive impairment in forensic samples, it is recommended that FST be studied separately in those groups. Inclusion of comprehensive measures of cognitive effort in future research examining the role of cognition in FST should be considered. A clear understanding of the potential impact of cognition on FST would allow integration of results obtained via neuropsychological assessment with those generated using functional FST assessment tools.

3.6 Conclusion

The current systematic review revealed that the role of specific cognitive processes in determining FST remains incompletely understood. Studies included in the current review contained a number of methodological flaws which limited the extent to which findings could be interpreted and generalised. However, the results suggest cognitive assessment is important to FST. Future research is required to further elucidate and clarify the findings of the current systematic review.

3.7 Literature Update

The systematic review described in the current chapter related to studies produced between 1970 and July 2013. As such, an updated search for publications and dissertations produced between July 2013 and February 2015 was conducted. The exact search strategy described in the current chapter (see section 3.3.1) and as shown in Appendix A was utilised.

The search yielded a total of 132 results. Articles that were clearly irrelevant based on their title ($n = 83$) or that focused on malingering ($n = 5$) were excluded. A further 32 records were excluded upon reading the Abstract. In all, 12 full-text articles were considered directly relevant to the research question and were reviewed. None of these articles met the inclusion criteria as outlined in the search procedure (section 3.3.1). All 12 articles were excluded (see Figure 2).

In conclusion, the updated systematic literature search revealed no new articles published between July 2013 and February 2015 which met the inclusion criteria to be included in the current systematic literature review.

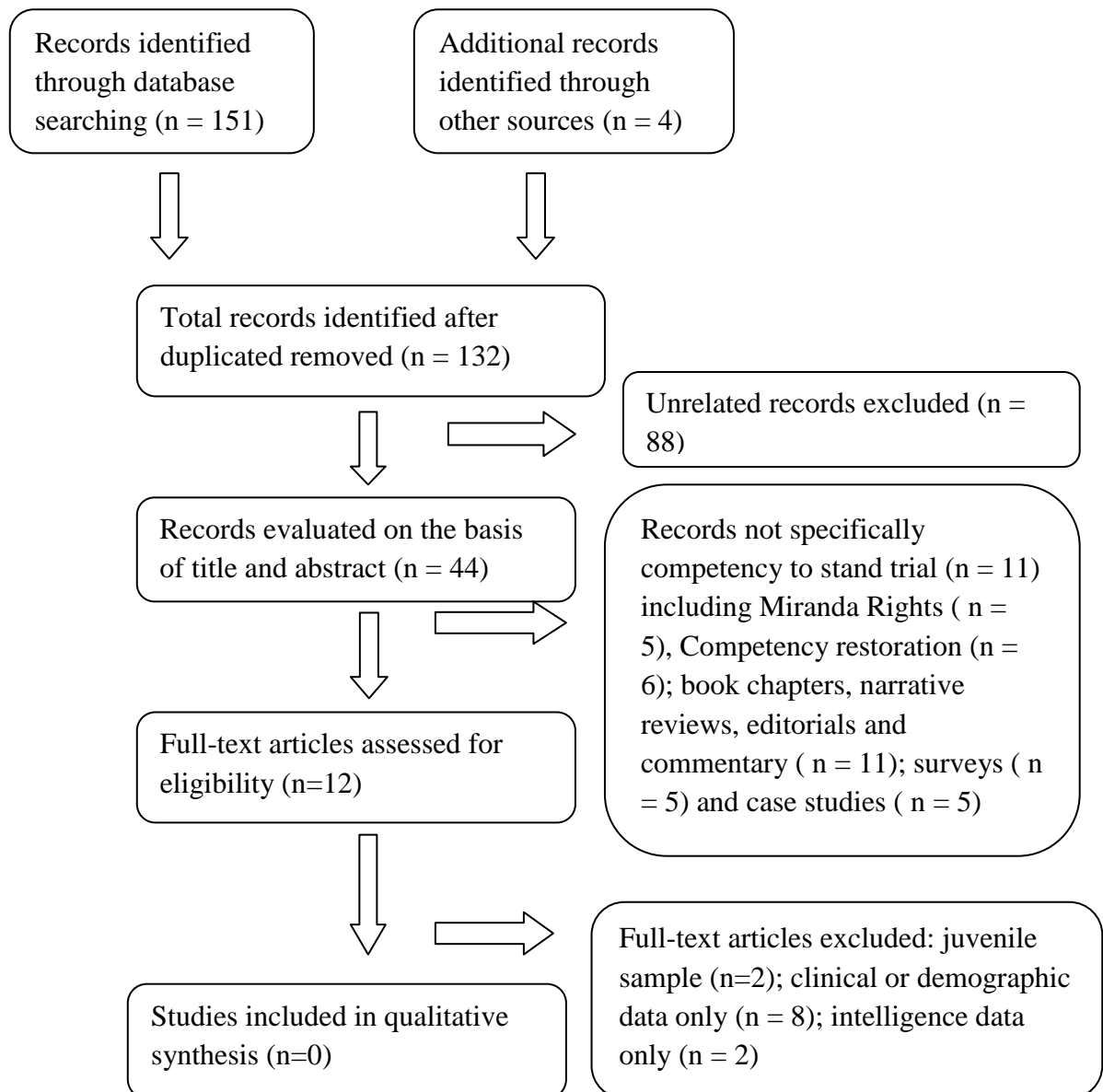


Figure 2. Systematic review process for studies evaluating cognition and fitness to stand trial produced between July 2013 to February 2014.

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CHAPTER 4:

The Role of Cognitive Assessment in Determining Fitness to Stand Trial

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The published article is included in Appendix F.

Note. The statistic appearing in the published paper of ATSI 18% is incorrect. The correct statistic is 13% and has been reported in this chapter. Section 4.7 under the heading ‘Further Investigation’ does not appear in the published paper.

4.1 Abstract

Cognition is often discussed as being of fundamental importance to an accused person's fitness to stand trial (FST); however there is limited empirical research in this area and no known published research within Australia. The aim of the present paper was to investigate the current practices of experts conducting FST assessments in Australia and to examine the role of cognition in these determinations. Expert reports (328) for 135 accused found unfit to stand trial between 2005 and 2010 in New South Wales (NSW) were examined. Collected data included the cognitive domains assessed, assessment techniques employed, the relationship between cognition and the *Presser* criteria, and demographic information. Results supported the hypothesis that cognition plays an important role in FST, in particular attention and memory; although there was significant variability in the practices and assessment methods of assessors. Results indicate a need for further research investigating the relationship between cognition and FST; as well as training and education for psychologists conducting FST assessments in Australia.

4.2 Introduction

Fitness to stand trial (FST) is a fundamental legal concept introduced to ensure procedural fairness and accuracy in court determinations (Heilbrunner & Frumkin, 2003). In Australia, FST is most typically assessed using the common law standard set down in the Victorian case of *R v Presser* [1958]; which outlined six key abilities an accused must possess in order to be found FST:

- 1) Ability to understand the charge
- 2) Ability to plead to the charge and exercise the right to challenge
- 3) Understanding of the basic nature of proceedings
- 4) Ability to follow the course of proceedings in broad terms
- 5) Ability to understand the substantial effect of any evidence and be able to make a defence or answer to the charge, including the ability to instruct counsel
- 6) Have sufficient capacity to be able to decide what defence strategy will be relied upon and make this known to the court and counsel.

Traditionally, psychiatrists were the preferred mental health expert in FST cases due to their medical training and psychiatric knowledge. However, psychologists are now also frequently recognised and accepted by the courts as experts on this legal issue. Most frequently psychologists are involved in cases of intellectual disability, where standardised intelligence tests provide the courts with objective evidence of an accused person's level of intellectual functioning. Although the literature suggests that other cognitive abilities such as memory, attention, language and executive functioning may also be important for FST (Kirkish & Sreenivasan, 1999; Melton, Petrila, Poythress, & Slobogin, 2007), few empirical studies have examined the role of these cognitive functions in FST (Grandjean, 2004; Nestor, Daggett, Haycock, & Price, 1999; Nussbaum, Mamak, Tremblay, Wright, & Callaghan, 1998; Ryba & Zapf, 2011).

The most comprehensive data has come from Nestor et al., (1999) and Grandjean's (2004) work in the USA, which revealed that attention, memory (particularly verbal), and language are important for FST. While their findings also suggested that higher-order skills may play a role in FST, Grandjean (2004) argued that perhaps only a subset of executive skills, such as social judgement, are related.

Over the last 20 years there has been increased focus on ascertaining an accused person's functional (legal) abilities to determine competency through the development of specific Fitness to Stand Trial - Assessment Instruments (FST-AIs). Over 12 FST-AIs now exist, ranging from informal checklists to structured criterion-based instruments, and it is argued that such tools allow for greater validity and applicability of psychological concepts to the legal context (Grisso, 2003; Melton, et al., 2007). These instruments focus on legal principles, for example understanding, appreciation and reasoning/rationality in the USA and are purported to provide a measure of an individual's factual legal knowledge, verbal language skills and potentially executive decision-making skills; however overall their assessment of cognitive ability remains limited and cannot determine clinical diagnosis or cause of incompetency. Some researchers have suggested these tools are best used in conjunction with traditional cognitive tests to evaluate FST (Kalbeitzer & Benedetti, 2009; Nussbaum, et al., 1998). Further, there is currently very limited research evaluating these tools in clinical populations such as traumatic brain injury or language disorders. The contention that standardised FST assessments and instruments can be employed across different legal jurisdictions without significant compromise to reliability and validity (Chantler & Heseltine, 2007) remains untested. The present authors are unaware of any Australian studies that have examined the clinical, demographic or cognitive constructs important for FST based on the Australian legal standard; and in fact there are very few Australian studies that have attempted to evaluate expert FST reports in any detail.

Birgden and Thomson (1999) referred to unpublished data from 1996 in which they reviewed 51 mental health expert reports where the accused was found unfit to stand trial and found that at least half of experts relied on clinical interviews to evaluate mental capacity and intellectual functioning. Psychiatrists had conducted 92.1% ($n = 47$) of assessments and only 11.7% ($n = 6$) of reports specifically addressed each of the *Presser* criteria.

In a more recent study, Large, Nielssen and Elliott (2009) reviewed 270 FST reports produced between 2005 and 2007 in New South Wales (NSW) and also found the majority (83.7%; $n = 226$) of assessments were conducted by psychiatrists. Agreement between experts regarding FST on the opposing sides was described by the authors as fair ($\kappa = 0.29$) and only moderate ($\kappa = 0.47$) for those on the same side. The authors suggested that procedures for assessing FST were in need of revision both in terms of the criteria applied and the way the assessments were performed. No analysis of assessment techniques was conducted.

Nicholson and Norwood (2000) reviewed six independent studies conducted in the USA between 1994 and 1998 that evaluated expert FST reports (1326 in total). In four of the six studies, psychologists performed the majority (48% to 80%) of assessments. For example, in Skeem, Golding, Cohn, and Berge's (1998) study of 100 reports, 80% were conducted by psychologists with PhD qualifications and only 14% by psychiatrists. The overall level of agreement between experts was satisfactory ($\kappa = 0.64$); although it was not reported whether any bias existed between professions or retaining body. Expert's use of traditional psychological tools varied across the six studies from 10% to 70%, with intellectual assessment batteries and personality measures most commonly utilised. Skeem et al. (1998) further reported that only 30% of experts in their study had related the results of psychological testing to competency. Across all six studies, 89% of reports addressed the ultimate issue of FST; however the number of experts addressing the individual

abilities as outlined in the legal standard (*Dusky v. United States*, 1960) varied. Four of the six studies reported such data and appreciation of the charge was assessed in 64% to 98% of reports. Understanding of legal process and capacity to disclose information to counsel were assessed in anywhere between 3% and 98% of reports across studies.

In a more recent study of over 8000 expert FST evaluations conducted in Virginia, USA by Warren and colleagues (2006), psychologists had conducted 84.7% ($n = 7,128$) of the assessments and psychiatrists 11.1% ($n = 936$). Psychologists were more likely to find an accused incompetent to stand trial than psychiatrists (21.1% versus 9.1% respectively). Although there are some differences in the legal criteria and thresholds for FST determinations between Australian and North American legal jurisdictions and hence direct comparisons are limited, this data provides a useful comparison of expert practice standards for FST assessments between countries.

The present paper represents the first investigation into the role of cognition and neuropsychological assessment in FST cases within Australia. The aims of the study were to:

- 1) Provide information on current practices of mental health experts conducting FST assessments
- 2) Examine the cognitive abilities underlying FST based on Australian legal criteria as outlined in *R v Presser* [1958]
- 3) Investigate the role of neuropsychological assessment in FST cases.

4.3 Method

The Mental Health Review Tribunal (MHRT) in NSW made available to the chief author 145 cases with relevant court documentation and expert mental health reports for those accused found unfit to stand trial between 2005 and 2010. Of those cases, nine were excluded on the basis that all related materials were dated prior to 2005 or there were no mental health reports available. A further case was excluded because the accused was less

than 18 years. Therefore 135 cases were included in the current review. There were a total of 328 reports, 256 (78.0%) by psychiatrists, 65 (19.8%) by psychologists (of which 35 or 10.7% were neuropsychological reports) and 7 (2.1%) by general medical practitioners. Number of cases did not significantly vary per year, ranging from 15 to 27 per annum ($\chi^2 (670) = 675, p = .44$). Number of reports per case ranged from one to six. Most cases had two (62.2%; $n = 84$) or three (30.3%; $n = 41$) expert reports. The defence commissioned 163 reports (49.7%) and the prosecution 141 (42.9%). The remainder of reports were requested by the courts, the MHRT or an unknown source. All cases involved serious offences that were dealt with in the District and Supreme courts. These included 36 charges of murder or attempted murder, 67 charges of wounding or serious assault, 118 charges of sexual assault, 70 serious property offences, 28 drug matters and 9 fraud charges. Permission to perform the study was obtained from the Macquarie University Ethics Committee and the MHRT, NSW.

Data collected from each report were: (i) referring agent; (ii) expert's profession; (iii) year of report(s) (iv) age, gender, country of origin, first language, education, criminal history and psychiatric history of the accused; (v) axis I and II diagnoses in accordance with the Diagnostic and Statistical Manual - Fourth Edition- Text Revision (DSM-IV-TR); (vi) substance abuse history; (vii) current medications; (viii) medical history including developmental disorders and acquired brain injuries; (ix) cognitive domains assessed (i.e. attention, premorbid functioning, intelligence, working memory, new learning and memory, processing speed, executive functioning, language and literacy) in accordance with commonly utilised neuropsychological tests and their associated cognitive domains (Lezak, Howison, & Loring, 2004; Strauss, Sherman, & Spreen, 2006); (x) level of ability in each cognitive domain; (xi) assessment of malingering; (xii) level of adaptive functioning, (xiii) formal assessment tools and scores (where available); (xiv) assessment of *Presser* and/or other legal criteria; (xv) tests and cognitive domains related to each of

the *Presser* criteria and; (xvi) expert's opinion about FST. Court papers were used to determine (i) the nature of the charge; (ii) type of expert reports reported in court judgement; and (iii) year of court decision. Where possible variables were coded continuously, however due to the qualitative nature of the data most were coded categorically. Two of the authors independently rated reports from 16 (11.9%) cases to assess inter-rater reliability. Kappa statistics from a subsample of 20 variables was conducted and ranged from 0.61 to 1.00. Inter-rater reliability was highest for demographic variables, medical and psychiatric history, malingering and expert opinion about FST (all $\kappa = .80$ to 1.00). Lower rates of inter-rater reliability were attained for expert's opinion about failure of accused to be able to follow the course of proceedings (*Presser* criteria 4; $\kappa = 0.62$) and assessment of cognitive domains, for example language ability ($\kappa = 0.61$).

Descriptive statistics were used to analyse demographic and sample variables. Frequencies were also used to provide an understanding of the data, including the prevalence of medical and psychiatric disorders and use of specific assessment tools. The proportion of cases found unfit per year; number of psychologists and psychiatrists obtained by the defence and prosecution and; psychologists and psychiatrists assessment of the *Presser* criteria were examined using χ^2 tests. Friedman non-parametric tests were used to evaluate the significance of cognition in relation to each *Presser* criterion. Generalised linear mixed models (GLMMs) were used to account for the clustered nature of the data (case reports were nested within participants) with independent variables that lacked statistical independence. GLMMs were used to assess associations between level of impairment in various cognitive domains and both (i) competency decision and; (ii) failure on the *Presser* criteria. Cognitive domains (measured on a scale from impaired to above average) were entered as fixed effects. Competency decision and failure on *Presser* criteria were the outcome variables. Computation options included binary logistic regression, random intercepts (for participants) and logit link function. A random effects

model with no predictors and random intercept (for participant) revealed significant variation around the intercept for all outcome variables (all $ps < .001$), indicating the nested nature of the data could not be ignored. Accordingly, GLMM analyses were used. Statistics were performed using IBM SPSS for Windows version 19.0 (SPSS, Chicago, IL, USA).

