

ARTICLE

The Admission of Risk Assessment Tools' Results in Cases Where a Primary Victim Uses Lethal Force in Self-Defence

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The *State of Western Australia v Liyanage* held that the results from two intimate partner violence risk assessment tools—the Danger Assessment Scale and the Abusive Behaviour Inventory—could not be used to assist a primary victim's self-defence claim if the victim had used lethal force against the predominant aggressor. The results demonstrated both the nature of abuse Ms Liyanage (the primary victim) had lived in and the fact she was at an extremely high risk of being killed by her husband (the predominant aggressor) at the time she killed him. Thus, the tools' results provided compelling evidence that she had used objectively reasonable force in self-defence. However, the Supreme Court of Western Australia held that the tools' results were not scientifically valid and were, therefore, inadmissible. This article will explore the substantial body of literature that demonstrates these tools are scientifically reliable and valid. Therefore, this article will argue that the results from these tools should have been admitted and offered as the basis of expert opinion evidence in *Liyanage*, and should be admitted in other cases where primary victims act in self-defence against predominant aggressors. The admission of the tools' results has the potential to improve primary victims' experiences within the criminal justice system and enable the system to respond more effectively to the realities faced by these women.

I Introduction

In *The State of Western Australia v Liyanage*, the Supreme Court of Western Australia (WASC) and Court of Appeal (WASCA) held that the results from two intimate partner

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violence risk assessment tools—the Danger Assessment Scale (DAS) and Abusive Behaviour Inventory (ABI)—were not admissible as expert opinion evidence.¹ Therefore, the results could not be used to assist Ms Liyanage's self-defence claim after she (the primary victim) had used lethal force against her husband (the predominant aggressor).² The results demonstrated both the nature of abuse she had been subjected to and that she was at an extremely high risk of being killed at the time she killed him. Thus, they provided compelling evidence that she had acted in self-defence, as they showed her actions to be objectively reasonable, necessary and proportionate. However, the WASC held that the tools' results did not meet the requirements of expert evidence as the tools were not scientifically reliable.³ The WASCA accepted the reliability of the tools, but provided little evidence in support of that statement, and had other concerns that rendered the tools inadmissible.⁴

The primary purpose of this article is to demonstrate that the tools are scientifically reliable and valid. Therefore, their results should be admissible. Part II will outline the *Liyanage* decisions and the relevant law supposing the case was heard in New Zealand. While recognising that *Liyanage* was decided in Australia, this article argues for New Zealand to take an alternative approach to admissibility should the opportunity arise. This article will examine the reasons admissibility was refused in *Liyanage* in order to refute them. By examining the relevant legal framework in New Zealand, this article will also demonstrate how this alternative approach may work if a similar case was heard here. Part III will argue that the results from the tools should have been admitted, with particular emphasis on the scientific validity of the tools. It will also explore how evidence from the tools would fit under the Evidence Act 2006. Part IV will respond to some of the concerns raised by the WASC and WASCA, and will provide some guidance as to how the tools should be used.

Although risk assessment can never be perfectly accurate, when these tools and their limitations are properly understood, they allow the court to make a more informed decision—an advantage which outweighs their limitations. This article will argue that these tools should have been admitted as part of expert opinion evidence in *Liyanage* and should be admissible in cases where primary victims act in self-defence against predominant aggressors.

1 *The State of Western Australia v Liyanage* [2016] WASC 12 [*Liyanage* (WASC)] at [80]; and *Liyanage v Western Australia* [2017] WASCA 112, (2017) 51 WAR 359 [*Liyanage* (WASCA)] at [159]. The Western Australia Supreme Court is the equivalent of the High Court in New Zealand. The Western Australia Court of Appeal is the appellate court, thus more authoritative than the WASC.

2 A primary victim is defined as “[t]he person who ... [experiences] ongoing coercive and controlling behaviours from their intimate partner”. A predominant aggressor is defined as “[t]he person who ... is the principal aggressor ... and who has a pattern of using violence to exercise coercive control” over their partner: Family Violence Death Review Committee *Fourth Annual Report: January 2013 to December 2013* (Health Quality and Safety Commission, June 2014) at 15. See also, Law Commission *Victims of Family Violence Who Commit Homicide* (NZLC IP39, 2015) at 14.

3 *Liyanage* (WASC), above n 1, at [80].

4 *Liyanage* (WASCA), above n 1, at [143], [148], [152]–[153] and [155].

II *The State of Western Australia v Liyanage*

A *The cases*

Ms Liyanage and her husband, Mr Athukorala, moved to Australia from Sri Lanka in 2011 and worked as doctors.⁵ The relationship was described as “intensively abusive” and “highly controlling, coercive and violent”.⁶ Throughout the entirety of the relationship, Mr Athukorala subjected Ms Liyanage to physical, emotional and sexual violence.⁷ He also controlled her finances and social life.⁸ On 23 June 2014, Ms Liyanage killed Mr Athukorala whilst he slept.⁹ She was charged with murder and argued that she had acted in self-defence.¹⁰

After the death, Ms Cooke, a social worker, administered the DAS and ABI to Ms Liyanage.¹¹ The DAS showed that Ms Liyanage was at an extreme risk of death at the time she killed her husband.¹² The ABI demonstrated the nature of abuse subjected to Ms Liyanage, thus helping to create a clearer picture of her circumstances.¹³ It also found that she was “typical of a person experiencing abuse and violence in an environment of extreme risk of harm”.¹⁴

One of the central issues in the case was whether the DAS and ABI results were admissible as part of Ms Cooke’s expert opinion evidence to support Ms Liyanage’s self-defence claim, as her counsel argued it should be.¹⁵ The WASC held that the results were inadmissible as part of expert opinion evidence.¹⁶ It held that no new studies or testing results demonstrated that the science behind these techniques was more settled to establish the techniques as scientifically reliable.¹⁷ The Court was concerned about using these tools to assess the presence of “historic” risk rather than determining the future risk.¹⁸ The Court was also concerned that Ms Liyanage would not reliably report underlying facts, which the tools required, to predict the level of risk because she was facing a murder charge.¹⁹ Ms Liyanage was convicted of manslaughter.²⁰

The WASCA reached the same conclusion as the WASC regarding the inadmissibility of the DAS and ABI results as the basis of expert opinion evidence, but cited different

5 *Liyanage* (WASC), above n 1, at [6].

6 At [36]–[37].

7 At [9].

8 At [9].

9 At [7].

10 At [1] and [11].

11 At [22].

12 At [35]–[37].

13 At [23].

14 At [23].

15 At [2].

16 At [80].

17 At [76] and [80]. For the avoidance of doubt, the author believes the WASC reached the correct decision on the facts as an adequate foundation regarding the tools’ admissibility and validity had not been laid. However, there is sufficient evidence of the tools’ scientific validity. Therefore, had this been presented in *Liyanage*, the tools’ results should have been admitted. The results should be admitted particularly in cases where a sufficient foundation is laid regarding the tools’ validity and admissibility.

18 At [26].

19 At [27].

20 *Liyanage* (WASCA), above n 1, at [4].

reasons.²¹ The WASCA held that the tools were scientifically valid and that the risk factors are associated with an increased risk of intimate partner homicide.²² However, they did not meet the stringent test of accurately predicting the likelihood of death to an individual.²³ Further, it held that the information provided by the tools and the “obvious indicators of risk” were not outside an ordinary person’s knowledge or experience.²⁴ The Court raised concerns that the tools would be used outside of the context they were designed for and they depended entirely on the defendant’s honesty, which was questionable in her circumstances.²⁵ Finally, it raised a floodgates argument: if the results from the tools were admissible in this case, what would prevent them from being admissible in cases where the prosecution administers them to the accused to secure a conviction?²⁶ Ms Liyanage’s conviction was upheld.²⁷

B *Relevant legal principles*

If this case was heard in New Zealand, evidence obtained from the DAS and ABI would be given by an expert, and the conclusions drawn from the tools’ results would be considered as expert opinion evidence.²⁸ To be admissible, expert opinion evidence must be both relevant under s 7 of the Evidence Act and substantially helpful under s 25.

Save for certain exceptions, s 7 provides that relevant evidence is admissible and “[e]vidence is relevant in a proceeding if it has a tendency to prove or disprove anything that is of consequence to the determination of the proceeding.”²⁹ Section 25(1) provides that expert opinion evidence is admissible if it is given by an expert,³⁰ is expert evidence,³¹ and “the fact-finder is likely to obtain substantial help from the opinion in understanding other evidence ... or ascertaining any fact ... of consequence”.³² The test of substantial helpfulness under s 25 creates a higher threshold than that of probative value and involves an assessment of the relevance, probative value and reliability of the evidence.³³ It is thus necessary that the DAS and ABI are scientifically valid for the evidence to be both relevant and substantially helpful.

21 At [159].

22 At [140]–[141] and [152].

23 At [152]–[153].

24 At [143] and [148].

25 At [152] and [142]. The Court also questioned Ms Cooke’s qualifications to deliver the evidence, at [155].

26 *Liyanage v Western Australia* [2017] Transcript SC/APP/PE/CACR 41/2016, 11 November 2016 at 11 [*Liyanage* (WASCA) Transcript].

