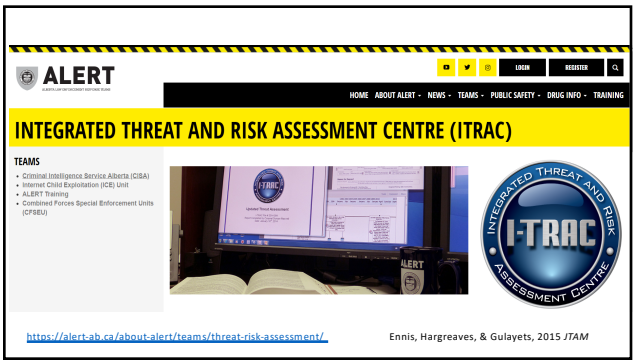


Optimizing Risk Assessment for Domestic Violence Research Team

MacEwan and Carleton students:
Renee Bencic
Martina Faitakis
Alicia LaPierre
Sacha Maimone
Adam Morrill
Lynden Perrault
Carissa Toop
Farron Wielinga

ORADV researchers:
Liam Ennis
Zoe Hilton
Sandy Jung
Kevin Nunes

Research coordinator:
Anna Pham

CONTACT: Zoe Hilton, PhD, CPsych | zhilton@waypointcentre.ca
Lynden Perrault, BA (Hons) | LyndenPerrault@cmail.carleton.ca
Alicia LaPierre, BA (Hons) | AliciaLaPierre@cmail.carleton.ca
Sandy Jung, PhD, RPsych | sandy.jung@macewan.ca

Slides available: (psychology crime lab macewan)
sites.google.com/a/macewan.ca/psychology-crime-lab-macewan-university/

Acknowledgments:

The points of view expressed in this article do not necessarily represent the views of the Integrated Threat and Risk Assessment Centre. This research was supported by the Social Sciences and Humanities Research Council of Canada.

Social Sciences and Humanities Research Council of Canada | Conseil de recherches en sciences humaines du Canada | Canada

Ontario Domestic Assault Risk Assessment: Predicting violent recidivism among high-risk intimate partner violence offenders

Lynden P. Perrault, N. Zoe Hilton, & Anna T. Pham

1

What is the ODARA?

2

The Ontario Domestic Assault Risk Assessment (ODARA)

- Risk assessment measure for male-to-female intimate partner violence
- Contains 13 dichotomized items (i.e., present or absent)
- Coded from case files (and/or victim interview)

3

TABLE B.1
Normative Data for the Distribution of Ontario Domestic Assault Risk Assessment (ODARA) Scores in a Population of Men With a Police Occurrence Report of Assault Against a Female Domestic Partner

ODARA score	Recidivism (%)	Percentage in this range of scores	Percentage scoring lower	Percentage scoring higher
0	7	9	0	91
1	17	17	9	74
2	22	21	26	53
3	34	20	47	33
4	39	13	67	20
5–6	53	14	80	6
7–13	74	6	94	0

Note. *Recidivism* is defined as a new assault against a female domestic partner identified by an occurrence report in police records or a charge in the criminal record during an average follow-up of 4.9 years after the index assault. Data from Hilton et al. (2004); Hilton and Harris (2009b); and Hilton, Harris, Rice, Houghton, and Eke (2008).

4

2

Empirical Support for the ODARA

5

Empirical Support for the ODARA

- Risk assessment measures typically assessed with statistic called the Area Under the Curve (AUC)
- Very common explanation: "An area of .77 indicates a probability of .77 that a randomly selected recidivist would have a higher score than a randomly selected nonrecidivist." (Hilton et al., 2004, p. 272)

6

Empirical Support for the ODARA

Hilton et al. (2004)

- ODARA development study
- IPV recidivism for original and cross-validation samples
- AUCs = .77 and .72, respectively

Messing and Thaller (2013)

- Meta-analysis including multiple IPV measures
- IPV recidivism
- Average weighted AUC = .66

