

Please contact us if you know of work that we should include in this listing.

The information contained in ODARA 101 is most fully described in the book:

Hilton, N. Z. (2021). Domestic Violence Risk Assessment: Tools for Effective Prediction and Management, Second Edition. American Psychological Association. https://www.apa.org/pubs/books/domestic-violence-risk-assessment-second-edition

Evaluation of ODARA 101

- Ham, E., Hilton, N. Z., Giesbrecht, C. J., & Macdonald, S. (2019) ODARA 101: Look What's New! Crime Scene, Volume 26, Issue 1 (6-7). https://osf.io/mhjga
- Hilton, N. Z., & Ham, E. (2015). Cost-effectiveness of electronic training in domestic violence risk assessment: ODARA 101. *Journal of Interpersonal Violence*. 30, 1065-1073. https://doi.org/10.1177%2F0886260514539762

Articles referred to in ODARA 101

Buchanan, K. (2009). *Risk assessment and spousal violence: Predictive validity and cultural applicability.* Dissertation Abstracts International: Section B: The Sciences and Engineering, Vol 71(1-B), 2010. pp. 651. [University of Regina]

While at the University of Regina, Dr. Kim Buchanan tested the ODARA's prediction of criminal charges or convictions for domestic violence. In a two-year follow up of ninety-nine men convicted of a violent offence against their domestic partners, in the Canadian province of Saskatchewan, she reported a large predictive effect for the ODARA (AUC = .72). (Learning Module 2: Validations of the ODARA, "Validations")

Campbell, J.C., Webster, D. W., & Glass, N. (2009). The Danger Assessment:

Validation of a lethality risk assessment instrument for intimate partner femicide. *Journal of Interpersonal Violence*, 24, 653-674.

https://doi.org/10.1177%2F0886260508317180

This article describes a case-control study, in which Danger Assessment scores were significantly higher among women interviewed after an attempted murder than women who were victims of less severe physical assault. (Resources: "Domestic Murder")



Eke, A.W., Hilton, N.Z., Harris, G.T., Rice, M.E., & Houghton, R.E. (2011). Intimate partner homicide: Risk assessment and prospects for prediction. *Journal of Family Violence*, 26, 211-216. https://doi:10.1007/s10896-010-9356-y

In a study we conducted with Dr. Angela Eke of men who killed their female partners, their average score was in the highest ODARA category at the time of a previous domestic assault documented in police records.

(Learning Module 1: ODARA Research and Development, "Prediction")

Gerth, J., Rossegger, A., Urbaniok, F., & Endrass, J. (2014). The Ontario Domestic Assault Risk Assessment (ODARA) – Validity und authorized German translation of an intimate partner violence screening tool. *Fortschritte der Neurologie-Psychiatrie*, 82(11), 616-626. https://psycnet.apa.org/doi/10.1055/s-0034-1384915

This article provides an authorized translation of the ODARA in German.

Gerth, J., Rossegger, A., Singh, J. P., & Endrass, J. (2015). Assessing the Risk of Severe Intimate Partner Violence: Validating the DyRiAS in Switzerland. *Archives of Forensic Psychology*, 1(2), 1-15.

In this study of 168 men who were arrested in Zurich for assaulting or seriously threatening their female partner, the ODARA risk category discriminated between general IPV recidivists and non-recidivists at a follow-up of three months with an AUC of .73 (Learning Module 2: Validations of the ODARA, "Validations")

Gray, A. L. (2012). Assessing risk for intimate partner violence: A cross-validation of the ODARA and DVRAG within a sample of incarcerated offenders. Unpublished MA thesis. [Carleton University]

While at Carleton University in Ottawa, Andrew Gray tested the ODARA, DVRAG, and three other assessments among 94 federal offenders. The ODARA and DVRAG were the strongest predictors of intimate partner violence in a follow up of over 5 years, both with AUCs of .71. (Learning Module 2: Validations of the ODARA, "More Recent Validation Studies for male offenders")

Hare, R.D. (2003). Hare Psychopathy Checklist – Revised (PCL-R) (2nd ed.). Toronto: Multi-Health Systems.

This manual explains how to score the PCL-R, which is an item in the Domestic Violence Risk Appraisal Guide (DVRAG).

(Resources: The ODARA/DVRAG System)

Hilton, N.Z. & Eke, A. W. (2016). Non-specialization of criminal careers among intimate partner violence offenders. *Criminal Justice and Behavior*. *43*, 1347-1363. https://doi.org/10.1177%2F0093854816637886

Among 93 men with a police record against a female marital, cohabiting, or dating partner, the ODARA predicted post-index IPV with a moderate effect size (AUC = .67) in a 7.5 year follow up. The ODARA also predicted other offenses with a moderate or large effect size including stalking, sexual assault and non-violent offenses.



(Learning Module 2: Validations of the ODARA, "Validations")

Hilton, N.Z. & Harris, G.T. (2009). How nonrecidivism affects predictive accuracy: Evidence from a cross-validation of the Ontario Domestic Assault Risk Assessment (ODARA). *Journal of Interpersonal Violence*, *24*, 326-337. https://doi.org/10.1177/0886260508316478

We have tested the ODARA's predictive accuracy in several validation studies. In this study, we tested the predictive accuracy of the ODARA for men without an extensive criminal history. (Learning Module 2: Validations of the ODARA, "Validations")

Hilton, N. Z., Harris, G. T., & Holder, N.L. (2008). Actuarial violence risk assessment in hospital-based partner assault clinics. *Canadian Journal of Nursing Research*, 40, 56-70.

The thirteen ODARA items were used to construct questions for an interview with the victim to ensure that the ODARA could also be used by professionals working in health care, shelters, victim services, or other services supporting victims of domestic violence. See this interview format in some of the videos in the scoring practice section of the ODARA 101 program. (Learning Module 1: ODARA Research and Development, "Purpose")

Hilton, N.Z., Harris, G.T., Popham, S., & Lang, C. (2010). Risk assessment among incarcerated domestic offenders across follow-up times and case criteria. *Criminal Justice and Behavior*, *37*, 815-832. https://doi.org/10.1177%2F0093854810368937

Together with Dr. Suzanne Popham at the Algoma Treatment and Remand Centre in Ontario, we tested the ODARA's predictive accuracy for criminal charges arising from domestic violence. The sample was limited to men incarcerated in a treatment centre, and the average ODARA score was in the second highest category. We followed these men up for an average of 8 years after release, and found that they spent about one third of that time in custody again. The ODARA significantly predicted recidivism in the full 8 year follow up and in follow-up periods as short as 6 months.

