Police Science

Australia & New Zealand Journal of Evidence Based Policing

www.anzsebp.com

CALL FOR NOMINATIONS

Distinguished Police Scientist Award

This annual award recognizes a member of the ANZSEBP who is an innovative law enforcement practitioner who is central to the implementation of a high quality program of work that advances Evidence Based Policing in their agency. These leaders of evidence-based policing not only help make high-quality police scholarship possible but also advance significant reforms in policing by utilizing science in their decision making.

- Nominees must be or have been **a member of a law enforcement agency**, either as a sworn officer or civilian employee; and

- Nominees must have been **central to the implementation of a <u>documented</u> rigorous scientific evaluation** in their affiliated agency. Such evaluations can be conducted for various interventions, policies, or practices and include a wide variety of outcomes (i.e., crime reduction, improvement in citizen satisfaction, reduction of fear, improvements in police legitimacy, etc.); and

- Nominees must show a **record of incorporating and translating evidence-based practices in their agency**. These practices may include implementing strategies that have been shown to be effective in reducing and preventing crime or using practices supported by research that address fear of crime, police legitimacy, internal accountability, and other law enforcement concerns. Such a record of practice might also include greater incorporation of science and scientific processes in decision making or training.

Selection decisions are made by the ANZSEBP Management Committee.

The Award winner will receive: free registration at the annual SEBP conference, a speaking role at the SEBP conference, an award plaque, free subscription to the Journal of Experimental Criminology for one year, and a published interview about his/her accomplishments to appear in Police Science.

To nominate for this award please go to our website (**www.anzsebp.com**) to download the nomination forms.

Outstanding Police Experiment Award

This award recognizes a single research project that contributes significantly to policing science. To be eligible a study must have been conducted within the last five years.

- Nominees can be individuals or teams.

- The study must be an impact evaluation that assesses the effectiveness of a policing intervention.

- A policing intervention is defined as some kind of a strategy, technique, approach, activity, campaign, training, directive, or funding/organisational change that involves police in some way (other agencies or organisations can be involved). Police involvement is broadly defined as police initiation, development or leadership where police deliver or implement the intervention or where police are recipients of the intervention. We will also consider interventions that are related, focused or targeted to police practices.

- The project must use randomised experimental (e.g., RCTs) and quasi-experimental evaluation designs with a valid comparison group that does not receive the intervention. We will accept designs where the comparison group receives 'business-as-usual' policing, no intervention or an alternative intervention (treatment-treatment designs) and quasi-experiments that control the assignment of cases to treatment and control groups (regression discontinuity), match the characteristics of the treatment and control groups (matched control), statistically account for differences between the treatment and control groups (designs using multiple regression analysis), or provide a difference-in-difference analysis (parallel cohorts with pre-test and post-test measures). Single group designs will not be considered. The following designs will be considered:
  – Randomized Controlled Trials
  – Meta-analyses
  – Cross-over designs
  – Regression discontinuity designs
  – Designs using multivariate controls (e.g., multiple regression)
  – Matched control group designs with or without pre-intervention baseline measures (propensity or statistically matched)
  – Unmatched control group designs with pre-post intervention measures which allow for difference-in-difference analysis
  – Short interrupted time-series designs with control group (less than 25 pre- and 25 post-intervention observations)
  – Long interrupted time-series designs with or without a control group (≥25 pre- and post-intervention observations)
  – Unmatched control group designs without pre-intervention measures where the control group has face validity
  – Raw unadjusted correlational designs where the variation in the level of the intervention is compared to the variation in the level of the outcome
  – Treatment-treatment designs

Selection decisions are made by the SEBP Executive Committee.

The Award winner (or winning team representative) will receive: free registration at the annual SEBP conference, a speaking role at the SEBP conference, an award plaque, free subscription to the Journal of Experimental Criminology for one year, an invitation to publish the project results in Police Science.

To nominate for this award please go to our website (**www.anzsebp.com**) to download the nomination forms.

Key Dates

Nomination Submission Deadline:	**1 March 2018**
Recipient Notification:	**1 May 2018**

Contents

Contributions
Articles on issues of professional interest are sought from Australasian police officers and police academics. Articles are to be electronically provided to the Secretariat, newman.michaelb@police.qld.gov.au. Articles are to conform to normal academic conventions. Where an article has previously been prepared during the course of employment, whether with a police service or otherwise, the contributor will be responsible for obtaining permission from that employer to submit the article for publication to *Police Science*. Contributors are expected to adhere to the Journal's publishing guidelines. These guidelines are available in this journal. All papers are peer-reviewed.

Disclaimer
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Membership comprised from: • State Police • Australian Federal Police • Australian Institute of Police Management (AIPM) • New Zealand Police • Australia and New Zealand Police Advisory Agency • Universities

Message from the Chairperson

Peter Martin *APM Ph.D.*

Chairperson, Australia and New Zealand Society of Evidence Based Policing
Deputy Commissioner, Queensland Police Service, AUSTRALIA
Adjunct Professor, University of Queensland, AUSTRALIA

As I write this message, I am mindful that we have just held our third annual conference. Once again the Society enjoyed the magnificent surroundings and hospitality of the Australian Institute of Police Management (AIPM) at Manly, Sydney, Australia. Our key note speakers this year included William Terrill (Arizona State University), Assistant Chief Constable Alex Murray (UKSEBP), Professor Lawrence Sherman (Cambridge University), Dr Barak Ariel (Cambridge University), Associate Professor Michael Townsley (Griffith University) and Dr Justin Ready (Griffith University).

The conference had a very ambitious agenda that included some 18 short shot presentations from almost every policing agency in Australasia. This edition of our publication – *Police Science: The Australia & New Zealand Journal of Evidence Based Policing* includes articles sourced from some of the key note and short shot presenters at the conference.

I have had the privilege and honour of leading the Society, as Chairperson, since it was formed in 2013. The Society has achieved a great deal since its embryonic beginnings at Customs House in Brisbane Queensland during the first Evidence Based Policing (EBP) Masterclass run by the University of Queensland (UQ). Some of the highlights for the Society over the last four years have been:

- 2013:
  – development and ratification of our Constitution
  – liaison with UKSEBP
  – link with key strategic partners to develop opportunities and benefits for members.

- 2014:
  – Negotiate opportunities with UQ to hold a second EBP Masterclass
  – website developed and launched
  – first AGM held at AIPM.

- 2015:
  – First annual conference held at AIPM
  – Second AGM where membership stood at 750 and starting to receive international support
  – Social media account established (Twitter: @ANZSEBP)
  – Strategic links formed with other SEBP Societies in the United Kingdom, America and Canada.

- 2016:
  – Second annual conference held at AIPM with 67 participants
  – Third AGM with membership having grown to 1200
  – Development of a 5 year Strategic Plan
  – Appointment by Queensland of an Evidence Based Policing Visiting Fellow at the University of Queensland, in part, to assist the Society
  – First two publications of Police Science

  – ANZSEBP Executive Committee formed a Panel with Professor Lorraine Mazerolle (UQ) and Professor Larry Sherman (Cambridge University) to present Evidence Based Policing Perspective in Melbourne to the Victoria Police Executive Command.

- 2017:
  – Third annual conference again held at the AIPM with 79 participants
  – Another AGM with membership growth of almost 100% from 1200 to over 2300
  – The introduction of a quarterly newsletter for members
  – Encouraged development of opportunities between Cambridge University and the AIPM.

At our last AGM, I am proud to say that my good friend and colleague, Deputy Commissioner Stephen Brown, Western Australia Police was elected as the new Chairperson for the Society. I will remain engaged with the Society as the Deputy Chairperson. Steve also has a vision for the Society into the future, setting an aspirational membership target of 10,000 by the next Conference. Development of a national communications strategy is to commence that will further highlight the work being undertaken throughout all jurisdictions in Australasia and encourage evidence based policing at every opportunity. Work is also underway to have Journal articles readily available to the public to enable a wider audience to search for and cite relevant articles. We will also continue to work with our key strategic partners to broaden our international reach to support other countries with EBP.