4.4 Results

Accused found unfit to stand trial ranged from 18 to 90 years of age ($M = 39.53$ years, $SD = 15.92$). The overwhelming majority were male (89.6%; $n = 121$) and of English-speaking background (77.0%; $n = 104$). Seventy-three percent ($n = 98$) of the sample were of Australian origin; of which 13.3 percent ($n = 18$) were Aboriginal or Torres Strait Islanders. The remainder of the sample comprised 13 (9.6%) of Asian origin; 9 (6.6%) of European origin; 7 (5.1%) of Middle Eastern origin; 6 (4.4%) of Pacific Islander or New Zealand origin; and one each (<1%) of North American and African origin. Interpreters were used in 8.1% ($n = 11$) of cases. The majority (60.0%; $n = 81$) had less than 9 years of education, with only 23.7% ($n = 32$) completing Year 10 and 11.8% ($n = 16$) completing Year 11 or higher. Two-thirds ($n = 90$) had a criminal history.

Seventy-nine percent ($n = 106$) had an Axis I disorder, with 56.3% ($n = 76$) diagnosed with schizophrenia or another psychotic disorder (defined as schizophrenia, schizophreniform disorder, schizoaffective disorder, delusional disorder, brief or shared psychotic disorder, substance-induced psychotic disorder or psychotic disorder not otherwise specified). A diagnosis of mood or substance disorder was given in 23.7% ($n = 32$) and 37.0% ($n = 50$) of cases respectively. In comparison, only 14.8% ($n = 20$) were diagnosed with an Axis II disorder, with the most common being antisocial personality disorder. In 51.1% ($n = 69$) of cases Axis II disorder diagnosis was deferred, most commonly due to the presence of an Axis I disorder.

Traumatic Brain Injury (TBI) was reported in 31.1% ($n = 42$) of cases. TBI was not mentioned as either present or absent in 37.5% ($n = 123$) of reports. Of those who reported a history of TBI, 61.2% ($n = 43$) did not provide any detail regarding TBI severity. Post Traumatic Amnesia (PTA) was reported in only 10 (3.1%) reports. Medical records were available to all assessors in 11 (8.1%) cases.

A disproportionate number of psychological reports were prepared on behalf of the defence (70.7%; $n = 46$) and only 10.7% ($n = 7$) for the prosecution; whereas for psychiatrists the distribution was more even (44.9% and 50.7%; or 115 and 130 respectively). The difference between referring agents and professions was highly significant ($\chi^2 1 = 27.61, p < .001$).

With respect to the *Presser* criteria, 23.1% ($n = 15$) of psychologists specifically addressed all criteria. A slightly higher percentage (32.3%; $n = 21$) did not address any of the six criteria. In contrast, 34.7% ($n = 89$) of psychiatrists explicitly addressed all six criteria and only 1.9% ($n = 5$) failed to address any of the *Presser* criteria. There was a highly significant difference between the two professions and whether any of the *Presser* criteria were addressed ($\chi^2 1 = 66.22, p < .001$). Where the expert determined the accused unfit (262 reports) and a cause was specified (248 reports), cognitive factors were identified by the expert as the primary ($n = 60$) or a related cause ($n = 70$) in 24.2% and 28.2% of reports respectively. GLMM analysis indicated this did not differ based on profession (AICC = 4621.14; variance of intercept = 1.46, $SE = .54$; $b = 0.87$, $SE = 1.11$, $t = 0.78$, $p = .44$).

Psychologists reported an intellectual disability (Full scale IQ < 69) in 50.7% ($n = 33$) of cases and a further 13.8% ($n = 9$) were classified as borderline/well below average intellectual functioning. A total of 31 reports (within 25 cases) recommended neuropsychological assessment; however that recommendation was adhered to in only 3 (12.0%) cases.

Table 4 shows the percentage of psychological reports in which aspects of cognition other than IQ were tested and the three measures most commonly used for each.

Table 4

Percentage of Psychological Reports Assessing Each Cognitive Domain and the Top Three Assessment Tools Used

Cognitive Domain	Percentage Assessed	Top 3 Assessment Tools		
		1	2	3
Premorbid Functioning	26.2	WRAT (10.8%)	WTAR (7.7%)	NART (4.6%)
Intelligence	92.3	WAIS (56.9%)	KBIT (15.4%)	WASI (12.3%)
Attention	60.0	WAIS (53.8%)	CPT (7.6%)	TEA (3.1%)
Processing Speed	58.5	WAIS (46.1%)	TMT(A) (20.0%)	
Verbal Memory	56.9	WMS (47.7%)	RAVLT (23.1%)	
Visual Memory	55.4	WMS (38.5%)	ROCF (23.1%)	BVMT (1.5%)
Executive Functioning	49.2	WCST (26.1%)	TMT (B) (23.1%)	DKEF (12.3%)
Adaptive Functioning	18.5	VABS (13.8%)	ABAS-II (4.6%)	
Effort (Malingering)	41.5	FIT (27.6%)	TOMM (15.4%)	Inbuilt (4.6%)

Note. WRAT= Wide Range Achievement Test; WAIS=Wechsler Adult Intelligence Test; WMS=Wechsler Memory Scales; WCST= Wisconsin Card Sorting Test; VABS= Vinelands Adaptive Behaviour Scale; FIT = Rey Fifteen- Item Memory Test; WTAR= Wechsler Test of Adult Reading; KBIT= Kaufman Brief Intelligence Test; CPT= Continuous Performance Test; TMT (A)= Trails A, Trail Making Test; RAVLT= Rey Auditory Verbal Learning Test; ROCF= Rey-Osterrith Complex Figure; TMT (B)= Trails B, Trail Making Test; ABAS-II= Adapted Behaviour Assessment System-Second Edition ; TOMM= Test of Memory Malingering; NART=National Adult Reading Test; WASI= Wechsler Abbreviated Scale of Intelligence; TEA= Test of Everyday Attention; BVMT= Brief Visuospatial Memory Test; DKEFS= Delis-Kaplan Executive Function System.

Twenty-three (70.1%) psychological reports in which an intellectual disability was diagnosed did not include objective assessment of adaptive functioning and 50.9% ($n = 17$) contained no reference to adaptive functioning. Only 15.3% ($n = 10$) utilised two or more objective tests of malingering; and 58.5% ($n = 38$) included no effort measure.

Table 5 reveals the relationship between each *Presser* criteria and different aspects of cognition as expressed by the experts. Freidman nonparametric tests were highly significant for experts' ratings of *Presser* criteria. GLMMs showed that no cognitive

Table 5

The Relationship between Key Cognitive Domains and Each Element of the Presser Criteria

Presser Criteria	Cognitive Domain								Friedman Non-parametric Test
	IQ	Attention	Proc. Speed	Working Memory	Memory	Language	Executive Functioning	General Cognition	
1. Understand the charge	48.1	0	0	0	5.8	9.6	5.8	11.5	$\chi^2(8)=453.72, p=.01$
2. Plead & challenge	53.3	2.2	2.2	2.2	6.7	15.6	13.3	22.2	$\chi^2(8)=487.15, p=.01$
3. Understand nature of proceedings	53.1	4.1	0	0	4.1	14.3	10.2	20.4	$\chi^2(8)=448.83, p=.01$
4. Follow proceedings	55.6	34.2	7.4	3.7	29.6	27.8	24.1	25.9	$\chi^2(8)=387.67, p=.01$
5. Evidence, make defence, instruct counsel	40.7	13.0	3.9	3.9	24.1	35.8	25.5	30.2	$\chi^2(8)=397.30, p=.01$
6. Decide defence strategy and make known to court & counsel	44.0	10.1	2.1	2.0	16.4	24.1	30.2	28.1	$\chi^2(8)=375.86, p=.01$

factors significantly predicted competency decision (Table 6). Memory significantly influenced a decision of failure on *Presser* criteria 1 (Table 6). Attention was the only cognitive domain that was significantly associated with failure on *Presser* criteria 2 and 3. Marginal significance was obtained for attention on criteria 6. Finally, 88.1% ($n = 289$) of reports provided an opinion on the ultimate issue. Experts reported the accused was unfit in 85.1% ($n = 279$) of reports. GLMM indicated competency decision did not differ based on referral agent ($b = 0.55$; $SE = .38$, $t = 1.43$, $p = .5$) however, there was a significant difference between professions ($b = 1.04$; $SE = .44$; $t = 2.37$; $p = .02$); with a higher percentage of psychologists finding the accused fit than psychiatrists (AICC = 1308.57; variance of intercept = .03, $SE = .43$).

4.5 Discussion

The current paper details the demographic and clinical characteristics of accused people found unfit to stand trial in NSW between 2005 and 2010. In line with previous Australian research, most FST reports were produced by psychiatrists (Birgden & Thomson, 1999; Large, et al., 2009). Although the reason is not known, it is possible that the difference reflected tradition, particularly given the high rate of mental illness (e.g. schizophrenia) in the current sample. The vast majority of psychology experts were retained by the defence. It is unclear from the current research why this might occur; although some potential reasons include (i) accessibility and availability of experts; (ii) cost of retaining different professional experts; (iii) expectation of expert psychologist's use of psychometric tools to address cognition and intelligence in relation to FST and (iv) degree and specificity of other elements canvassed in the report non-specific to fitness, such as background history, which may be advantageous to the defence. The reported incidence of TBI was high; however the mechanism and severity of injury was not always specified. This may have reflected the fact that medical records were not available in the majority of cases.

Table 6

GLMM Analysis of Cognitive Factors Associated with Failure on Each of the Presser Criteria

	Competency Decision			Presser criteria 1			Presser criteria 2			Presser criteria 3		
Parameter	Est.	SE	<i>P</i>	Est.	SE	<i>P</i>	Est.	SE	<i>P</i>	Est.	SE	<i>P</i>
Intercept	-1.710	0.211	0.00*	1.762	0.272	0.00*	0.435	0.197	0.021*	0.580	0.199	0.004*
Attention	-0.025	0.083	0.765	0.141	0.237	0.533	0.307	0.171	0.074 ⁺	0.373	0.185	0.045*
Processing Speed	-0.016	0.058	0.782	0.045	0.059	0.439	0.050	0.053	0.346	0.001	0.060	0.930
Intelligence	-0.010	0.012	0.405	-0.006	0.008	0.478	0.003	0.007	0.658	0.034	0.007	0.571
Memory	-0.043	0.115	0.711	-0.026	0.013	0.044*	-0.018	0.011	0.113	0.026	0.039	0.500
Executive functioning	0.000	0.075	0.995	-0.280	0.237	0.238	-0.099	0.069	0.155	-0.093	0.089	0.296
Literacy	0.243	0.213	0.254	0.201	0.006	0.450	0.226	0.191	0.237	0.253	0.204	0.214
Adaptive functioning	0.019	0.016	0.234	0.021	0.266	0.701	0.007	0.016	0.680	-0.009	0.017	0.589
Intercept variance	0.240	0.388		0.947	-0.462		0.332	0.287		0.539	0.331	
AICC	1463.63			1457.68			1331.19			1354.83		

Table 6

Continued

	Presser criteria 4			Presser criteria 5			Presser criteria 6		
Parameter	Est.	SE	<i>P</i>	Est.	SE	<i>P</i>	Est.	SE	<i>P</i>
Intercept	-0.742	0.185	0.00*	-0.797	0.189	0.00*	0.401	0.276	0.028*
Attention	-0.060	0.164	0.715	-0.024	0.038	0.532	0.274	0.165	0.098*
Processing Speed	-0.021	0.063	0.746	-0.321	0.164	0.05**	0.039	0.049	0.420
Intelligence	0.001	0.007	0.941	0.008	0.007	0.236	0.003	0.007	0.632
Memory	0.010	0.016	0.523	0.299	0.169	0.069 ⁺	-0.012	0.016	0.269
Executive functioning	-0.005	0.078	0.505	0.306	0.163	0.062 ⁺	-0.086	0.070	0.224
Literacy	0.042	0.039	0.952	0.187	0.177	0.291	-0.004	0.016	0.803
Adaptive functioning	0.111	0.176	0.281	0.063	0.200	0.458	0.022	0.121	0.904
Intercept variance	0.153	0.258	0.530	0.578	0.307		0.248	0.276	
AICC	1338.17			1558.98			1323.72		

Note. Est. = Estimation; SE = Standard Error; AICC = Akaike's Information Criterion.

⁺<.10, *<.05

Psychologists appear to be more frequently involved in cases where an intellectual disability is suspected and in fact IQ was the only aspect of cognition routinely objectively measured in 92.3% of psychological reports. Interestingly, few psychologists assessed adaptive functioning in accordance with the DSM-IV-TR criteria for an intellectual disability (APA, 2000). Although intelligence was significantly correlated with all six *Presser* criteria in the current analysis, it was not predictive of FST.

Aspects of cognition other than IQ were recognised by both psychiatrists and psychologists as significantly impacting the ability of the accused to meet each element of *Presser*. Experts associated attention, memory, receptive and expressive language, and executive functions with several *Presser* criteria (primarily elements 4, 5 and 6); despite formal assessment of these cognitive domains only being conducted by 60.1% of psychologists. However, a significant number of reports were non-specific about the particular cognitive domain(s) associated with each criterion. There are several possible reasons for this including: (i) detailed assessment of each cognitive domain was not always undertaken, restricting the assessor's ability to associate specific cognitive domains with the legal criteria; (ii) experts reluctance to explicitly state a connection between a cognitive domain and the legal criteria given the limited empirical research in this area; and (iii) a large proportion of experts did not adhere to the *Presser* criteria either in its entirety or at all, and hence could not discuss the relationship between cognition and the relevant legal criteria.

Wechsler intelligence and memory scales were the tools most commonly used by psychologists. The Wechsler Adult Intelligence Scale (WAIS) was utilised to assess intelligence, attention and processing speed. Interestingly, intellectual screening tools were used in a large number of reports (35.3%) including those where an intellectual disability was reported. This is discordant with the recommendations in the literature which specify the importance of using a comprehensive measure of intellectual functioning

(e.g. Crowe, 2010; Everington & Olley, 2008). Few (15.3%) psychologists utilised two objective measures of effort and over half (58.5%) used no objective measure of effort at all; which conflicts with literature recommendations and clinical practice guidelines (Heilbronner et al., 2009; Slick, Sherman, & Iverson, 1999). This is particularly important in forensic assessments where the incidence of feigned or exaggerated cognitive (and psychiatric) impairment is elevated (Ardolf, Denney, & Houston, 2007; Larrabee, 2005).

The current research revealed that attention and processing speed are significantly related to an accused failing to meet certain *Presser* criteria; with executive functioning and memory also approaching significance. The results support the hypothesis that cognition is an important determinant of the ability to meet the Australian legal criteria of *Presser*; and are consistent with the international findings (Nestor et al., 1999; Grandjean, 2004). Attention has consistently been shown to be important; however this may reflect the fact that a large proportion of these samples have a mental illness which is likely to affect attention and may be detected without formal neuropsychological assessment. It is possible that studies with larger sample sizes, comprehensive neuropsychological assessment and detailed neurological histories will highlight the importance of other cognitive domains; however assessment of effort is required to ensure any positive findings are not artificially inflated.

A large number of experts (67.6%) failed to address all six elements of *Presser*, reflecting little change in Australian practice since the review by Birgden and Thompson (1999); and much poorer evaluation of the relevant legal criteria than indicated in USA based research (Nicholson & Norwood, 2000). A much higher percentage of psychologists (32.3%) than psychiatrists (1.9%) failed to address any of the *Presser* criteria. It is possible that psychiatrists are more familiar with the legal criteria given the frequency with which they conduct FST assessments. The results do however highlight the need for ongoing education for psychologists conducting FST assessments.

Finally, a significantly higher percentage of psychologists (23.1%) found the accused FST than psychiatrists. This was an unexpected result and the opposite of that found in a recent USA study (Warren, et al., 2006). It may be that psychologists in the present study were involved in cases primarily concerning cognitive abilities including intellectual disability which may be more contentious. Although comprehensive neuropsychological assessment was recommended in 18.5% of cases, neuropsychological evaluation occurred in very few of those cases ($n = 3$). The potential contribution of those assessments appears to be better recognised by experts than legal practitioners.

This study has several limitations including the inclusion of only accused found unfit to stand trial. Further, there are no official statistics on the overall number of FST evaluations conducted annually in NSW or Australia wide, which make it difficult to place the current study's findings within clear context. In order to develop a complete picture of expert reports and determination of FST within Australia, review of both unfit and fit cases is required. Unfortunately, due to the failure to include raw data in psychological reports, quantitative analysis of the current data was not possible. That analysis would, however, provide further detail about the degree of deficit required to significantly impact FST and allow for comparisons with international studies. Finally, the current study was restricted to FST reports in NSW and there may be differences between the various legal jurisdictions within Australia. Although the results of the current study are consistent with the contention that assessment of FST including psychometric tools transcend legal barriers (Chantler & Heseltine, 2007), this assumption remains largely untested.