Jung and Buro (2017)

- ODARA scores from large Edmonton sample
- IPV and violent convictions
- AUCs = .70 and .71, respectively

7

3

The Current Study

8

The Current Study

- Conducted at the Integrated Threat and Risk Assessment Centre (ITRAC) in Edmonton, Alberta, Canada
  - Men charged for IPV and referred by police to ITRAC for threat assessment
- Primary aim:
  - Predictive validity of the ODARA for **violent recidivism** in high-risk IPV offender sample (not IPV recidivism)

9

Methods

- ODARA scored by trained research assistants
  - Adequate interrater reliability (ICC = .85) and internal consistency (Cronbach's α = .92)
- File information included provincial and federal criminal records, police reports, correctional files, and mental health evaluations
- Recidivism (charges and convictions) coded by different research assistants who were masked to scoring of risk measures

10

Methods

- Eligibility criteria:
  - Male-to-female intimate partner violence
  - Identifiable index offence from 2010-2015
- **Index offence** = **most recently known incident** wherein the male either perpetrated violence against a female intimate partner or made a credible threat of death with a weapon

11

Sample

- Obtained **152 cases of IPV** with ODARA scores
  - Ages ranged from 18 to 65 (M = 35.36)
  - Majority Caucasian (70%), many unemployed (43%)
- Follow-up period of ~1.5 to ~8 years (M = 4.21, SD =1.89)
- Reoffending period of 0.12 to 8.22 years (M = 2.77, SD = 1.89)
  - 53% had at least one violent reoffence

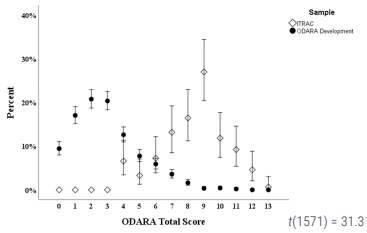
12

Preliminary Research Question

- Is the sample obtained at ITRAC high-risk?
- Compare to the sample used to develop the ODARA (*N* = 1421; see Hilton et al., 2004; Hilton, Harris, & Rice, 2010)

13

Results



t(1571) = 31.31, *p* < .001, *d* = 2.68

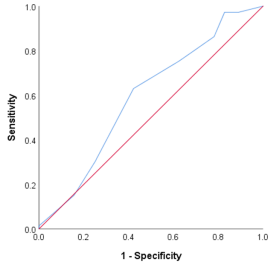
14

Main Research Question

- Does the ODARA predict subsequent non-intimate partner violent offending for high-risk IPV offenders?
- AUC analysis for ITRAC data **reduced to 137** due to missing data and exclusion criteria

15

Results



AUC = .59, *p* = .062, 95% CI [.50, .69]

16

Summary

- The ITRAC sample is higher risk, but the ODARA did not significantly predict violent recidivism
- Suggests the ODARA needs to be calibrated to accommodate high-risk samples when used to predict violent recidivism

17

Limitations and Future Directions

Limitations

- Small sample size
- Limited dataset (only violent recidivism)
- Limited applicability to field settings

Future Directions

- Identify variables that can differentiate high-risk recidivists and non-recidivists in policing context
- Conduct research in applied contexts

18

References

Hilton, N. Z., Harris, G. T., & Rice, M. E. (2010). *Risk assessment for domestically violent men: Tools for criminal justice, offender intervention, and victim services*. Washington, DC: American Psychological Association.