(Learning Module 2: Validations of the ODARA, "Validations")

Hilton, N.Z., Harris, G.T., & Rice, M.E. (2007). The effect of arrest on wife assault recidivism, controlling for pre-arrest risk. *Criminal Justice and Behavior, 34*, 1334-1344. https://doi.org/10.1177%2F0093854807300757

Men with lower ODARA scores were less likely to be arrested and convicted, even though the ODARA had not been invented at the time. In this study, arrest had no overall effect on domestic violence recidivism but a small beneficial effect in lower risk cases, mostly in terms of a delayed time until recidivism.

(Learning Module 1: ODARA Research and Development, "Percent who recidivate as a function of ODARA category")

Hilton, N.Z., Harris, G.T., Rice, M.E., Houghton, R., & Eke, A.W. (2008). An indepth actuarial risk assessment for wife assault recidivism: The Domestic Violence Risk Appraisal Guide. *Law and Human Behavior*, 32, 150-163. https://psycnet.apa.org/doi/10.1007/s10979-007-9088-6



We have tested the ODARA's predictive accuracy in several validation studies. In this study, we tested the predictive accuracy of the ODARA for men with an extensive criminal history; that is, a police record for wife assault and a correctional system file. (Learning Module 2: Validations of the ODARA, "Validations")

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,* 267–275. [Erratum 17, 131.]. https://psycnet.apa.org/doi/10.1037/1040-3590.16.3.267

The ODARA was created from a study conducted by the Research Department in Penetanguishene, at the Waypoint Centre for Mental Health Care, in collaboration with the Ontario Provincial Police Behavioural Sciences and Analysis Services. This article describes the follow-up study, statistical analysis, and predictive accuracy in the original ODARA research and the first validation study.

(Learning Module 1: ODARA Research and Development)

Hilton, N. Z., Harris, G. T., Rice, M. E., Eke, A. W., & Lowe-Wetmore, T. (2007). Training front-line users in the Ontario Domestic Assault Risk Assessment (ODARA), a tool for police domestic investigations. *Canadian Journal of Police and Security Services*, *5*, 95-98. https://osf.io/yqfza

Fifty police officers scored the ODARA for two cases, either with or without the scoring instructions. The officers who had the instructions all scored the cases correctly. This article also describes the evaluation of the classroom training program on which ODARA 101 is based. (Learning Module 2: Validations of the ODARA, "Reliability: Do ODARA Users Agree?")

Hilton, N.Z., Popham, S., Lang, C., & Harris, G.T. (2014). Preliminary validation of the ODARA for female intimate partner violence offenders. *Partner Abuse, 5.* 189-203.

Together with Dr. Suzanne Popham at the Algoma Treatment and Remand Centre in Ontario, we tested the ODARA's predictive accuracy for criminal charges arising from domestic violence. The sample was limited to women incarcerated in a treatment centre with a police record of violence against a current or former marital, common law, or dating partner; 6% of the partners were female. The average ODARA score was in the second highest category. We followed these women up for an average of nearly 9 years after release, and the ODARA score significantly predicted intimate partner violence recidivism. The overall rate of recidivism was 23%, and there was little evidence that items modified for offender gender predicted recidivism better than the unmodified ODARA.

(Learning Module 2: Validations of the ODARA, "Validations")

Jung, S., & Buro, K. (2017). Appraising risk for intimate partner violence in a police context. *Criminal Justice and Behavior*. 44, 240–260. https://doi.org/10.1177%2F0093854816667974

In a sample of 226 male perpetrators of actual or threatened violence, who were identified through police reports in Alberta and followed up for at least one year, the ODARA predicted subsequent convictions for any incident against an intimate partner with an AUC of .70. Any violent convictions were predicted with an AUC of .71, and charges (either violent or intimate-



partner related) produced AUCs of .67 and .66, respectively. The ODARA was scored with an inter-rater reliability of .91.

(Learning Module 2: Validations of the ODARA, "Validations")

Lauria, I., McEwan, T.E., Luebbers, S., Simmons, M., & Ogloff, J. R. P. (2017). Evaluating the Ontario Domestic Assault Risk Assessment in an Australian frontline police setting. Criminal Justice and Behavior, 44, 1545-1558. https://doi.org/10.1177%2F0093854817738280

This article describes a prospective validation of the ODARA among 854 family violence offenders reported to police in Australia. The ODARA predicted intimate partner violent recidivism with a medium effect size, AUC = .68. It also predicted nonphysical intimate partner abuse with an AUC of .73.

(Learning Module 2: Validations of the ODARA, "Validations")

Moser, A.E. (2012). Validation and expansion of the Ontario Domestic Assault Risk Assessment (ODARA) instrument: An early warning system. (Master's dissertation, University of New Brunswick, 2012).

Angela Moser tested the ODARA's prediction of new police reports for incidents of violence or other disputes against an intimate partner, among 174 male and 26 female perpetrators of such disputes, in the Canadian province of New Brunswick. The overall moderate predictive effect of the ODARA (AUC = .70), and AUC of .67 for female offenders. Prediction was improved by adding items measuring psychopathy.

(Learning Module 2: Validations of the ODARA, "Validations")

This work is also described in Moser, A. E., & Campbell, M. A. (2012). Validation and expansion of the Ontario Domestic Assault Risk Assessment (ODARA) instrument: An early warning system. Centre for Criminal Justice Studies & Psychology Department, University of New Brunswick. Available at https://www.unb.ca/saintjohn/ccjs/ resources/pdf/odarapoliceresponse2012.pdf

Radatz, D., & Hilton, N. Z. (2019). Determining batterer intervention program treatment intensities: An illustration using the Ontario Domestic Assault Risk Assessment. Partner Abuse 10(3), 269-282. https://doi.org/10.1891/1946-6560.10.3.269

This study explores how the ODARA can be used to guide treatment intensity decisions for IPV offenders. It illustrates how low, medium, and high treatment intensity categories can be created, using data from the ODARA construction and validation research, and focusing on men with criminal charges for the index assault. It recommends that batterer intervention programs use this approach, in order to apply the principles of effective intervention and improve treatment outcomes.