4.6 Conclusion

This is the first study to demonstrate the importance of cognition and neuropsychological assessment in FST assessments in Australia. Consistent with previous findings, the results indicated the importance of factors other than intelligence such as attention/concentration, language, processing speed, memory and executive functioning in

determining FST. The findings highlight the need for improved standards of assessment of FST including routine examination of effort; use of comprehensive intelligence tests and explicit examination of each of the *Presser* criteria. Further training and education for psychologists conducting FST assessments is recommended to ensure better assessment standards and to increase the frequency with which neuropsychological assessment is requested in FST determinations.

4.7 Further Investigation

The study presented in Chapter 4 provides an overview of the demographic and clinical characteristics of defendants deemed unfit to stand trial in NSW. However, it is important for the current research to also collect and evaluate data relating to fit defendants in order to allow for comparison between fit and unfit defendants' in relation to demographic, clinical and neurological variables. Importantly, it was hoped that this would allow for comparison between fit and unfit defendants in relation to specific cognitive abilities. As such, case files from the Office of the Director of Public Prosecutions (ODPP) were requested and reviewed. These results were then placed in the same datafile as the results from the current chapter and evaluated in a second study which is presented in Chapter 5.

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CHAPTER 5:

Fitness to Stand Trial in One Australian Jurisdiction: The Role of Cognitive Abilities, Neurological Dysfunction and Psychiatric Disorders in Fit and Unfit Defendants

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5.1 Abstract

In Australia, limited research of the factors determining Fitness to Stand Trial (FST) has been conducted. In particular, the relevance of cognitive abilities and neurological dysfunction in accordance with the legal standard of *R v. Presser* [1958] has not been comprehensively explored. In the largest known sample of court determined FST cases in Australia examined to date, expert reports for 153 unfit and 91 fit defendants in New South Wales (NSW) over a five year period were retrospectively reviewed. Data related to cognitive assessment, psychiatric disorders, neurological dysfunction, demographic factors and expert's opinion was extracted. Results showed cognitive abilities, in particular verbal memory, nonverbal skills, and executive functioning, were influential in differentiating fit and unfit groups and determining FST. However, quantitative analysis was limited as few reports contained test scores or comprehensive psychometric analysis. Defendants with neurological dysfunction alone or with a dual diagnosis of psychiatric disorder or intellectual disability were more likely to be found unfit to stand trial. Expert opinion was biased toward referring agent and psychologists were less likely than psychiatrists to examine all of the relevant legal criteria. Comprehensive cognitive assessment in specific cases and more standardised assessment practices are indicated.

5.2 Introduction

Evaluation of fitness to stand trial (FST) is commonly performed by mental health professionals, such as psychiatrists and psychologists, in order to assist the courts in determining a defendant's ability to stand trial (Melton, Petrila, Poythress, & Slobogin, 2007). Reported rates of agreement between expert reports and court determinations are high (Cruise & Rogers, 1998; Zapf, Hubbard, Cooper, Wheelles, & Ronan, 2004); supporting the value of conducting comprehensive, high quality assessments and producing thorough reports for the courts (Murrie, Boccaccini, Zapf, Warren, & Henderson, 2008).

Research evaluating the role and use of psychological (affective and cognitive) and fitness to stand trial assessment instruments (FST- AIs) in these assessments has increased in recent years (Cooper & Grisso, 1997; Mumley, Tillbrook, & Grisso, 2003; Pirelli, Gottdiener, & Zapf, 2011). Although FST- AIs have been developed to specifically address a defendant's psycho-legal competency, studies have shown that psychological tests continue to be utilised at high rates (Archer, Buffington-Vollum, Stredny, & Handel, 2006). General intelligence as well as other cognitive abilities such as recent memory, working memory, processing speed, problem solving, and language skills have been purported to impact FST (Kirkish & Sreenivasan, 1999; Melton, et al., 2007). However, there is need to relate these cognitive abilities to the specific psycho-legal process and legal jurisdiction, including Australia (e.g., Skeem & Golding, 1998).

Pirelli, Gottdiener, & Zapf (2011) conducted a meta-analytic review of FST research conducted between 1967 and 2008. Despite intelligence being measured in 36 of the 68 competency studies included in the review, few papers had presented data on fit and unfit defendants [three studies reported Full Scale Intelligence (FSIQ), four reported Performance Intelligence (PIQ) and seven reported Verbal Intelligence (VIQ)]. Pirelli et al. (2011) found that fit defendants scored in general 5 to 6 points higher than unfit defendants

on FSIQ, PIQ, and VIQ. Although it was noted that a smaller number of studies had included assessment of other cognitive abilities such as memory and executive functioning, it was not possible to evaluate those results as most tests had been used in only one study and/or inadequate data was presented for analysis (Pirelli et al., 2011, Table 7 pp. 26). Pirelli et al. (2011) concluded that although cognitive assessment could be useful in specific FST evaluations, the literature had yet to adequately address when and under what conditions it may be used most effectively.

Although limited in number, studies have demonstrated some support for specific cognitive abilities in determining FST including memory, processing speed, visuoperceptual skills, working memory and aspects of executive functioning (see White, Meares, & Batchelor, 2013 for review). For example, in the United States, Nestor, Daggett, Haycock, and Price (1999) performed a retrospective analysis of 181 forensic inpatients and found that those who were recommended by the mental health expert as fit to stand trial performed better on tests of memory (particularly verbal), attention and social intelligence than defendants recommended unfit to stand trial in reference to the legal standard of *Dusky v. United States* (1960). Grandjean (2004) found fit defendants differed from unfit defendants in verbal memory, verbal comprehension, social judgment, and executive functioning abilities but not on measures of visual memory, visual spatial skills, or attention. However, it remains unclear whether similar cognitive abilities would be relevant or adequate to meet other legal jurisdictions' standards of FST.

In Australia, the "minimum standard" for FST was set down in the case of *R v Presser* [1958], wherein Justice Smith purported that the defendant must to be able to: (1) understand the charge; (2) plead to the charge and to exercise the right to challenge jurors; (3) understand generally the nature of the proceedings as an inquiry into whether the defendant committed the offences charged; (4) follow and understand the course of the court proceedings in a general sense; (5) understand the substantial effect of any evidence

presented against them, to make a defence or answer the charge, have the ability to instruct counsel and provide their own version of the facts to counsel and to the court ; and (6) have sufficient capacity to decide on and communicate a defence strategy to counsel and to the court. Mental health experts are frequently independently retained by the defence and prosecution respectively to provide an opinion on a defendants' FST in accordance with the *Presser* criteria. Currently, there are no formal guidelines or standards of assessment for experts.

Within the Australian context, there has been limited research into FST. Day and colleagues (2000) reported that South Australian magistrates commonly requested FST evaluations to answer questions about psychiatric history, brain impairment, and opinion regarding psychiatric diagnosis. This report suggests a role for cognitive assessment, at least to determine the nature and cause of any cognitive impairment, which may arise from psychiatric and/or neurological dysfunction (e.g., see Green, 2006; Hofer, Biedermann, Yalcin, & Fleischhacker, 2010; Morgan & Ricker, 2008). White, Batchelor, Pulman & Howard (2012) in a preliminary analysis of a sample of unfit defendants in New South Wales (NSW) found that experts related a number of specific cognitive abilities (including memory, attention, processing speed, language and executive functioning) to the *Presser* criteria. Attention, memory, and processing speed appeared to be related to a defendant being found unfit to stand trial. However, because the study was restricted to unfit defendants, no comparative analyses between fit and unfit defendants were conducted. Rates of dual diagnoses were not explored. Interestingly, psychologists were found to more likely opine that a defendant was unfit to stand trial compared to psychiatrists. In an earlier study, Large, Nielssen and Elliott (2009) evaluated pairs of expert FST reports and found the level of agreement was only fair to moderate; however reported little evidence of bias by experts regarding FST opinions based on referring agent. The authors suggested there was a need to reform the procedure for assessing FST in both the application of the *Presser*

criteria and the method of assessment undertaken. Finally, van der Wijngaart, Hawkins & Golus (2014) in an analysis of 33 case judgements of FST in South Australia found psychologists' reports were generally accepted by judges; although they highlighted the importance of linking test data and opinion to the legal question, otherwise the expert opinion was undervalued. The analysis by van der Wijngaart et al. (2014) suggests psychologists are under-represented given their expertise in FST assessments; and that there is a need to evaluate cognitive abilities in fit and unfit defendants and how these abilities relate to the Australian legal context to ensure expert assessment and testimony has the greatest impact and meets the veracity of the legal sphere. Given the limited research within an Australian context, it is also important to investigate other factors which may influence a defendant's cognition and/or FST outcome including non-credible performance, demographic variables and expert's assessment and opinions.

Rates of psychiatric disorders, intellectual disability (ID) and acquired brain injury (ABI) have consistently been shown to be overrepresented within the forensic setting (Nicholson & Kugler, 1991). ABI is defined as damage to the brain imparted after birth as a result of trauma e.g. traumatic brain injury (TBI), stroke, illness or infection, hypoxia or prolonged drug and alcohol use which potentially impact a person's cognition (Brain Injury Australia, 2012). In addition, there are high rates of dual diagnoses, such as ID and/or cognitive impairment and psychosis (Vanny et al., 2009), which taken together may compound cognitive impairment. Cognitive assessment may be particularly important in those cases. Neurodegenerative disorders, such as Alzheimer's disease, may be increasingly relevant in an ageing prison population (Australian Bureau of Statistics, 2014). At present, there is a paucity of research presenting data on the prevalence or relevance of such diagnoses to FST proceedings, particularly within the Australian context. This information would be useful to legal practitioners, judges and experts and may have

some bearing on evaluation methods and standards, as well as inform the likelihood of an unfit defendant becoming fit within the 12 months following a fitness hearing.

Finally, rates of non-credible performance are estimated to be significantly higher in forensic settings including FST evaluations compared to clinical samples (e.g., Ardorf, Denney & Houston, 2007; McDermott & Sokolov, 2009). McDermott & Sokolov (2009) reported non-credible performance rates of between 8 and 17% for pre-trial defendants. Accordingly, Stimmel, Green, Belfi & Klaver (2012) reported that assessment of non-credible performance is critical to all FST evaluations. A number of papers have included discussion of the most effective ways to detect non-credible performance in this population as well as in subpopulations including the mentally ill or intellectually impaired (e.g., Berry & Schipper, 2007; Green, Rosenfeld, Belfi, Rohlehr & Pierson, 2012; Stimmel, Green, Belfi & Klaver, 2012). The incidence of non-credible performance in FST assessments within the Australian context remains unknown.

The aim of the current study was to expand on the findings of White et al. (2012) by comparing court-determined fit and unfit defendants to:

- 1) explore the role of cognitive abilities in determining FST
- 2) explore the implications of neurological dysfunction and psychiatric disturbances on FST
- 3) identify cases where comprehensive cognitive assessment may be warranted in accordance with the legal standard of *R v. Presser* [1958].

Given this was the first known Australian based FST study to compare fit and unfit defendants, additional factors that may be important for FST assessments including non-credible performance and expert's opinion were also explored.

5.3 Method

A retrospective examination of 244 FST cases in New South Wales between 2005 and 2010 was conducted. A total of 145 archived cases held by the Mental Health Review

Tribunal (MHRT) as per White et al. (2012) and an additional 155 archived cases held at the Office of the Director of Public Prosecutions (ODPP) were combined in the current study to allow for analysis of both fit and unfit defendants¹. Fifty-six cases were excluded [no expert reports available or outside requested date range ($n = 37$); defendants age (<18 years) ($n = 4$); or case not specifically FST ($n = 15$)]. Therefore, 244 cases (135 from the MHRT and 109 from the ODPP) and 573 expert mental health reports were analysed in the current review.

Of those, 153 (62.7%) defendants were determined unfit and 91 (37.3%) fit to stand trial by the courts. The overwhelming majority of expert reports (79.6%; $n = 456$) were authored by psychiatrists. There were 50 different psychiatrists who produced at least one psychiatric FST report; however 70% were produced by 5 psychiatrists. Psychologist's produced 106 (18.5%) reports; 46 were neuropsychological reports. There were 44 different psychologists who produced one or more psychological reports. The 5 most frequently utilised psychologists accounted for 39.6% of psychological reports. The remainder of reports were authored by general medical practitioners. The Macquarie University Ethics Committee, the MHRT of NSW, and the ODPP in NSW approved the current study.

Demographic factors, psychiatric disorders and neurological disorders were recorded for each defendant as summarised in Table 7. Additional data collected from each report included (i) expert's profession, referral agent and opinion about the defendant's FST; (ii) cognitive abilities assessed (i.e., attention, intelligence, working memory, new learning and memory, processing speed and executive functioning); (iii) assessment of non-credible performance; (iv) level of adaptive functioning; and (v) psychometric tests and scores. Where possible variables were coded continuously, however, due to the qualitative nature of the data the majority were coded categorically. Cognitive abilities and classification of neuropsychological tests was determined in accordance with

neuropsychological texts by Lezak, Howieson, & Loring (2004) and Strauss, Sherman, & Spreen (Strauss, Sherman, & Spreen, 2006) as well as respective test manuals (Wechsler, 2008a, 2008b).

A second coder (either the third author or a research assistant) independently coded data from 58 cases (23.8%). Kappa statistics were utilised to examine inter-rater agreement. The reliability analysis indicated that the inter-rater agreement between the first and second codings was substantial (mean $\kappa = 0.72$; all $p < .05$) in accordance with Landis and Koch's (1977) interpretation of kappa values.

Descriptive statistics, frequencies, chi-square tests, and binary logistic regressions were used to analyse demographic factors, psychiatric disorders and neurological disorders. Group differences on psychometric tests were examined by univariate analyses. Separate multivariate analyses of variance (MANOVAs) were performed for test scores which were grouped on the basis of empirical considerations (e.g., visual and verbal memory tests to examine memory functioning). Generalised linear mixed models (GLMM) were used to account for the clustered nature of the data (case reports nested within participants) with independent variables that lacked statistical independence. GLMMs were used to assess associations between level of impairment in various cognitive abilities (measured on a scale from impaired to above average) and competency decision; and referring agent, profession and expert opinion. Computation options included binary logistic regression, random intercepts (for participants), and logit link function. A random effects model with no predictors and random intercept (for participant) revealed significant variation around the intercept for the outcome variable ($p < .001$), indicating the nested nature of the data could not be ignored. Accordingly, GLMM analyses were used. Statistics were performed using IBM SPSS for Windows version 21.0 (SPSS, Chicago, IL, USA).

5.4 Results

5.4.1 Demographic Factors, Psychiatric Disorders and Neurological Dysfunction

The majority of defendants were male, single, born in Australia and of English speaking background, unemployed, had 10 or fewer years of education, were charged with a serious offence, and had a criminal history (see Table 7). Indigenous Australians accounted for 11% ($n = 27$) of the total sample. Interpreters were utilised in less than 10% of cases ($n = 22$). A logistic regression examining the impact of demographic factors on FST was not significant ($\chi^2(7) = 9.20, p = .24, \text{Nagelkerke } R^2 = .05$)².

The majority of fit and unfit defendants had a history of psychiatric disorder, were diagnosed with a current psychotic disorder, and were prescribed antipsychotic and/or mood stabiliser drugs. Mood and anxiety and substance disorders were common. A smaller percentage of defendants were diagnosed with a personality disorder (see Table 7). Disorders typically diagnosed in childhood or adolescence were reported in approximately one-third of defendants. Attention Deficit Hyperactive Disorder (ADHD) was reported in 21 defendants (8.6%), autistic spectrum disorder in four defendants (1.6%) and ID (Full scale IQ < 69) in nearly one quarter ($n = 56$; 23%) of defendants. One defendant was diagnosed with Fetal Alcohol Spectrum Disorder (FASD). Neurological dysfunction was reported in one quarter of defendants ($n = 62$). ABI was reported in a high number of defendants ($n = 50$; 20%). TBI was reported in 86 (35.2%) defendants, with the severity of the TBI being mild in 23 defendants, moderate in 5, severe in 4, extremely severe in 3 and unspecified in 51. For the purpose of the current analysis and in accord with recent literature regarding outcome, for the purposes of the current paper only cases of severe and extremely severe TBI were classified as having sustained an ABI that was likely to result in permanent, neurologically based cognitive impairment (Carroll et al., 2004; Dikmen,

Table 7.