Hilton, N. Z., Harris, G. T., Rice, M. E., Lang, C., Cormier, C. A., & Lines, K. J. (2004). A brief actuarial assessment for the prediction of wife assault recidivism: The Ontario Domestic Assault Risk Assessment. *Psychological Assessment, 16*(3), 267-275. doi: 10.1037/1040-3590.16.3.267

Jung, S., & Buro, K. (2017). Appraising risk for intimate partner violence in a police context. *Criminal Justice and Behavior, 44*(2), 240-260. doi: 10.1177/0093854816667974

Messing, J. T., & Thaller, J. (2013). The average predictive validity of intimate partner violence risk assessment instruments. *Journal of Interpersonal Violence, 28*(7), 1537-1558. doi: 10.1177/0886260512468250

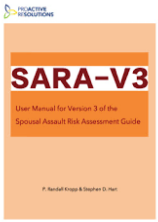
19

Evaluating the Predictive Effectiveness of the Spousal Assault Risk Assessment Guide Version 3

Alicia R. LaPierre, *Carleton University*
Sandy Jung, *MacEwan University*
Anna T. Pham, *Carleton University*

SPJ APPROACH: SARA-V3

- Spousal Assault Risk Assessment Scale, Version 3 (SARA-V3)
  - Structured Professional Judgement (SPJ) tool
  - 24-item measure of IPV risk
  - Three domains: *Nature of IPV*, *Perpetrator Risk Factors*, and *Victim Vulnerabilities*



2

SPJ APPROACH: SARA-V3

- Nature of IPV (8 items)
  - Distorted attitudes re: IPV, IPV-related criminal history, severity/chronicity/escalation of IPV, harm (e.g., sexual, threats)
- Perpetrator Risk Factors (10 items)
  - Mental health/substance abuse, relationships, criminal hx (non-IPV)
- Victim Vulnerabilities (6 items; new to version 3)
  - Attitudes, mental health/substance abuse, barriers

3

SARA-V3 VERSUS SARA-V2

- SARA-V2 has demonstrated good predictive validity, and is widely used in IPV cases (Belfrage et al., 2012; Messing & Thaller, 2013; Nicholls et al., 2013)
- V3 is different than V2 because of the introduction of the temporal coding of the three domains
  - "Past" = longer than 1 year before assessment date
  - "Recent" = within 1 year of the assessment date

4

CURRENT STUDY

- SARA-V3, as yet, has no research examining its effectiveness as a risk prediction instrument
- Examine the unique predictive validity of the "past" and "recent" domains of the SARA-V3
  - Area Under the Curve (AUC) analyses

METHODS

- Sample
  - 152 high-risk IPV offenders referred to ITRAC by police for threat assessment, had to have SARA scores
- SARA Inter-rater reliability → **high**
  - Past quantitative scale: ICC = .86; Cronbach's α = .93
  - Recent quantitative scale: ICC = .85; Cronbach's α = .92

6

METHODS

- Coding – SARA items coded on a 3-point scale
  - 0 = not present or unknown
  - 1 = Partially present
  - 2 = Present
- Each item coded twice: once for 'past' and once for 'recent' scale
  - Total score out of 48 per scale

7

METHODS

- Past and Recent Scales
  - Authors argue against quantifying the SARA (Kropp & Hart, 2015)
  - *But:* research with the SARA-V2 demonstrates that this is effective (Jung & Buro, 2017)

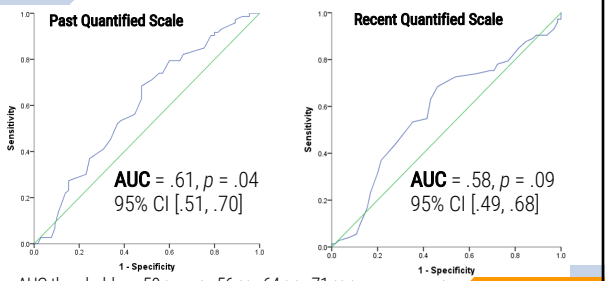
8

METHODS

- Statistical Analysis: Area Under the Curve (AUC)
  - Estimate of the probability that the SARA-V3 will rank a randomly selected high-risk IPV offender higher (i.e., as higher risk) than a randomly selected low-risk IPV offender
  - Ideal measure for assessing predictive accuracy in forensic psychology (Rice & Harris, 2005)

9

RESULTS



AUC thresholds = .50 (chance), .56 (S), .64 (M), .71 (L) (Rice & Harris, 2005)

10

DISCUSSION

What did we learn?