(Learning Module: Validations of the ODARA, "Validations")

Rettenberger, M. & Eher, R. (2013). Actuarial risk assessment in sexually motivated intimate-partner violence. *Law and Human Behavior*. 37, 75-86. https://psycnet.apa.org/doi/10.1037/b0000001

This study followed up 66 male domestic sexual assaulters for about 5 years after release from the Austrian Prison System. The domestic violence recidivism rate was 21% overall, and the ODARA predicted this recidivism with an AUC of .71. The ODARA also predicted criminal and



general violent recidivism. The DVRAG (an algorithm for combining the ODARA and the Hare (2003) Psychopathy Checklist-Revised (PCL-R)) also predicted recidivism but did not improve prediction over and above the ODARA.

(Learning Module 5: Interpretation of Risk, "User's interpretation of Risk")

Seewald, K., Rossegger, A., Urbanoik, F., Endrass, J. (2017). Assessing the risk of intimate partner violence: expert evaluations versus the Ontario Domestic Assault Risk Assessment. *Journal of Forensic Psychology: Research and Practice.* 17(4), pp. 217-231 https://doi.org/10.1080/24732850.2017.1326268

This study examined the accuracy of forensic experts using unstructured clinical judgment (UCJ) compared to graduate students scoring the ODARA in identifying high-risk perpetrators of IPV. After a mean follow-up period of 8.0 years, the base rate of violent recidivism was 20.0% and students using the ODARA were significantly more accurate than clinical experts in assessing long-term violent recidivism (AUC = .78 vs. 0.35). Raters without extensive clinical training were able to differentiate those spouses who carried on assaulting their intimate partner from those who desisted from violent behavior.

(Learning Module 2: Validations of the ODARA, "Validations")

Stewart, G., & Henning, K. R. (2010, September). *Risk assessment for intimate partner violence*. Paper presented at the 2nd Annual Domestic Violence Symposium, Seattle, WA.

Outside of Ontario, police Sergeant Greg Stewart and Professor Kris Henningthe ODARA's ability to predict subsequent domestic incidents in police occurrence reports among men in Portland, Oregon. Not all of these men had committed a violent domestic incident in the past, and the researchers had to pro-rate for items pertaining to the index assault and to the victim's children. They followed up the men for two years, and the ODARA significantly predicted domestic violence recidivism.

(Learning Module 2: Validations of the ODARA, "Validations")

Trinh, B. V. (2010). A Replication Study of the Domestic Violence Risk Appraisal Guide (DVRAG). (Doctoral dissertation, Alliant International University, 2010).

Among 64 men with a police record of domestic violence and attending domestic violence treatment in Orange County, California, the Domestic Violence Risk Appraisal Guide (DVRAG, an algorithm for combining the ODARA and a measure of psychopathy) predicted domestic violence recidivism with a large effect size.

(Learning Module 2: Validations of the ODARA, "More Recent Validation Studies for male offenders")

Ulmer, J. C. (2015). The Ontario Domestic Assault Risk Assessment (ODARA): A Validation and Comparison Study for an Oregonian Law Enforcement Agency. Unpublished PhD thesis. [George Fox University]

Jennifer Ulmer tested the ODARA's predictive validity when scored by police officers, among 268 men with a history of domestic violence. The average ODARA score was over 7, and the ODARA showed a small predictive effect for violence against persons, AUC = .57. Ulmer attributed this



poor performance to problems with training and use of the scoring instructions, as well as time constraints and limited information gathering (Learning Module 2: Validations of the ODARA, "Validations")

Other work on domestic violence

Ajil, A., & Staubli, S. (2023). Predictive policing and negotiations of (in)formality: Exploring the Swiss case. *International Journal of Law, Crime and Justice, 74*, 100605. https://doi.org/10.1016/j.ijlcj.2023.100605

This survey of risk assessment tools used by police in Switzerland reported that the ODARA was one of two IPV risk assessment tools widely used, the other being the German-based DyRiAS.

Ballucci, D., Campbell, M. A., & Gill, C. (2020). Use of the ODARA by police officers for intimate partner violence: Implications for practice in the field. Journal of Community Safety and Well-being, 5(3), 91-102. https://doi.org/10.35502/jcswb.150

This paper describes a study of police officers' use of the ODARA in domestic cases with and without use of physical violence by men and women. Police were more likely to make arrests in cases with higher ODARA scores and more physical violence and injury. The researchers concluded that the ODARA can improve decision making on discretionary matters. However, different definitions of IPV, limited understanding of the complexities of domestic abuse, and a focus on a single incident rather than the broader case history, reduced compliance with risk assessment policies.

Connor-Smith, J. K., Henning, K., Moore, S., & Holdford, R. (2011). Risk assessments by female victims of intimate partner violence: Predictors of risk perceptions and comparison to an actuarial measure. *Journal of Interpersonal Violence*, 26, 2517 – 2550. https://doi.org/10.1177/0886260510383024

Among 728 women whose male partners were arrested for IPV, women's perceptions of risk were split into high risk and low risk. Scores on a 10-item modification of the ODARA were also split into two categories of high risk (scores of 6 or higher) and low risk (5 or lower). Categories of perceived risk were positively related to the ODARA categories, with 67% agreement and a kappa statistic of .34. Women with relatively high risk ODARA scores expected low risk more often than the other way around.

Dinwiddie, K., J. (2013). Exploring the utility of victims' perceptions of risk assessment tools: Validation of the Ontario Domestic Assault Risk Assessment using shelter victim interviews (Unpublished doctoral dissertation). Chicago School of Professional Psychology. ProQuest, UMI Number: 3587611

This study of 57 women in shelters examined some psychometric properties of the ODARA. Scores on the ODARA and the Danger Assessment were positively correlated. The ODARA had acceptable internal and split-half validity. Perpetrators' age, where the victim lived,



and victim pregnancy accounted for only 1.5% of the variance found in the ODARA responses.

Eke, A.W., Hilton, N.Z., Meloy, J.R., Mohandie, K., & Williams, J. (2011). Predictors of recidivism by stalkers: A nine-year follow-up of police contacts. *Behavioral Sciences and the Law*, *29*, 271-283. https://doi.org/10.1002/bsl.975

Among stalking offenders, 77% committed new offenses and 33% committed violent recidivism, within an average follow-up of nearly 9 years. Most violent recidivism was against an intimate partner. Predictors of violent recidivism were similar to those in other populations: younger age at first offense, criminal history, failure on conditional release, and substance abuse.