Demographic, Psychiatric and Neurological Characteristics for Fit and Unfit Defendants

	Fit	Unfit
Age	$M = 35.8$ ($SD = 12.7$)	$M = 39.6$ ($SD = 16.0$)
Male	92.3%	88.2%
10 years or less education	86.8%	87.1%
English first language	71.4%	75.8%
Australian born	61.5%	70.6%
Criminal history	64.8%	68.3%
History of abuse ^a	19.8%	23.5%
Unemployed ^b	81.3%	94.4%
Single ^b	86.8%	77.8%
Index offence		
Violent	34.1%	35.9%
Sexual	26.4%	30.1%
Property	30.8%	24.2%
Drugs	8.8%	7.8%
Fraud	0.0%	2.0%
History of psychiatric disorder	60.4%	60.8%
Current psychiatric disorders		
Psychotic disorder ^c	54.9%	56.2%
Mood or Anxiety disorder	22.0%	22.2%
Substance disorder	42.9%	36.6%
Personality disorder	19.8%	13.7%
Antipsychotic/Mood Stabiliser medication	73.6%	65.4%
Intellectual Disability	17.6%	26.1%
Neurological dysfunction**	13.2%	32.7%
Acquired brain injury*	12.1%	24.8%
Neurodegenerative disorder*	1.1%	7.8%
Dual diagnoses		
Psychiatric disorder & Neurological dysfunction**	7.7%	31.4%
Psychiatric disorder & Intellectual Disability**	7.7%	25.5%
Neurological dysfunction & Intellectual Disability*	2.2%	9.8%

Note. M = Mean; SD = Standard Deviation

* $p < .05$; ** $p < .001$.

^a History of abuse included sexual, physical and/or emotional abuse.

^b Analyses included ODPP files only (i.e., $n = 109$).

^c Psychotic disorder is defined as schizophrenia, schizophreniform disorder, schizoaffective disorder, delusional disorder, brief or shared psychotic disorder, substance-induced psychotic disorder, or psychotic disorder not otherwise specified in accordance with definitions outlined in the DSM-IV-TR (APA, 2000).

2009; Dikmen, Machamer, Powell, & Temkin, 2003; Roebuck-Spencer & Sherer, 2008). An additional 12 (4.9%) defendants were diagnosed with a neurodegenerative disorder. A logistic regression of psychiatric disorders (psychotic disorder, mood or anxiety disorder, personality disorder, substance disorder), ID and neurological dysfunction (ABI or neurodegenerative disorder) and FST determination was significant ($\chi^2(7) = 21.15, p = .004$, Nagelkerke $R^2 = .11$). Overall goodness of fit was 63.9%. Defendants with an ABI were 3 times more likely to be found unfit to stand trial relative to defendants without an ABI ($b = 1.12, SE = 0.39, \text{Exp}(B) = 3.07, 95\% \text{ CI} = 1.41 - 6.69, p = .005$). Defendants with a neurodegenerative disorder were 13 times more likely to be determined unfit to stand trial compared to defendants without a neurodegenerative disorder ($b = 2.59, SE = 1.08, \text{Exp}(B) = 13.29, 95\% \text{ CI} = 1.60 - 110.36, p = .017$). Defendants with an ID were twice as likely to be found unfit to stand trial ($b = 0.74, SE = 0.38, \text{Exp}(B) = 2.10, 95\% \text{ CI} = 1.0 - 4.38, p = .049$). No other significant effects were found.

Rates of dual diagnoses were relatively high (see Table 7). Defendants diagnosed with a psychiatric disorder and neurological dysfunction were more likely to be found unfit to stand trial ($\chi^2(1) = 18.33, p < .001$). Defendants with neurological dysfunction and ID were also more likely to be found unfit to stand trial ($\chi^2(1) = 5.09, p = .02$). Finally, defendants with ID and psychiatric disorder were more likely to be found unfit to stand trial ($\chi^2(1) = 11.8, p = .001$).

5.4.2 Cognitive Assessment

Formal assessment measures were rarely reported by psychiatrists (9%; $n = 41$), the most common measure being the Mini Mental State Examination (MMSE) (7.5%; $n = 34$). Table 8 shows the percentage of psychological reports in which aspects of cognition were examined and the three tests most commonly used to measure each. In over 30% of reports, screening tools were used to measure IQ. Adaptive functioning was reported to be formally tested in 17 reports (16%). As shown in Table 8, cognitive functions other than

Table 8.

Psychometric Assessment of Cognitive Abilities Conducted by Psychologists

Cognitive Abilities	Percentage Assessed	Top 3 Assessment Tools		
		1	2	3
Intelligence	89.6	WAIS (57.5%)	KBIT (16%)	WASI (14.2%)
Attention	56.6	WAIS (49.1%)	WMS (5.7%)	CPT (5.7%)
Processing speed	50	WAIS (41.5%)	TMT(A) (17%)	SDMT (2.8%)
Verbal memory	52.8	WMS (41.5%)	RAVLT (22.6%)	RMT (0.9%)
Visual memory	49.1	WMS (34.0%)	RCFT (21.7%)	BVRT (4.7%)
Executive functioning	40.6	COWAT (23.6%)	WCST (18.9%)	TMT(B) (18.9%)

Note. WAIS = Wechsler Adult Intelligence Scale; KBIT = Kaufman Brief Intelligence Test; WASI = Wechsler Abbreviated Scale of Intelligence; WMS = Wechsler Memory Scales; CPT = Continuous Performance Test; TMT(A) = Trail Making Test, Part A; SDMT = Symbol Digit Modality Test; RAVLT = Rey Auditory Verbal Learning Test; RMT = Reid Memory Test; RCFT = Rey-Osterrieth Figure Test; BVRT = Brief Visual Memory Test; COWAT = Controlled Oral Word Association Test; WCST = Wisconsin Card Sorting Test; TMT(B) = Trail Making Test, Part B.

intellect were much less frequently examined, with attention the second most commonly assessed ability (56.6%). Expressive and receptive language abilities were not formally assessed.

Non-credible performance

Performance validity was tested in 45 psychological reports (42.5%); and two or more objective measures of performance validity were utilised in 13 reports (12.3%). The Rey Fifteen Item Test and Test of Memory Malinger (TOMM; Tombaugh, 1996) were the most commonly used tests (26.4% and 17% respectively). Psychiatrists did not report any performance validity testing; however, non-credible performance was suspected in 40

(8.7%) psychiatric reports. In total, non-credible performance was reported in 23 (9.4%) defendants.

5.4.3 Cognition and FST

Few expert reports included test scores for quantitative analysis of differences between fit and unfit defendants. Results of independent sample *t*-tests revealed defendants found fit to stand trial had higher Perceptual Organisational and Verbal Memory Index scores than unfit defendants (see Table 9). A MANOVA of Wechsler measures of intellectual abilities (Full Scale IQ, Verbal Comprehension Index, and Perceptual Organisational Index) and FST was significant, Pillai's Trace $F(3,55) = 3.73, p = .016, \eta_p^2 = 0.17$. Perceptual organisational abilities were significantly higher amongst fit compared to unfit defendants ($F(1, 57) = 7.54, p = .008, \eta_p^2 = 0.12$). No other predictors were significant after Bonferroni adjustment. MANOVA of Wechsler memory index scores (Verbal Memory Index and Visual Memory Index) and FST was not significant, Pillai's Trace $F(2,15) = 2.92, p = .085, \eta_p^2 = 0.28$. GLMM revealed executive functioning was the only cognitive ability approaching significance when predicting a judges' determination of FST (see Table 10).

5.4.4 Expert Referrals and the Legal (*Presser*) Criteria

GLMM showed that experts' competency decision was significantly impacted by the referring agent ($b = 0.78, SE = 0.21, \text{Exp}(B) = 2.19, 95\% \text{ CI} = 1.46 - 3.30, t = 3.77, p < .001$). Therefore, the odds of a defendant being found fit to stand trial by an expert were twice as likely when the referrer was the prosecution as opposed to the defence (AICC = 2074.49, variance of intercept = 0.57, $SE = 0.16$). GLMM was not significant for expert's profession and FST decision. However, analysis showed that a significantly higher percentage (80%) of defendants who underwent neuropsychological assessment were found unfit to stand trial ($\chi^2(1) = 7.06, p = .008$).

Table 9.

Means and Standard Deviations of Fit and Unfit Defendants on Neuropsychological Test Index Scores

Index	Fit			Unfit			<i>T</i>	<i>df</i>	<i>p</i>	<i>d</i>
	M	SD	N	M	SD	N				
Full Scale IQ	72.52	12.93	27	64.54	16.46	37	2.09	62	0.041	0.53
Verbal Comprehension Index	70.70	11.10	27	65.91	18.32	43	1.23	68	0.225	0.30
Perceptual Organisational Index	77.75	13.92	28	67.28	14.99	43	2.96	69	0.004*	0.72
Working Memory Index	77.75	18.08	8	70.83	14.49	24	1.1	30	0.28	0.44
Processing Speed Index	73.50	16.60	6	68.90	12.76	20	0.72	24	0.476	0.33
Verbal Memory Index	77.92	9.21	13	64.80	9.72	25	4.02	36	0.000**	1.37
Visual Memory Index	80.13	15.66	6	73.00	10.34	11	1.20	17	0.248	0.61
Adaptive Functioning Index	63.75	10.60	4	56.92	5.82	12	1.66	14	0.119	0.96

Note. M = Mean; SD = Standard Deviation; N = Number; *df* = Degrees of Freedom.

* $p < .01$; ** $p < .001$. Conservative alpha of 0.01 was adopted due to the number of comparisons.

Full Scale IQ, Verbal Comprehension Index, Perceptual Organisational Index, Working Memory Index and Processing Speed Index scores were derived from the Wechsler Adult Intelligence Scale - Third Edition (WAIS-III, 1997) or Wechsler Abbreviated Scale of Intelligence (WASI, 1999). Verbal Memory Index and Visual Memory Index scores were derived from the Wechsler Memory Scales- Third Edition (WMS-III, 1997). Adaptive Functioning Index was measured by the Adapted Behavior Assessment System- Second Edition (ABAS-II; 2000).

Table 10.

GLMM Analysis of Cognitive Abilities and Judges' FST decision

Parameter	Competency Decision		
	Est.	SE	<i>P</i> value
Intercept	-0.566	0.209	0.007*
Attention	-0.001	0.035	0.968
Processing Speed	0.018	0.017	0.283
Intelligence	-0.028	0.026	0.280
Memory	-0.038	0.086	0.657
Executive Functioning	-0.381	0.217	0.079 ⁺
Intercept variance	4.796	0.746	0.00**
AICC	2813.822		

Note. Est = Estimation; SE = Standard Deviation; AICC= Akaike's Information Criterion

⁺ $p < .10$; * $p < .05$; ** $p < .001$.

While psychiatrists were retained by both sides equally (51.1% or $n = 226$ for the ODPP and 48.9% or $n = 216$ for the defence), psychologists were overwhelmingly retained by the defence (84.8%; $n = 78$) compared to the prosecution (15.2%; $n = 14$).

Neuropsychological reports were also primarily requested by the defence 88.9% ($n = 32$).

Most experts provided an opinion on the ultimate issue of FST (89.7%; $n = 514$). The level of agreement between expert and court decision was high (76.8%). Within cases, the level of agreement between experts regarding FST decision was slight ($\kappa = 0.18$), with lower levels of agreement found in cases where the defendant was found fit to stand trial (46.6%) than in cases where the defendant was found unfit to stand trial (66%).

Significantly fewer psychologists (17%; $n = 18$) addressed all 6 *Presser* criteria than did psychiatrists (33.3%; $n = 152$; $\chi^2(1) = 10.53$; $p = .001$). There was also a significantly higher percentage of psychologists (33%; $n = 35$) who did not specifically address any of the *Presser* criteria compared to psychiatrists (4.4%; $n = 20$; $\chi^2(1) = 81.25$; $p < .001$).

5.5 Discussion

The present study represents the largest known review of FST reports and associated defendant characteristics in Australia to date. Current findings extend the preliminary results of White et al. (2012) and support the role of cognitive assessment in relation to FST, above and beyond general intelligence testing in specific cases. Significant differences between fit and unfit defendants on tests of nonverbal intellectual abilities (Perceptual Organisation Index) and verbal learning and recall (Verbal Memory Index) were evident. Index scores on the Wechsler Intelligence and Memory scales for fit and unfit defendants were noticeably lower than in previous studies (e.g., Nestor et al., 1999). It is possible that scores were more likely to be reported by experts for defendants where intellectual and/or cognitive impairment was found on psychometric testing to show evidence of objective impairment. Additionally, cognitive assessment other than intelligence testing was not consistently used and few psychologists routinely included validity performance measures which may have skewed the current findings. This was the first known Australian study to evaluate non-credible performance in FST assessments. Non-credible test performance was reported in just under 10% of defendants. Importantly, executive functioning, although not frequently quantitatively examined, was predictive of judge's FST decision. Although White et al. (2012) reported attention, working memory and processing speed were related to a finding of unfitness, the current results did not provide evidence that verbal intelligence, working memory or processing speed were predictive of FST. However, those functions were not extensively examined across all defendants. Further examination is recommended, particularly as many experts qualitatively referred to these as impacting on specific elements of the *Presser* criteria (see White et al., 2012).

Consistent with previous literature, the current study revealed higher rates of psychiatric disorders, neurological dysfunction and ID than in the general population.

Defendants with neurological dysfunction or ID were more likely to be found unfit to stand trial. Interestingly, psychotic disorder alone was not predictive of FST. Internationally, psychotic disorders has been shown to be a very strong predictor of FST (Pirelli et al., 2011). This further validates the importance of Australian based FST research to consider factors which may be salient to the *Presser* criteria and Australian FST standard as opposed to other legal jurisdictions.

Dual diagnoses occurred in high rates, suggesting that consideration of more than one diagnosis as potentially impacting cognitive functioning and FST is important. Defendants with neurological dysfunction and psychiatric disorder or ID were much more likely to be found unfit to stand trial, as were defendants with an ID and psychiatric disorder. The present findings validate those reported by Day and colleagues (2000) to show why judges frequently seek information about psychiatric disorders and neurological disorders in FST expert reports and argues for increased cognitive assessment in specific cases where possible neurological disorder or dual diagnoses is suspected. The current research goes some way in responding to Pirelli et al.'s (2011) question about when cognitive assessment may be useful in the context of FST evaluations. In FST cases where a neurological dysfunction as well as dual diagnosis of psychiatric disorder and/or ID are suspected, formal cognitive assessment is likely to be beneficial.

Notably, a high proportion of the current sample were found unfit to stand trial (62.7%) compared to other overseas studies. The meta-analysis conducted by Pirelli et al. (2011) revealed that across 59 studies, 27.5% of defendants were, on average, found unfit (range 7-70). However, 75 percent of the sample from South Australia in van der Wijngaart et al. (2014) were found unfit to stand trial and the Law Reform Commission in NSW (LRC, 2013) reported 74.1 percent of defendants were found unfit to stand trial according to NSW court judgements published via legal database AustLii between 2008 and 2011. This may reflect inherent differences in the legal standard and procedures of

FST and its interpretation by experts and judges in Australia relative to other international jurisdictions; however further Australian research is needed to investigate this.

The apparent bias of mental health experts towards referring agent is of concern and has not largely been supported in previous research (Large et al., 2009; White et al., 2012). Although not accessible from the current data, it may be useful to elicit whether the question of fitness was raised by the defence or prosecution and whether this contributed to the apparent referral source bias. Further, there is no way to determine the number of reports obtained by either side, particularly the defence, which may not have been presented to the court as identified in van der Wijngaart et al. (2014). Contrary to White et al. (2012), there was no evidence of bias of profession on FST opinion.

An opinion on the ultimate issue was absent in over 10% of reports. While in some such reports it was apparent that this was a result of the expert's lack of knowledge and understanding of the relevant legal question and purpose of the assessment, others felt that it was not their role to comment on this and the remainder did not clearly communicate their opinion; suggesting further training for experts about the requirements of a FST report. Where a view was expressed, the rate of agreement between experts and judges' determinations of FST was high, consistent with previous research (Freckelton, 1996). However there was poor agreement among experts within cases; particularly when a defendant was found fit to stand trial. There was expert disagreement in 48 unfit cases (31%) and 47 fit cases (52%). It was not known which or how many cases experts were required to testify in court. It is possible that in defendants where the level of impairment is less severe or borderline, there is greater variability in expert opinion as to whether they meet the *Presser* criteria. Regardless, the results of these analyses suggest that improved standards for FST assessments is needed, particularly for psychologists who do not always consider all relevant aspects of the *Presser* criteria. Given the elevated rates of psychiatric disorders, importance of neurological dysfunction and aspects of cognitive functioning, it

may be that more routine and comprehensive objective cognitive assessment of specific cognitive abilities such as executive functioning would improve consistency between experts. Further, the current elevated rates of suspected non-credible performance (9.4%) suggest that formal objective testing may assist in determining the validity of clinical judgements.

The current findings should be considered in light of several limitations. First, the present study is based on a retrospective case design. Further prospective studies which incorporate examination of cognitive abilities are required. Quantitative analysis of cognitive test scores was limited by the small number of defendants who underwent cognitive assessment and reporting by experts. This limited the power of the statistical tests used. Further, qualitative analyses were largely based on Wechsler tests and results on a single instrument. Without comprehensive and routine assessment of performance validity, reports of psychiatric disorders and/or intellectual or cognitive impairment should be interpreted with some caution as they are vulnerable to artificial inflation. This may in turn lead to overestimation of the rates and significance of these factors in the determination of FST decisions. Finally, the current results are limited to NSW and may not generalise to other Australian and international legal jurisdictions. Many factors such as legal and procedural issues which may influence a judges' determination of FST were outside the scope of the current study.