27 *Liyanage* (WASCA), above n 1, at [289].

28 Section 4 of the Evidence Act 2006 defines an expert as “a person who has specialised knowledge or skill based on training, study, or experience”. Under s 4, expert evidence is defined as “evidence of an expert based on the specialised knowledge or skill of that expert and includes evidence given in the form of an opinion”.

29 See, however, ss 7(1) and 8, which states that relevant evidence is inadmissible if it is inadmissible under the Evidence Act or any other, or where it is excluded due to having an unfairly prejudicial effect on, or needlessly prolong proceedings.

30 See s 4 definition of “expert”.

31 See s 4 definition of “expert evidence”.

32 Note that factual expert evidence is governed by its relevance, probative value and prejudicial effect as per ss 7 and 8.

33 *Robinson v R* [2014] NZCA 249 at [26]; and Mathew Downs (ed) *Cross on Evidence* (10th ed, LexisNexis, Wellington, 2017) at 85.

Arguably, the admission of the DAS and ABI results would fall under the category of novel scientific evidence as they have not been previously accepted as evidence by the courts.³⁴ This area of law is not codified. However, the evidence must still be relevant and substantially helpful.³⁵ *Lundy v Rendors* endorsed the *Daubert v Merrell Dow Pharmaceuticals Inc* test as forming part of the “substantial helpfulness” inquiry, and as a means to ensure courts assessed the reliability of the novel scientific evidence as a prerequisite to admissibility.³⁶ *Daubert* proposed the following considerations in assessing the admissibility of novel scientific evidence:³⁷

- Has the theory or technique been tested? The Court agreed with a proposition made by Michael Green, stating that “[s]cientific methodology today is based on generating hypotheses and testing them to see if they can be falsified”.³⁸
- Has it been subjected to peer review and publication? The Court held that “submission to the scrutiny of the scientific community is a component of ‘good science,’ in part because it increases the likelihood that substantive flaws in methodology will be detected”.³⁹
- What is the known or potential error rate and the existence of standards controlling the theory or technique’s operation?⁴⁰
- Is it generally accepted by the scientific community? The Court held that “[w]idespread acceptance can be an important factor in ruling particular evidence admissible, and ‘a known technique which has been able to attract only minimal support within the community’ may properly be viewed with scepticism”.⁴¹

The High Court in *Lundy* held that the *Daubert* factors are non-exhaustive and failure to meet one does not necessarily preclude the admission of the evidence.⁴² The Court of Appeal in *Lundy* stated that “whether a methodology is satisfactory or [not] must depend ultimately on the response [of] the relevant scientific community”.⁴³ The Court of Appeal further held that “a track record of acceptance by a body of scientific opinion” is required.⁴⁴

34 The term novel scientific evidence is commonly referred to in the literature and case law. For example, Downs, above n 33, at 87 refers to a “novel scientific technique”; and see *Lundy v R* [2014] NZCA 576 [*Lundy* (CA 2014)] for an example where a new technique was proposed as novel scientific evidence. See generally Elisabeth McDonald and Scott Optican (eds) *Mahoney on Evidence: Act and Analysis* (Thomson Reuters, Wellington, 2018) at 145–148, which discusses scientific opinion evidence and novel disciplines.

35 McDonald and Optican (eds), above n 34, at 145.

36 *Lundy* (CA 2014), above n 34, at [51]–[69]; *Lundy v R* [2018] NZCA 410 [*Lundy* (CA 2018)] at [241]; and *Daubert v Merrell Dow Pharmaceuticals Inc* 509 US 579 (1993). In addition to the *Daubert* factors, relevance, probative value and substantial helpfulness must all be assessed prior to admissibility.

37 *Daubert*, above n 36, at 580; and see Jack Oliver-Hood “Challenging the Admissibility of Scientifically Invalid Evidence” [2018] NZ L Rev 399 at 418 for an analysis on the lack of engagement with the *Daubert* factors in New Zealand courts and the risks of such an approach.

38 Michael D Green “Expert Witnesses and Sufficiency of Evidence in Toxic Substances Litigation: The Legacy of *Agent Orange* and Bendectin Litigation” (1992) 86 Nw U L Rev 643 at 645 as cited in *Daubert*, above n 36, at 593.

39 *Daubert*, above n 36, at 593–594.

40 At 594.

41 At 594 (citations omitted).

42 *R v Lundy* [2014] NZHC 2527 at [55(e)].

43 *Lundy* (CA 2018), above n 36, at [241].

44 At [241].

Therefore, s 25 operates to exclude “junk science” but also science that lacks a sufficient claim to scientific validity, having regard to the *Daubert* factors.⁴⁵

The Court of Appeal in *Lundy* also held that a methodology must be validated before it is offered as evidence in court: “[t]he robustness of a methodology cannot legitimately be established by an inexperienced judge or jury.”⁴⁶ *Lundy* and *Daubert* place the judge as gatekeeper in that the judge determines whether the methodology underlying the expert testimony is scientifically valid and admissible (as opposed to the jury).⁴⁷ The judge’s role is to “assess whether the proposed evidence is sufficiently helpful and reliable so as to warrant its admission” (as opposed to settling a scientific dispute).⁴⁸

Supposing the DAS and ABI were admissible as expert opinion evidence, they could help to establish a self-defence claim under s 48 of the Crimes Act 1961 as they provide support for the objective requirement of reasonableness. This is discussed further in Part III of this article.

III Admission of the DAS and ABI Results

This Part will explore the substantial body of literature that provides support for the argument that the DAS and ABI are scientifically valid. It will also outline why the results from the tools should have been admitted as expert opinion evidence with reference to the *Daubert* factors, and how the results are relevant to self-defence.

A *The DAS and ABI tools are scientifically valid*

(1) Statistical measures

The literature assessing the validity of the DAS and ABI employs complex statistical measures. To understand this literature, it is essential to first understand two key statistical measures: reliability and validity.

Reliability refers to “the ability of [an instrument] ... to produce consistent results when [tested] ... under different conditions”.⁴⁹ This is important in the context of risk assessment as it shows that if the same risk factors are present at two different points in time, the level of risk will be the same. The Cronbach alpha (α) is a measure of internal consistency.⁵⁰ A Cronbach alpha of 0.70–0.79 is considered fair, while 0.80–0.89 is good, and 0.90 or higher is excellent.⁵¹ Test-retest reliability is “the degree to which an instrument measures the same thing over [different time points]”.⁵²

Validity refers to the ability of an instrument to measure what it was intended to measure.⁵³ This is important in the context of risk assessment as it means an instrument

45 Scott Optican and Jack Oliver-Hood “Evidence Law Update for Civil and Criminal Lawyers” (Auckland District Law Society CPD seminar presentation, February 2019) at 57.

46 *Lundy* (CA 2018), above n 36, at [241].

47 At [241]; and McDonald and Optican (eds), above n 34, at 145–146.

48 Downs (ed), above n 33, at 87.

49 Andy Field *Discovering Statistics Using IBM SPSS Statistics* (5th ed, SAGE, London, 2018) at 1033.

50 Judy L Postmus, Amanda Mathisen Stylianou and Sarah McMahon “The Abusive Behavior Inventory–Revised” (2016) 31 *Journal of Interpersonal Violence* 2867 at 2879.

51 At 2879.

52 Jan Roehl and Kristin Guertin “Intimate Partner Violence: The Current Use of Risk Assessments in Sentencing Offenders” (2000) 21 *Just Sys J* 171 at 185.

53 Field, above n 49, at 15.

will provide an accurate measure of the level of risk faced. There are two main types of validity: criterion-related validity and construct validity.⁵⁴

Criterion-related validity is broken into two subcategories: concurrent validity and predictive validity.⁵⁵ Concurrent validity is the “ability of a scale to distinguish between groups”.⁵⁶ Predictive validity is the ability of an instrument to predict certain outcomes, often regarded as the most important quality of a risk assessment tool designed to predict reoffending.⁵⁷ Predictive validity is commonly assessed using Relative Operating Characteristics Area Under the Curve (ROCAUC) analysis.⁵⁸ The sensitivity of the instrument (true positives; the proportion of women who were predicted to experience re-assault and did experience re-assault) is plotted against the specificity (true negatives; the proportion of women who were not predicted to experience re-assault and who did not experience re-assault).⁵⁹ If the Area Under the Curve (AUC) is 0.5, the instrument is predicting the outcome “no better than chance”.⁶⁰ Anything between 0.51 and 1.0 (perfect predictive validity) means the instrument is predicting better than chance.⁶¹ An AUC of 0.70, for example, means that there is a 70 per cent chance “that a randomly selected recidivist would have a higher score on the risk assessment instrument than a randomly selected nonrecidivist”.⁶² This value is “considered acceptable in risk assessment” literature.⁶³

Construct validity refers to “how a [measure] relates to other variables”.⁶⁴ It consists of convergent validity and discriminant validity.⁶⁵ Convergent validity is demonstrated by correlations with similar constructs or measures.⁶⁶ Discriminant validity means that the measure does not correlate with unrelated measures.⁶⁷

It is important to note that the tools do not assess the individual’s risk of death; instead, they have been created and tested at the group level and inferences about the

54 At 1039.

55 At 15.

56 Melanie F Shepard and James A Campbell “The Abusive Behavior Inventory: A Measure of Psychological and Physical Abuse” (1992) 7 *Journal of Interpersonal Violence* 291 at 295; and Jacquelyn C Campbell “Prediction of Homicide of and by Battered Women” in *Assessing Dangerousness: Violence by Batterers and Child Abusers* (2nd ed, Springer Publishing, New York, 2007) 85 at 97.