Ennis, L., & Hilton, N. Z. (2021). Domestic violence risk assessment: Tools and procedures for threat assessment and management. In R. Meloy and J. Hoffman (Eds.), *International Handbook of Threat Assessment*, pp. 488 - 506. Oxford University Press.

This chapter looks at domestic violence through the lens of threat assessment. It describes the ODARA and other domestic violence risk assessment tools, and outlines how the guiding principles of risk, need, and responsivity apply to domestic violence assessment and intervention. The chapter also discusses victim safety and situational risk factors.

Fanarraga, I., Yang, J., & Koetzle, D. (2022). Intimate partner violence and risk assessment: A systematic review. Department of Criminal Justice, John Jay College of Criminal Justice. Available from Research Gate.

This systematic review of 48 studies with 49 samples identified 28 risk assessment tools used to assess risk of IPV recidivism, including 16 specifically designed to assess IPV risk. Average effect sizes ranged from AUC = 0.54 to 0.71, with the DVRAG average AUC = 0.71 based on five studies, and the ODARA average AUC = .67 based on 17 studies.

Folkes, S.E., Hilton, N. Z. and Harris, G.T. (2013). Weapon Use Increases the Severity of Domestic Violence but Neither Weapon Use nor Firearm Access Increases the Risk or Severity of Recidivism. *Journal of Interpersonal Violence*, 20, 1-14. https://doi.org/10.1177%2F0886260512468232

This article examines whether access to firearms increases assault severity or whether it is the characteristic of a subgroup of offenders who are more likely to commit severe and repeated domestic assault. Although firearm access and weapon use were related to actuarial risk of domestic violence recidivism, neither predicted occurrence or severity of recidivism.

Gerth, J., Rossegger, A., Bauch, E., & Endrass, J. (2017). Assessing the discrimination and calibration of the Ontario Domestic Assault Risk Assessment in Switzerland. *Partner abuse*. *8*(2), 168-189. https://DOI.org/10.1891/1946-6560.8.2.168

In 185 men identified from police reports of IPV who were followed up for 5 years, 32% reoffended with IPV and the ODARA had a small and significant predictive effect (AUC = .63).

Giesbrecht, C. J., Edmonds, T. F., & Bruer, K. C. (2022). A survey of intimate partner



violence intervention programs in Saskatchewan, Canada. Canadian Psychology/Psychologie canadienne. Advance online publication. http://dx.doi.org/10.1037/cap0000348

This paper describes a survey of treatment programs in Saskatchewan, where probation services, domestic violence courts, and domestic violence shelters and services in Saskatchewan currently use the ODARA. Some treatment programs reported also using the ODARA as well as other risk assessment tools

Graham, L. M., Sahay, K. M., Rizo, C. F., Messing, J. T., & Macy, R. J. (2021). The validity and reliability of available intimate partner homicide and reassault risk assessment tools: A systematic review. *Trauma, violence, & abuse, 22*(1), 18-40. https://doi.org/10.1177%2F1524838018821952

This systematic review of tools identified the ODARA one of the two most studied domestic violence risk assessment tools. Inter-rater reliability for ODARA scores across studies ranged from .90–.94. AUCs ranged from .64 to .77. Methodological differences across studies made it challenging to summarize validation findings.

Gryshchuk, O. (2020). Subtypes of female intimate partner violence suspects implications for the validity of the ODARA with females (Doctoral dissertation, University of New Brunswick).

This study identified 151 adult female suspects in police reports, and defined IPV defined as abusive, threatening, harassing, or violent behaviour intended to coerce an intimate partner. In an average three-year follow-up, 46 women (30%) had a new police contact for a domestic incident, with or without arrest. Only 3 recidivists were known to have committed a physical assault and the remaining reoffenses included harassment and breach of conditions. Researchers scored the ODARA with excellent reliability (total score ICC = .98, item ICCs ranged from .72 to 1.00). The ODARA had an average score of 3.41 and did not significantly predict recidivism (AUC = .522). It is not clear whether the ODARA's limited predictive value was due to its application to women who use IPV and/or to a sample of largely non-violent index offenses and non-violent outcomes.

Harris, G.T., Hilton, N.Z., & Rice, M.E. (2011). Explaining the frequency of intimate partner violence by male perpetrators: Do attitude, relationship, and neighborhood variables add to antisociality? *Criminal Justice and Behavior, 38*, 309-331. https://doi.org/10.1177%2F0093854810397449

In this study, we measured potential causes of domestic violence in four domains: antisociality, attitudes and values, aspects of the relationship, and neighborhood characteristics. The dependent variable was the total number of instances of domestic violence. Antisocial traits (especially psychopathy) gave the best evidence of causal status. Variables in each other domain exhibited some explanatory power, but some of the apparent causal role could be attributable to enduring antisociality.

Hegel, J., Pelletier, K. D., & Olver, M. E. (2021). Predictive properties of the Ontario Domestic Assault Risk Assessment (ODARA) in a northern Canadian prairie sample. *Criminal Justice and Behavior.*, 49(3), 411–31. https://doi.org/10.1177/00938548211033631



This study tested the ODARA in a sample of 300 men in a northern region of Canada. In an average follow-up of nearly 5 years, 45% committed IPV recidivism and the ODARA predicted IPV recidivism with a small effect size in the total sample and in the sub-sample of 278 Indigenous men (both AUCs = .62). Additional violent and non-violent outcomes were also studied in a variety of follow-up periods.

- Hilton, N. Z. (2019). Ontario Domestic Assault Risk Assessment (ODARA). The SAGE Encyclopedia of Criminal Psychology.
- Hilton, N.Z. (1992). Battered women's concerns about their children witnessing wife assault. *Journal of Interpersonal Violence*, 7, 77-86. https://doi.org/10.1177%2F088626092007001007

This article reports on interviews with assaulted women about their concerns for their children and how these concerns affected the decision to leave the assailant. Fifty-five percent of the women's children had witnessed violence, and 90% had become involved in the physical or psychological abuse in some way, even after separation. Fifty-five percent of the women left because of the risks to their children.

Hilton, N.Z. (Ed.) (1993). Legal responses to wife assault: Current trends and evaluation. Newbury Park, CA: Sage.