Despite such limitations, the present findings emphasise the value of using quantitative methods to establish the extent to which courts can rely on expert opinion. Future studies employing prospective designs, comprehensive neuropsychological assessment and systematic reporting of neurological dysfunction, ID, psychiatric disorders and dual diagnoses are needed in order to further elucidate the role of cognitive abilities in FST and test whether neuropsychological disorder/impairment is the reason why these groups are significantly and more likely to be found unfit to stand trial. Any future study

should take into account other important identified factors such as non-credible performance and possible expert biases.

This study does lend itself to recommendations for Australian mental health experts conducting FST evaluations. Formal comprehensive cognitive assessment is warranted in defendants with neurological dysfunction and dual diagnoses. The severity and nature of any TBI should be comprehensively explored and specified, where possible. Cognitive abilities including intelligence (particularly non verbal), executive functioning and verbal memory appear to be relevant to FST. Performance validity should routinely be examined. Cognitive assessment should be explored in direct relation to the legal criteria of *Presser*. Experts should ensure they have adequate training and expertise in the area of FST prior to undertaking evaluations, particularly psychologists. Finally, experts must always be cognisant that their duty is to the court, not the referring agent and to make their assessment as objective as possible.

5.6 References

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5.7 Footnotes

1. All cases could have been obtained from the courts or the ODPP; however the MHRT was contacted first and hence the majority of unfit cases were sourced from the MHRT. As such, there is no theoretical reason to consider these as two separate samples in the current study.
2. Demographic variables were age, sex, Australian born, English first language, Education, Criminal history and charged with a serious crime. Full analysis available from authors on request.

CHAPTER 6:

Fitness to Stand Trial: Views of Criminal Lawyers and Forensic Mental Health Experts Regarding the Role of Neuropsychological Assessment

This paper is currently *in press* as:

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6.1 Abstract

The role of expert opinion, including neuropsychological assessment, in fitness to stand trial (FST) determinations has been viewed as advantageous by practitioners and empirical researchers. The purpose of this study was to examine the views of criminal lawyers and forensic mental health experts regarding the quality and usefulness of neuropsychological assessments in FST decisions within the Australian context. Thirty-five semi-formal interviews were conducted. Respondents' understanding of and experience with neuropsychology and cognitive assessment techniques were explored. Respondents viewed neuropsychological assessment as beneficial in FST cases, particularly those involving intellectual disability, traumatic brain injury or other organic brain disorders; although many had limited understanding and experience with the discipline. Mental health experts reported using varied cognitive assessment techniques and approaches to assessing the relevant legal (*Presser*) criteria. The perceived quality of neuropsychological reports was generally positive. Several barriers to comprehensive assessment were identified by respondents. Respondents identified areas for improvement for neuropsychological report writers.

6.2 Introduction

Forensic mental health experts routinely provide expert evaluations to the courts in order to assist them in making legal decisions such as fitness to stand trial (FST).

Historically, psychiatrists were the expert of choice, however, increasingly the opinions of psychologists with specific skills including neuropsychological assessment are being sought (Denney & Sullivan, 2008; Sweet, Ecklund-Johnson, & Malina, 2008). Forensic neuropsychologists have the ability to diagnose clinical conditions, such as traumatic brain injury, which occur in high rates within forensic settings, and to consider the effect of those conditions within the legal context. Forensic mental health expert opinion can be inferred to be highly regarded by decision makers, with agreement rates between experts and courts estimated to be greater than 90% (Cox & Zapf, 2004; Freckelton, 1996; Zapf, Hubbard, Cooper, Wheelles, & Ronan, 2004).

Notwithstanding the above, studies suggest that expert reports may inadequately assess and/or address the relevant legal criteria (as cited in Viljoen, Wingrove & Ryba, 2008; Birgden & Thomson, 1999; Nicholson & Norwood, 2000; Skeem, Golding, Cohn & Berge, 1998). Wettstein's (2005) paper on the quality of forensic mental health assessments revealed a major flaw of the mental health expert was the failure to relate their findings to their conclusions and the psycho-legal issue at hand. Difficulties also ensued when data was not interpreted in the report, leaving report readers, typically lawyers, to interpret the findings, sometimes incorrectly. A recent review of expert FST reports prepared in NSW, Australia (White, Batchelor, Pulman & Howard, 2012) revealed that one-third of psychological reports failed to address the relevant legal criteria for FST of *R v Presser* [1958]. Other key areas of concern included limited cognitive testing and a failure to detail acquired brain injuries.

Several studies have examined the quality of FST reports by forensic mental health experts through analysis of retrospective case reports or surveys of experts evaluating

common FST assessment practices (e.g. Borum & Grisso, 1996; Robbins, Warers, & Herbert, 1997; Ryba, Cooper, & Zapf, 2003; Skeem, Golding, Cohn, & Verge, 1998). Comparatively, little is known about how those reports are perceived by the lawyers who request the report, other mental health professionals who review them prior or subsequent to making their own clinical judgements, and the judges who make final rulings on a defendant's FST. That information is important, as the purpose of the reports is to assist these parties and aid determination of a legal decision (FST).

Viljoen et al. (2008) noted that solicitors and judges may consider different aspects to be important to FST than clinicians. Their study surveyed 166 judges from seven states in the United States of America (USA) and found that psychological testing was viewed as valuable and that an expert's ultimate opinion on the issue of FST was an essential component of reports. Rogers and colleagues (2009) conducted semi-structured interviews with 12 criminal barristers to examine their views on the legal construct of 'fitness to plead', associated procedural problems and difficulties with fitness to plead assessments in England and Wales. Barrister's responses indicated that they felt the legal criteria were applied by experts inconsistently, there was often insufficient consultation between experts and the representing legal team, and that it was important for the expert to consider the potential for behaviour referred to in the article as malingering.

In South Australia, Day and colleagues (2000) found magistrates were generally satisfied with the quality of expert reports. They noted that magistrates requesting FST reports were interested in assessment of mental health history, brain impairment and opinion regarding clinical diagnosis; and heavily relied on psychiatric opinion. The authors recommended that the use of psychological assessment, particularly where brain impairment and intellectual capacity were of concern, may be undervalued and could be utilised more frequently (Day et al., 2000). The role of cognition and FST remains unresolved. A systematic review of the international literature (White, Meares, &

Batchelor, 2013) showed that over and above intellectual capacity, cognitive processes, specifically, processing speed, verbal memory and visuo-perceptual skills differentiated fit and unfit groups. Aspects of executive functioning, including social knowledge and abstract thinking, influenced FST. However findings were limited due to a lack of control for intelligence in several studies and the small data pool.

As such, it is important to consider lawyers' (defined herein as solicitors, barristers and judges) and mental health experts' (defined as psychiatrists and psychologists) understanding about various expert professions, what role they may play in FST assessments, and how such assessments can be improved. This is particularly important for the field of forensic neuropsychology, a relatively new discipline.

The aim of the present research was to (1) identify the level of understanding and use of neuropsychological assessment for FST by lawyers and mental health experts; (2) identify forensic mental health expert assessment practices of FST and the role of cognition; (3) examine lawyers' and mental health experts' perceptions of the quality of FST reports; and (4) explore problems and obstacles to assessment and possible FST assessment guidelines as identified by both lawyers and mental health experts within an Australian context.

6.3 Method

6.3.1 Participants

A total of 35 respondents participated in the current study. Respondents were 17 criminal lawyers including 10 solicitors and barristers (5 from private firms, 2 from Legal Aid and 3 from the Office of the Department of Public Prosecutions) and 7 court judges; 14 forensic mental health professionals including 5 forensic psychiatrists and 9 psychologists (8 forensic psychologists and one clinical neuropsychologist); 2 law academics and; 2 law policy makers. The majority (32) were based within New South Wales (NSW), two were from Victoria and one was from South Australia.

6.3.2 Sampling Procedures

Participants were recruited via two methods. Firstly, those with known expertise and experience in FST and cognitive impairment were identified through FST research or practice in the field. Secondly, non random snowball sampling was used, i.e., participants were asked to recommend others until the target number of interviews (minimum of five solicitors, judges, psychiatrists and psychologists) was obtained. As participants were selected on the basis of expert recommendation, a small number of participants from non-targeted groups (academia and policy makers) were also interviewed.

6.3.3 Research Design

A semi-structured interview was conducted. Participants were asked a series of open-ended questions that covered the following areas in relation to FST: experience and understanding of neuropsychological assessment; assessment approach and techniques; quality of neuropsychological reports; and problems and obstacles to assessment. Items were not necessarily discussed in sequential order. The interview schedule was used flexibly to allow exploration of new areas and in accordance with the respondent's discipline and expertise (i.e., an interview guided approach). See Appendix C for the questions used to guide the interviews.

The majority of interviews (32) were conducted in person and the remainder via telephone between 2010 and 2013 by the principal investigator (AW). On seven occasions SP was also present. Written informed consent was obtained before each interview and the participants were told that their responses would be audio recorded and de-identified. Thirty interviews were recorded on audiotape. Handwritten notes were taken for the interviews not taped. Interviews ranged from 18.38 to 91.10 minutes in length ($M = 48.07$; $SD = 16.31$). Interview transcripts were typed by AW and imported into QSR International's Vivo 9 software (2010). All quotations included in the manuscript are

verbatim, with occasional minor edits for clarity. The study was approved by Macquarie University Human Research Ethics.

6.3.4 Data Analysis

Qualitative content or thematic analysis was used in conjunction with principles from the framework method (Ritchie & Lewis, 2003; Ritchie, Lewis, Nicholls, & Ormston, 2013).

6.4 Results

Analysis of the data revealed four main themes and numerous sub-themes. These are summarised in turn. Where group differences were evident, the results have been separated into the different groups of respondents.

6.4.1 (1) Understanding and Experience with Neuropsychology

(a) What is neuropsychology. Across disciplines, most respondents felt that the understanding of neuropsychology within the criminal justice system was generally quite poor. Although 13 lawyers articulated that they had a good working knowledge of neuropsychology, only three demonstrated a thorough and comprehensive understanding of the discipline. Several respondents had difficulty differentiating neuropsychology from other forms of psychology.

(b) Role of neuropsychological assessment. Lawyers typically identified neuropsychological assessment as relevant in relation to assessments of traumatic brain injury (TBI), intellectual disability (ID) and "brain damage". One commented that neuropsychological assessment was only fruitful in rare and serious offences and only employed when recommended by either a psychologist or psychiatrist. Another indicated that due to a lack of exposure and understanding of neuropsychological assessment, they may be underutilised; although said that it would be a "specialised situation that you would get a neuropsychological report". One judge strongly advocated for neuropsychological

assessments over forensic psychology assessments in FST cases to comprehensively assess any organic impairment.

Mental health experts typically stated that neuropsychological assessment was not necessary in every FST case and provided examples of when an assessment would be indicated including in cases of TBI, ID, developmental disorders, epilepsy and neurodegenerative disorders. Less commonly effort was mentioned.

(c) Experience with neuropsychology. The overwhelming majority of lawyers reported limited experience with neuropsychological assessment within the context of FST cases. The majority of experience was in relation to TBI in the civil arena.

(d) Weighing neuropsychological evidence. The majority of lawyers (60%) placed greater weight on psychiatric than neuropsychological expert opinion, predominately due to historical standings and medical qualification, with the general exception of cases of ID. However some respondents suggested that this view may be shifting:

Some Judges used to be very scathing about psychology reports because they saw them as just a backdoor method of getting in background [information] but neuropsychologists seem to be on a different level that you are actually looking for a dysfunction or a particular inability and the Judges seem to get that.

6.4.2 (2) Assessment of FST and the Role of Cognition

(a) General approach. Mental health experts frequently reported that their assessment approach and methodology to a fitness assessment did not vary relative to other types of assessment. A few commented that they approached it like a general capacity assessment. However others indicated that their approach differed, with a much greater focus on a defendant's cognition (including memory and language skills) and medical or psychiatric features as opposed to psychosocial factors. Four individuals specifically

discussed the importance of basing their assessment on the legal criteria for FST, as set down in *R v Presser* [1958]. A number of mental health experts (particularly psychiatrists) indicated that FST assessments more frequently required neuroscience techniques such as neuropsychological assessment, neuroimaging and neurological opinion than other legal matters, for example, sentencing reports.

(b) Role of cognition. There was uniform agreement amongst forensic mental health experts regarding the fundamental importance of cognition in FST. However, there was some variability regarding the relevance of specific cognitive domains. All respondents identified executive functioning or higher order abilities as relevant, in particular planning and reasoning abilities. Intellectual capacity was seen to be of high importance by all psychiatrists and two-thirds of psychologists. Just under half (6) of mental health experts reported that memory was relevant. One psychologist held memory to be of critical importance. Expressive and receptive language skills were mentioned by all psychologists but were not specifically identified by any psychiatrists. Other aspects seldom mentioned included attention, working memory and processing speed. Two psychologists reported that all cognitive domains were of relevance:

Everything can affect any cognitive impairment, that is why it is so complex, so you can't exclude anything and that is why neuropsychologists especially I think have a role...what is important is a comprehensive review of all domains and then put that to the court...

Mental health experts also discussed the importance of functional assessment. However, less than half (44.4%) of psychologists reportedly regularly examined this whereas the majority of psychiatrists (80%) said that they routinely considered a person's functional status. Lawyers were less articulate regarding specific cognitive domains, although all respondents recognised that a defendant's cognitive abilities were of high relevance to FST.

(c) Psychometric assessment. All psychologists reported that the Wechsler Adult Intelligence Scale (WAIS) was an important assessment tool. Over half (55%) endorsed the use of an abbreviated intelligence test, such as the Wechsler Abbreviated Scale of Intelligence (WASI). The Wechsler Memory Scales and Rey Complex Figure test were the only other measures reportedly used by at least one-third of psychologists (33.3%), consistent with White et al. (2012). Psychiatrists reported limited use of assessment tools. Half reported routinely screening cognition using a Mini Mental State Examination (MMSE) in FST assessments:

In my experience cognitive impairment is often missed...If you suspect it, you have got to test it...a MMSE is a screening tool, it is not a diagnostic tool, it does not tell you about severity or nature of impairment and most times in fitness it's got to do with severity because it's a threshold.

You've got to get some handle on the severity and the nature of those impairments...I'll screen it with a cognitive test and if I get a positive screen then I'll always recommend neuropsychological testing...

Seldom did mental health experts spontaneously mention assessment of effort. In response to direct questioning, 78.6% said that effort was an important aspect of examination. However, only 33.3% of psychologists routinely examined effort. Only one psychiatrist explicitly said they would rely on neuropsychological examination to help determine effort. Another psychiatrist reportedly relied on interview and internal consistency of reliable responses.

Lawyers considered that effort testing was of critical importance and expected that this was routinely included in an assessment by mental health experts:

Every time they [the expert] should build into their assessment ways in which they can report on the possibility of malingering. One would

expect that these days. When you look at a report you should look for signs that they tested for that.

(d) Fitness to Stand Trial - Assessment Instruments (FST- AIs). Most (71%) of mental health experts reported awareness and basic knowledge of FST- AIs. Only one practitioner, a forensic psychologist from Victoria, reported using a modified version of a FST- AI (the Fitness to Stand Trial- Revised; FIT-R). However, typically respondents indicated that these instruments did not apply to the Australian context as they reference different legal standards (e.g. Dusky v. US). In contrast with traditional neuropsychological tests, one psychologist commented "The American [FST- AI] tools are applied to the American legal system whereas the neuropsychological tools are not tied to a particular system that is external to brain function". No lawyers, academics or policy makers had any knowledge of FST- AIs, which was not all that surprising in an Australian context.

(e) Clinical diagnoses. The overwhelming majority (87.5%) of mental health experts indicated that identifying the underlying cause of unfitness was important.

Further, a few identified the need to distinguish between transient and permanent causes of impairment. In contrast, only 16.6% of lawyers felt that identifying the cause was essential while 83.3% said that this was important. "I think an underlying cause is helpful, but technically not really necessary". One academic commented:

Including a clinically recognised diagnosis in your report is of interest in the sense that it's about your communication with the court that show that you are actually the bridge between the expert medical knowledge, medical psychiatric knowledge on one side and the legal knowledge on the other...

(f) Addressing the legal question. There is debate within the FST literature as to whether an expert should give an opinion regarding the ultimate issue, that is, based on the

Presser criteria whether an individual is fit or unfit to stand trial (for example, see Nicholson & Norwood, 2000). Of the 14 mental health experts, 12 reported that they regularly commented on the ultimate issue. All lawyers were of the firm belief that the expert should address the ultimate issue. "That's what they are assessing so they have to give an opinion". Judges went further:

It's crucial [for the expert] to address all 6 *Presser* criteria. Always discuss 6 criteria for fitness as the minimum standard. Don't concentrate on personal background or material which cannot be corroborated or verified as there is less weight placed on this and in fact, [it may] undermine the objective nature of the report in the judges mind.