Membership of the ANZSEBP remains FREE. As a reminder, you can join the ANZSEBP by accessing our website at **www.anzsebp.com**. Membership entitles you, amongst other benefits, to:

- full access to the web site including, amongst other things, research resources;

- subscription to Police Science, two issues per year;

- subscription to the ANZSEBP Newsletter, released quarterly;

- reduced price conferences (e.g. the annual ANZSEBP Conference)

- reduced subscription to the Journal of Experimental Criminology

- reduced subscription to Policing: A Journal of Policy and Practice; and

- the ability to network and learn from other practitioners.

I trust that you will enjoy each of these articles and find value and relevance that can be applied in the important work that you do.

Kind regards

Peter Martin APM Ph.D.
Chairperson (former), ANZSEBP

Message from the Editor

Professor Colin Rogers

University of South Wales, UK

A very warm welcome to the latest edition of the journal. Firstly, let me congratulate Deputy Commissioner Stephen Brown, Western Australia Police, on his election as the new chair for the society. At the same time let me offer my thanks to Deputy Commissioner Peter Martin, Queensland Police Service for all his work and assistance, not only with the society as a whole, but with the launch of this journal to promote evidence based policing in Australia and New Zealand at a time when the approach supports tackling all forms of criminality.

Recent terrorist attacks in London, Melbourne and across the globe remind us that there are occasions when the world is not as safe as we would want it to be. It is of course the duty of the state to protect its citizens from harm and to provide a safe and secure environment for them to live in. This of course devolves to our law enforcement agencies. However, police and security forces face a daunting task, as those who would seek to harm us change their methods and targets continuously in an effort to combat attempts to bring them to justice. The ways in which the state can react to such atrocities of course varies from country to country, but in general there is an understandable approach which involves tighter and harsher legislation, increased use of surveillance and technology and tougher measures called for by politicians of whatever persuasion.

Much of the responses called for requires good intelligence and information and whilst the use of technology should surely provide some of this through various means, there can be no substitute for face to face interaction by the police with community members as part of their daily activities to ensure a good and strong supply of information. Police in the UK, in particular, have suffered enormous cuts following austerity and political philosophy changes which has seen the number of constables in the UK reduced from 110,080 in 2009 to a reported 96,637 in 2016. This nearly 14000 reduction in the rank that deals with front line incidents has meant a continuance of response policing (emergency calls) at the expense of neighbourhood or beat policing teams across the 43 forces in England and Wales.

The danger of course is that less police in the community on a regular basis means less information and intelligence about those who would enter criminality or terrorism activities. After all, terrorists come from communities too and we have seen the success of the evidence based policing approach utilising such sources of information. . So the question arises, what price the safety and security of individuals by the state? Politicians have difficult choices to make, but one could argue that that is why they became politicians in the first place. However, the maintenance of a visible, accessible and constant police presence in community must surely be of national interest, especially when so much information and intelligence actually comes from that source. It has been alleged by some in the UK that economic cuts to neighbourhood policing, so often seen by many as not being 'real policing', and the undermining of this approach facilitated the terrorist attacks recently seen in the UK. If this is the case, then there must surely be a strong case for the furtherance of community based interactive policing in order to obtain the intelligence that is the life blood of any strategy to tackle terrorism. In this edition we have a number of useful articles that demonstrate the usefulness of the approach and which we hope will have resonance for you, wherever you work.

Professor Colin Rogers
University of South Wales
UK

United Kingdom Society of Evidence Based Policing (UKSEBP)

Alex Murray

Temporary Assistant Chief Constable Alex Murray graduated from Birmingham University in 1996 and joined West Midlands Police where he worked in CID and uniform roles in the cities of Birmingham, Coventry and Wolverhampton. In 2008, he graduated from Cambridge University, with a Masters degree in Criminology. His thesis developed the understanding of police legitimacy within Muslim communities. He is passionate about involving the community in reducing crime and has led West Midlands Police on preventing violent extremism.

He is the founder, and currently Vice Chair, of the Society of Evidence Based Policing and has introduced randomised control trials into West Midlands Police as a means of understanding what works in reducing harm and providing value for money. In 2014, he received the Superintendents award for Excellence in Policing and has been recognised by George Mason University's Centre for Evidence Based Policing. He is a visiting scholar at Cambridge University, has been associate director of the Cambridge Indian Police Service Training Programme and was part of the UK National Disaster Victim Identification Team.

SEBP here in the UK and around the world, seems to be gathering pace. Last week I was at the Norwegian Embassy as a Senior Investigating Officer, Ivar Fahsing, was presenting his research on how people become better detectives – he is moving on to launch the Nordic SEBP. He attended this year's SEBP conference where the latest research findings were presented. Dr Justin READY flew in from Queensland having conducted the first randomised control trial for memory recall following MTFA incidents – mass shootings – his findings are questioning current thinking around when best to take statements. How does using behavioural science impact on policing? The conference highlighted an operation in West Midlands Police, UK, where speeding drivers were given a simplified letter and a photo of flowers around a lamppost with information about how many children have been killed on the roads.

Re-offending reduced by 20% and court attendance was reduced by over 40% – a no cost intervention that saved over a million pounds and may have saved lives. Rob BRINER introduced concepts of Evidenced Based Management – again so many assumptions were challenged – heard the stuff about how "millennials" (people born after 1986) think differently and job hop more? There is no evidence for it. Jason Roach introduced a concept called self-selection policing – presenting data that shows how people who do little bad things also do big bad things and how you can use this to catch people more effectively. Driving whilst disqualified is a huge indicator of being a crime generator – and yet we rarely focus on these offences. When we are open about questioning what we think we know it appears we can learn so much more.

SEBP is trying to push the boundaries around communication. If you type "Pint Of Science" into google you will find how you can go the pub in Australia to learn from scientists about interesting things…this year in the UK, SEBP will be there talking about how the police can embrace the scientific method. Around the UK regional co-ordinators continue to mobilise officers and researchers to use, communicate and produce new research evidence.

This is helped by the College of Policing that has created the "what works" centre and makes practice based on evidence at the heart of being a police professional. It has also funded universities to work with police services to build on what works – many of these have partnered with SEBP in sponsoring talks, local meetings and conferences.

For the police we have always been interested in how we make a tangible benefit in the communities we serve – Universities are now remunerated in a similar fashion and this is creating great partnerships.

100 years ago universities were asked to invade hospitals to add some rigour into understanding what works – it appears the same thing is now happening to police stations.

Finally, as police services we need to understand how embracing digital can make us more evidence based. To what extent are your press offices or communications departments based on evidence? What twitter massages actually prevent crime, what increases confidence? Recent research by Cardiff University looks at the impact of the type of messages we send out – again it will present many challenges to what we do. You can see the briefings here http://**upsi.org.uk/briefings/**. Even more importantly are the opportunities that good data presents – especially when we apply analytics and visualisation – it allows us to identify with as much predictive accuracy as possible who or where we should target – and then measure the consequences in a much simpler fashion than we have done previously.

I don't think there is a time in police history where the opportunities for improvement have been so achievable – the challenge is whether we are ready to have the desire, imagination and ability to fail/learn in order to reach for those goals. This is at the heart of what SEBP does.

American Society of Evidence-Based Policing (ASEBP)

Jason G. Potts

Jason Potts is a Sergeant with the Vallejo Police Department where he has served for 17 years. He is a National Institute of Justice (NIJ) LEADS Scholar, an ASEBP board member, and a Police Foundation Fellow. He is also a Reserve Special Agent with the Coast Guard Investigative Service and has a background in drug, gang, and general investigations. He is a member of the Vallejo Police Department SWAT Team and possesses a Master of Advanced Studies (MAS) in Criminology, Law and Society from UC Irvine. For more information on ASEBP, please see http://americansebp.com/home/

Advocating for Research

Founding members of the American Society of Evidence-Based Policing (ASEBP) are holding their first inaugural conference at Arizona State University May 22–23 with the aim of advocating and supporting research in policing. There are approximately 18,000 police departments and 750,000 police officers in the U.S with varying organisational cultures, deployment styles, social demographics, and relationships with their communities, along with differing educational and training requirements expected of officers—so the task of supporting research is easier said than done. However, the emphasis on research and data in policing is critical—the public seemingly is no longer satisfied with accepting the opinions of the police without evidence. In this era of social media, instant knowledge, and a shift in public perception, it's time for our profession to move toward the same evidence based practices that have galvanised the field of medicine for years.