This edited book covers four major themes: historical framework of legal response to wife assault; police attitudes and action; prosecution, mediation, and treatment within the court system; and victims as defendants and participants in the legal system. The authors of each chapter describe evaluation research and highlight their own work in each area.

Hilton, N. Z. (2014). Actuarial assessment in serial intimate partner violence: Comment on Cook, Murray, Amat, and Hart. *Journal of Threat Assessment and Management, 1,* 87-92. https://psycnet.apa.org/doi/10.1037/tam0000013

This invited article shows the scoring and interpretation of the ODARA and DVRAG in a case described by Cook et al. in the same journal issue. The ODARA and DVRAG interpretations with respect to risk assessment concur with conclusions drawn by Cook et al. using the B-SAFER and the SAM but in the actuarial model risk management depends on apportioning existing resources according to policy-level decisions informed by risk and on individual-level assessment of criminogenic needs and responsivity.

Hilton, N. Z. & Eke, A. W. (2017) Assessing risk of intimate partner violence. In Campbell, J.C. & Messing, J. T. (Eds.). Assessing dangerousness: Domestic Violence offenders and child abusers (3rd Edn.), pp. 139-178. New York: Springer. https://doi.org/10.1891/9780826133274.0006

This chapter reviews risk assessment tools for intimate partner violence, as well as risk factors and correlates. It also discusses the potential for assessing risk after change, assessing risk among female domestic offenders, and practice issues in risk assessment and policing.



Hilton, N. Z., Eke, A. W., Kim, S, & Ham, E. (2023). Coercive control in intimate partner violence: Conceptual definition and association with recidivism. *Psychology of Violence*, *13*(4), 277–285. https://doi.org/10.1037/vio0000457

This study was a secondary analysis of 1,421 police reports of domestic violence by men against their female intimate partner in the ODARA construction and cross-validation datasets. Information about nonphysical abuse and attitudes was factor analyzed to see whether a construct of coercive control would emerge. There were two factors, reflecting psychological control and controlling attitudes, that together were related to a) the severity of physical violence at the index assault, b) the occurrence and severity of physical domestic violence recidivism. This study lends support to the idea that police officers can detect and document behaviours and attitudes related to the concept of coercive control.

Hilton, N. Z. & Ennis, L. (2020). Intimate partner violence risk assessment and management: An RNR approach to threat assessment. In S. Wormith, L. Craig, & T. Hogue (Eds.), What Works in Violence Risk Management: Theory, Research and Practice. Wiley, pp. 163-182. https://doi.org/10.1002/9781119315933

This chapter looks at the criminal justice response to domestic violence and describes the risk-need-responsivity model of effective correctional service. It then describes the ODARA and other domestic violence risk assessment tools, and criminogenic treatment needs related to domestic violence, and shows how the RNR model can help the field advance, especially in the practice of threat assessment.

Hilton, N. Z., Ham, E., & Green, M. M. (2019). Adverse childhood experiences and criminal propensity among intimate partner violence offenders. *Journal of interpersonal violence*, *34*(19), 4137-4161. https://doi.org/10.1177%2F0886260516674943

This study of men undergoing forensic assessment looked at adverse childhood experiences (ACEs) such as childhood abuse, witnessing domestic violence, and parental mental illness. The 99 men with a current or previous offense of intimate partner violence (IPV) had more ACEs than two other groups (233 men with violent offenses other than IPV and 103 men with nonviolent criminal histories). Among the men with IPV histories, higher ACEs were related to higher actuarial risk of violent recidivism. There was insufficient evidence to conclude that ACEs represent a criminogenic treatment need for men who committed IPV.

Hilton, N. Z., Harris, G.T., & Rice, M.E. (2001). Predicting violent recidivism by serious wife assaulters. *Journal of Interpersonal Violence*, *16*, 408-423. https://doi.org/10.1177%2F088626001016005002

This article examines psychopathy, the Violence Risk Appraisal Guide (VRAG), and motives thought to be related to men's violence against female domestic partners, among men with a history of serious domestic violence. Violent recidivism was lower among these men than among a larger sample of generally violent offenders.

Hilton, N. Z., Harris G. T., & Rice, M. E. (2014). The step-father effect in child abuse: Comparing discriminative parental solicitude and antisociality. *Psychology of*



Violence, 5, 8-15. https://psycnet.apa.org/doi/10.1037/a0035189

We studied the step-father effect, whereby children are more risk of physical abuse by parents than are children genetically related to their parents, in domestically violent men who had a minor child at the time of their ODARA index assault. Men were more likely to assault their step-children, an effect observed at all levels of offender antisociality.

Hilton, N.Z. & Harris, G.T. (2005). Predicting wife assault: A critical review and implications for policy and practice. *Trauma, Violence, & Abuse, 6*, 3-23. https://doi.org/10.1177%2F1524838004272463

This non-technical review examines the research evidence for the prediction of domestic violence recidivism by men against their female partners, lethal domestic violence, and the onset of domestic violence. A glossary of terms is included. Data from the ODARA research regarding the effect of domestic violence treatment attendance are presented. Because of statistical and practical limitations to predicting lethal assault, we recommend using an actuarial assessment of assault risk, plus attention to the strongest correlates of lethal assault when lethality is a concern.

Hilton, N. Z., & Harris, G. T. (2009). Criminal justice responses to partner violence: History, evaluation, and lessons learned. In D. J. Whitaker & J. R. Lutzker (Eds.), Preventing partner violence: Research and evidence-based intervention strategies (p. 219–243). American Psychological Association. https://doi.org/10.1037/11873-010

This chapter reviews the history and effectiveness of legislation, policing, prosecution, and alternative approaches to domestic violence. The more extensive knowledge about criminal justice responses to other forms of criminal conduct is described, along with lessons that could be applied to domestic violence.

Hilton, N.Z., Harris, G.T., & Rice, M.E. (2014). The actuarial assessment of risk for domestic violence recidivism. In A.C. Baldry & F.W. Winkel (Eds.). *Risk assessment in intimate partner violence*. Nigmegen, Netherlands: Nova Science Publishers, pp. 127-143.

This chapter reviews the development and validations of the ODARA in non-technical language.

Hilton, N. Z., & Quinsey, V. L. (2017). Domestic Violence Risk Appraisal Guide can be scored with PCL-R Facet 4. *Crime Scene*, *24*, 14-16.