Only the past distinction of the SARA-V3 may be effective at predicting violent recidivism

What does that mean?

New format of the SARA-V3 may need to be revised or consider alternatives

More research on V3 necessary

11

LIMITATIONS & FUTURE DIRECTIONS

- Limitations
  - Incomplete IPV recidivism coding at the time this study was conducted
  - Archival data → past coding may have been more complete than recent
  - Research assistant coding vs field users' coding (Edens & Boccacini, 2017)
- Future directions
  - Compare it with the SARA-V2
  - Replicate this study with another IPV sample (high-risk and others)
  - Examine the predictive validity/relevance of the three domains

12

TAKE-HOME MESSAGE

- SARA-V3 did not perform very well for predicting violent recidivism in a predominantly high-risk sample of IPV offenders
  - More research on SARA-V3 necessary
- Further research examining IPV recidivism risk is also important
  - If continually poor → need for revision, or return to using the SARA-V2
  - Use SARA-V3 as information tool for needs assessment/guidance

13

Thank You!

Email: alicialapierre@cmail.carleton.ca
Twitter: @LaPierrePsyc

14

MacEwan UNIVERSITY Carleton UNIVERSITY UNIVERSITY OF ALBERTA

Accuracy of the B-SAFER to Assess Risk with High Risk Intimate Partner Violence Perpetrators

Sandy Jung, Ph.D., R.Psych. Anna Pham, M.A. Liam Ennis, Ph.D., R.Psych.

- Structured professional judgment schemes (e.g., HCR-20 v3, SARA, RSVP, B-SAFER)
- Emphasis on clinical judgment rather than quantifying

- From SARA, created B-SAFER for police
- Limited research (e.g., SVR-20, RSVP, B-SAFER)

B-SAFER

Scoring: 0 = No Evidence; 1 = Possible or Partial Evidence; 2 = Clear Evidence

Perpetrator Risk Factors
1. Violent acts
2. Violent threats or thoughts
3. Escalation
4. Violation of court orders
5. Violent attitudes

Psychosocial Adjustment
1. General criminality
2. Intimate relationship problems
3. Employment problems
4. Substance use problems
5. Mental health problems

Victim Vulnerability
1. Inconsistent behavior/attitude
2. Extreme fear
3. Inadequate access to resources
4. Unsafe living situation
5. Personal problems

Kropp, Hart, & Belfrage (2005)

Brief Spousal Assault Form for the Evaluation of Risk (B-SAFER)

Storey, Kropp, Hart, Belfrage, & Strand (2014)	AUC = .70 [64-.76]; *n* = 249
Loinaz (2014)	AUC = .76; *n* = 40
Gerbrandij, Rosenfeld, Nijdam-Jones, & Galietta (2018)	AUC = .55 [.40-.71]; *n* = 158
Svalin, Mellgren, Levander, & Levander (2018)	AUC = .57; *n* = 301

Other studies:
(not examine predictive validity) Au, Cheung, Kropp, Yuk-chung, Lam, & Sung (2008)
(summary ratings) Belfrage & Strand (2012)

- Identify threat assessments 2010-2015
- Extraction of reports and accompanying documentation
- RAs trained on structured professional judgment measures (SARA v2, v3; B-SAFER), ODARA, and full coding form
- Coding of cases and quality assurance to check for complacency
- N = 258
  With varying sample sizes depending on missing data

B-SAFER

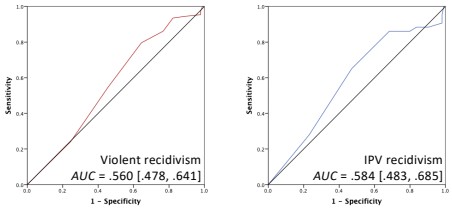
	Violent Recidivism	Intimate Partner Violent Recidivism
Total of PAST items	*AUC* = .613 95% CI [.534, .692]	*AUC* = .551 95% CI [.446, .655]
Total of RECENT items	*AUC* = .455 95% CI [.373, .537]	*AUC* = .444 95% CI [.343, .544]