Evidence based practices are determined by applying data and the best possible scientific research to guide policy and practice. Medicine accomplished this 150 years ago by creating the American Medical Association (AMA) to combat people espousing fake cures and calling it medicine (ASEBP 2017). The AMA dedicated their organisation to advancing the art and science of medicine. Similar to medicine, policing is an art, and although not a physical science, there is a social science behind policing. Doctors study other doctors to advance their empirical knowledge of their profession, why aren't cops studying other cops? Just as practicing doctors founded the AMA, the ASEBP was founded by practicing police officers with the goal of molding the current police culture rooted in scientific evidence (ASEBP 2017).

The American Society of Evidence-Based Policing (ASEBP) was established in the summer of 2015 by a group of police officers focused on bringing research evidence to the front lines of policing with the intention of molding police cultures to be more data and research driven. Founded by front-line officers under the umbrella of the Police Foundation and with the support of Jim Bueermann, the intention was to advance policing for front-line law enforcement officers by advocating for and exposing them to the value of research and science so that we are better informed and able to collaborate with our communities. Our primary goal is to advocate for the best available research to solve many of our policing problems by raising awareness, advocating for evidence based policing, and bridging the gaps through facilitation and education between practitioners and academia so that data can be replicated, targeted, tested and tracked (Sherman 2013). Data without context is just data, but with the evidence we are able to test the data—not just confirm it. We shouldn't just confirm what we already think we know; evidence based policing advocates for testing our conclusions (Wilkinson 2017).

Advocacy and raising awareness starts with leadership willing to lead from the front. Members of ASEBP are leading the way in this effort. For example, I am in the early stages of a three-month automatic licence plate reader (ALPR) experiment at the Vallejo Police Department with BetaGov, a non-profit research organisation, led by Dr. Angela Hawken (BetaGov 2017). This group has shown that randomised police experiments do not have to be complicated or lengthy and can be completed in three to four months, with successfully measured outcomes ready to be successfully replicated (BetaGov 2017). This trial will attempt to measure the effectiveness of the ALPR '3M' technology and the potential behaviour changes for officers on patrol by randomising filters or interventions remotely and implementing controls.

Today's young law enforcement officers are primed to embrace research, especially as it becomes more accepted and less cumbersome. They tend to be better educated, open-minded, and more than ever, capable of re-engineering the profession through data and science, but we still must transform our cultures. Josh Young, a former Ventura Police Officer and founding member of ASEBP, addressed these questions in a published Cambridge University thesis (Young 2014). In his study, he stressed the "importance of realigning incentives and performance appraisals to encourage managers in an evidence based policing philosophy—one built into the cultural structure through training" (p. 38). And Greg Stewart, founding member of ASEBP and Portland Police Sergeant, was recently inducted into the Evidence-Based Policing Hall of Fame at George Mason University for his work on evidence based policing. Sgt. Stewart supervised the Domestic Violence Reduction Unit where he worked to implement one of the nation's first automated actuarial risk assessment systems. This system was used to conduct risk-based case assignment aimed at targeting domestic offenders with the highest risk of recidivism for additional follow-up (Police Foundation 2017).

Come visit world class Phoenix, Arizona May 22–23 to see what front-line police like Josh Young and Greg Stewart are doing in the U.S. to push the evidence based policing needle forward.

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Canadian Society of Evidence Based Policing (CAN-SEBP)

Laura Huey

Laura Huey is an Associate Professor of Sociology at the University of Western Ontario, the Director of the Canadian Society of Evidence Based Policing, a Senior Research Fellow at the Police Foundation, a member of the Board of SERENE-RISC and a Senior Researcher and University Representative for the Canadian Network for Research on Terrorism, Security and Society.

She is also the London Police Service Research Fellow and sits on the Canadian Association of Police Governance Research & Policy Committee and the Board of the Canadian Association of Police Educators.

In January 2017, CAN-SEBP's Executive tabled three initiatives that were presented to our partners and voted in as strategic priorities. One of these initiatives forms the basis of a major program: the "**Good Data Initiative (GDI)**".

The purpose of this campaign is to develop and promote good data collection, retention, sharing and access among police services in order to strengthen not only Canada's policing research, but also to inform more effective and efficient public safety strategies. To that end, through GDI we will be working with other CAN-SEBP members, as well as national and international partners and collaborators, to develop research, host workshops and initiate a social media and other awareness campaigns to begin dialogue on how, when, where, why and what's the best way to collect and use data.

The overall objectives of the **Good Data Initiative** are to:

1. generate empirical knowledge of current police data practises and research into best practices, and;

2. promote quality data collection, verification, analysis and sharing among police agencies.

In May of 2017, we will begin launching GDI through the release of a GDI section of the CAN-SEBP website. This new section will feature: a data library, videos, papers on police data issues and blogs by a range of contributors. We have also started up a Twitter account #gooddatainit to keep the policing community up-to-date on various issues and initiatives linked to policing data.

Call for Articles

Articles on issues of professional interest are sought from Australasian police officers and police academics. Articles are to be submitted electronically via the AZNSEBP website (anzsebp.com). Articles are to conform to normal academic conventions. Where an article has previously been prepared during the course of employment, whether with a police service or otherwise, the contributor will be responsible for obtaining permission from that employer to submit the article for publication to Police Science. Contributors are expected to adhere to the Journal's publishing guidelines. All submissions are subject to review. Articles should be no more than 6000 words (not including references) and be Harvard referenced. Articles should be based upon the aims and objectives of the journal and the evidence based policing approach.

Aim One: Increased use of best available research evidence to solve policing problems:

- Raise awareness of the value of evidence-based practice.
- Provide access to research tools and guidance.
- Advocate evidence-based practice across all policing bodies.
- Provide a forum for police professional researchers.

Aim Two: The production of new research evidence by police practitioners and researchers:

- Support police practitioners to undertake research projects.
- Support police practitioners to access research expertise.
- Support researchers to access police data.
- Facilitate awareness of ongoing police research projects.

Aim Three: Communication of research evidence to police practitioners and the public:

- Disseminate police-based research to different audiences.
- Present the implication of research findings for policing practice.

Article Submission Guidelines

Articles must be written and presented in English.

Articles are evaluated according to the following criteria:

- relevance to the conference theme
- relevant to an Australasisn policing jurisdiction
- professional merit
- contribution to knowledge, practice and policies
- clarity

It is the responsibility of the presenting author to ensure the article is submitted correctly. The ANZSEBP will not be held responsible for article submissions not received via the online submission process, or for submission errors caused by internet service outages, hardware or software delays, power outages or unforeseen events.

Acknowledgment of receipt of your article is not deemed as an acceptance for publication.

Style Guide for attachments

Font type and size for the abstract text: **Arial**, **11pt** left justified.

Abstract must not exceed 300 words and must include a title.

No references, graphics, tables, footnotes or images should be included with your abstract text.

Use standard abbreviations only. Within the body of the abstract, when using abbreviations spell out the name in full at the first mention and follow with the abbreviation thereafter. Abbreviations may be used in the title, provided the name in full is outlined in the body of the abstract.

Author's biographies (200 word maximum) and photo are to be submitted with the abstract and all biographies to be written in third person.

Working in Pasteur's Quadrant:
Learning from an Embedded Criminologist Model in an Australian Police Organisation

Martin, P., Bedford, L. & Raison, G. (February 2017)

Introduction

By 2022, criminologists embedded within police departments, evidence-based policing, and translational criminology will be accepted practices and as commonplace as community policing and problem solving is today (Taniguchi & Bueermann 2012, p.16).

Around the world, police organisations are faced with ever more complex roles and uncertain social contexts, alongside shrinking budgets. Police are now expected to prevent, manage and control social problems ranging from "truancy to terror, from graffiti to gunmen" (Blair 2005). Police today are called upon to be ready to meet the challenges on the "front foot": to be ready for whatever comes their way as the 21st century unfolds. They increasingly recognise, however, that the reactive ad hoc approach to fixing service problems, and the corollary idea that "if it ain't broke, don't fix it", is too risky. By *resisting* the tendency to sweep problems under the carpet as fast as possible, or to rush in and "fix" them, evidence based police leadership is demonstrating its commitment to informed organisational decision-making in rapidly changing and uncertain contexts[1].