This brief article describes how to use PCL-R Facet 4 instead of the total PCL-R score as the 14th item on the DVRAG. In the same construction sample as reported in Hilton, Harris, Rice, Houghton, & Eke (2008), the modified DVRAG had moderate predictive accuracy with an AUC of .71, and in the cross-validation sample it had a large predictive effect with an AUC of .73.

Hilton, N. Z., & Radatz, D. L. (2018). The criminogenic and noncriminogenic treatment needs of intimate partner violence offenders. *International journal of offender* therapy and comparative criminology, 62(11), 3247-3259. https://doi.org/10.1177%2F0306624X17740015



This study extended the one reported by Hilton, Ham, & Green (2019). The 99 men who had committed IPV had more of the Central Eight criminogenic treatment needs than the other men with violent or nonviolent criminal histories. The criminogenic needs that were highest in this group included: antisocial personality traits, procriminal attitudes, criminal associates, substance use, and poor marital and family relationships. This study supports targeting criminogenic treatment needs in domestic violence treatment programs.

Hilton., N. Z., Radatz, D. L. (2021). Criminogenic needs and intimate partner violence offenders: Association with recidivism and implications for treatment. *Psychological Services*, 18(4), 566–573. https://psycnet.apa.org/doi/10.1037/ser0000450

This study reanalyzed data from the original ODARA construction and cross-validation data, looking at how criminogenic treatment needs were related to the ODARA and to domestic violence recidivism. Out of the seven needs measured, antisocial personality traits had the strongest association with recidivism and added positively and incrementally to the prediction of recidivism after the ODARA. This study supports targeting criminogenic treatment needs in domestic violence treatment programs.

Hilton, N. Z., & Radatz, D. (2023). The effects of race and gender when predicting intimate partner violence recidivism in police reports using the Ontario Domestic Assault Risk Assessment. *Crime & Delinquency*. Advance online publication Jun 6, 2023. https://doi.org/10.1177/001112872311786

This study examined a modified version of the ODARA (omitting substance abuse and barriers to victim support) in 448 racially diverse individuals identified as IPV perpetrators by a United States urban police service. This included 361 men from the sample of Radatz & Hilton (2022) plus 87 women. Recidivism was defined as a new police report for IPV in a fixed 2-year follow up. 33% recidivism and the ODARA AUC = 0.59. Predictive effects were mostly small. The ODARA did not significantly predict women's IPV recidivism or other violent offending, and predicted IPV among White individuals and any violent recidivism among Black individuals. The authors concluded that gender and race can affect the validity of IPV risk assessment, despite evidence for predictive accuracy within a diverse sample

Hilton, N. Z., Pham, A. T., Jung, S., Nunes, K., & Ennis, L. (2021). Risk scores and reliability of the SARA, SARA-V3, B-SAFER, and ODARA among Intimate Partner Violence (IPV) cases referred for threat assessment. *Police Practice and Research*, 22(1), 157-172. https://doi.org/10.1080/15614263.2020.1798235

This study is the first article from the Optimizing Risk Assessment for Domestic Violence (ORADV) project that evaluates risk and outcomes among men referred to a specialized threat assessment service following a police report of intimate partner violence. The sample scored higher on the ODARA than previously reported routine policing samples. Inter-rater reliability on the ODARA was r = .84. Percentage agreement on ODARA items ranged from 69% (victim concern) to 97% (victim's biological child with a previous partner).

Hilton, N. Z., Rice, M. E., Harris, G. T., Judd, B., & Quinsey, V. L. (2021). The Violence Risk Appraisal Guide, Sex Offender Risk Appraisal Guide and Violence Risk Appraisal Guide-Revised for violence risk assessment and the Ontario Domestic



Assault Risk Assessment and Domestic Violence Risk Appraisal Guide for domestic assault risk In R. K. Otto and K. S. Douglas (Eds.) *Handbook of violence risk assessment* (2nd ed.). New York: Routledge/Taylor & Francis. https://books.google.ca/books?hl=en&lr=&id=vdoMEAAAQBAJ&oi=fnd&pg=PT195&ots=tb4bE5PN8v&sig=IMunRICRzSx9QpCE593uQ4nBeJk#v=onepage&g&f=false

This chapter describes the research creating and validating the ODARA, the DVRAG, and other actuarial tools for violence risk assessment. Case scoring samples are included.

Jolliffe Simpson, A. D., Joshi. C., & Polaschek, D. L. L. (2021). Predictive validity of the DYRA and SAFVR: New Zealand Police's family violence risk assessment instruments. *Criminal Justice and Behavior, 48*(10), 1487–1508. https://doi.org/10.1177/0093854821997525

This study tests the validity of a new IPV risk assessment tool, the SAFVR, in New Zealand. The authors report that vAUCs for the SAFVR were smaller than previously found for the ODARA in New Zealand, reported in unpublished studies.

Jung, S., & Himmen, M. K. (2022). A field study on the police use of the Ontario Domestic Assault Risk Assessment (ODARA). *Journal of Threat Assessment and Management*, 9(4), 204–217. https://doi.org/10.1037/tam0000175

This study is the first in Canada to examine the predictive accuracy of the ODARA when scored by the investigating police officer. In 97 men who assaulted their female partner, the ODARA predicted general recidivism with medium to large effects (AUCs = .698 to .713), predicted violent recidivism with medium effects (AUCs = .629 to .700), and predicted IPV recidivism with small to medium effects (AUCs = .629 to .682). When predicting IPV recidivism, AUCs were statistically significant for reconvictions but not for police charges.

Jung, S., Himmen, M. K., Velupillai, N., & Buro, K. (2022). Does stalking behavior improve risk prediction of intimate partner violence? *Victims & Offenders*, 17(4), 553-570. https://doi.org/10.1080/15564886.2021.1963899

This study examined whether 226 police-reported cases of IPV had a history of stalking, and whether stalking improved prediction of IPV over and above risk assessment tools. Stalkers did not have significantly different ODARA scores or different IPV recidivism rates. In regression analyses, the ODARA significantly predicted IPV recidivism (and general recidivism). The ODARA remained significant when adding stalking to the model, and stalking did not improve prediction.

Jung, S., & Stewart, J. (2019). Exploratory comparison between fatal and non-fatal cases of intimate partner violence. *Journal of Aggression, Conflict and Peace Research*, *11*(3), 158–168. https://doi.org/10.1108/JACPR-11-2018-0394

This study found that total ODARA scores were not significantly different between three groups of IPV perpetrators: 1. those committing intimate partner homicide; 2. A group who committed nonfatal IPV and were matched to the homicide group on age and sex; 3. a random sample of IPV cases from police reports.