57 Erica Bowen “An overview of partner violence risk assessment and the potential role of female victim risk appraisals” (2011) 16 *Aggression and Violent Behavior* 214 at 219.

58 At 219.

59 Janice Roehl and others *Intimate Partner Violence Risk Assessment Validation Study: The RAVE Study Practitioner Summary and Recommendations: Validation of Tools for Assessing Risk from Violent Intimate Partners* (NCJRS, Document No 209732, revised December 2005) at 10; and Jill Theresa Messing and Jonel Thaller “The Average Predictive Validity of Intimate Partner Violence Risk Assessment Instruments” (2013) 28 *Journal of Interpersonal Violence* 1537 at 1539.

60 Messing and Thaller, above n 59, at 1539.

61 At 1539.

62 At 1539.

63 Jacquelyn C Campbell, Daniel W Webster and Nancy Glass “The Danger Assessment: Validation of a Lethality Risk Assessment Instrument for Intimate Partner Femicide” (2009) 24 *Journal of Interpersonal Violence* 653 at 667.

64 Shepard and Campbell, above n 56, at 297.

65 At 297.

66 Campbell, above n 56, at 96.

67 Shepard and Campbell, above n 56, at 297.

individual's risk are made from this information.⁶⁸ Nevertheless, the results can be used to inform an individual assessment. Part IV of this article discusses this in more detail.

(2) The Danger Assessment Scale

The DAS was created in 1986 with an aim to predict the risk that a person using violence will kill the primary victim.⁶⁹ It comprises a calendar and a checklist of risk factors, which includes specific violent actions, substance abuse and controlling behaviours.⁷⁰ The victim marks on the calendar the dates on which they have experienced violence in the past year and the severity of this violence.⁷¹ This aims to increase the victim's awareness of the seriousness of the situation.⁷² The victim then indicates which risk factors apply.⁷³

The original version of the DAS had 15 items but the current version contains 20 items.⁷⁴ The scores for each risk item on the checklist are weighted differentially and added up.⁷⁵ An overall score of 0–7 is classified as “variable danger” where the level of risk “can change quickly”; 9–13 is classified as “increased danger”; 14–17 is classified as “severe danger”; and a score of 18 or higher is classified as “extreme danger”.⁷⁶ Ms Liyanage fell into the extreme danger category, where steps must be taken to ensure that homicide cannot eventuate.⁷⁷ After the score is calculated, the victim is informed of the risk level of violence.⁷⁸ This serves as the first step in safety planning.⁷⁹

(3) The Abusive Behaviour Inventory

The ABI was created by Melanie Shepard and James Campbell in 1992 as a measure of intimate partner violence (IPV) that included both physical and psychological abuse.⁸⁰ The ABI includes 30 items and each is rated on a five-point scale to measure the IPV within the past six months.⁸¹ Ten items measure physical abuse, including sexual assault.⁸² Twenty items measure psychological abuse, including emotional abuse, isolation, intimidation, threats and economic abuse.⁸³

68 See David L Faigman, John Monahan and Christopher Slobogin “Group to Individual (G2i) Inference in Scientific Expert Testimony” (2004) 81 U Chi L Rev 417.

69 Jacquelyn C Campbell “Nursing assessment for risk of homicide with battered women” (1986) 8(4) *Advances in Nursing Science* 36 at 42.

70 At 42. The DAS tool can be accessed online: Jacquelyn C Campbell “Danger Assessment” (January 2004) VAWnet <<http://vawnet.org>>.

71 Campbell, above n 69, at 41–42. Note DAS can also be used when men are primary victims. The gendered language in DAS reflects the reality that women are more often primary victims than men.

72 At 42.

73 At 36.

74 Campbell, Webster and Glass, above n 63, at 655 and 657–658. These items were drawn from the literature, homicide records, interviews with battered women, domestic violence shelter employees and experts and law enforcement officials.

75 At 658.

76 At 662 (emphasis omitted).

77 *Liyanage* (WASC), above n 1, at [35]–[37].

78 Campbell, above n 69, at 36–37.

79 At 42.

80 Shepard and Campbell, above n 56, at 303–304.

81 At 292.

82 At 293.

83 At 293.

The 10 physical items are added and divided by 10 to obtain a score between one (no physical abuse) and five (very frequent physical abuse).⁸⁴ Similarly, the 20 psychological abuse items are added and divided by 20 to obtain a score between one and five.⁸⁵ This gives a physical abuse subscale score and a psychological abuse subscale score.⁸⁶ The higher the score, the more abusive the relationship.⁸⁷

B Admission of DAS and ABI as expert evidence

The DAS and ABI results are likely to be considered novel scientific evidence and should be admissible as expert opinion evidence. As outlined above, to be admissible as novel scientific evidence the evidence must be relevant under s 7 and substantially helpful under s 25 of the Evidence Act.

(1) Relevance

(a) Relevance of DAS results

The DAS results are relevant under s 7 of the Evidence Act as it “has a tendency to prove” that the victim was facing a high risk of death at the time she acted in self-defence. If the results show a high risk of death, this helps to inform the reasonableness and proportionality of the victim’s actions. The DAS results provide a data-based approach to reasonableness rather than common-sense, thus supporting a self-defence claim, which is something clearly of consequence to the determination of a proceedings.

If the DAS results were admitted in *Liyanage*, the expert witness could have presented evidence that Ms Liyanage was at an extremely high risk of death at the time she killed her husband. The jury would then have been made aware of Ms Liyanage’s increased risk of death and the risk factors she faced. For example, her husband controlled most of her daily activities, used increasing levels of physical, sexual and emotional violence towards her, forced her to perform sexual acts and she believed he was capable of killing her.⁸⁸ If the jury was aware of this, they would have had a better understanding of the circumstances in which Ms Liyanage acted. The jury would have been better placed to assess whether Ms Liyanage’s actions were objectively reasonable and whether she had acted in self-defence. They may have been more likely to consider her actions in exercising lethal self-help as objectively reasonable.

The relevance and usefulness of the DAS, however, depends on the context in which it is used.⁸⁹ The DAS was designed and validated for primary victims to assess the present risk of lethality. Its relevance is therefore linked to these situations. It is appropriate to use the DAS to assess a primary victim’s level of risk in both research and some court settings (for example, where primary victims have used lethal self-defence).

84 At 294.

85 At 293.

86 At 293–294.

87 At 297.

88 *Liyanage* (WASCA), above n 1, at [35]–[44].

89 Whilst some may argue the reliability of DAS results also depends on the purpose for which they are used, this is misguided as reliability is an internal measure of consistency (as opposed to depending on external circumstances).

(b) Relevance of ABI results

The ABI results are relevant as it provides important contextual information of the primary victim's IPV experiences. The results also provide information about the level of abuse in a relationship. Like the DAS results, this can help a jury to assess reasonableness and proportionality of a primary victim's actions considering the level of threat they faced. In a world where primary victims struggle to be believed,⁹⁰ the ABI results provide an important tool to assist a jury in understanding the abuse faced by a primary victim.

(2) Substantially helpful

Section 25(1) of the Evidence Act states that expert opinion evidence is admissible if it is given by an expert, is expert evidence and "the fact-finder is likely to obtain substantial help from the opinion in understanding other evidence ... or ascertaining any fact ... of consequence". The non-exhaustive *Daubert* factors form part of the "substantial helpfulness" inquiry.⁹¹

A jury is likely to obtain substantial help from both the DAS and ABI results. This is because both tools have a reliable and established scientific underpinning and assist the jury in deciding whether a primary victim acted in self-defence.⁹² The admissibility of the DAS and ABI results will now be considered having regard to the *Daubert* factors.