Police are also increasingly and rightly called upon by politicians and the public to support spending decisions with evidence that their investment decisions deliver value for money: they must demonstrate that the benefits of an innovation outweigh the costs of its implementation before taxpayer money is allocated to it. The Queensland Police Service (QPS) in Australia, with 12,000 plus officers and a significant tax payer funded budget, is no exception. So, while there is no question that the "demand on Australian police agencies from researchers has increased exponentially over the past decade" (Rojek, Martin & Alpert 2014, p. 46), in turn, researchers are increasingly called upon by police leaders to help them provide rigorous evidence to support policy and practice decisions. Given this demand for "evidence", it is not surprising that policing in the Anglo-West has seen a steady increase in research into "what works" since the late 20th century (Sherman 2013). Specifically, applied experimental research in police organisations increased dramatically between the 1990s and 2000s (Braga & Davis 2014). Police and researchers are now regularly partnering to implement evidence based policing programs of research.

Recent pressure from the community, government, senior executive and the rank and file of the QPS to modernise front-line equipment and communications for officers comes with significant up-front and ongoing financial costs. While the proposed technology advances appear anecdotally to have significant benefits on the policing front line, neither the benefits of the new equipment nor the benefits of increased front-line mobility have been established through rigorous testing. The QPS leadership request for significant ongoing and potentially additional funding for technology has, inevitably, led to a call within the QPS Senior Executive and government to back up this proposed funding decision with "evidence" of its value to police and the community.

Senior leadership in the QPS has long had a highly successful partnership with senior academics working at The University of Queensland (UQ) and Griffith University. Over time, these partnerships have supported a drive by QPS leadership towards an evidence based policing approach and have manifested in the establishment of the Australia and New Zealand Society of Evidence Based Policing in 2013. This move was driven by QPS, but is supported and celebrated by policing scholars in Australia, New Zealand and beyond.

Given these long-term partnerships, opting to directly employ a social scientist, as QPS has done—a policing scholar aligned with the evidence based policing "movement"—to implement and report on a randomised controlled trial (RCT) may seem, on the one hand, like a "natural next step". In so doing, QPS may be seen to be moving the practitioner–academic partnership arrangement to the next level. On the other hand, the embedded criminologist model is not the normal default of police and, in fact, represents a novel and untested way of partnering for QPS: the norm would have been to reach out to an external party, not bring someone in. It is the novelty of the approach and learnings from this experience that are the focus of this paper. If Taniguchi and Bueermann (2012) are right, we need to know more about how to maximise the benefits of this model to support translational criminology.

The embedded criminologist model differs most fundamentally from a close external research partnership by virtue of the fact that rather than working at a University or research consultancy the researcher works directly *within* a criminal justice agency to implement a research project or program of research. They become an internal resource in support of evidence based decision-making within the organisation (Braga & Davis 2014; Petersilia 2008; Taniguchi & Bueermann 2012). Apart from this seemingly obvious distinction, this article seeks to add to an understanding of what the embedded criminologist model means for the partners in this arrangement. It is a lived experience and we, as academics and practitioners, are writing this article to share the learnings from our "pilot". Our paper does not purport to provide any evidence of which elements of the model work and which do not. It is not based on any objective investigation or empirical method. Rather, it is our account. We believe, however, that these learnings are relevant beyond the QPS and may be useful to police interested in evidence based policing elsewhere.

While rare, the model is not unique. Embedded criminologists have been successfully employed in police and prison systems in the past to undertake in-situ research. The academic partners in these relationships have published on their experiences (e.g. Braga & Davis 2014; Jenness, 2008; Petersilia, 2008), but to date, there "is little published research from the perspective of the police practitioner and presumably even less information from the combined perspectives of the researcher and police practitioner" (Rojek, Martin & Alpert 2014, p. vi). This paper aims to begin to address this gap. Specifically, by capturing learnings from the embedded criminologist experience as a specific form of research–practitioner partnership, we wish to tease out the benefits of the embedded criminologist model *over and above* a continuing close and enduring partnership between police decision-makers and university academics. Critically, our embedded criminologist model does not in any way replace the partnership between QPS and UQ, but rather adds value to this existing arrangement.

Benefits of the embedded criminologist model

Both police and researchers may benefit from research–practitioner partnerships and there have now been a number of rigorous studies of these partnerships (e.g. Braga & Davis 2014; Engel & Whalen 2010; Foster & Bailey 2010; McEwen 2004; Petersilia, 2008). Rojek, Martin and Alpert (2014) discuss a range of benefits, barriers and enablers distilled from these accounts. We will reflect on their summary of findings in light of the role of an embedded criminologist. We will also draw on our experience to add to these results.

Skills: Firstly, researchers bring a special set of skills to the game. These include "theoretical – and scientific based knowledge" (Rojek, Martin and Alpert 2014, p. 35) that provides alternative perspectives as well as skills in terms of the methods of social science and research project management. We have found that being embedded enhances the extent to which these skills can leverage knowledge sharing and transfer. This is because this sharing is able to happen ad hoc, informally, on-the-job, in a timely manner and takes place during conversations between *colleagues*—not only between an academic partner and one or two senior contact persons within the police organisation. Another, less tangible skill is raised by Baars (2014, p. 10), namely, "being able to respond to a question without responding to the agenda behind it." Embedded research skills include being able to navigate "the difficult terrain of being part of an independent academic agenda and one that is rooted in the concerns of wider society" (Baars 2014, p.10). Jenness (2008) suggests that this requires being less like a dog who is loyal to people, and more like a cat who is loyal to "home, mission, and place" (Jenness 2008, p. 16).

Credibility: Rojek and colleagues (2014) found that partnerships provide "third party" credibility with other entities and the public because the research is perceived to be independent and based on rigorous empirical methods. Embedding a criminologist to run a trial may, however, be seen to potentially undermine this perceived objectivity. Quite simply, an embedded criminologist working within a program intervention team may be seen to have "skin in the game" that may bias the results. In our model, this perception is mitigated to some extent because the researcher reports formally to a steering committee made up of members of the program being evaluated, senior police and an *external* senior academic—a manifestation of the commitment of the police to end up with a credible set of results. Specifically, the involvement of a senior academic on the steering committee increases the external credibility of the research process and results. The police organisation has also indicted that they fully support the publications of results to ensure that they are open to peer review scrutiny to lend weight to ongoing and future support from government. For the researcher, this support is essential since their own career rests on being able to publish their work (Frisch 2016).

In fact, Welsh, Braga and Hollis-Peel's (2012) meta-analysis of the influence of researchers on police programs and whether a high degree of influence is associated with biased reporting of results suggests the opposite. The "more intensive evaluator involvement in program activities do not necessarily translate into inflated estimates of program effects. In fact, higher levels of evaluator involvement may be associated with more conservative estimates of program effects through the more rigorous research designs implemented in these closer researcher-practitioner partnerships" (Welsh, Braga & Hollis-Peel 2012, p.415). In our experience, this is the case. Being embedded has the advantage of potentially increasing the fidelity with which the experiment is implemented and minimising bias. Still, it is essential that the embedded criminologist conducts themselves with what Welsh and colleagues refer to as "disciplined passion"

(Welsh, Braga & Hollis-Peel 2012, p. 428). This means, in part, being consistently clear in all discussions that the evaluation is objective and based on the methodology of rigorous experimental process and analysis.

Analytical capacity: A fairly straightforward benefit of partnering is the additional research and analysis capacity the partnership may bring. Being embedded certainly enhances the extent to which the researcher is able to be deployed as a resource within the program team, not only to implement the evaluation, but also to assist with conceptualisation of other elements of the program delivery. In the absence of results from the experiment, the embedded criminologist may influence a range of processes that sit outside the ambit of the research project itself. The researcher may promote research evidence that demonstrates, for example, that the impact of technology is not neutral in policing, and use criminological theory to question and redefine some of the expected "benefits" and "dis-benefits" originally proposed to measure the outcomes of a program.

The police implementing the intervention are mainly interested in the positive results and benefits, but the embedded criminologist should play a role in highlighting possible unexpected results and the value of understanding the dis-benefits that emerge from the analysis. In our case, this has led to a refocussing of the original question "Does it work?" to address questions related to the theoretical mechanisms of *why* the roll out of technology may have certain unexpected positive and negative impacts. These impacts may relate to, for example, police legitimacy, police discretion, community expectations, the possibility of over-policing of certain groups, changing work patterns, and internal relationships between organisational units (see Koper et al. 2015).

