Improving police risk assessment of intimate partner violence

Felix Leung and Lily Trimboli

SUMMARY

BACKGROUND

Previous research has shown that the NSW Police Force's Domestic Violence Safety Assessment Tool, the DVSAT, has poor predictive accuracy in discriminating those who experience intimate partner re-victimisation from those who do not (Ringland, 2018). The aim of this study was to develop a tool with better predictive accuracy than the DVSAT. Using police data on 234,454 incidents of intimate partner violence recorded between January 2016 and December 2018, we evaluated four predictive models of intimate partner re-victimisation:

- NRAP-all: a model with all 16 risk factors identified in the National Risk Assessment Principles (NRAP) developed by Australia's National Research Organisation for Women's Safety (ANROWS);

- NRAP-10: a model with only the 10 high-risk factors identified by ANROWS in the NRAP;

- SAFVR: the Static Assessment of Family Violence Recidivism (SAFVR), developed by the New Zealand Police; and

- DVSAT-8: a model with the eight items from the NSW DVSAT that are most predictive of repeat victimisation.
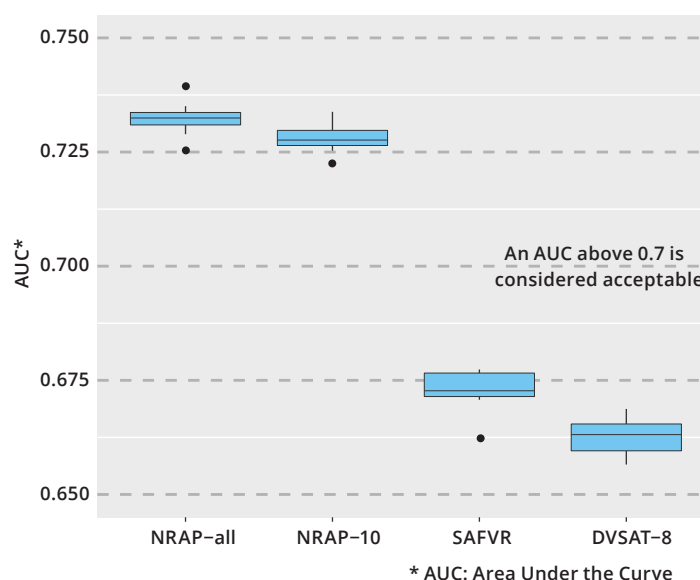
KEYWORDS

intimate partner violence

re-victimisation   risk assessment

predictive accuracy

KEY FINDINGS

Predictive performance of the four models tested

Of the four models, only the two NRAP models had acceptable predictive performance (i.e., with an Area under the Curve (AUC) above 0.7). The model with the highest AUC was the NRAP model that combined all 16 risk factors identified by ANROWS (with an average AUC of 0.732). When tested on unseen data, its out-of-sample AUC was similar, at 0.738. The simpler NRAP-10 model performed only slightly worse with an average AUC of 0.728.

Further analysis found that the best performing NRAP model could be simplified, with almost no loss in predictive performance. Of the 16 risk factors in the NRAP model, a simplified model using only the best five predictors delivered an out-of-sample AUC of 0.734.

CONCLUSION

This study demonstrates that a risk assessment instrument with a small number of variables can identify victims who are most at risk of future intimate partner violence. With an appropriately selected risk threshold to match service capacity, the simplified model could help control the volume of referrals at a desired level.