McEwan, T. E., Pichler, A. S., Ogloff, J. R. P., & Simmons, M. (2023). The validity of the ODARA in Australian intimate partner violence cases without prior assault/credible threat or cohabitation. *Criminal Justice and Behavior*, 9385482211398–. https://doi.org/10.1177/00938548221139854

This study compared 200 men who physically assaulted a woman with whom they had cohabited (meeting the original ODARA criteria for an eligible index assault) and 275 men in domestic incident reports who had not assaulted their partner (n = 212), who had never cohabited with their partner (n = 32) or both (n = 31). One definition of recidivism used in the study was any post-index domestic incident involving the same partner (regardless of who was recorded as the aggressor) that involved physical violence. The average follow-up was 16 weeks.* The ODARA's predictive accuracy for recidivism was tested using the c-index, which is a weighted average of time-specific AUC values.

Among the men who met full ODARA criteria, the ODARA predicted recidivism with a medium effect size, c-index = .69 (previously reported by Lauria et al., 2017). Among the men who did not meet at least one eligibility criterion, ODARA scores were lower (some items may not have been applicable) and the ODARA did not significantly *predict* recidivism, c-index = .56. For those who had never physically assaulted their partner (which was the majority of the non-criterion group), the ODARA was not a significant predictor of new physical assaults by the man, c-index = .55. There were too few cases to test the ODARA for dating violence.

*The study also examined any post-index police occurrence involving the same partner (not necessarily assault), with similar predictive effects overall.

McTague, J. (2018). Validation of the Ontario Domestic Assault Risk Assessment (ODARA) instrument with men and women. (Master's thesis, University of New Brunswick).

This study followed 209 men and 100 women identified as perpetrators of IPV in police reports. This study defined domestic violence as an event in which someone "abuses or threatens to abuse their intimate partner by use of physical, sexual, psychological (including blackmail and stalking), emotional, or financial abuse" (page 29). In a 1-year follow up, 34% of men reoffended and the ODARA predicted this outcome with a medium effect size (AUC = .64). Women reoffended at a lower rate (18%) and the ODARA was not a significant predictor (AUC = .52).

Messing, J.T., & Thaller, J. (2013). The average predictive validity of intimate partner violence risk assessment instruments. *Journal of Interpersonal Violence*, 28, 1537-1558. https://doi.org/10.1177%2F0886260512468250

This review identified the ODARA as the most accurate IPV risk assessment tool on average. The predictive accuracy of the ODARA in their meta-analysis (AUC= .67) was equivalent to a moderate effect size and statistically larger than that of the four other tools studied.

Nazarewicz, J. (2020). "You fight like a girl": Intimate partner abuse perpetration and recidivism amongst Australian women. Doctoral thesis, Swinburne University of Technology.

This study followed 99 women through police reports for one year. Only 20 women had committed IPV at the index assault, and only 6% of the total sample committed a subsequent IPV



offense. AUCs for violent and nonviolent outcomes ranged from .40 to .56 and the confidence intervals were wide, with the result that none of these effects were significant.

Olver, M. E., & Jung, S. (2017). Incremental prediction of intimate partner violence: An examination of three risk measures. *Law and Human Behavior, 41*(5), 440–453. https://doi.org/10.1037/lhb0000251

Olver and Jung tested the ODARA's predictive validity when scored from police files by researchers with good inter-rater reliability (correlation = .90). Among 289 men and women with a history of domestic violence in opposite-sex relationships, the average ODARA score was 5.4. The ODARA showed a large predictive effect in an average three-year follow up, AUC = .72. ODARA scores also predicted violent and general recidivism with large effects. Psychosocial adjustment items from the Spousal Assault Risk Assessment provided incremental predictive validity over the ODARA for intimate partner violence.

Peters, J. R., Nunes, K. L., Ennis, L., Hilton, N. Z., Pham, A., & Jung, S. (2022). Latent class analysis of the heterogeneity of intimate partner violent men: Implications for research and practice. *Journal of Threat Assessment and Management*, 10(3), 202–219. https://doi.org/10.1037/tam0000192

This paper describes a study finding three distinct profiles of men who perpetrate intimate partner violence (IPV): IPV-specific (29%), generally violent/antisocial (20%), and both IPV and generally violent/antisocial (51%). The latter group had higher ODARA scores. The groups also differed in their rates of IPV recidivism, any violent recidivism, and general recidivism.

Pham, A. T., Hilton, N. Z., Ennis, L., Nunes, K. L., & Jung, S. (2023). Predicting recidivism in a high-risk sample of intimate partner violent men referred for police threat assessment. *Criminal Justice and Behavior, 50*(5), 648–665. https://doi.org/10.1177/00938548221143535

This study included 247 men referred for threat assessment due to domestic violence. The average ODARA score was 7.87 (range 2–12). In an average 4 year follow up, 91 men (37%) had a new criminal charge for a post-index intimate partner violence assault. The ODARA significantly predicted IPV recidivism with a small effect size, AUC = .587. The ODARA also predicted any violence (AUC = .630) and any general recidivism (AUC = .687). This study also found that total scores on the SARA-V2 predicted all types of recidivism (AUCs = .574 - .684), and total scores on the SARA-V3 and B-SAFER predicted general recidivism (AUC = .583, .595). The article also reports results for SARA and B-SAFER sub-scales.

Pham, A. T., & Jung, S. (2022). Risk Constructs Behind Ontario Domestic Assault Risk Assessment. Victims & Offenders. Advance online publication https://doi.org/10.1080/15564886.2022.2117750

This article describes a factor analysis of the ODARA items in a sample in which the ODARA's predictive validity for IPV and other outcomes was already reported (Jung & Buro, 2017). Three



factors to the ODARA were identified: antisocial patterns, victim vulnerabilities, and information related to the index-offence. The antisocial patterns factor predicted IPV recidivism, any violent offending, and any general recidivism. Victim vulnerabilities predicted general offending, and the index offense factor did not predict any outcomes. The authors conclude that IPV risk is multidimensional, and that improved understanding of IPV risks that may be relatively difficult to assess and measure could improve risk assessment.