Formative evaluation: Being embedded not only allows for a natural process analysis, it also moves the evaluation from being a summative exercise focussed on measuring whether the intervention met its stated goals or results, to actively engaging with the program to generate the best outcomes while it is being implemented—a formative evaluation. So, for example, the researcher has been supported by police in the program team to run focus groups to hear directly from officers in the field and potentially provide feedback that adds value to the development of the technical capabilities that will be delivered post-experiment. This is a tricky line to walk for the embedded criminologist.

The temptation of wading into program debates as an "action researcher" must at all times be tempered by the need to protect the integrity of the implementation of the experiment. The need for the researcher to keep their distance from the process of program implementation was referenced by one manager in the program as a "Switzerland quality of neutrality". Beyond this, because the researcher is embedded, the generation and translation of new knowledge from the results of the experiment—the analysis and interpretation of the results—will be undertaken in context and in partnership with the police. This process will be part of the formative evaluation of the intervention.

Knowledge translation: The past decade has seen an increased focus on issues of research translation in policing (Lum et al. 2012), or what has been called translational criminology (Laub 2012). It is no longer seen as good enough for university researchers to publish in journals and expect the findings of research to trickle down into police organisations via a few interested police leaders. As Cynthia Lum et al. (2012, p. 88) ask: "Does the way researchers conduct their projects have a greater impact on receptivity to research than the findings from the research, no matter how compelling?" Based on our experience, we think it does.

Because the "police practitioner–research partnerships represent an interpersonal form of research utilization" (Rojek Martin & Alpert 2014, p. 2), the embedded criminologist model is an effective way of meeting the challenge of research translation where research is able to influence policy and practice (Braga & Davis 2014; Petersilia 2008). Arguably, the embedded criminologist model comes closest to moving the discussion beyond the idea of *research use* into the idea of *knowledge translation* where the police are not seen to be passive recipients of science from rigorous research but co-producers of the science and co-interpreters of the knowledge derived therefrom. In our experience, the majority of members of the police team involved in the implementation of the experimental trial are interested in the results. They feel personally invested in the evaluation because they see it as *their evaluation.* They want to know what the outcome is. The embedded criminologist model is thus an active "translation strategy" built on ongoing interaction between the police and the researcher where both the "research-based knowledge of the researchers and the experienced-based knowledge of the practitioner are each recognized and valued" (Kerner 2006 cited in Rojek, Martin & Alpert 2014, p. 24). Having an embedded researcher chaperone an experiment inside a police organisation makes the researcher an active part of the solution—and dispels the view that they are "all care and no responsibility" (Rojek, Martin & Alpert 2014, p. 48).

It is fundamental that the role of the embedded researcher is to provide evidence that supports the best decision-making for the police organisation. However, until such time as the results of the evaluation have been finalised, the anticipated evidence from the trial cannot be more than superficially discussed and even then with great care, despite possible pressure to take a position on the expected outcome of the experiment. This pressure is probably something an external partner would not be exposed to, at least not to the same degree, and the embedded researcher must carefully manage these expectations. In our case, this has been achieved by the researcher providing evidence from extant research to add value to ongoing discussions within the program team in the interim.

Boundary-spanning: Because knowledge sharing is at the heart of the relationship between the embedded criminologist and the police (and works both ways), this benefit is likely to best be realised when the embedded criminologist is a reasonably open and gregarious person who is both interested in and able to generate interest in exploring *ideas* and, likewise, the team they are working within is hungry for and accepting of the skills and knowledge the researcher brings to the table. In our model, knowledge exchange within the program in which the criminologist is embedded is mostly informal (in the absence of research results) but it may also be formal, such as providing advice on in-house surveys, communications materials and so forth. This requires that the researcher is willing and able to flexibly apply their social science skillset to address any specific questions or requests that may arise within the team and elsewhere in the organisation. In this way the researcher may effectively act as an internal "boundary-spanner" to bring in and socialise new knowledge (Nonaka and Takeuchi 1995) of relevance to the organisation. To a very large extent, in our experience, this will be knowledge of relevance to the evaluation and take place within the subsystem of the program team in the absence of any specific research results. However, more than this, it provides opportunities for the embedded researcher to socialise the idea of the value of empirical research and evidence based policing *in general.* This often takes the form of asking for common assertions made in the course of everyday discussions to be supported with evidence of their correctness, or the researcher actively seeking out that evidence of behalf of colleagues.

Synergies: Finally, the embedded criminologist is well-placed to have insight into other research activities internal to the QPS but taking place in different parts of the organisation. Brokered by the QPS Research Committee, our embedded criminologist has been able to add value to the implementation of a second experiment by drawing on synergies between the original contracted work and the new research program, even though these projects are taking place in two different police commands.

Enablers

Trust: Trust is an essential ingredient of the model's success. In the case of external partnerships, Rojek, Martin and Alpert (2014) note that trust may take a great deal of time to develop due to the historical and potentially critical approach taken by social scientists in their study of the police. In our experience it has been useful for the embedded criminologist to, firstly, be associated with an extant longstanding relationship of trust between the senior police and university partner. Secondly, the known and demonstrated orientation of the embedded criminologist—in our case to an evidence based policing approach, including an active history of supporting the expansion of evidence based policing within QPS—has been a useful starting point for the personal relationship of trust to develop between the embedded criminologist and police in the program team as well as police leadership.

In fact, despite a great deal having been written about the difficulties in building trusting relationships between the research and police practitioner communities (Boba 2010; Bradley & Nixon 2009; Engel & Whalen 2010), results from a National Institute of Justice partnership survey in the USA (based on 871 agency responses) suggest that only 2% of agencies indicated that they did not trust the motives or intent of researchers wanting to partner with them. Only another 2% had heard of other agencies having a negative experience in a partnership with researchers (Rojek, Martin & Alpert 2014). Frisch (2016) also suggests that this distrust between police and academics may be waning although there will always be some agencies that resist such partnerships.

Our experience of implementing a randomised controlled field trial in partnership with an embedded criminologist aligns with this. Probably the most important element of the model is the ongoing exposure of each party to the other working as colleagues—different parts of one team pulling in the same direction to successfully implement the trial. The criminologist is seen to be a valued member of the program team, bringing specialist skills and knowledge to enhance the program's activities, not an external imposition. The criminologist is "treated like an employee and … immersed in the agency's routines" (Frisch 2016). From the criminologist's perspective, the ongoing demonstrated commitment to maintaining the internal integrity of the trial builds and facilitates trust in police colleagues. This is reinforced by the stated openness of the police leadership and those implementing the trial to absorb potentially "negative" findings.

Professionalism: A concern has been raised regarding the extent to which the police may resist the scrutiny of a social scientist in their midst. As Rojek, Martin and Alpert (2014) note, police are used to being the scrutineers and may not welcome scrutiny. Moreover, there remains a strong cultural belief that police are the experts when it comes to understanding the causes and control of crime (Taniguchi and Bueermann 2012). For social scientists, "scrutiny" into different facets of the social world is the crux of their job—they are geared to explore and discover and probe for findings related to their subject.

Further, for social scientists in all fields, in an imperfect society there is also always room for improvement. Research in the fields of education, health, social services and other elements of the criminal justice system involve such scrutiny, founded on the basis that there is always theory to be built and practice to be tested. For social scientists, policing is no different. Criminologists have not singled out police as needing improvement or reform, even if police may feel that this is the case. It is important for the researcher to communicate and reinforce that in all areas of social endeavour, social scientists aim to test whether there is the potential to do harm and find ways to improve practice.

As Rojek, Martin and Alpert (2014, p 43) stress, however, "not being judgmental of the agency and their personnel" is important to the success of a trusting partnership. It is important that the embedded criminologist respects the hierarchical nature of the organisational culture and conducts themselves professionally and courteously in their dealings with police colleagues. While a necessary part of their role, the scrutiny should not be interpreted as being critical of police. In conversations with the police, it is important that the criminologist refrains from delving into colleagues' personal motivations and beliefs that may sit uneasily with their own. While the role is that of a participant observer of sorts, the criminologist is *not* researching the people they work with, but rather the processes and outcomes associated with the evaluation. Being embedded reinforces this view, because it *guarantees* that the researcher is working at the behest of the police who have *themselves* identified an area for potential improvement via a rigorous evaluation by a practitioner with the required skills. Both the program and the research are, in fact, embraced and owned by the police.