(a) Both tools have been tested and were found to be reliable and valid

(i) DAS

Literature shows that the DAS has good Cronbach alpha values (ranging from 0.57–0.94),⁹³ test-retest reliability (ranging from 0.89–0.97),⁹⁴ good ROCAUC scores (ranging from 0.59–0.92, and 0.92 when the DAS is predicting attempted femicide)⁹⁵ and strong evidence of

90 For example, see Dell Marie Butler "Holding Back The 'Battered Woman': *Western Australia v Liyanage* [2016] WASC 12" 41(1) UWAL Rev 321 at 321; Marjory D Fields "Getting Beyond 'What Did She Do to Provoke Him?': Comments by a Retired Judge on the Special Issue on Child Custody and Domestic Violence" (2008) 14 *Violence Against Women* 93; Elisabeth C Wells "'But Most of All, They Fought Together': Judicial Attributions for Sentences in Convicting Battered Women Who Kill" (2012) 36 *Psychology of Women* 350; Julie Stubbs and Julia Tolmie "Falling Short of the Challenge? A Comparative Assessment of the Australian Use of Expert Evidence on the Battered Woman Syndrome" (1999) 23 *MULR* 709; and Elizabeth Sheehy "Evidence Law and 'Credibility Testing' of Women: A Comment on the *EC* Case" (2002) 2 *QUTLJ* 157.

91 *Lundy* (CA 2014), above n 34, at [51]–[69]; and *Lundy* (CA 2018), above n 36, at [241].

92 These requirements were set out in Jack Oliver-Hood "'Indicators of deception' in scientific expert evidence" [2018] *NZLJ* 192 at 192.

93 See Tonia Nicholls and others "Risk Assessment in Intimate Partner Violence A Systematic Review of Contemporary Approaches" (2013) 4 *Partner Abuse* 76 at 129; and Roehl and others, above n 59, at 20. Note this variability is probably explained by the fact that there is variability in how DAS is administered.

94 Lisa A Goodman, Mary Ann Dutton and Lauren Bennett "Predicting Repeat Abuse Among Arrested Batterers: Use of the Danger Assessment Scale in the Criminal Justice System" (2000) 15 *Journal of Interpersonal Violence* 63 at 67; Janice Roehl and others *Intimate Partner Violence Risk Assessment Validation Study: Final Report* (NCJRS, Document No 209731, May 2005) at 20; and Ellen Patrice Stuart and Jacquelyn C Campbell "Assessment of Patterns of Dangerousness with Battered Women" (1989) 10 *Issues in Mental Health Nursing* 245 at 252–253.

95 Roehl and others, above n 94, at 21; and Campbell, Webster and Glass, above n 63, at 665 and 667.

convergent validity⁹⁶ and concurrent validity.⁹⁷ These results are set out in more detail below.

The 15-item DAS

The author found 41 articles that validated the 15-item DAS as a reliable and valid measure in a range of settings, such as in primary health care when women filed charges against their abusive partners, and before and after a protection order.⁹⁸ Cronbach alphas have ranged from 0.60–0.94, which are good.⁹⁹ Test-retest reliability has ranged from 0.89–0.97.¹⁰⁰

Many of the studies have demonstrated predictive validity.¹⁰¹ The ROCAUCs have ranged from 0.59–0.92, all of which show that the DAS is predicting outcomes much better than chance.¹⁰² Studies have found that the AUC is best when the DAS is predicting attempted femicide (0.92), the purpose for which it was designed.¹⁰³ Concurrent predictive validity has also been demonstrated: the DAS has been able to successfully differentiate groups of women depending on the level of risk they are facing.¹⁰⁴

Studies have demonstrated that convergent validity with the DAS significantly correlates with other IPV measures such as the Conflict Tactics Scale, Index of Spousal Abuse and Violence Risk Appraisal Guide.¹⁰⁵ Based on these findings, a number of researchers and governmental departments have supported the DAS as a reliable and valid instrument in predicting femicide.¹⁰⁶

96 Nicholls and others, above n 93, at 129; Campbell, above n 56, at 96; and Roehl and others, above n 94, at 21.

97 Campbell, above n 56, at 95; Roehl and others, above n 94, at 21; and Campbell, Webster and Glass, above n 63, at 665.

98 See the following selection of articles that validated the 15-item DAS: Judith McFarlane and others “Intimate Partner Violence: A Gender Comparison” (2000) 15 *Journal of Interpersonal Violence* 158 at 160; Messing and Thaller, above n 59, at 1537; Roehl and others, above n 94, at 1; Stuart and Campbell, above n 94, at 245 and 252–253; Goodman, Dutton and Bennett, above n 94, at 66; and Jacquelyn C Campbell and others “Assessing Risk Factors For Intimate Partner Homicide” (2003) 250 *NIJ Journal* 14 at 16.

99 Roehl and others, above n 94, at 20; Campbell, above n 56, at 96. Note this variability is probably explained by the fact that there is variability in how DAS is administered.

100 Goodman, Dutton and Bennett, above n 94, at 67; Roehl and others, above n 94, at 20; and Stuart and Campbell, above n 94, at 252–253.

101 Nicholls and others, above n 93, at 129.

102 At 135; and Roehl and others, above n 94, at 21.

103 Messing and Thaller, above n 59, at 1543. This study found that the AUC is 0.67 when predicting assault and 0.69 when predicting severe re-assault. The average predictive value is 0.62. The lower AUCs were obtained when the DAS was not directly administered to women but when information was obtained from their files. These particular results can be questioned as the DAS was not intended to be used in this way.

104 Campbell, above n 56, at 97; and Roehl and others, above n 94, at 21.

105 Nicholls and others, above n 93, at 135; and Roehl and others, above n 94, at 21.

106 Campbell, above n 56, at 98; Roehl and others, above n 94, at 13; and State of Victoria *Royal Commission into Family Violence: Summary and Recommendations* (Parl Paper No 132, March 2016) at 120. The Western Australian Government has acknowledged that the DAS risk factors are associated with a greater chance of lethality. Thus, it has indirectly acknowledged the validity of the DAS. This is the jurisdiction *Liyana* was decided in. See Department for Child Protection and Family Support *Western Australian Family and Domestic Violence Common Risk Assessment and Risk Management Framework* (2nd ed, Western Australian Government, Perth, 2015) at 72. The New Zealand Ministry of Health has recommended that the DAS be used in assessing victim’s risk of lethality and in safety planning. See Ministry of Health *Well Child /*

The 20-item DAS

After the DAS was modified to include 20 items, Janice Roehl and others found that it was reliable among femicide victims ($\alpha=0.80$), attempted femicide victims ($\alpha=0.75$) and abused women ($\alpha=0.74$).¹⁰⁷ The DAS displayed concurrent validity, as scores for femicide and attempted femicide victims were approximately twice as high as the scores for the abused control group.¹⁰⁸ Further, the DAS displayed a predictive validity with an AUC of 0.92 for attempted femicide cases.¹⁰⁹

Jacquelyn C Campbell, Daniel W Webster and Nancy Glass found that sensitivity (true positives) and specificity (true negatives) were maximised when “severe danger” was used as the threshold for determining when a victim was at a high risk of death.¹¹⁰ When using this threshold, the DAS is likely to capture more than 90 per cent of all lethal cases.¹¹¹ When “extreme danger” is used as the cut-off point, false negatives, are likely to make up less than five per cent of results.¹¹² This is significant because Ms Liyanage was assessed to be at an “extreme risk” of death, and Jacquelyn C Campbell and others’ finding show that the DAS was likely to be accurate in her case.

(ii) ABI

In summary, the literature shows that the ABI is a reliable and valid measure of IPV, despite the WASC’s decision in *Liyanage*. This is evinced by excellent Cronbach alphas (ranging from 0.76–0.96),¹¹³ factor analysis, criterion-related validity, construct validity, divergent validity, and factorial validity (where individual items correlated with the ABI score but not with unrelated variables). This is set out in more detail below.

Criterion-related validity was demonstrated by the significant differences in scores between abuser and non-abuser groups.¹¹⁴ In particular, ABI scores were 25 per cent higher for those in abusive relationships compared to those who were not.¹¹⁵ The ABI also showed good construct validity as it correlated with measures associated with abuse

Tamariki Ora Programme Practitioner Handbook: Supporting families and whānau to promote their child's health and development – Revised 2014 (Ministry of Health, Wellington, 2015) at 235. A New Zealand Police report has emphasised the “reliability, validity and predictive accuracy” of the DAS: Melanie Brown *Family Violence: Risk Assessment Review of International Research* (New Zealand Police, Wellington, 2011) at 30 and 45.

107 Roehl and others, above n 94, at 20.

108 Campbell, Webster and Glass, above n 63, at 665.

109 At 665 and 667.

110 At 666.

111 At 667.

112 At 667–668.

113 For example, see Shepard and Campbell, above n 56, at 301; Therese Zink and others “Abuse Behavior Inventory: Cutpoint, Validity, and Characterization of Discrepancies” (2007) 22 *Journal of Interpersonal Violence* 921 at 921; and April A Gerlock “Domestic Violence and Post-Traumatic Stress Disorder Severity for Participants of a Domestic Violence Rehabilitation Program” (2004) 169 *Military Medicine* 470 at 472.