B-SAFER
Perpetrator Risk Factors Subscale

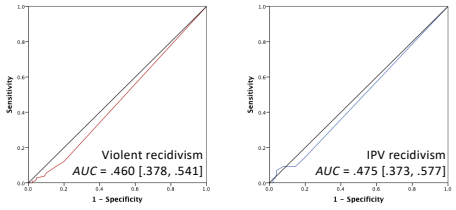
Perpetrator Risk Factors	Past	Recent (4 weeks)
Violent acts	2.8% | 2.4% | 94.7%	93.5% | 0% | 6.5%
Violent threats or thoughts	9.3% | 8.9% | 81.7%	93.1% | 2.4% | 4.5%
Escalation	18.7% | 33.7% | 47.6%	96.3% | 1.2% | 2.4%
Violation of court orders	21.1% | 2.0% | 76.8%	89.0% | 3.3% | 7.8%
Violent attitudes	9.8% | 30.9% | 59.3%	92.7% | 4.1% | 3.3%

N = 246 % for No Evidence, Possible or Partial, Clear Evidence

PAST items:
Perpetrator Risk Factors Subscale



RECENT items:
Perpetrator Risk Factors Subscale

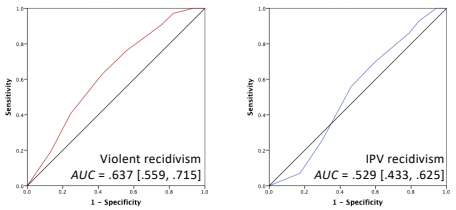


B-SAFER
Psychosocial Adjustment Subscale

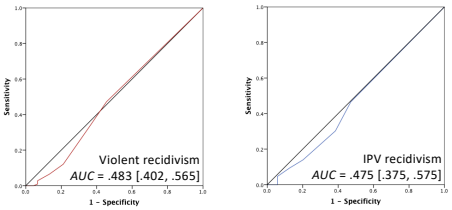
Psychosocial Adjustment	Past	Recent (4 weeks)
General criminality	32.5% | 24.8% | 42.7%	96.7% | 1.2% | 2.0%
Intimate relationship problems	1.6% | 7.7% | 90.7%	84.1% | 6.9% | 8.9%
Employment problems	19.5% | 25.6% | 54.9%	67.5% | 7.7% | 24.8%
Substance use problems	8.9% | 21.1% | 69.9%	93.5% | 4.5% | 2.0%
Mental health problems	16.7% | 32.5% | 50.8%	84.6% | 12.2% | 3.3%

N = 246 | % for No Evidence, Possible or Partial, Clear Evidence

PAST items:
Psychosocial Adjustment Subscale



RECENT items:
Psychosocial Adjustment Subscale

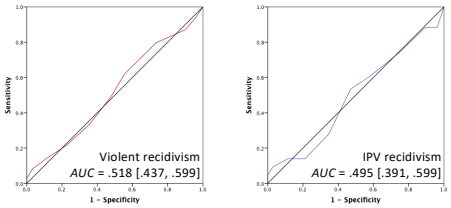


B-SAFER
Victim Vulnerability Subscale

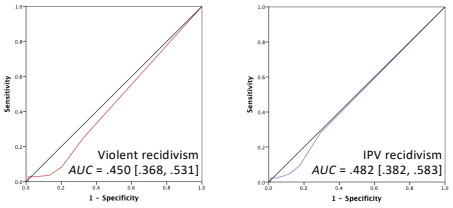
Victim Vulnerability Factors	Past	Recent (4 weeks)
Inconsistent behavior/attitude	16.7% | 21.5% | 61.8%	89.0% | 6.9% | 4.1%
Extreme fear	36.6% | 31.7% | 31.7%	89.0% | 5.3% | 5.7%
Inadequate access to resources	54.5% | 31.7% | 13.8%	95.1% | 4.1% | 0.8%
Unsafe living situation	49.2% | 26.8% | 24.0%	89.4% | 6.5% | 4.1%
Personal problems	57.7% | 15.9% | 26.4%	91.5% | 6.1% | 2.4%