Orientation: Boba (2010) correctly suggests that for a partnership to work, the police need to be open to research and the researcher needs to be open to working with the police. On the one hand, it is important that the researcher is assured that their work will be taken seriously, that they can make a difference, and that they are not simply "window dressing" to support politically motivated decisions (Petersilia 2008, p.338). On the other hand, the researcher's academic orientation is important. We have found that embedding a *policy-oriented* criminologist (Petersilia 2008) in QPS potentially breaks down the cultural divide between police and researcher. The police see the evaluation as integral to and supporting of their own policy decision process—and they buy into the idea of the need and value of a rigorous approach. In so doing they are invested in the successful implementation of the trial as a policy research *process* and are not just interested in the research *results.*

Contextualisation: Of course, there are benefits for the organisation and there are benefits for the police scholar as well. For the researcher, access to the "face of the rock", the "feel" of a police day, and, of course, police databases are all highly valuable. This is further facilitated by having support in understanding the complexities of police processes and procedures as well as the data held by the police. Police data are often generated for operational and tracking purposes and not research. While an external partnership with an academic institution may involve the brokering of access by one or two personnel in the police organisation, the ongoing access to a wide range of sworn and unsworn personnel playing different roles in the organisation (middle management, program managers, business analysts, data analysts, and front-line police) is a specific benefit for the embedded researcher.

Being embedded is potentially invaluable in the *interpretation* and testing of the results and will allow the researcher to easily tap into the expertise of the network of police (and support functions within QPS) to contextualise and interpret the data. For the embedded criminologist the quality of the research must matter and much of this relates to the ability to meaningfully interpret the results in context.

Formalisation: In our view, an embedded criminologist should be contracted as a lead researcher or principal investigator for a realistic period of time—as much time as required to design, implement and report on a trial or program of research. They may also be incorporated into the policy research capacity of the organisation on a continuing basis. They should be remunerated in line with their high level of responsibility as well as their advanced research and project management skills—both requirements of the successful execution of the role. The contractual arrangements will provide a greater level of certainty to the durability of the partnership. It will also guarantee timelines and format for reporting that are suitable to both parties, something which is often an area where external researchers have not met police expectations (Rojek, Martin & Alpert 2014).

The contracted arrangement should, however, be differentiated from the partnership that is discussed above and is based on building a relationship of trust amongst colleagues. Relationships built during the implementation of the trial under the embedded criminologist model have great potential to endure and lead to further collaboration outside of the original contracted arrangement. This is not only because the embedded criminologist has significant insight into the organisational processes and systems (including data systems) through their working within the organisation, but also because they potentially have a personal commitment to the organisation. For the police, having worked closely with the researcher in the past there is an extant relationship and less risk associated with procuring their services for future projects.

Ongoing communication: Apart from an up-front collaboration in problem identification and selection of the evaluation method, the co-location of the researcher with police directly involved in the implementation of the trial fosters ongoing communication on the day-to-day elements of the trial. Rojek, Martin and Alpert (2014) found that good, ongoing, communication is one structural enabler of the success of the embedded criminologist model. We have found that this is the case and that potential issues are able to be quickly identified, robustly considered and resolved in a timely manner. Because of the co-location and ongoing communication, issues are usually well understood by both the police manager of the experiment and the researcher. This reduces the risk of miscommunication as well as promoting the opportunity to co-investigate complex issues as they arise.

It has been very important that our researcher continues to highlight the distinction between the successful implementation of the trial and the much-anticipated "positive" results. The embedded researcher must gently bring colleagues—who are hugely invested in a positive set of findings—around to understanding that the outcome of the trial may include some negative findings. This is enabled through ongoing informal discussions, which are made possible because of the co-location of the researcher in the team. As such, the implementers of the trial and leadership are well prepared and will not be "caught off guard" (Rojek, Martin & Alpert 2014, p. 39) when negative findings materialise.

The empirical knowledge of the researcher is enriched by the experiential-based knowledge of the practitioner and vice versa (Davies, Nutley & Walter 2008; Kerner 2006; Lavis 2006). Ongoing communication "allows the researcher to introduce new ideas and challenge the traditional assumptions of the practitioner while allowing the practitioner the opportunity to challenge the researcher, to wrestle with how such ideas would be implemented and what impact they would have in their specific setting" (Rynes, Bartunek & Daft 2001).

Further, the researcher's open access to the police leadership for less formal communication and requests for clarity has been essential to the success of the model to date.

Leadership: It is important that the leadership support the trial process and provide "top cover" for the embedded researcher. It would be difficult (read nigh impossible) to work as an embedded criminologist to implement a trial in a police organisation in the absence of this leadership support. So, as Rojek and colleagues note, it is important that "the chief gets it" (Rojek, Martin & Alpert 2014, p. 42). Because trials involve the suspension of business-as-usual, they may impact police operations in a fundamental way. This can be met with significant levels of internal resistance .

Without an ongoing and genuine message from the leadership going out to the troops to buffer the trial and the embedded criminologist from active resistance, they—and the police middle management they are working with—will battle to successfully implement the trial. In our case, the QPS leadership are the initiators of the trial and they act as the formal channel of communication to the police rank and file. This has neutralised any anticipated "small p" political resistance. It has also framed the evaluation as part of what Taniguchi and Bueermann (2012) refer to as a re-engineering of the organisation to reflect the value of science in policing. This has allowed the researcher to work within this frame—in the "big picture"—to talk about evidence based policing as a general organisational goal, outside of the direct ambit of the evaluation.

Pasteur's Quadrant: Chief Superintendent Alex Murry, founder of the UK Society of Evidence Based Policing suggests that "police exchange access [with academics] for methods … no money needs to change hands" (Murray 2016, p. 12). But herein lies a seldom-articulated conflict: yes, academics chase "impact factors" and publications, but they are also, most fundamentally, interested in advancing theory— they lean towards basic research and the advance of knowledge in their fields of interest (the *Bohr Quadrant* depicted in Figure 1).

Sometimes they are simply not interested in the immediate practical questions that police decision-makers want answered. They may still be prepared to philanthropically provide expertise and "rigorous program evaluation methods" (Braga & Davis 2014, p. 1) to a police-led research process. However, there may be a significant impost on the external partner, who must balance the demands of their university career and "commitment to the partnership" (Rojek, Martin & Alpert 2014, p. 43). When practical policy-oriented questions are raised by police that are not a field of interest for their established external academic research partner, an embedded academic may be the way to go.

This is because the policing research agenda is increasingly driven by police to meet their need for pragmatic and time-critical solutions through rigorous applied research. This pure applied research orientation is reflected in the *Edison Quadrant* as depicted in Figure 1. However, the *evidence based policing* agenda increasingly supports research that addresses the broader quest for theoretical knowledge. In policing, *Pasteur's Quadrant* is where pure and applied research are brought together in pursuit of research that provides practical and operationally implementable answers while *at the same time* building theoretical knowledge about policing. The rapid expansion of rigorous evaluations that are tailored to support specific policy decisions increasingly contribute to generalised knowledge and criminological theory, or what Stokes (1997) referred to as 'Use Inspired Basic Research'.

Figure 1. Pasteur's Quadrant (Stokes 1997)[3]
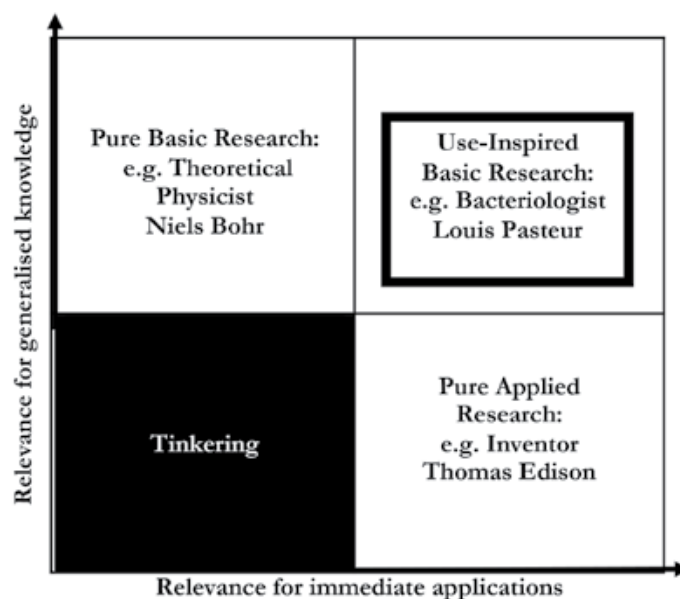
In our experience, the value of engaging an embedded criminologist to drive research in a police organisation is that it creates just these synergies between pure and applied streams of research. It also ensures that energy and resources aren't wasted "tinkering", as may be the case when quick-fix solutions are required or evidence needs to be trotted out in support of preconceived policy positions. The outcome of this is likely to be that more questions than answers are surfaced in the process, but the measured and tested stability that this delivers is good for academia and good for the policing field.