114 Shepard and Campbell, above n 56, at 296–297.

115 At 296.

(convergent validity)¹¹⁶ and did not correlate with measures not associated with abuse (divergent validity).¹¹⁷ There was also evidence of factorial validity, where individual items correlated with the ABI's score but not with unrelated variables.¹¹⁸

(c) Known or potential error rates

(i) DAS

Several studies have found it to be over predictive of femicide.¹¹⁹ Jacquelyn C Campbell and others found that 40 per cent of women not killed and 83 per cent of women killed had similar scores indicating that they were in great danger.¹²⁰ This does not mean that the DAS should be inadmissible as expert evidence because evidence does not need to be perfectly accurate to be admissible.¹²¹ However, it does mean that an expert needs to carefully explain the limitations of the DAS to a jury, including its over predictive nature.¹²² Once the jury has a complete picture of both the strengths and limitations of the DAS they can decide how to weigh the evidence.¹²³

The DAS does produce a small number of false negatives, which indicate that the primary victim was not in danger when in reality she was.¹²⁴ This demonstrates the importance of having other evidence to corroborate the level of risk a primary victim faced.

Although the DAS is not perfect in its prediction of homicide and more research involving different cultures should be done, the literature and use of the DAS suggest that it is a reliable and valid instrument.

(ii) ABI

The literature does not specifically deal with the error rate of the ABI. This may be because the nature of the tool is to measure the IPV a primary victim has been subjected to, based on the information provided by the primary victim. An error rate would be difficult to calculate in this context, as the primary victim is providing information about which risk factors are present, from which an indication of the severity of abuse is ascertained. This is different from the DAS which indicates the primary victim's risk of death.

116 Zink and others, above n 113, at 921 and 927. The ABI strongly correlated with the CTS ($r=0.76$), the verbal aggression scale ($r=0.74$) and the CTS physical aggression, injury and sexual coercion scale ($r=0.71$).

117 Shepard and Campbell, above n 56, at 297.

118 At 298. In particular, most of the psychological items correlated most highly with the psychological scale and most of the physical items correlated most highly with the physical scale.

119 Campbell and others, above n 98, at 16; and Roehl and others, above n 94, at 13.

120 Campbell and others, above n 98, at 16.

121 Evidence needs to be substantially helpful under s 25(1) of the Evidence Act, not perfectly accurate. This was confirmed in *Lundy* (CA 2014), above n 34, at [72]–[73].

122 Ulrika Haggård-Grann "Assessing Violence Risk: A Review and Clinical Recommendations" (2007) 85 *Journal of Counseling & Development* 294 at 299.

123 See McDonald and Optican (eds), above n 34, at 106. Weight and admissibility are two separate issues. This is explored further under Part IV of this article: see *Lundy* (CA 2014), above n 34, at [90]; and *M (CA438/2010) v R* [2011] NZCA 84 at [35].

124 Campbell, Webster and Glass, above n 63, at 667.

(d) Both tools have been subjected to peer review and publication and are generally accepted by the scientific community

(i) DAS

Based on the large body of peer-reviewed literature, there is a strong argument for the proposition that the DAS is generally accepted by the scientific community. The DAS is one of the oldest and most commonly used risk assessment instruments in the IPV literature.¹²⁵ It has been peer reviewed over 30 times.¹²⁶ As outlined above, 41 articles have validated the DAS as a reliable and valid measure. It has been used in a range of settings across the globe and has been used as a model to develop instruments for unique contexts, settings and populations.¹²⁷ For example, the DAS has been used by healthcare professionals and law enforcement to assess the risk of lethality present in a range of settings for over 25 years.¹²⁸ It has been used as an aid for prosecutors in deciding whether or not to proceed with a case or oppose bail.¹²⁹ Certain jurisdictions require the DAS to be administered in relation to pre-sentencing inquiries to assist with crafting “appropriate sentences and probation conditions”.¹³⁰

The DAS has also been used to assess the risk of lethality that primary victims face in domestic violence agencies, shelters and child welfare services in countries such as the United States, Canada, Australia, New Zealand, the United Kingdom, China, Germany,

125 R Karl Hanson, Leslie Helmus and Guy Bourgon *The Validity of Risk Assessments for Intimate Partner violence: A Meta-Analysis* (Public Safety Canada, 2007) at 1.

126 Amanda Hitt and Lynn McLain “Stop the Killing: Potential Courtroom Use of a Questionnaire that Predicts the Likelihood that a Victim of Intimate Partner Violence will be Murdered by her Partner” (2009) 24 *Wisconsin Journal of Law, Gender & Society* 277 at 308.

127 The DAS has been used by researchers, healthcare professionals, law enforcement, domestic violence agencies, shelters and child welfare services, and government departments. It has also been modified for use with same-sex couples (DA-R), immigrant women (DA-I), by police officers responding to IPV (LAP and DA-LE) and in emergency departments. All of these variations have significant predictive validity over and above the DAS for these specific groups (AUCs= 0.79–0.85). See Nancy Glass and others “Risk for Reassault in Abusive Female Same-Sex Relationships” (2008) 98 *American Journal of Public Health* 1021 at 1021; Jill Theresa Messing and others “Culturally Competent Intimate Partner Violence Risk Assessment: Adapting the anger Assessment for Immigrant Women” (2013) 37 *Social Work Research* 263 at 263; Jill Theresa Messing and Jacquelyn Campbell “Informing Collaborative Interventions: Intimate Partner Violence Risk Assessment for Front Line Police Officers” (2016) 10 *Policing* 328 at 330 and 328; Carolyn Snider and others “Intimate Partner Violence: Development of a Brief Risk Assessment for the Emergency Department” (2009) 16 *Society for Academic of Emergency Medicine* 1208 at 1208 at 1208; John Hopkins School of Nursing “Danger Assessment” <<http://learn.nursing.jhu.edu>>; Jill Theresa Messing and Jonel Thaller “Intimate Partner Violence Risk Assessment: A Primer for Social Workers” (2015) 45 *British Journal of Social Work* 1804 at 1807; and Allison Millar, Ruth Code and Lisa Ha *Inventory of Spousal Violence Risk Assessment Tools Used in Canada* (Department of Justice Canada, 2013) at 14.

128 John Hopkins School of Nursing, above n 127. In the United States, the DAS is used in court programmes, shelters, family justice and medical settings and by law enforcement, such as the American Domestic Abuse Response Team and the Family and Child Abuse Prevention Center’s Domestic Violence Court Advocacy Program: see Danger Assessment “In the Field” <www.dangerassessment.org>; and Roehl and Guertin, above n 52, at 179.

129 Roehl and Guertin, above n 52, at 186 as cited in Hitt and McLain, above n 126, at 287.

130 Jacquelyn C Campbell, Phyllis Sharps and Nancy Glass “Risk Assessment for Intimate Partner Homicide” in Georges-Franck Pinard and Linda Pagani (eds) *Clinical Assessment of Dangerousness: Empirical Contributions* (Cambridge University Press, Cambridge, 2001) 136 at 152.

Finland, Ireland, Mexico, Norway, Sweden, the Philippines, Singapore and Taiwan.¹³¹ The use of the DAS in these contexts is no different to the use in *Liyanage*, as Ms Liyanage's level of risk was assessed with regard to the presence of risk factors.¹³²

(ii) ABI

The ABI has been used extensively in diverse settings to assess the nature and severity of IPV,¹³³ indicating that researchers view it as a reliable and valid measure of IPV. The author found 13 studies that have validated the ABI in a range of settings, ethnicities and sexual orientations.¹³⁴ These studies have concluded that it is a "reliable and valid measure of physical and psychological [IPV]".¹³⁵ Indeed, many authors stated that they chose the ABI because it is a valid and reliable measure of IPV, has high internal consistency and strong criterion-related, convergent, discriminant and factorial validity.¹³⁶

The ABI has been used in treatment settings and by domestic violence agencies to assess the level of IPV the primary victim is facing.¹³⁷ It has also been used in medical settings, counselling sessions, high schools and universities.¹³⁸ The ABI has been endorsed in the *Encyclopedia of Interpersonal Violence*, the *Practitioner's Guide to Empirically*

131 Messing and Thaller, above n 127, at 1809; and Millar, Code and Ha, above n 127, at 14.

132 Butler, above n 90, at 333.

133 For example, it has been used to assess the nature and severity of IPV present in a relationship, levels of IPV before and after an intervention, in the context of a woman's readiness to leave an abusive relationship, the relationship between IPV and mental health outcomes, and child abuse. See Melanie Shepard "Child-Visiting And Domestic Abuse" (1992) 71 *Child Welfare* 357 at 360; William R Downs *Alcohol Problems and Violence Against Women* (NCJRS, Document No 188267, 18 June 2001) at 12; Melanie S Harned "A Multivariate Analysis of Risk Markers for Dating Violence Victimization" (2002) 17 *Journal of Interpersonal Violence* 1179 at 1179; Robert Russell and Maxwell K Jory "An Evaluation of Group Intervention Programs for Violent and Abusive Men" (1997) 18 *ANZJFT* 125 at 125; Lauren A Shurman and Christina M Rodriguez "Cognitive-Affective Predictors of Women's Readiness to End Domestic Violence Relationships" (2006) 21 *Journal of Interpersonal Violence* 1417 at 1417; and Apala Aggarwal and others "Prevalence and Predictors of Intimate Partner Violence in Alcohol Use Disorder" (2016) 21 *Journal of Mental Health and Human Behaviour* 25 at 25.