In considering the question of duration of trial, as outlined in the case of *Kesavarajah* (1994), only 8 (57%) of the mental health experts said that they directly referenced this while an additional 4 experts reported that they addressed this indirectly. Lawyers typically presumed that this was canvassed by forensic mental health experts.

Finally, mental health experts were asked about their consideration of the complexity of the trial. This was not reportedly commonly addressed (26%). However, the majority of lawyers (80%) said that they felt trial complexity was something that the mental health expert should consider.

6.4.3 (3) Neuropsychological Reports

(a) Report quality. Mental health experts generally felt that the quality of neuropsychological reports produced in FST matters was high or very high (66%), although most noted considerable variability between reports in that respect. Two felt that the neuropsychological reports were generally below average. In addition, some mentioned a distinction between reports by clinical neuropsychologists and neuropsychological style reports produced by psychologists who were not endorsed in the areas of neuropsychology.

There was also criticism of clinical neuropsychologists performing forensic assessments without adequate knowledge and training.

Similarly, lawyers typically rated the reports positively although noted marked variability in the quality of reports. One judge commented "... quite frankly the neuropsychological reports that I've read and I can remember have all been of a very high quality". Often respondents grouped together forensic and neuropsychological reports.

(b) Report recommendations. Psychiatrists were most informative about suggested improvements, particularly in cases where they had instigated the referral for neuropsychological assessment. Recommendations included more comprehensive assessment of effort and executive functioning, and better integration of the person's cognitive test performance, real life functioning, and FST capacity. The use of simplified language and terminology as well as less reliance on test scores were also frequently suggested.

Lawyers highlighted similar issues including better integration and explanation of executive functioning and functional capacity, and the importance of using layman's language. The majority also discussed the need for forensic neuropsychological reports to better address and link the psychometric testing to the legal question including all relevant elements of the *Presser* test, as well as individual factors such as the complexity and length of the trial, and the types of evidence the defendant would be required to understand. Additional recommendations included better and more frequent use of corroborative material. Multiple assessment sessions were seen as ideal. Finally, lawyers said that they were commonly seeking information about the parameters or limitations of the assessment. Some commented that these were often poorly identified or ignored in reports. Judges in particular reiterated that the more scientific and objective the report, the better the quality. Other general issues raised were summarised by one solicitor:

Qualifications should be clearly set out, they very often aren't.

Very often I don't get a CV with a report... psychiatrists don't always detail how much time they spend with a person. A lot of them [mental health experts] don't tell you what material that they received, some of them make some sweeping broad statements without giving any explanation as to the basis... I have also discovered some that will write further reports and you don't quite notice they have not mentioned the fact that they didn't see the person again. It's based on the same material...

An academic observed that reports should “go beyond the diagnosis; talk about the difference between intellectual disability and cognitive impairment if relevant to the case so that the judge understands the differences and types of difficulties that arise as a result and how this differs in terms of long term prognosis, services availability etc...”.

(c) Report guidelines. Respondents were largely cautious about the prospect of standardised guidelines for FST assessments. Frequently issues around adequate training and qualifications to perform FST assessments were seen as key. Mental health experts were more open to general guidelines which may allow for easier interpretation of the legal criteria from a psychological perspective.

One lawyer commented "The good experts don't need any more [guidelines]." However, some lawyers commented that the materials given to each of the experts should be standardised to ensure that experts have reviewed the same material and that their opinion is based on such. One further considered:

I think it would be helpful in some ways if the reports were structured in the same way so it was easier to compare apples and oranges, whether that means that you have a standard form whereby you indicate precisely what tests you have done and they are pre-divided into different

categories so we can see which tests have been done, where, in some ways if the reports were standardised in that way it would be a help, it would be much easier to compare the opinions and see where the differences may lie.

6.4.4 (4) Problems and Obstacles to Assessment

Common practical obstacles identified by over half (55%) of mental health experts were time constraints including face-to-face time with the defendant, inadequate consultation with the solicitor, and inadequate time to write the report. Other common problems included inadequate funding for reports, poorly defined and detailed referrals, lack of provision of corroborative material, access to gaol facilities and time between the assessment and court date, particularly for psychiatric assessments. Similar concerns were raised by lawyers.

Overall, mental health experts rated the quality of briefings as average (5 out of 10). However, this issue was not often considered by lawyers, with only one-third acknowledging that frequently an inadequate brief was provided to the psychologist. The overwhelming majority (80%) reported none or minimal contact with the solicitor before and/or after the assessment with virtually no feedback on their report. Two mentioned that the only time they had been contacted by some referring agents was when they were requested to alter their report or opinion in some way. Finally, mental health experts, particularly psychiatrists, advocated for increased use of neuroimaging and neuropsychological assessment, particularly in very serious matters e.g., murder. Often this was apparently requested but not followed through (as found in White et al., 2012), which limited the ability of the expert to provide a comprehensive or conclusive opinion.

6.5 Discussion

Forensic neuropsychology is generally viewed as useful and informative for FST determinations, particularly in cases involving neurological brain impairment. However it

is currently incompletely understood and underutilised. Adequate research and investigation of relevant cognitive factors as well as practical constraints are currently impacting the quality of FST assessments. The assessment of FST is variable; although a number of cognitive processes above and beyond intelligence such as executive functioning, memory and language are viewed as relevant and important constructs. Consideration of effort is paramount for lawyers although formal assessment is underutilised by mental health experts. Adequate training and expertise for forensic mental health experts conducting FST assessment are also important considerations. Despite these issues, neuropsychological reports are generally perceived to be of a high quality.

6.5.1 Recommendations

On the basis of the results of the current study several key recommendations in relation to FST assessments are made. Forensic mental health experts and psychologists in particular, should routinely include a robust assessment of effort. Cognitive testing should be comprehensive and in addition to intellectual capacity, should include the domains of executive functioning, memory and language. Reports should: (a) contain information pertaining to the underlying cause of any impairment and its relation to FST; (b) address all elements of the relevant legal criteria (*Presser* test) and any other relevant case law; and (c) express an opinion on the ultimate issue. Finally, additional forensic training for FST assessments is recommended for forensic experts. All experts should carefully evaluate their skill sets and purported expertise. Reports should explain key terms to reduce both the risk of misunderstanding in the courtroom and the need for oral evidence.

There is opportunity to educate the legal profession about the specific sub-disciplines of psychology. Lawyers are encouraged to gain further knowledge and education regarding the definition and use of neuropsychology within the forensic setting and in FST assessments. Mental health experts recommend more frequent follow through on requests for neuropsychological assessment as well as other forms of neuroscience

including neuroimaging; as well as increased communication between the forensic mental health expert and the legal practitioner to generate more helpful, objective and comprehensive reports.

6.5.2 Limitations

The sampling method and research design may have exposed the study to bias in two ways. Firstly, relying on personal references for potential participants could result in those with opposing views being systematically overlooked due to preferential selection of likeminded individuals. Secondly, the fact that all interviews were conducted by those trained in Clinical Neuropsychology may have affected the views expressed. The variety of responses received, however, suggest that the sample may have been representative. The fact that the sample was predominantly based within one legal jurisdiction (NSW) and was small in size may have also adversely affected generalisability of the results.

6.5.3 Future research

Future research is recommended in order to further examine lawyers and mental health experts' understanding and views of neuropsychological and general forensic FST evaluations, to help improve the standards of forensic FST reports in Australia. Larger samples with wider representation across Australian legal jurisdictions and a greater number of lawyers with a high level of experience with neuropsychological assessment would be helpful. Surveys may help to quantify the results herein. Further empirical research investigating the precise cognitive elements relative to FST is also required.

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CHAPTER 7:

Discussion

7.1 General Summary and Contribution to the Literature

As already acknowledged, FST standards are open to modified interpretation depending upon context. FST cannot be measured by a single or identical set of assessment methods in all cases (Grisso, 2003). However, the current study aimed to explore the role of specific cognitive abilities and cognitive assessments in FST determinations within the Australian legal context and in accordance with the legal criteria of *R v Presser* [1958]; and in turn inform expert FST assessment practices.

A systematic review of the literature identified a small number of international studies which presented comparative data between fit and unfit defendants regarding specific cognitive abilities. The results of those studies revealed memory, processing speed, working memory, visuoperceptual abilities and executive functioning differentiated fit and unfit defendants. The retrospective analyses of Australian FST cases reported in Chapters 4 and 5 addressed the first and second aims and respective hypotheses of this research. Consistent with the first hypothesis, the current research found variable assessment and reporting practices of experts, in particular psychologists, conducting FST evaluations. The second hypothesis was supported by the current research and demonstrated that specific cognitive abilities including memory, nonverbal skills, executive functioning and intelligence were important in FST determinations. In addition to these aims, the research reported in Chapter 5 represents the most comprehensive snapshot within Australia of fit and unfit defendant characteristics including the prevalence of psychiatric disorders and neurological dysfunction that has been conducted to date. Neurological dysfunction and in particular, neurodegenerative disorders, ABI and ID significantly increased the odds of a defendant being found unfit to stand trial. The third aim and respective hypothesis was addressed in Chapter 6. An analysis of interviews conducted with forensic mental health experts and legal practitioners indicated that the current level of knowledge about neuropsychological assessment in the field could be

improved. However, respondents perceived neuropsychological assessment as an important source of information in FST evaluations.

The research presented in this thesis represents a contribution to both the local and international forensic and scientific communities' attempts to understand the relevance of psychiatric disorders, neurological dysfunction and cognitive abilities to the legal question of FST. The research provides empirical support for the role of cognitive abilities in FST determinations which is vital to ensure expert assessment practices meet evidentiary standards. USA and Australian courts examine the reliability of scientific testimony before they admit such evidence most commonly based on the tests of *Frye v. United States* (1923) and *Daubert v. Merrell Dow Pharmaceuticals* (1993). Under the Frye test a court should only admit evidence generated by a psychological test if the test is generally accepted amongst psychologists (Martin, Allan, & Allan, 2001). The Daubert ruling expanded this to ensure that expert evidence was related to scientific theory and technique that was testable, had been subject to peer review and publication, had an established error rate, and was generally accepted in the relevant scientific field (Archer, Buffington-Vollum, Stredny, & Handel, 2006; Bush, Connell, & Denney, 2006). Several authors have argued that psychologists and in particular neuropsychologists, are uniquely suited to meet the challenge of Daubert, due to the objective nature of psychometric assessment and neuropsychological assessment (Greiffenstein & Cohen, 2005; Lally, 2003). The current body of research would suggest that the legal profession also sees merit in neuropsychological assessment for this reason.

This research has also contributed to informing standards of practice for FST assessments. By consulting forensic mental health experts and legal practitioners, the research encompasses the needs and expectations of both professions within this interdisciplinary field. It is anticipated that the use of Australian based studies such as those herein which adhere to the *Presser* criteria will improve the sensitivity and

classification accuracy of FST assessments conducted by psychologists within the Australian setting. Finally, surveying leading experts in the FST field and utilising the previous work of Pirelli, Zapf and Gottdiener (2011) provided information about how to conduct more informative and robust FST research in future.

The remainder of this chapter does not reiterate the findings already presented and discussed in the body of the thesis but rather, focuses on the ramifications and limitations of the current research and recommendations for future investigations in this area.

7.2 Converging the Evidence: The Current State of Affairs

The current body of work can be used to evaluate and contrast Australian FST cases with those from international jurisdictions. Several important points of distinction were highlighted and suggest that there may be fundamental differences between defendant characteristics and/or the legal criteria and legal process within the Australian landscape compared to that of other western legal jurisdictions. For example, psychiatric disorders have consistently been shown to be predictive of FST in the international literature, however, this was not replicated in the current research. Interestingly, the percentage of unfit defendants (62%) was significantly higher than in international studies. It was unclear whether such differences represented a unique population, differences in expert assessment or legal procedures. Further research would be required to investigate any such differences; however the current findings suggest caution in assuming the results of research conducted overseas will be applicable to the Australian context.

The results of the current research were interpreted to suggest that some cognitive abilities identified in the international literature may not be as important within the Australian context and in relation to *Presser*, for example, working memory. However, one must consider this with caution due to the lack of data available in the current retrospective case analysis from which to draw any firm conclusions. What is clear is the importance of cognitive abilities such as memory and executive functioning to determining FST.

Neurological dysfunction was very strongly predictive of FST and in the cases reviewed for the purposes of the current research occurred at higher rates than previously reported (e.g., Warren et al., 2006). This finding highlights the importance of considering such factors in FST evaluations, particularly in older defendants. Of equal importance, was the significance of dual diagnoses on a defendant's likelihood of being found unfit to stand trial.

While points of difference between the studies reported in Chapters 4 and 5 and the overseas literature existed, there were similarities. A number of expert evaluations did not meet best practice standards. Consistent with the findings of Grisso (2010) in the USA and T. Rogers, Blackwood et al. (2009) in England and Wales, one of the main issues and criticisms was expert opinion without sufficient explanation and evidence and a failure to address all relevant legal criteria. Psychiatrists answered the legal question more frequently than psychologists. The reason for the difference between professions is unclear, although may reflect the higher number of psychologists producing fewer reports compared to psychiatrists. The fact that the respective professions have different models of training may also contribute to the variance. Further, this may reflect different levels of training within the profession as not all psychological assessments were completed by those with post-graduate qualifications and with forensic and/or neuropsychology specific training. Different levels of training and different areas of specialty may result in more variable assessment practices among psychologists, however, this was difficult to analyse in the current study due to the low numbers of practitioners with different post-graduate qualifications.

It is extremely important for experts to be cognisant of the legal context within which forensic psychology operates and the legal principles and case law that govern the practices of forensic experts. Non-credible performance was reported in 9.4% of evaluations. This was lower than international studies of 19 to 23% (e.g., Mittenberg,

Patton, Canyock, & Condit, 2002), although significantly higher than in the general population. The findings suggest, in line with literature recommendations, that performance validity should be routinely examined and multidimensional; however this was not the case within the current sample. The results indicate that there is a need to increase awareness of the importance of adequate performance validity testing in FST evaluations for forensic mental health experts. The current body of research reiterates the importance of adequate training and expertise of forensic experts when conducting FST assessments. Experts within NSW must adhere to the Expert Witness Code of Conduct in accordance with New South Wales Uniform Civil Procedure Rules Act 2005- Schedule 7; however, the current findings suggest that some experts may not be fully cognisant of the level of skill and forensic knowledge required when undertaking such assessments. It is incumbent upon mental health experts to recognise the limits of their expertise (Sullivan & Denney, 2008). Regardless of profession, experts need to be aware of the risk of bias in their opinion and ensure that they are answering to the court, not the referring agent. As indicated by Scott (2007) it is essential that psychological reports reflect psycho-legal criteria and that legal professionals hire the right type of expert to competently conduct the evaluation.

The present research suggests that there is a gap between what is perceived to be evaluated and what is actually evaluated. Psychologists should be aware that lawyers expect that all *Presser* criteria will be addressed and an opinion on the ultimate issue of FST provided. In order to address this, there is a need for greater communication between professions as well as additional training for experts, particularly psychologists. The current research suggests that psychologists may require further specialised training in FST evaluations. FST should be addressed in forensic post-graduate psychology degrees and these expert psychologists should be encouraged to conduct research in this area and publish their findings in interdisciplinary journals with legal scope. This would assist in

increasing the education provided to the legal profession about the role of psychology as well as the different levels and nature of qualifications of various psychologists.

Neuropsychological assessment was recommended in a number of cases but not conducted. Of those who did undergo neuropsychological assessment, 80% were found unfit to stand trial. It is unclear why the majority referred for assessment did not have this completed whether it was perceived that the likely result would be a finding of unfit, inadequate funding for these reports, a need for improved training and knowledge of the lawyer about neuropsychological assessment or other reasons.

7.3 Research Limitations

Several limitations pertaining to specific sections of the research have been addressed within each chapter. For example, retrospective design, multiple statistical comparisons limited by a lack of data, and the small n with the associated possible risk of insufficient power to detect between-group differences or relationships between cognitive abilities and FST. These limitations were perhaps not unexpected given previous endeavours and writings, for example by Birgden and Thomson (1999), who outlined the difficulties inherent in this area of research between psychology and the law, particularly within the Australian context. These limitations create an ongoing challenge for future research.

7.4 Future Research Directions

Replication and extension of these results in a larger sample, utilising a prospective design and including multiple states and territories within Australia is warranted. There is a need to evaluate specific clinical groups for which neuropsychological assessment may be important, such as defendants with a TBI within the FST context. Any future research endeavours would require assistance of the legal community in identifying cases. The collection of official statistics on FST hearings and outcomes in NSW and Australia is recommended. In the development of any Australian FST- AI, a general population study

to examine the layperson's understanding and knowledge of legal processes and whether they would pass the *Presser* test would be useful. Although it has been argued that Australia has a low threshold for FST compared to some other international jurisdictions, executive functioning was found to be important in FST determinations. This suggests that the application and interpretation of the criteria requires some higher order functions. It is not clear how this is influenced by factors such as the complexity and length of the case and further research is required to examine the influence of these factors.