N = 245-246 | % for No Evidence, Possible or Partial, Clear Evidence

PAST items:
Victim Vulnerability Subscale



RECENT items:
Victim Vulnerability Subscale



Conclusions

- Quantifying B-SAFER items only predicts violent recidivism
- Past psychosocial adjustment subscale (> 4 weeks) predicts violent reoffending only
  - Consistent with routine sample research
- Weak use with high-risk sample
- Not associated with IPV reoffending
- Recency of 4 weeks could not fully be examined

Future Directions

- Need to examine utility of B-SAFER in Canadian context
  - immediately post-index
  - requires recent interview info
  - file review is not suitable
- Question predictive validity
  - all 3 subscales
  - for IPV reoffending specifically
- Move from assumption all SPJs created the same
  - separately examine SPJ measures
  - independently (avoid bias)
- Examine incremental validity

CONTACT: Zoe Hilton, PhD, CPsych | zhilton@waypointcentre.ca
Lynden Perrault, BA (Hons) | LyndenPerrault@cmail.carleton.ca
Alicia LaPierre, BA (Hons) | AliciaLaPierre@cmail.carleton.ca
Sandy Jung, PhD, RPsych | sandy.jung@macewan.ca

Slides available: (psychology crime lab macewan)
sites.google.com/a/macewan.ca/psychology-crime-lab-macewan-university/

Acknowledgments:

The points of view expressed in this article do not necessarily represent the views of the Integrated Threat and Risk Assessment Centre. This research was supported by the Social Sciences and Humanities Research Council of Canada.

Social Sciences and Humanities Research Council of Canada | Conseil de recherches en sciences humaines du Canada | Canada

References

Au, A., Cheung, G., Kropp, R., Yuk-chung, C., Lam, G. L. T., & Sung, P. (2008). A preliminary validation of the Brief Spousal Assault Form for the Evaluation of Risk (B-SAFER) in Hong Kong. *Journal of Family Violence, 23*, 727–735.

Belfrage, H., & Strand, S. (2012). Measuring the outcome of structured spousal violence risk assessments using the B-SAFER: Risk in relation to recidivism and intervention. *Behavioral Sciences & the Law, 30,* 420-430.

Gerbrandij, J., Rosenfeld, B., Nijdam-Jones, A., & Galietta, M. (2018). Evaluating risk assessment instruments for intimate partner stalking and intimate partner violence. *Journal of Threat and Risk Management, 5,* 103-118.

Kropp, P. R., Hart, S. D., & Belfrage, H. (2005). *Brief spousal assault form for the evaluation of risk (B-SAFER): User manual.* Vancouver, Canada: Proactive Resolutions Inc.

Loinaz, I. (2014). Typologies, risk and recidivism in partner-violent men with the B-SAFER: A pilot study. *Psychology, Crime & Law, 20,* 183-198.

Storey, J. E., Kropp, P. R., Hart, S. D., Belfrage, H., & Strand, S. (2014). Assessment and management of risk for intimate partner violence by police officers using the Brief Spousal Assault Form for the Evaluation of Risk. *Criminal Justice and Behavior, 41,* 256–271.

Svalin, S., Mellgren, C., Levander, M. T., & Levander, S. (2018). Police employees' violence risk assessments: The predictive validity of the B-SAFER and the significance of protective actions. *International Journal of Law and Psychiatry, 56,* 71-79.