134 Amongst these are: Zink and others, above n 113, at 921; Amanda Mathisen Stylianou, Judy L Postmus and Sarah McMahon "Measuring Abusive Behaviors: Is Economic Abuse a Unique Form of Abuse?" (2013) 28 *Journal of Interpersonal Violence* 3186 at 3186; and Gerlock, above n 113, at 470.

135 Shepard and Campbell, above n 56, at 301.

136 Cheryl Koopman and others "Child Abuse and Adult Interpersonal Trauma As Predictors of Posttraumatic Stress Disorder Symptoms among Women Seeking Treatment for Intimate Partner Violence" in Thomas A Corales (ed) *Focus On Posttraumatic Stress Disorder Research* (Nova Science Publishers, New York, 2005) 1 at 7; and Natalie A Cort and others "Interpersonal Psychotherapy for Depressed Women With Histories of Intimate Partner Violence" (2014) 6 *Psychological Trauma: Theory, Research, Practice, and Policy* 700 at 700.

137 See, for example, Lisa Young Larance and Maryann Lane Porter "Observations From Practice: Support Group Membership as a Process of Social Capital Formation Among Female Survivors of Domestic Violence" (2004) 19 *Journal of Interpersonal Violence* 676 at 681-682; and Carl A Ridley and Clyde M Feldman "Female Domestic Violence Toward Male Partners: Exploring Conflict Responses and Outcomes" (2003) 18 *J Fam Viol* 157.

138 Postmus, Stylianou and McMahon, above n 50, at 2870; Alisha Ali and others "Emotional Abuse, Self-Blame, and Self-Silencing in Women With Irritable Bowel Syndrome" (2000) 62 *Psychosomatic Medicine* 76; Harned, above n 133; and Melissa K Holt and Dorothy L Espelage "A Cluster Analytic Investigation of Victimization Among High School Students" (2003) 19(2) *Journal of Applied School Psychology* 81.

Supported Measures of Anger, Aggression, and Violence and the *Handbook of Family Measurement Techniques*.¹³⁹ The authors stated that the clinical utility and research applicability of the ABI was high.¹⁴⁰ The use of ABI in practice is important as it shows that practitioners in the field believe that the measure is reliable and valid.

Both the DAS and ABI meet the *Daubert* factors. They have been tested (and such tests show the tools are both reliable and valid), subjected to extensive peer review and publication, have a low error rate and have generally been accepted by the scientific community.¹⁴¹ *Lundy* held that whether a methodology is satisfactory or not ultimately depends on the response of the scientific community.¹⁴² They both have a proven track record of acceptance by the scientific community,¹⁴³ and the response in this case is clear: the DAS and ABI are scientifically reliable and valid.

(e) Counter-intuitive evidence

The tools' results could also be substantially helpful as "counter-intuitive evidence" that helps to correct misconceptions held by the jury about IPV and the risk factors associated with lethality. Counter-intuitive evidence is admissible and considered substantially helpful when it "[corrects] erroneous beliefs or assumptions that a judge or jury may intuitively hold and which, if uncorrected, may lead to illegitimate reasoning".¹⁴⁴ Such evidence is most commonly admitted in cases involving allegations of sexual abuse of young people.¹⁴⁵ However, there is no reason why counter-intuitive evidence should not be admitted in cases where primary victims kill their abusive partners.¹⁴⁶ In such cases, there are often long-held misconceptions about IPV. For example, IPV has often been "understood as a series of discrete violent incidents".¹⁴⁷ This fails to capture its true nature "as a pattern of harm that is bigger than [individual incidents of violence]", and "the cumulative and compounding operation of these factors over time".¹⁴⁸ There is also often a fundamental misunderstanding (or an absence of knowledge) about the risk factors

139 Claire M Renzetti and Jeffrey L Edleson (eds) *Encyclopedia of Interpersonal Violence* (SAGE, Los Angeles, 2008) at 4; George F Ronan and others *Practitioner's Guide to Empirically Supported Measures of Anger, Aggression, and Violence* (Springer, Switzerland, 2014) at 164; and John Touliatos, Barry F Perlmutter and George Holden (eds) *Handbook of Family Measurement Techniques: Volume 2* (Sage Publications, California, 2001) at 293.

140 Ronan and others, above n 139, at 166.

141 Hitt and McLain, above n 126, at 305 and 309.

142 *Lundy* (CA 2014), above n 34, at [241].

143 At [241].

144 *DH v R* [2015] NZSC 35, [2015] 1 NZLR 625 at [2]. See also *Kohai v R* [2015] NZSC 36, [2015] 1 NZLR 833 at [18]; Downs (ed), above n 33, at 87; and McDonald and Optican (eds), above n 34, at 148–150.

145 For example, *DH v R*, above n 144.

146 The Law Commission has recently recommended that, in appropriate cases, a joint statement should be admitted to "the jury addressing myths and misconceptions about family violence". This recommendation comes after "[r]esearch shows that jurors may believe myths or have misconceptions about sexual and family violence": Law Commission *The Second Review of the Evidence Act 2006: Te Arotake I te Evidence Act 2006* (NZLC R142, 2019) at 12. Similarly, the Court of Appeal ruled counter-intuitive evidence as admissible regarding the effects of "battered woman's syndrome". *R v Guthrie* (1997) CRNZ 67 (CA) as cited in Downs (ed), above n 33, at 87.

147 Julia Tolmie and others "Social Entrapment: A Realistic Understanding of the Criminal Offending of Primary Victims of Intimate Partner Violence" [2018] NZ L Rev 181 at 183 and 201–202.

148 At 201 and 216.

associated with danger and lethality.¹⁴⁹ These risk factors include previous serious injury, threats to kill, access to a gun, threats of suicide, separation, forced sex, and extreme jealousy and dominance (all of which are included in the DAS).¹⁵⁰

When misconceptions about IPV and the risk factors associated with lethality are left uncorrected, it leads to a misunderstanding of the factual context in which a primary victim acted.¹⁵¹ The significance of the presence of such risk factors is often overlooked and misunderstood.¹⁵² Misunderstandings create dangerous and unfounded stereotypes; for example, that IPV is a “relationship issue”, or that a primary victim should have called the police or sought refuge in a domestic violence shelter.¹⁵³ An accurate understanding of IPV and the associated risk factors is therefore crucial to understand the circumstances in which a primary victim acts, accurately assessing their actions and ensuring equitable outcomes.¹⁵⁴

The DAS and ABI results are important types of counter-intuitive evidence as they help to correct any misunderstandings or stereotypes a jury has about the primary victim or the reasons why she acted in particular way.¹⁵⁵ They may therefore provide the jury with important information about risk factors associated with an increased risk of death—many of which will not be obvious to those with no prior experience or knowledge of IPV.

DH v R held that counter-intuitive evidence “should not be linked to the circumstances of the complainant in the case in which the evidence is being given”.¹⁵⁶ This presents some tension. The DAS is used to predict the level of risk an individual faces, while an expert would testify to this. However, if the DAS results are admitted as counter-intuitive evidence the expert could state that, based on their expertise, when a certain combination of risk factors are present, there is a higher risk of death to the primary victim. This evidence is necessary to correct any misconceptions or misunderstandings a jury may have about IPV and show that, objectively speaking, women in these circumstances are at a high risk of death. This is consistent with how counter-intuitive evidence has traditionally been used. However, issues would arise if the expert stated that the presence of certain risk factors meant the defendant used reasonable force to defend herself, as this is an issue for the jury to decide.

(f) Conclusion on the substantial helpfulness of DAS and ABI results

The above provides support for the proposition that the DAS and ABI results are substantially helpful under s 25 of the Evidence Act. Both tools have an established scientific underpinning and sufficient claim to scientific validity (having regard to the *Daubert* factors). However, we must also consider what makes the tools substantially helpful. Both help the jury to understand and assess the risk of death a primary victim faced at the time she acted in self-defence and the nature and extent of the IPV she

149 Judith Buckingham “Patterns of Violence in Intimate Relationships: A Critical Examination of Legal Responses” (PhD thesis, University of Canterbury, 2006) at 185.

150 At 7.

151 At 183, 190 and 205; and Law Commission *Understanding Family Violence: Reforming the Criminal Law Relating to Homicide* (NZLC R139, 2016) at 6, 23 and 26–28.

152 Buckingham, above n 149, at iii and 185.

153 Tolmie and others, above n 147, at 195–196 and 201.

154 Law Commission, above n 151, at 6.

155 Tolmie and others, above n 147, at 217 argue that “[e]xpert testimony may be required to ... challenge the interpretive framework that may otherwise be placed over [the primary victim’s] testimony”.

156 *DH v R*, above n 144, at [30].

experienced. They also correct misguided beliefs the jury may have about IPV and the risk factors associated with danger and lethality. Therefore, the tools' results assist the jury to assess a primary victim's self-defence claim, as they provide more information regarding whether or not her actions were reasonable, necessary and proportionate. If a jury understood that Ms Liyanage was at a high risk of death at the time she acted, they may have found that her actions in killing her husband were justified by self-defence.