7.5 Conclusion

The body of research reported in the current thesis provides evidence for the importance of specific cognitive abilities in relation to the Australian legal standard of FST set down in *Presser* and supports the use of neuropsychology in this area. Despite limitations, this series of studies provides experts and researchers with the most comprehensive data for FST defendants in Australia published to date. Although further efforts are required, it is anticipated that this research will help inform cognitive assessments of FST and expert practices more broadly. Comprehensive cognitive assessment of specific cognitive abilities can be an important way to inform FST determinations. In response to the question raised by Pirelli, Gottdiener and Zapf (2011) about when is cognitive assessment helpful, the current research has identified that within the Australian context at least, cases where there is dual diagnoses, evidence of neurological dysfunction or ID may require and benefit from comprehensive cognitive assessment.

CHAPTER 8:

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APPENDICES

Appendix A: Search Strategy

Appendix B: Questionnaires Part 1 and 2

Appendix C: Semi-structured Interview Questions for Forensic Mental Health Experts,
Lawyers and Judges

Appendix D: Additional Comments and Responses from Criminal Lawyers and Forensic
Mental Health Experts

Appendix E: Publication: The Role of Cognition in Fitness to Stand Trial: A Systematic
Review

Appendix F: Publication: The Role of Cognitive Assessment in Determining Fitness to
Stand Trial

Appendix G: Macquarie University Human Research Ethics Committee Approval letter;
Mental Health Review Tribunal Approval Letter; and Office of Director of Public
Prosecution Approval Letter

APPENDIX A:

Search strategy

1. exp fit* to stand trial/
2. exp adjudicative competenc*/
3. exp competenc* to stand trial/
4. exp fit* to plead/
5. exp capacity to stand trial/
6. exp trial competenc*/
7. 1 or 2 or 3 or 4 or 5 or 6
8. exp cognit*/
9. exp psychometric/
10. exp neuropsycholog*/
11. exp forensic psycholog*/
12. exp forensic assess*/
13. exp forensic mental health assess*
14. 8 or 9 or 10 or 11 or 12 or 13
15. 7 and 14

Note: Using an asterisk enabled searching of various endings of the root word, such as *competency* and *competence*.

APPENDIX B:

Questionnaires Part 1 and 2

Neuropsychological Assessment and Fitness to Stand Trial: Questionnaire Part 1

Listed below are the 13 competency research criteria published by Pirelli, Zapf & Gottiner (2011) in the paper: Competency to stand trial research: Guidelines and future directions, *Journal of Forensic Psychiatry & Psychology*, 22(3), 340-370.

Please consider the importance of each item when used to evaluate the quality of a comparative study of competency to stand trial. 0 = no importance; 1 = minimal importance; 2 = some importance; 3 = high importance; 4 = critical importance

Guideline	Rating (0-4)
1. Explicit and clear presentation of information when publishing multiple manuscripts from the same study	
2. a. Presentation of means for comparative groups	
2 b. Presentation of standard deviations for comparative groups	
2 c. Presentation of effect sizes for comparative groups	
3. Presentation of significant <u>and</u> non-significant findings	
4. Continuous coding of data when possible (i.e. as opposed to categorical coding)	
5. Examination of whether differences exist between participants and non-participants	
6. Use suitable competent comparison group	
7. Coded all data which may serve as potentially moderating variables rather than using these as exclusion criteria	
8. Data analyses performed using all available competency criteria	
9. Presentation of data comparatively by competency status in addition to other dichotomies	
10. Presentation of relevant findings for the total sample in addition to those for the incompetent and competent subsamples	

Guideline	Rating (0-4)
11. Incompetent and competent control groups included in malingering studies	
12. Defendants classified as 'questionably fit' where possible	
13 a. Included defendant characteristics: (i) age	
13 a. (ii) ethnicity	
13 a. (iii) sex	
13 a. (iv) level of education	
13 a. (v) employment status	
13 a. (vi) marital status	
13 a. (vii) psychiatric diagnosis	
13 a (viii) psychiatric history	
13 a. (ix) competency history	
13 a. (x) legal history	
13 b. Included study-specific variables: (i) date range of data collection	
13 b. (ii) source of initial competency decision	
13 b. (iii) source of competency decision used for comparison	
13 b. (iv) nature of competent comparison group	
13 b. (v) name of and data from traditional and/or competency assessment instruments used	
13 b. (vi) setting of study	
13 b. (vii) sample's country of origin	
13 b. (viii) nature of participant recruitment	
13 b. (ix) type of sample	

Neuropsychological Assessment and Fitness to Stand trial: Questionnaire Part 2

1. Please list your formal title and qualifications:

2. Please indicate how many years you have been working in the area of adjudicative competency:

3. Please indicate the State and Country in which you have conducted the majority of your work in this area:

4. Please indicate whether you were familiar with the Pirelli, Zapf & Gottdiener (2011) Research Guidelines prior to this study:

☐ YES

☐ NO

5. Do you think Guideline 2 which has multiple criteria : reporting of means, standard deviations and effect sizes should be assigned an overall weighted score or assessed individually?

☐ Overall score

☐ Independently Assessed

6. Do you think Guideline 13 a: reporting of defendant characteristic variables including marital status, age, ethnicity etc. should be assigned an overall weighted score or assessed individually?

☐ Overall score

☐ Independently Assessed

7. Do you think Guideline 13 b: inclusion of study-specific variables including date range of data collection, source of initial competency decision etc. should be assigned an overall weighted score or assessed individually?

☐

Overall score

☐

Independently assessed

8. Would you consider including any additional criteria to those outlined by Pirelli, Zapf & Gottdiener (2011) when specifically evaluating or conducting competency to stand trial studies? If so please list.

9. Please provide any feedback or comments:

APPENDIX C:

Semi-structured Interview Questions for Forensic Mental Health Experts, Lawyers and Judges

Note: The following questions were used to guide the interview only. The questions were not necessary asked in the same order across respondents or explicitly asked if the respondent had already provided an answer.

Forensic Mental Health Experts

- P1. What is your general impression of the *Presser* criteria and how does it fit with clinical models which you typically operate within?
- P2. What approach do you take when assessing someone in regards to the *Presser* criteria?
- P3. When conducting a fitness assessment do you approach the assessment differently than any other assessment?
- P4. When formulating your opinion with regards to an individual's fitness what thought processes do you go through?
- P5. Do you use any formal assessment or psychometric tools to aid your determination of fitness?
- P6. How important do you think it is to identify an underlying cause of unfitness?
- P7. Do you comment on the ultimate issue?
- P8. Do you think it is important to assess for duration of trial?
- P9. What do you feel, if any, is the role of neuropsychological assessments in fitness cases?
- P10. What cognitive abilities do you think are important for fitness?
- P11. Do you consider malingering/effort to be an issue? How would you assess for this?
- P12. How have you viewed the neuropsychological reports you have come across in regards to fitness assessments?
- P13. How could we improve neuropsychological assessments for fitness cases?
- P14. In general, what are the current problems or obstacles in conducting fitness assessments?
- P15. If standard guidelines for professionals conducting fitness assessments were to be established, what do you feel are the essential components?
- P16. Do such guidelines need to be varied between professionals e.g. psychiatrists and neuropsychologists and clinical psychologists? If so, what should distinguish these reports?
- P17. What feedback from solicitors/barristers/judges have you received in the past in relation to fitness assessments?
- P18. Have you heard of Fitness Tools (e.g. MacArthur CST assessment tools; MacCAT) What do you think of them being brought into the Australian legal context?

Lawyers

- S1. What is your experience with neuropsychological evidence?
- S2. In your opinion, what is the courts/laws/solicitors understanding of neuropsychological evidence? What are expectations for neuropsychological evidence? What is it understood to bring to the proceedings?
- S3. How is neuropsychological evidence viewed by judges/jury/legal profession in comparison with other forms of expert medical/scientific based evidence e.g. psychiatric evidence- is it viewed in the same context and given same weighting?
- S4. What do you feel, if any, is the role of neuropsychological assessments in fitness cases?
- S5. What types of clients would you refer for neuropsychological evaluation?
- S6. Have the recent amendments to legislation regarding indefinite confinement for unfit individuals changed your referral policy, threshold for referrals?
- S7. How much contact do you have with mental health assessors? What information do you provide them with?
- S8. What would you expect/anticipate a neuropsychological report to include, what type of evidence for fitness report? How do you believe fitness should be addressed in the report?
- S9. How important is it that the report speaks about the underlying likely cause/reason for the impairment in legal construct?
- S10. Whose role is it to discern malingering? Is this something that should be considered?
- S11. Do you expect the neuropsychologist to give an opinion on the ultimate issue?
- S12. Do you expect evaluation of other issues like complexity of trial, duration of trial?
- S13. How have you viewed the neuropsychological reports you have come across in regards to fitness assessments? Have they been beneficial? What parts did you find particularly useful?
- S14. How could we improve neuropsychological assessments for fitness cases?
- S15. Have you heard of the fitness tests such as that developed by the Macarthur group in US based on Dusky standard? Do you think that they could be successfully integrated into an Australian context?
- S16. In general, what are the current problems or obstacles in conducting fitness assessments?
- S17. If standard guidelines for professionals conducting fitness assessments were to be established, what do you feel are the essential components?

S18. Do such guidelines need to be varied between professionals e.g. psychiatrists and neuropsychologists and clinical psychologists? If so what should distinguish these reports?

S19. What are your views of the Fitness criteria as they currently stand?

S20. What are views on LRC proposed guidelines for change?

Judges

- J1. What is your experience with neuropsychological evidence?
- J2. In your opinion, what is the courts understanding of neuropsychological evidence?
- J3. How is neuropsychological evidence viewed by judges in comparison with other forms of expert medical/scientific based evidence e.g. psychiatric evidence- is it viewed in the same context and given same weighting?
- J4. In regards to fitness cases have you seen any neuropsychological evidence presented? if so, has it been beneficial? What parts did you find particularly useful?
- J5. What do you expect from a neuropsychological report addressing fitness?
- J6. Do you expect the neuropsychologist to give an opinion on the ultimate issue?
- J7. Do the reports you have seen for fitness meet expectations? If not, what areas could be improved?
- J8. How could neuropsychological evidence be presented or discussed in a more helpful manner to aid the decision making process?
- J9. How do you believe fitness should be addressed in the report?
- J10. Have you heard of fitness tests such as that developed by the Macarthur group in US based on Dusky standard? Do you think they could successfully be integrated into an Australian context?
- J11. Whose role is it to discern malingering? Is this something that should be considered?
- J12. What does a judge have in mind as a sufficient or minimum basis for an individual to meet the *Presser* criteria? What would you be looking for in evidence to aid your decision making?
- J13. What cognitive abilities do you think underlie *Presser*?
- J14. Do you think we should be taking into account other factors like complexity of trial and duration of the trial?
- J15. What are your views of the Fitness criteria as they currently stand?
- J16. What are views on LRC proposed guidelines for change?

APPENDIX D:

Additional comments and responses from Criminal Lawyers and Forensic Mental Health
Experts

(1) Understanding and Experience with Neuropsychology

(a) What is Neuropsychology?

Lawyers:

"...um well psychological reports really look at the behavioural issues whereas neuropsychology is looking at cognitive issues I suppose, that's it in summary".

(b) Role of Neuropsychological Assessment

Lawyers:

"They [referring agent] can't see what the difference is between that [neuropsychological] report and a forensic psychology report. It is quite a specialised situation that you would get a neuropsychological report".

(d) Weighing Neuropsychological Evidence

Lawyers:

"I think there is a lot more faith on these topics in psychiatrists than psychologists but I think if you could come up with objective parameters or tests you would end up in the same position as a psychiatrist. It would be of much greater value. And you would probably find that psychiatrists would be asking for the neuropsychological reports in order to do their reports...."

"Some Judges used to be very scathing about psychology reports because they saw them as just a backdoor method of getting in background but neuropsychologists seem to be on a different level that you are actually looking for a dysfunction or a particular inability and the Judges seem to get that."

"Quite frankly I think there should be many more neuropsychological assessments made of people rather than just psychological assessments or instead of a psychological assessment because what tends to happen is that you get the psychological assessment that thinks that there might be some organic issues there but nothing is ever done about it because the money runs out, they have only got enough money from Legal Aid to get a neuropsychological report".

"Within medical models of thinking, more weight is given to evidence which they see as independent, objective and has been subjected to peer review process. For neuropsychologists this means gathering supporting evidence where possible e.g. MRI scans, medical records, other medical reports etc. And talking about tests e.g., their validity, reliability and provide supporting evidence for them from the literature where can-reference a paper or add footnotes where appropriate."

(2) Assessment of FST and the Role of Cognition

(a) General Approach

Forensic mental health experts:

"The methodology that people use is basically the same... I don't find it different from other assessments..."

"The main thought process I go through these days is I assume that everybody is fit until proved otherwise. So what I do is I look for the

reasons why the person might not be fit on the assumption that they are fit. "

"The methodology that people use is basically the same I think in most of the specialists but at the end of all that one might require further information or further collateral from family, from hospital records that you have discovered that you didn't know about or neuropsychological testing or intelligence testing or both you know, those sort of issues might not be apparent when you first start the interview or from the record but become an issue later on so it's more of a process than a, it's a discovery, it is a methodology but you might discover other things that you were not aware of..."

"Well it is a standard psychiatric assessment applied to the *Presser* criteria. So, you know, every assessment has a different purpose. So a fitness assessment is cross-sectional. It is here and now, it is what you are like now - so the first thing I will do is I'll assess whether there are currently symptoms, what those symptoms are, the extent of their severity - then I'll look at a person's understanding of *Presser* criteria and then I'll kind of blend the two. So I'll consider what the symptoms are and I'll explore the *Presser* criteria in relation to those symptoms. So for example, if they are hearing voices, what about your ability to focus? How distracting are they and what percentage of the day do you hear those voices? You decided to plead guilty - what is your reason for pleading guilty and understanding the reasoning process? You think there is a conspiracy - do you think your lawyers are part of that conspiracy?

So you start attaching the *Presser* criteria to the symptoms. By then you get quite a comprehensive view and then you make your call."

"I usually start off with do you know if you are guilty or not guilty trying to get them to formulate that a bit and probably going through court functions and apart from intellectual assessment just getting an idea of their general understanding of court and what that means and what the trial means."

"In the fitness I see is a process often it's not a onetime determination sometimes its wiser to say I'm going to call him unfit now especially with a mental illness but he is taking medication and I'll reassess it and often what I say in my reports is - look it's at the fitness hearing that it counts. I'll come in for the fitness hearing, go into the gaol early in the morning, and see what he's like on that day...I think it's a process it's not a onetime determination, it actually can be a number of assessments."

"Well a capacity assessment. That would be a structure I would use on any capacity assessment. I think because it has got a lot in common because one of the things about most areas of capacity and incapacity is to find a nexus between the diagnosis and the brain changes and the capacity thing itself so if you kind of have to go through the stages, you've got to directly go through the capacity criteria..."

"Well first of all psychiatrists have a primary role in the diagnostic component of the patients presentation so working out the diagnosis and

then trying to determine to what extent, if any, does a condition impact on their fitness."

"... my approach is testing out some of those competencies which include things like short-term memory but particularly capacity to pay attention, that working memory element, the ability to be able to communicate and in that respect I don't mean the sophistication of language what I mean is do they have a psychological problem that prevents them from being able to communicate ideas, thoughts and feelings to their solicitor or indeed to anybody who might be asking those questions... You have actually got to demonstrate that there are definite impairments of understanding and concentration associated with the person's capacity to give evidence and to assist in their own defence. Finally of course you have to consider their psychological state and personality..."

"Very differently. My primary focus is on their cognition and any relevant medical or psychiatric background history. I am not so much worried about their psychosocial factors, at least not to the same extent that I would be for other types of forensic assessments... I would consider probably first and foremost, again in keeping with the *Presser* criteria, can they explain to me in their own words why they are in the situation they are in [and] tell me why they have been charged with the offences that they have been charged with. That allows me to consider qualitatively their memory of the event, which I think is incredibly important, it also allows me to gauge their language abilities..."

" It's like a structured clinical question, series of questions...It's one area where I probably would request more second opinion of neuropsych[ological] reports, particularly if it's come up as part of the assessment e.g. someone may have intellectual disabilities or an organic condition then I would be more inclined to order further tests like EG, MRI or asking for a neuropsychologist to see a person so that's probably, not directly in what I am doing, but it's part of the whole opinion in getting that together for that particular client."

(b) The Role of Cognition in FST Assessments

Forensic mental health experts:

"The problem I have found with traumatic brain injury is in memory and that's where I have really focused with fitness...the way I have done most of my work in looking at memory and I use a fairly standard battery for looking at certain elements of verbal executive functioning as well as working and verbal memory."