Radatz, D., & Hilton, N. Z. (2019). Determining batterer intervention program treatment intensities: An illustration using the Ontario Domestic Assault Risk Assessment. Partner Abuse, 10(3). https://doi.org/10.1891/1946-6560.10.3.269

This study illustrates how treatment providers can identify treatment intensity categories using ODARA score distributions. Treatment providers can the highest risk individuals at intake using their own percentiles, and prioritize them for the best available, most intensive treatment.

Radatz, D. L., & Hilton, N. Z. (2022). The Ontario Domestic Assault Risk Assessment: Predicting violence among men with a police record of intimate partner violence in the United States. *Criminal Justice and Behavior, 49*(3), 371-388. https://doi.org/10.1177/00938548211035816

This study validated the ODARA in a racially diverse sample of men in the United States. Of the 356 men 35% committed IPV recidivism against a female partner in a fixed 2-year follow-up. Due to limited information, only 11 ODARA items could be scored. This version of the ODARA predicted IPV recidivism with a small effect size (AUC = .59) and other violent and non-violent outcomes. There was poor calibration with 2-year IPV recidivism rates drawn from the original ODARA research.

Rice, M.E., Harris, G.T., & Hilton, N.Z. (2010). Violence Risk Appraisal Guide and Sex Offender Risk Appraisal Guide for violence risk assessment and the Ontario Domestic Assault Risk Assessment and Domestic Violence Risk Appraisal Guide for wife assault risk assessment. In R. Otto and K. Douglas (Eds.) Handbook of violence risk assessment tools. (pp. 99-120). Oxford, UK: Routledge/Taylor & Francis.

This chapter describes the family of violence risk assessments developed by the Penetanguishene researchers using similar techniques. A second edition of this book is in progress, with an updated chapter including the VRAG-R and the DVRAG-4.

Richardson, J., & Norris, K. (2022). Evaluating the risk assessment tools used by Australian police officers responding to domestic violence incidents: a narrative review. Psychiatry, Psychology and Law, 28(6), 785-801. https://doi.org/10.1080/13218719.2020.1739576



This paper reviews family and domestic violence risk assessment tools used by police in Australia. It ranks the Australian tools in terms of their content consistency with published, validated tools including the ODARA. Note that some ODARA items are described incorrectly, so use of the ODARA scoring manual is advised.

Schafers, C., Olver, M. E., & Wormith, J. S. (2020). Dynamic appraisal of intimate partner violence risk and need: Results from an outpatient treatment program. *Criminal Justice and Behavior, 48*(4), 481–501. https://doi.org/10.1177/0093854820980498

In this study, 88 men attending a court-mandated domestic violence treatment program were followed for 15 months. The average ODARA score was 5.5, and ODARA scores were highly correlated with scores on the SARA Version 3 (SARA-V3) measured before and after treatment. The ODARA predicted general recidivism with a large effect (AUC = .72) and treatment dropout with a medium effect (AUC = .70). This study did not measure IPV recidivism, but general violence (against any victim); the ODARA had a small effect (AUC = .63, not significant). SARA-V3 scores changed from pre- to post-treatment, and the post-treatment SARA-V3 scores improved prediction of general and violent recidivism over the ODARA. The authors concluded that there is growing support for using the ODARA and SARA in tandem.

Sentürk, A. B., Wesemüller, M. & Rettenberger, M. (2016). Kriminalprognose bei häuslicher Gewalt – Validierung der deutschsprachigen Version des Ontario Domestic Assault Risk Assessment (ODARA) an weiblichen und männlichen häuslichen Gewalttätern [Risk assessment in cases of domestic violence - a validation of the German version of the Ontario Domestic Assault Risk Assessment (ODARA) with female and male domestic violence offenders]. Rechtspsychologie – Rpsych, 2, 330-344. https://doi.org/10.5771/2365-1083-2016-3-330

This study identified 186 men and 44 women from police reports of IPV. In a 5-year follow-up, 18% of the men committed domestic violence recidivism and 27% committed general recidivism, and the ODARA had small predictive effects for these outcomes (AUCs = .58 and .60). The women reoffended at a lower rate (9% IPV and 16% general recidivism) and the ODARA predicted outcomes with similar effect sizes (AUCs = .61 and .60). However, statistical significance was observed only for the prediction of general recidivism among men.

Storey, J. E., & Hart, S. D. (2014). An examination of the Danger Assessment as a victim-based risk assessment instrument for lethal intimate partner violence. *Journal of Threat Assessment and Management, 1*(1), 56–66. https://doi.org/10.1037/tam0000002

This study of 100 male IPV offenders attending an outpatient forensic clinic for a presentence assessment found that the average ODARA score was 6.65 (SD = 2.12) and 50% fell in to the highest risk category. Inter-rater reliability in a subsample of 23 cases was ICC1 = .81 for total



scores and ICC1 = .89 for the seven risk categories. Only three items had missing information across the entire sample. ODARA scores were positively correlated with scores on the Danger Assessment, r = .25 when the DA was scored from victim information alone and r = .27 when using victim information plus file information.

Van der Put, C. E., Gubbels, J., & Assink, M. (2019). Predicting domestic violence: A meta-analysis on the predictive validity of risk assessment tools. *Aggression and Violent Behavior*, *47*, 100–116. https://doi.org/10.1016/j.avb.2019.03.008

This review reported that actuarial tools performed better than other tools for domestic violence risk assessment.

Winfield, A., Hilton, N. Z., Poon, J., Straatman, A. L., & Jaffe, P. G. (2023). Coping strategies in women and children living with domestic violence: Staying alive. *Journal of Family Violence*. Advance online publication https://doi.org/10.1007/s10896-022-00488-1

Interviews with mothers who experienced severe or potentially life-threatening domestic violence, and adult survivors of childhood exposure to domestic violence, revealed how mothers and their children worked together to reassure each other, keep each other safe, and make plans to leave the abusive situation. The authors concluded that safety planning should incorporate the mother-child dyad.

Youngson, N., Saxton, M., Jaffe, P. G., Kielt, L., Olszowy, L., Dawson, M., & Straatman, A.-L. (2022). Domestic violence risk assessment research to real-world practice: The devil is in the implementation. Violence and Victims, 37(4), 425–440. https://doi.org/10.1891/vv-2021-0129

In this study, a thematic analysis of 255 open text responses from a survey of 1,405 participants (mostly from shelter, police, healthcare, and child protection services) revealed challenges in the implementation of risk assessment, including the ODARA.