(3) Guidance on use of risk assessment tools

In an extrajudicial article, Justice Glazebrook created guidelines for the use of risk assessment tools in court (albeit in the context of predicting recidivism).¹⁵⁷ Although written about a different issue, the article provides guidance as to how the DAS and ABI could be used in court. First, the expert should prove that the tools are valid and ensure that the Court understands their evidence.¹⁵⁸ Second, the expert must describe the strengths and limitations of the tools and how the results can be interpreted.¹⁵⁹ Provided these guidelines are complied with, the advantages of admitting the evidence will usually outweigh any limitations.¹⁶⁰ Therefore, in a case similar to *Liyanage*, an expert should describe the DAS and ABI, explain what conclusions can be drawn and highlight the strengths and limitations of the tools. The Court can then make an informed decision on the evidence before it.

(4) Admissibility vs weight

Admissibility and weight are two separate issues.¹⁶¹ The former is determined by the judge and the latter is determined by the jury. Both the DAS and ABI satisfy ss 7 and 25 of the Evidence Act, and are therefore likely to be admissible. Once admitted, the jury should be made aware of the instruments' limitations. For example, risk assessment will never be entirely accurate because it is over predictive and the victim's credibility must be assessed based on her circumstances.¹⁶² It is the jury's role to decide how much weight they put on the instruments, taking into account their limitations.¹⁶³ This argument is supported by the literature, in other cases,¹⁶⁴ and was made by Ms Liyanage's defence counsel on appeal.¹⁶⁵

C *Relevance to self-defence*

Once admissible as expert evidence, the tools' results can help to establish a self-defence claim under s 48 of the Crimes Act, which states that:

157 Susan Glazebrook "Risky Business: Predicting Recidivism" (2010) 17 *Psychiatry, Psychology and Law* 88 at 88.

158 At 97.

159 At 100.

160 At 97 and 110.

161 *Lundy* (CA 2014), above n 34, at [90]; *M* (CA438/2010), above n 123, at [35]; McDonald and Optican (eds), above n 34, at 106; and Oliver-Hood, above n 37, at 422. Both *Lundy* and *M* held that an attack on expert evidence does not affect admissibility. Rather, it goes to the weight a fact-finder puts on the evidence.

162 Haggård-Grann, above n 122, at 299.

163 *Lundy* (CA 2014), above n 34, at [90]; and *M* (CA438/10), above n 123, at [35].

164 *Lundy* (CA 2014), above n 34, at [90]; and *M* (CA438/10), above n 123, at [35].

165 *Liyanage* (WASCA) Transcript, above n 26, at 11.

Every one is justified in using, in the defence of himself or herself or another, such force as, in the circumstances as he or she believes them to be, it is reasonable to use.

Reasonableness is comprised of three elements: “imminence and seriousness of the threat”, and proportionality of the response and lack of alternative options.¹⁶⁶ Self-defence is therefore comprised of a subjective and objective test.¹⁶⁷ It involves an inquiry into the circumstances as the defendant subjectively believed them to be and, in light of this, whether the use of force was objectively reasonable.¹⁶⁸

In this case, the primary victim must subjectively believe she is at a high risk of death and use force that is objectively reasonable in those circumstances. The DAS results go towards the objective component of self-defence. They quantify the level of risk of death to the primary victim at the time she acted in self-defence, and so inform the reasonableness and proportionality of her actions in relation to the seriousness of the threat. For example, if the DAS shows that a primary victim was at a high risk of death at the time of the killing, her actions are more likely to be seen as proportionate and reasonable; thus, supporting her self-defence claim.¹⁶⁹ Contrary to the WASCA’s subsequent comments,¹⁷⁰ this analysis has been supported in the literature.¹⁷¹ For example, Evan Stark argues that the DAS can be used as part of the defence strategy in a self-defence claim to show the risk a woman faced before she killed her abusive partner.¹⁷²

While the ABI does not quantify the risk of death, it provides important contextual information which indicates the nature and severity of the abuse.¹⁷³ This gives the court a better understanding of the circumstances in which a primary victim acted and allows the jury to better assess whether the victim’s actions are objectively reasonable, necessary and proportionate. The ABI can also form part of the “social framework evidence”. This type of evidence provides important psychological and social context to allow the jury to better understand the abuse the primary victim faced and the circumstances in which she

166 *R v Wang* [1990] 2 NZLR 529 (CA) at 530.

167 At 529; and Law Commission, above n 2, at 27.

168 Law Commission, above n 2, at 27.

169 The question as to whether there was a lack of alternative options is part of the self-defence test in New Zealand. The DAS provides important information in relation to pre-emptive strikes as one of the risk factors confirms that leaving the relationship increases the risk of death. Therefore, the DAS provides important evidence that counters the assumption that leaving is a safe and viable option. In any event, a woman should not have to wait until she is being attacked before acting in self-defence, especially if she is at a high risk of death (however, this discussion is outside the scope of the article).

170 *Liyanage* (WASCA), above n 1, at [112].

171 Evan Stark “Preparing for Expert Testimony in Domestic Violence Cases” in Albert R Roberts (ed) *Handbook of Domestic Violence Intervention Strategies: Policies, Programs, and Legal Remedies* (Oxford University Press, Oxford, 2002) 216 at 245; and Hitt and McLain, above n 126, at 290.

172 Stark, above n 171, at 246–247. Hitt and McLain, above n 126, at 289–290, also support this analysis and envisage the DAS being used in cases where a battered woman acts in self-defence. Campbell, Webster and Glass, above n 63, at 670, also acknowledges that the DAS can be used in the criminal justice system to substantiate the victim’s perception of risk. Jacquelyn Campbell “Commentary on Websdale: Lethality Assessment Approaches: Reflections on Their Use and Ways Forward” (2005) 11 *Violence Against Women* 1206 at 1207.

173 Shepard and Campbell, above n 56, at 291 and 297.

killed her husband.¹⁷⁴ Dell Marie Butler argued that judicial conservatism around accepting this evidence in *Liyana* resulted in limited understanding of Ms Liyanage's lived reality.¹⁷⁵

IV Response to Concerns About the Tools' Use

The WASC and WASCA in *Liyana* raised several concerns about admitting the tools' results. This section will address those concerns and argue that, in addition to being scientifically valid, the tools should be admitted for the following reasons:

- the tools' use can be limited to appropriate contexts;
- using the tools in a courtroom setting is not fundamentally different to what was originally conceptualised;
- there is no legal requirement that the tools be perfectly accurate in order to be admissible;
- concerns about favourable reporting are not unique to this case and are inherent in all criminal cases; and
- the information provided by the tools (including risk factors associated with increased risk of death) does not comprise "obvious indicators of risk"¹⁷⁶ and are not within an ordinary person's knowledge or experience.

A Cases where these tools are appropriate

The judges in *Liyana* were concerned that admitting these tools would allow them to be used in situations where they were undesirable.¹⁷⁷ This is a valid concern. As *Hart v R* stated, once it is admissible, evidence can be used for all purposes.¹⁷⁸ The Court in *Hart* held that "the Evidence Act does not support the concept of limited admissibility", and that "evidence is either admissible for all purposes or it is not admissible at all".¹⁷⁹

However, evidence must still be relevant in order to be admissible.¹⁸⁰ The DAS and ABI were designed and validated to assess the risk of lethality and severity of abuse faced by primary victims. They help to inform the objective reasonableness of a primary victim's actions, and thus, they are only relevant and admissible in these contexts. The tools were not designed to convict primary aggressors or primary victims when they have been assessed as being at a low risk of death. Although *Hart* suggests that the tools would be admissible for all purposes, once the purpose of the tools, their relevance and the information they provide is taken into consideration, their use should be limited to cases where primary victims have used lethal self-help in self-defence.

The WASCA in *Liyana* was concerned that the tools may be administered by the prosecution for the purposes of incriminating the accused.¹⁸¹ The tools may be used

174 Butler, above n 90, at 326 and 327. This evidence has been admitted in similar cases as it provides important contextual information that allows the jury to better understand the situation in which a primary victim killed.

175 At 331.

176 The language used by the Court in *Liyana* (WASCA), above n 1, at [143].

177 *Liyana* (WASCA) Transcript, above n 26, at 11.

178 *Hart v R* [2010] NZSC 91, [2011] 1 NZLR 1 at [54], [57] and [64].

179 At [54].

180 Evidence Act, s 7.

181 *Liyana* (WASCA) Transcript, above n 26, at 11.

against primary victims, as the prosecution could administer them to victims to demonstrate a low risk of death and, therefore, excessive self-defence. With respect, the defendant's right to silence should adequately protect them from having to complete the DAS or ABI.