Conclusion

In our "pilot", we hired a criminologist to—as was explained at the time—rigorously evaluate the impact of significant ongoing investment in mobile technology to QPS front-line officers. The police wanted a rigorous test of the impact of the technology to support decision-making around further investment in front-line mobility. At the time of writing this paper the RCT that was the impetus for the embedded criminologist model is still in-flight. While these results are not as yet clear (and will potentially be the subject of further reporting)—what is clear is that we have identified a significant process of mutual learning, and from that, respect of each other's contributions has developed.

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End Notes

1. Organisational learning theorists (e.g. Argyris & Schön 1996 and Senge 1997) suggest that this is a demonstration of the capacity of an organisation to engage in double-loop organisational learning which involves questioning the underlying motives, values and routines of an organisation.

2. Argyris & Schön (1996) refer to these as "defensive routines".

3. Donald Stoke's Pasteur's Quadrant graphic by Turadg Aleahmad is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License. Based on a work at http://openeducationresearch.org. Downloaded from: http://openeducationresearch.org/2009/01/pasteurs-and-edisons-quadrants/donald-stokes-pasteurs-quadrant-diagram/

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Cameras, Complaints and Cops:
Body-worn Cameras Reduce Complaints by 93%

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Abstract:

A new study published in the journal Criminal Justice and Behavior by the University of Cambridge, RAND Europe and several serving police officers suggests that equipping frontline police officers with body-worn cameras could lead to dramatic reductions in citizens' complaints filed against the police (Ariel et al. 2017). This multisite randomized controlled trial has shown that, across seven experimental sites, 1,539 complaints were lodged against police officers in the 12 months preceding the study (M = 219.86; SD = 206.9), or 1.20 complaints per officer, but complaints lodged dropped in the posttreatment period to 113 (M = 16.14; SD = 13.1), or 0.08 complaints per officer. This marks an overall reduction of 93% in the per-officer incidence of complaints.

Background

Evidence from several disciplines tells us that when humans are aware that they are observed, they change their behavior¬¬—often for the better in terms of adhering to rules. This is the basic premise of both self-awareness and deterrence theories, two well-researched areas of study into human behavior (Mead 1934; Nagin 2013). The same goes for police officers: when people are cognizant that someone—or even something—is watching them, demeanor, behavior and conduct are expected to change. Cameras can potentially be one such stimulus. When you are aware that someone is video-recording you, you behave differently, becoming more self-conscious and thinking more about your actions. We might recognize this from standing in front of an audience, giving a lecture, talking on Skype or being filmed when at a social event. But what about filming police–public encounters? What effects would there be if we equipped officers with cameras so that police–public encounters are recorded?

The first answer to this question was in an earlier experiment we conducted in Rialto, California (Ariel, Farrar & Sutherland 2015). The number of complaints filed against officers dropped from 0.7 complaints per 1,000 contacts to 0.07 per 1,000 contacts. Yet, people questioned the generalizability of the Rialto findings to other jurisdictions. We approached as many police departments as we knew through the Cambridge University Police Executive Program, and asked them to conduct a replication study. Several forces agreed to do that, and the results of this multisite experiment are now coming out (e.g. on the effect of body-worn cameras (BWCs) on the use of force (Ariel et al. 2016).

The Cambridge University BWCs Replication Study

Following the Rialto publication (but not necessarily because of it), frontline cops were quickly equipped with BWCs. Ultimately, one could argue that this is a long overdue move: everybody else is recording the police with cameras, except the police themselves. But this has now changed, with most of the large police departments in the United States already recording their day-to-day interactions with suspects

and victims, and many more departments procuring cameras as we type. Crucially, this worldwide and uncontrolled experiment has gone on with little evidence being generated: we are only just keeping up the pace with publications on the efficacy of these devices for policing (Lum et al. 2015), but there is a risk of applying policies that are not evidence-based. But we now have evidence that BWCs can indeed create a shift in modern policing.

Over a year, between 2014 and 2015, we studied thousands of police shifts, in different places, in communities with millions of residents. We randomly assigned half of the police shifts in these forces to treatment and half into control conditions on a weekly basis. During "treatment shifts", officers were asked to wear BWCs and collect digital evidence, whereas during "control shifts" the officers were asked not use these devices. The instructions were to keep the camera on throughout the shift, or turn the camera on prior to responding to a call, as well as providing a verbal warning at the beginning of the engagement, as a way to "nudge" both parties that the encountered was being recorded. Given the random assignment, we therefore had two equal groups of shifts, where the only difference between these groups was the treatment: BWCs. We are aware of the potential for a "treatment contamination effect"—because the same officers wore and did not wear the BWCs—but we ruled out alternative units of analysis (Ariel et al. 2016) as being worse or impractical.[1]

We then measured the number of complaints against frontline officers. These were the raw number of complaints lodged either for misconduct or against what the complainant construed as excessive use of force, not those that were substantiated. Across millions of officer shift hours, what we found was a significant reduction in complaints from the year prior to the study, compared to the year of the study: a 93% reduction.

Ultimately, if complaints against the police are a proxy for police legitimacy, then BWCs can potentially be interpreted as the spark, the vehicle, to increase police legitimacy, in a dramatic way. At the very least, accountability was greatly enhanced, given the elevated transparency of police actions.

However, here's the twist: we found a reduction across all frontline officers in these forces, including times when officers did not wear the cameras. In fact, our analyses comparing treatment shifts versus control shifts revealed "only" a 10% reduction in the odds of complaints against officers when cameras were used, which was not statistically significant. The reduction in complaints was observed across the entire department, even for police officers in areas that did not participate in our study (frontline neighborhood policing officers, for example). This made us think that the effect of the cameras on accountability was contagious. The effect spread across the entire force. Something changed at the level of the organization. Perhaps it is not surprising: if you and all your friends in the office are being filmed all the time, for a long period of time, and you change the way you behave because of the recording, why would you go back to the way you behaved before the cameras were installed, if they are not there anymore (as habitual behavior can form quickly enough)?

The evidence seems to support this story. An alternative explanation is that simply "being part of a study" led to the change in behavior—a "Hawthorne Effect" in the classic sense of that well-known but little understood research (McCambridge, Witton & Elbourne 2014). However, this is undermined by the other outcomes from the trial that showed substantive, statistically significant differences between treatment and control conditions. We think this means there was something particularly salient about the use of BWCs on officer–suspect interactions that spilled over between the treatment and control conditions.

At the same time, from a purist perspective, the results can be construed as irrelevant. A nonsignificant outcome during the experimental phase is what it is: nonsignificant. However, the similar findings, of a similar magnitude, across different police departments that are disconnected from one another, suggests that the change was a result of the effect of using BWCs. We did not include any other intervention in the study, officers were not trained to behave in a different way, there was no additional technology incorporated in the program, no change in policy. The camera was simply meant to serve as a nudge, as a reminder, for following existing procedures and codes of behavior. Therefore, we remain somewhat confident that we are observing a true effect of the BWCs, despite the methodological shortcoming. Only a large cluster-randomized trial could potentially mitigate these limitations; however, it would prove incredibly difficult to secure cooperation from a few dozen departments to participate in such a study.