"The other part we are interested in more so than the [Presser] standard is regarding fitness to stand trial and that is around a person's ability to understand and rationally respond to the charges, their ability to exercise procedural rights and their understanding of the nature of court proceedings. So that's probably more of the area that I would be called to utilise expertise and psychometric information to come to conclusions around a person's mental fitness to stand trial."

"I think it's crucial. I feel quite fortunate I suppose that I have got a bit of a background in head injury and I am able to utilise those psychometric measures in a fitness assessment. I am not quite sure how you determine for a person with a brain injury whether they met the criteria for fitness or not if you're not using the instruments that we've discussed earlier. I think it's crucial. I am not sure how people do it and when they don't use those tools because you've got psychometric measures which back up your opinion otherwise you would pick it from somewhere else."

"Everything can affect any cognitive impairment that is why it is so complex so you can't exclude anything and that is why neuropsychologists especially I think have a role...what is important is a comprehensive review of all domains and then put that to the court...it is not really the score that is important.... they [the court] need to be told look he has got impairment there but it affects him with the *Presser* criteria for this and this reason."

"I'd do a diagnostic assessment that would allow me to make some sort of provisional diagnosis at the end of the day I would do an assessment that tapped into all the major cognitive domains looking at frontal lobe executive functioning. I'd be looking at language, I'd be looking at expressive and receptive language. I couldn't help myself I'd be wanting to look at spatial function even though in a sense you could argue that's not relevant but I would never do an assessment without doing that. I'd be looking at different aspects of memory in terms of how well they can encode information and the nature of it. Whether it's just concrete

structured stuff or whether it's more complicated unstructured stuff and looking at their retention over time so I would be doing all of that and being able to explain how people performed on my cognitive tests in all those different domains and then I would specifically address these things."

"Well its overall intelligence and general knowledge, frontal lobe function is very well tested or described and you don't see it much in psychometric testing even though it's the most relevant issue to the person's behavioural problems quite often. I think your learning, concentration, registration and recall are all capacities of the main area of interest."

"From a psychiatric or from a cognitive perspective the ability to absorb, attend and retain so those aspects whatever that is and to comprehend and to communicate. So whatever you test in those things."

Lawyers:

"Executive functioning is of paramount importance. In addition, for fitness I would want to know about their communication skills, memory, rational judgement and can they understand information. Fitness is a low level threshold, so keep this in mind."

"Language skills are the foundation of fitness criteria- distinguish between receptive/comprehension and expressive language skills and also abstract knowledge. They need to have the capacity to understand

abstract concepts but don't necessarily need to be able to communicate in abstract terms- can be concrete as long as they understand what's going on in the courtroom. So distinguish thinking abstract versus expressive language function."

(c) Psychometric Assessment

Forensic mental health experts:

"In my experience cognitive impairment is often missed...If you suspect it, you have got to test it...a MMSE is a screening tool, it is not a diagnostic tool, it does not tell you about severity or nature of impairment and most times in fitness it's got to do with severity because it's a threshold. You've got to get some handle on the severity and the nature of those impairments...I'll screen it with a cognitive test and if I get a positive screen then I'll always recommend neuropsychological testing..."

"The other thing I find that neuropsychological testing helps with enormously especially [is] when I am suspecting the position of malingering, because often people malingering cognitive problems...I can assume they are malingering but just my interaction is not enough, you have to have given them the due respect of assessing them properly. What I find of value in cognitive testing is you've got some validity with the neuropsychological stuff...that just adds to the pie, then one can start making more informed and more confident statements, about the validity of their presentation."

“It is so difficult to know reliably if someone is telling the truth or not I think the court is better placed to determine that... The problem for clinical psychiatry and psychology is you are often limited by, even if you do standard tests in psychometrics, by what the patient is telling you.”

"I know it's the new hot potato for some psychologists. My view is that it [malingering] is not getting any traction in the court because its new and its untested and issues of validity and reliability I don't think are probably..... Malingering is always an issue which might be raised. With mental illness the reality is its very hard to successfully malingering mental illness. If you as a psychiatrist know your stuff it's very hard for a patient to consistently and successfully not to say it doesn't happen but I say to the court all the time it's very hard to plead mental illness and in fact most people who do try to linger mental illness turn out to be mentally ill. In criminal matters the DSM-IV cautions us about the need to be careful. When somebody is malingering or if somebody is malingering as I say it's easier to pick up if their malingering mental illness than if their malingering cognitive impairment."

Lawyers:

"Yes this is very important [effort testing]. It is something I would want to know and something if there was any doubt I would cross examine the witness about. I would presume this is always done?"

"Every time they [the expert] should build into their assessment ways in which they can report on the possibility of malingering. One would expect that these days. When you look at a report you should look for signs that they tested for that [malingering]".

(d) FST- AI's

Forensic mental health experts:

"The formal tool I use is *Presser* criteria. The risk of using things like the McArthur fitness assessment tools is you are starting to introduce criteria that are not legally defined law. Ultimately, they'll get ignored".

"The problems in developing one [FST- AI] are absolutely numerable, not the least being that there are distinctions between the different state jurisdictions."

"The American tools are applied to the American legal system whereas the neuropsychological tools are not tied to a particular system that is external to brain function."

(e) Clinical diagnoses in Reports

Forensic mental health experts:

"Absolutely essential. You cannot argue that a person is unfit unless you can show the mechanism whereby they are unfit. It may be because of a neurological deficit, it might be because of psychosis, it might because of cognitive competence but you have to be able to have a theory as to why a person is unfit."

Lawyers:

"I think an underlying cause is helpful, but technically not really necessary."

"Including a clinically recognised diagnosis in your report is of interest in the sense that it's about your communication with the court that show that you are actually the bridge between the expert medical knowledge, medical psychiatric knowledge on one side and the legal knowledge on the other..."

(f) Addressing the Legal Question of FST

Forensic mental health experts:

"As difficult as it may seem to traverse the ultimate issue there is no point in sending out a person for a fitness assessment if the person [expert] ends up not making a decision as to whether they are fit or not."

"I am qualified to make a comment on whether I think the person is fit or not but I am not answering the ultimate question I am saying I believe he is [fit or unfit] ...I think some people don't actually say this person is fit or this person isn't [fit] but in my experience the judge actually wants you to give as much information to make the decision. At the same time, be respectful that you are usurping that role."

Lawyers:

"That's what they are assessing so they have to give an opinion".

"I don't know if neuropsychologists feel that they are able to comment on those things because usually it's a psychiatric assessment. Usually if a psychologist or a neuropsychologist commented on the *Presser* and there was not a psychiatric report as well I don't know how far that would go".

"Always discuss the 6 [*Presser*] criteria for fitness as the minimum standard. Don't concentrate on personal background or material which cannot be corroborated or verified as there is less weight placed on this and in fact, [it may] undermine the objective nature of the report in the judges mind."

(3) Neuropsychological Reports

(b) Report Quality.

Forensic mental health experts:

"I think it's the heterogeneity of our profession that is a significant problem for us. There are far too many people, clinical people and neuropsychology people and some forensic people who are practising in the forensic field who do not know what they are doing, and this causes considerable angst."

"The neuropsychological reports are superior they have more reliable information, they are generally of a higher standard in the completeness [compared to general forensic reports]."

"My experience is that I think the difficulty is for clinicians is most clinicians I think still tend to overgeneralise the mental state or impairment of an individual so a lot of the reports I see clinicians, even

though the criteria are pretty clear and they are supposed to be directing what's the end product, we still see a number of cases where clinicians just form the view that if the persons psychotic or if they have brain damage then somehow they won't be fit. So I think the criterion themselves are not problematic I think it's more about how they are understood and applied by clinicians... We have a neuropsychologist in Victoria who was doing fitness assessments who didn't even know the criteria, so again I think the criteria are actually pretty good I think where they fall down is application. The one criterion that I think is difficult and is most relevant probably to neuropsychology is in *Presser* where they talk about to follow what's going on in court because in my experience there are 2 categories of individuals, 1) mental illness and 2) intellectual disability. For people who are intellectually disabled, usually the issue is that they can't really follow the trial because they lack attention, they lack concentration, their intellectual functioning doesn't allow them to understand. That is one criterion that probably needs better articulation."

Lawyers:

"... quite frankly the neuropsychological reports that I've read and I can remember have all been of a very high quality".

(c) Neuropsychological Report Recommendations

Forensic mental health experts:

"There are times where it is written for another neuropsychologist and not for the reader. I think one of the difficulties is where psychologists get trained by psychologists or academics not in the real world. The longer reports are written that way. They are not user friendly."

“...I think one of the problems that we all have is the issue of making sense of the tests and what they are really telling us. I think it's not much value to just talk in psychometric terms... I think what we really need to try and do is to develop a language that is going to be understandable by those who are reading the report and it's no good writing a 20 page report, it's absolutely useless...what they are wanting is they are wanting an opinion. They certainly want to know how you arrived at that opinion and to demonstrate that but at the end of the day I find that there is a lot of padding in reports...”

“...I think the judges are wanting to know does this person have cognitive impairment, if so what sort of cognitive impairment they have, you are the expert you need to tell the judge they have a problem with cognitive impairment in those areas and that this as far as our understanding goes, this is consistent with parts of the brain that have been damaged in some way and this is the impact it has on this person's ability to be able to function, now and in the future. I think it is also important for us to draw attention to the other factors that could be contributing to the cognitive problems that we are seeing.”

"So I think as a neuropsychologist you probably do need to have a bit of a grounding in forensic and understanding of why people do some of the offending things they do".

Lawyers:

“Qualifications should be clearly set out, they very often aren't. Very often I don't get a CV with a report... psychiatrists don't always detail how much time they spend with a person. A lot of them don't tell you what material that they received, some of them make some sweeping broad statements without giving any explanation as to the basis... I have also discovered some that will write further reports and you don't quite notice they have not mentioned the fact that they didn't see the person again. It's based on the same material...”

“Go beyond the diagnosis; talk about the difference between intellectual disability and cognitive impairment if relevant to the case so the judge understands the differences and types of difficulties that arise as a result; if/how differs in terms of long term prognosis, services availability etc...”

(4) Australian Legal Criteria of *Presser*

Forensic mental health experts:

“I think the *Presser* criteria are quite comprehensive...I think in Australia the level of illness that is required to be unfit or what the threshold is very unclear. I think that the fitness criteria themselves are not what they mean and are not clearly articulated. That's the problem so far as fitting in with us [clinical practitioners]. I think we are not given enough direction as...people in the mental health field as to what they mean by these criteria.”

“[It’s] not so much about the outline of the criteria, which I think are reasonable, and I think fairly comprehensive, but how do you actually draw the line and say yes well this particular part of the criteria has failed and this part isn’t...”

"One other point is you are given the criteria but it doesn't tell you how impaired they have to be so like the *Presser* criteria that we have just looked at they don't say, it says to understand but they don't say give us an indication of how well they understand."

"I do apply what I have seen in the international jurisdiction which is that the threshold is low you know at the moment. There are arguments being made that it is too low and we have to increase the threshold but at this point the threshold is low and the fundamental question is does he understand what he's done? What they said he's done? Does he understand he is going to court and can he participate? Can he make a decision and if he can do all that then he's probably more fit than unfit."

"*Presser* I think is deceptively simple. I think when you first look at *Presser* that is just yes no yes no yes no and I think the most complex one is the one about following the proceedings of the court”.

"It seems to me that *Presser* is now being applied in a fairly flexible way. There is a lot more interest - psychiatrist who are writing reports seem to be looking more at the person's capacity to instruct more than anything else of the criteria.”

Lawyers:

"I think the law has intentionally made these [fitness threshold] things really low because this person is entitled to meet that charge".

"... I mean part of the *Presser* criteria is capacity to get instructions. That is really undervalued by the majority of the judicial population, it is largely ignored, and that's a critical issue. If I feel that I can't get instructions to me that is the ultimate test... and you know I have an ability to assess that."

"Views of fitness as currently stand is that they work well in majority of cases however could be better and perhaps need to raise threshold and dig a bit deeper below the surface. In USA higher threshold, more detail (still seen in front of a jury and believe that is something that is lost here in Australia, should be in front of a jury)...*The Presser* criteria in current form are extremely blunt....Maybe you could provide more feedback to lawyers re. practical guidelines for ways in which they could deal with or communicate with a seemingly difficult client..."

"Their ability to properly instruct their lawyers, I think all these things are very intertwined - if a person can't properly instruct their lawyers they are probably not going to understand very much about what is going on and whilst in this business about understanding court proceedings and all that sort of stuff, that's probably in the scheme of things not as important as some others because there would be a lot of people who would be

running trials who don't particularly understand a lot about what is going on but a person has to know and understand what they have been charged with and however long the trial is expected to take whether they are going to be meaningfully engaged over that whole period be able to provide their lawyers with responses to the evidence that is being given by different people, particularly of course people who might be complainants or whatever and that if necessary they really should be in a position whether it happens or not to be able to give evidence on their own behalf, so they are under no disadvantage compared to anyone else who is going to give evidence. Now in a lot of criminal cases defendants don't give evidence for all sorts of reasons but a person who is disabled well that's an issue and it should be looked at on the basis that if it gets to that stage what is their capacity to give evidence and deal with cross-examination over a period of time. ...Apart from that, I'd want to have some confidence that if that situation arose the person would be able to give a reasonable account of themselves but if they weren't able to do that I'd be very concerned if they could get a fair trial and if they would be fit to plead. "

(d) Standard/Varied Guidelines for Expert Assessments

Forensic mental health experts:

“There is a lot of argument about whether or not we should have standardised reports for this...take a look at the fitness reports that are in Melton's book (Melton, et al., 2007) and it's a good model for a fitness report and those kinds of things. The difficulty is the cases have unique presentations and it would be unwise to limit the range or the competence

of a psychologist to adapt to the specific features of that case. I think there probably are some broad brush guidelines that say you know you better have this in a report no matter what... but I don't think we should be specifying how to do a fitness assessment. We might want to specify who does a fitness assessment..."

"What I am saying is if *Presser* was translated into a more psychological framework we could have a more standardised approach."

"The first guideline is if fitness issue is a cognitive one it should be handled by an appropriately qualified and trained psychologist, and if it's a psychiatric one the same is true for psychiatrists, that's number one, number two I think there needs to be delineation of the types of questions that we need to ask the client in determining fitness and there needs to be a delineation of the domains of cognitive functioning that we need to explore in order to answer those questions."

"I think probably a standardised interview battery so probably a more standardised assessment approach. If you want to answer this question then this is the kind of psychometric information that you would probably want to gather and these are the tools you might want to use in order to do that. Not just limited to one standardised battery but if you want to use a caveat or the WASI then it's up to you but as long as you get an intellectual functioning measure and here's the kind of general criteria from the literature that we would see as being a cut off to indicate that the person might not be fit. More standardisation, something that

comes from evidence based which is allowing us to make better determinations about whether a person is fit or not. Because sometimes I do feel like you are asking my opinion so here is my opinion and I think I've based it on reasonably strong ground but who knows."

"I think it is absolutely essential that they [the forensic mental health experts] are all given the same material, exactly the same material. Nothing left out, nothing the defence are leaving out so they get what they think is the right result or nothing we leave out they should get exactly the same and that does not happen. That does not happen."

Lawyers:

"The good experts don't need any more [guidelines]."

"I think it would be helpful in some ways if the reports were structured in the same way so it was easier to compare apples and oranges, whether that means that you have a standard form whereby you indicate precisely what tests you have done and they are pre-divided into different categories so we can see which tests have been done, where, in some ways if the reports were standardised in that way it would be a help, it would be much easier to compare the opinions and see where the differences may lie."

(5) Problems and Obstacles to Assessment

Forensic mental health experts:

"I think also there is usually a lot of disagreement amongst psychiatric opinion about whether the person is fit or unfit but because it can change

I think the best model would be to have the person assessed closer to trial or in court.”

Lawyers:

“Obstacles to assessment are time, funding (most are legal aid) and poor communication between referring lawyer and psychologist. Sometimes psychologists will receive an inadequate brief from the lawyers, no corroborate material, [the experts] need to request this.”

APPENDIX E:

Publication:

White, A.J., Batchelor, J., & Meares, S. (2013). The role of cognition in fitness to stand trial: A systematic review. *The Journal of Forensic Psychiatry and Psychology*, DOI: 10.1080/14789949.2013.868916.

APPENDIX F:

Publication:

White, A.J., Batchelor, J., Pulman, S., & Howard, D. (2012). The role of cognitive assessment in determining fitness to stand trial. *International Journal of Forensic Mental Health, 11*(2), 102-109.

APPENDIX G:

Ethics Approval Documentation:

- 1) Macquarie University Human Research Ethics
Committee Approval letter;
- 2) Mental Health Review Tribunal Approval Letter; and
- 3) Office of Director of Public Prosecution Approval
Letter