B *Concerns about retrospective use*

The WASC in *Liyanage* was concerned that using the DAS and ABI to assess the presence of historic risk rather than determining the level of future risk would be to use the tools in a context for which they were not designed.¹⁸²

With respect, this argument is not entirely valid. The use of risk assessment is inherently retrospective in that it involves looking at past conduct to inform an assessment of the current risk. This is no different to the use in *Liyanage*: the DAS and ABI were used to assess the risk factors that were previously present to determine the level of risk she faced. Thus, the DAS was used for the purpose it was created: to assess the risk of death the victim faced at the time she acted.¹⁸³ Further, the DAS was used to assess the level of risk Ms Liyanage faced at the time she killed, and the ABI was used to provide important contextual information about the nature and severity of IPV Ms Liyanage had faced. These are the purposes the tools were originally designed for. The Court's concern about using the tools for a different purpose than they were designed for was misplaced. Ms Liyanage's defence counsel submitted these arguments on appeal.¹⁸⁴

C *No legal requirement of perfect prediction*

The WASCA in *Liyanage* held that in order to be admissible, the risk assessment tools needed to accurately predict the percentage likelihood of death to an individual, thus quantifying that risk.¹⁸⁵ This concern ties into the group to individual (G2i) problem. The G2i problem arises because scientists typically measure phenomena at a group level, while legal proceedings resolve issues at an individual level.¹⁸⁶ This poses a challenge for courts in deciding whether, and how, group data can be used to resolve or make inferences for individual cases.¹⁸⁷

The G2i problem is present to some extent in the use of the DAS and ABI, as the tools have been created and tested at the group level. Inferences about the individual's level of risk or circumstances are then made from this information. For example, the DAS indicates that Ms Liyanage shares many characteristics with the collective group of people who are or will become victims of lethal domestic violence. This is not necessarily the same as showing that she was at a high risk of death at the time she acted; instead, she shared a statistically significant number of the same characteristics with those at a high risk of death. However, the G2i problem is less relevant to the DAS because it has been specifically designed to provide information on an individuals' risk of death. This is similar to the examples of psychiatric and clinical psychological evidence David L Faigman, John

182 See *Liyanage* (WASC), above n 1, at [26]–[27].

183 Butler, above n 90, at 333.

184 *Liyanage* (WASCA) Transcript, above n 26, at 12.

185 *Liyanage* (WASCA), above n 1, at [152]–[153].

186 Faigman, Monahan and Slobogin, above n 68, at 417.

187 At 417–418.

Monahan and Christopher Slobogin discuss;¹⁸⁸ “[a]lthough their disciplines are based on general knowledge, [they treat] individuals with particular diagnoses.”¹⁸⁹

Faigman, Monahan and Slobogin propose a number of criteria that must be met before a court decides whether scientific expert testimony based on G2i is admissible.¹⁹⁰ The weight accorded to each criterion depends on whether the expert is giving evidence at a group or individual level.¹⁹¹

- The evidence must be relevant in that it must “[relate] to some specific issue in dispute” and “the research basis for the expert’s opinion generalizes to the legal issues in dispute”—that is, it is externally valid.¹⁹²
- The expert presenting the evidence must be qualified to give the evidence. If an expert is giving evidence at the group level, their knowledge, training and education are important.¹⁹³ If an expert is giving evidence at an individual level, their skill and experience will be more important.¹⁹⁴
- The expert’s testimony must be scientifically valid, with regard to the *Daubert* factors.¹⁹⁵
- The expert’s testimony must be helpful as it provides the jury with useful information.¹⁹⁶
- The evidence must not mislead or distract the jury.¹⁹⁷

The author suggests that it is also important to inform a jury of the G2i problem, how it applies to the case before it and what conclusions can be drawn from the evidence. Provided this occurs, the DAS and ABI results should be admissible as the tools are relevant, scientifically valid and helpful.

D *Concerns about favourable reporting*

The WASC judge in *Liyanage* were concerned that Ms Liyanage would overstate her risk to minimise her chance of being convicted of murder.¹⁹⁸ This is a valid concern as both tools rely heavily on the victim’s portrayal of the circumstances. However, this concern is inherent to all criminal cases to some extent. In each case, the defendant’s credibility is assessed in determining whether their version of events should be believed or not. It is usually the jury’s job to assess this. This problem may be exacerbated in cases that use the DAS and ABI, as the expert administering the tools does not question the truth of what the primary victim says. The proposed testimony is an expert’s opinion of the defendant’s risk. The self-reporting is not done in the presence of the jury or subject to cross-examination, so the expert must accept the report at face value. This precludes the jury

188 At 434.

189 At 434.

190 At 440 and 472–473.

191 At 476.

192 At 441 and 473.

193 At 444.

194 At 446.

195 At 447 and 473.

196 At 466 and 473.

197 At 473.

198 See *Liyanage* (WASC), above n 1, at [27].

from making the same assessments of credibility that they do in a case where the defendant testifies in their presence. There is therefore the potential for the expert's evidence to be presented as truth without proper examination of the primary victim's story.

However, the Court's concern confuses the concepts of admissibility and weight. Both the DAS and ABI results are scientifically valid, relevant and substantially helpful. Therefore, they should be admissible. Concerns about the defendant's honesty are questions of weight to be answered by the jury and are distinct from the question of admissibility.

Further, the jury is still able to evaluate the truthfulness of the primary victim's account of events and weigh the evidence accordingly. It is not true that if the DAS and ABI are admitted as evidence, the jury will automatically acquit the defendant without critically examining her account of events. If available, other evidence can help the jury to assess the defendant's truthfulness; for example, by comparing her account with police and medical records.¹⁹⁹

A further safeguard would involve the expert witness fully explaining the basis for their opinion and their view of the defendant's credibility, which would likely be subject to cross-examination. This would ensure that the jury has all information the expert had in making a decision and the expert's assessment of credibility. The judge can also issue directions to the jury regarding the fact the tools rely heavily on the defendant's version of events. The jury would then weigh the tools based on their assessment of the defendant's credibility.

It is critical that when evidence from the tools is presented, the jury is also informed of the tools' limitations, so they can then make an informed decision based on the evidence before them. Despite their limitations, the tools' both still provide important information relevant to the proceedings.

E Information provided by DAS and ABI are not within an ordinary person's knowledge

The WASCA in *Liyanage* held that information provided by the DAS and ABI was not outside an ordinary person's knowledge or experience.²⁰⁰ With respect, this overestimates the average person's understanding of IPV and the risk factors associated with an increased risk of lethality. Many people have long-held misconceptions about IPV,²⁰¹ and a fundamental misunderstanding of the risk factors associated with danger and lethality,²⁰² as discussed above in Part III of this article. This means that the information provided by the tools, including the risk factors associated with increased risk of death, are not necessarily within an ordinary person's knowledge or experience.²⁰³

199 Ms Liyanage's defence counsel put forward this argument during the trial. It has also been supported in the literature. For example, Stark argues that assessing the women's credibility can be achieved by independent corroboration and by assessing her story against what is known about IPV: see Stark, above n 171, at 246.

200 *Liyanage* (WASCA), above n 1, at [143] and [148].

201 Tolmie and others, above n 147, at 183 and 202.

202 Buckingham, above n 149, at 185.

203 Section 25(2)(b) of the Evidence Act makes it clear that even if this information was "a matter of common knowledge", expert evidence about it will not be inadmissible per se.

V Conclusion

In *Liyana*, both the WASC and the WASCA held that the DAS and ABI results could not be used to assist a primary victim's self-defence claim when she had used lethal force against her husband (the predominant aggressor). The WASC held that the tools' results were inadmissible as they did not meet the expert evidence test. The WASCA accepted that the tools were scientifically valid, but held that the results were inadmissible for policy-related reasons. With respect, both lines of reasoning are wrong. The analysis of the literature presented above demonstrates that both the DAS and ABI are valid and reliable tools. The tools' results are relevant under s 7 of the Evidence Act, and substantially helpful under s 25 having regard to the *Daubert* factors. They assist the court in understanding the risk of death that the primary victim faced when she acted in self-defence and the nature of the IPV she had lived with, while correcting any misunderstandings about IPV or the risk factors associated with lethality. Other concerns raised by the WASC and WASCA have been addressed, and the conclusion drawn is that the DAS and ABI results should have been admitted as part of the expert evidence framework.

Once admitted, the tools assist in establishing a self-defence claim by providing support for the objective reasonableness and proportionality of a primary victim's actions in relation to the seriousness of the threat she faced. The tools' limitations must be presented with information about what conclusions can be drawn from them to assist the courts in making an informed decision. It is the jury's responsibility to determine the weight placed on the tools' results after considering these limitations.

In conclusion, the DAS and ABI results should have been admissible in *Liyana* under the expert evidence rules to inform Ms Liyana's self-defence claim. They should also be used in similar cases where primary victims use lethal self-defence against their primary aggressors. This article stands as a suggestion that should a case like *Liyana* arise in New Zealand, it is open to our courts to accept DAS and ABI results as admissible under expert evidence rules. The results from these tools allow the court to better understand the nature of abuse present, the circumstances and context in which the victim acted, the level of risk of death present and help correct misunderstandings a jury may have about IPV. Thus, they help to facilitate informed decision-making in the criminal justice system and ensure better outcomes for those involved.