The Known Unknowns

We are not too sure about the types of complaints that were reduced, as this level of granularity was not available to us because of potential privacy and disclosure concerns. Is it the case that police officers behaved in a different, more professional manner, which resulted in a reduced need to complain against them? Alternatively, are we seeing a reduction in frivolous/vexatious complaints against the police? The perhaps predictable answer is that it is likely a combination of both: being observed had a "civilizing effect" on some (Noppe, 2016) and this calming effect removed the need to use police force in these police–public encounters. The camera "deterred" officers from misconduct behavior, but it is equally likely that the presence of a BWC calmed down otherwise aggressive suspects. It can also be the case that officers were able to de-escalate situations.

Second, the "best policy" about activating the device remains unclear. When, where and how should police officers use BWCs? One option is to ask officers to turn on the device all the time, throughout the entire shift. However, this can become very costly, as the storage could amount to a hefty bill (think of the cost of Dropbox© for 100 terabytes of videos, per year, per department, with an exponential growth). There is also a major question in terms of the "proportionate" invasion of privacy of victims, suspects, and bystanders: do we have the right for privacy in the public domain? What about children being filmed while the police are talking to their mother, who has been a victim of a domestic assault? Doesn't the officer have the right for privacy—at the very least bathroom breaks or "talking trash" about their superiors—in between calls for service as well?

We think that the weight of the research evidence and the potential for missed evidentiary opportunities to record "the entire story" from the officer's perspective, collectively lend themselves to the conclusion that there should be very minimal discretion about when and how to use BWCs in police operations. More is indeed better in this case.

Consider this: some countries have guidelines that BWCs "should be activated during incidents of use of force". However, how would the officer be able to predict, ahead of time, that *this* incident is a job that would result in the use of force, or a complaint? Why should we expect this from an officer? In the heat of the moment, we should not expect the officer to think about recording the aggressive suspect either, rather than try their best to de-escalate a situation, or even apply necessary force to protect themselves. Cops communicate with people who are sometimes at their worst in terms of the human condition: angry, violent, drunk, abusive, or all of these. Part of their job requires applying necessary force. However, the *rationale* for the use of force can then be missed if the BWCs is activated too late, and a crucial piece of evidence is lost. Finally, in terms of privacy, the important thing is what the police would *store and use*, not what the police *record and delete* according to retention policies.

Third, there should be clear guidelines about retention policies, access to the videos, celerity of releasing videos into the public domain following critical incidents, and—perhaps most crucially—when the police are allowed to stop recording encounters. For example, some police departments are considering allowing the police to exclude certain interactions by particular police units (e.g., border police, covert detectives, or during stop and frisk). The rationale for this direction is that the recording could then be discoverable during court proceedings and can "reveal sensitive working procedures", which could subsequently be used by criminal elements. Is this the appropriate approach? We lack the evidence to counter this approach, but intuition (and past experience) suggests it would be counter-effective.

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End Notes

1. For example, having half the officers wear cameras, and the other half not meant that both "treatment" and "control" officers could attend the scene at the same time. How can we disentangle the effect (or otherwise) of the camera in that situation?.

Can Predictive Policing Work in Australia?

A/Prof. Michael Townsley

Predictive policing is a crime reduction approach that has gained prominence overseas recently. This article will explore the underlying concepts comprising predictive policing and attempt to sketch out the contexts in which predictive policing might prosper in Australian settings. Essential to this critique is understanding how these "localised" approaches have been developed and implemented in other countries and the degree to which those conditions are present or absent in Australia.

Predictive policing is a collection of analytical techniques to make predictions of either future crime locations, future offenders, or perpetrators of past crimes (Nix 2015; Perry 2013). The approach differs from previous forms of analysis because predictive policing is prospective in nature (or should be!). This means the analysis involves producing a forecast, crude as it might be. In the development phase a metric or indicator is computed that captures how accurate the generated forecasts are. In this way, an analyst or decision makers can have a degree of confidence in the validity of the predictions.

Conventional intelligence products, in contrast, consist of statements that are purely descriptive in nature (numbers and types of crimes, say). At this level, any recommendations arising are absolutely retrospective, and it is an open question how accurate those retrospective patterns are in predicting the future. A jurisdiction with a strong seasonal component self-evidently should not rely on descriptive analysis of the recent past because they will end up policing winter's patterns in spring. Alternatively, targeting previous victims in a bid to prevent repeat victimisation is probably a good approach because it has been well established that becoming a victim of crime temporarily elevates the risk of future victimisation (Farrell & Pease 2017).

What is predictive policing trying to predict? Perry (2013) identifies four distinct targets, but two of these comprise the majority of applications: (a) people, that is, which individuals are most likely to commit crime in the future; and (b) places, that is, what locations are most likely to host crime in the future (and at what times). The remainder of this article will concentrate on the latter, but before getting to that I need to spend three paragraphs explaining why predicting offenders is problematic.

Predicting future offending

Most of the information police agencies have at their disposal about offenders relates to characteristics of people, such as age, ethnicity, gender, offending history, or suburb of residence. These variables are largely static or unchangeable, which lies at the heart of the problem. One usually has no choice about their parents, ethnicity, home and so on. In this way, these characteristics become self-fulfilling: increased police attention leads to further involvement with the criminal justice system, which has a well known criminalising effect. Individuals lucky enough to not fit the established profile experience less police attention and are detected at lower rates, further reinforcing the profile's validity.

A more serious issue than using static characteristics is that police agencies often have no information about people who are not offenders or who have not been detected. When conducting an experiment, scientists try to establish a control group from which you can make comparisons with an experimental group (that receives some manipulation). Looking at patterns within a single group provides no information about the prevalence of observations beyond that group. For instance, with great certainty I can say there is a 99.9% correlation between offending and having two eyes. Almost every prisoner I have interviewed had two eyes. Clearly, using that characteristic as a profiling feature would be naive, to say the least. Comparing the same correlation for a non-offending population is a pre-requisite in assessing the forecasting accuracy of any feature.

Offender self-selection (Roach & Pease 2016) is close to an evidence based approach to offender targeting. The idea is that offenders are, by and large, versatile. Individuals who commit serious criminality also perpetrate low-level criminal acts. A way of targeting serious criminality, therefore, is to police low-level crimes with a view to disrupting subsequent (severe) criminality. For instance, cars illegally parked in disabled bays were linked to outstanding warrants and traffic offences at much higher rates than nearby legally parked vehicles (Chenery, Henshaw & Pease 1999). An inability to produce identifying documentation was associated with longer and more recent offending histories (Roach 2007).

Predicting where future crime will occur

Back to places: how to predict where and when crime will take place in the immediate future? There are two principal generating processes that explain the spatial distribution of crime. Both have multiple labels in the academic literature, but for our purposes (and for clarity), I will describe these as either (i) long-term or (ii) short-term processes. Both processes generate spatial patterns of crime that are predictable.
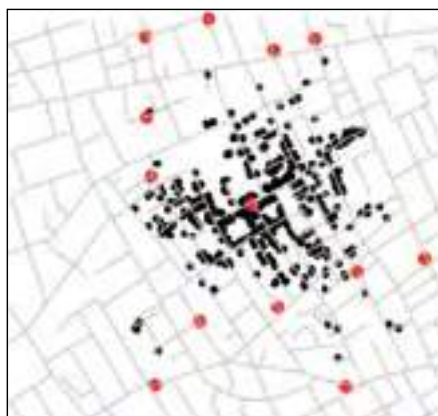
- **Long-term processes that generate crime are time invariant.** That is, the forces that produce crime opportunities are entrenched, well-established and cannot be altered quickly. A community with low socio-economic status, poor educational attainment, and multi-generational unemployment and active drug (and other) markets would generate an abundance of criminal opportunities. These places are likely to have a ready supply of motivated offenders and vulnerable targets.

A long-term crime generating process is akin to a poisoned well. Anyone drinking from the well runs a very high risk of adverse health effects. Tackling long-term processes is about correctly identifying the forces that contribute to an environment that produces high rates of criminal opportunities. Interrupting long-term processes involves either the removal of causes or making their presence infrequent enough to undermine the supply of opportunities.

A widely known example of this type of process is John Snow's famous cholera map (see Figure 1). John Snow correctly identified the cause of cholera—infected water—a theory running counter to conventional knowledge at the time. Part of his analysis was to map the number of deaths occurring in a cholera outbreak in London in 1854. This produced one of the most famous maps in modern history, where all the deaths concentrate around the Broad Street water pump. A riveting treatment of Snow and his cholera map can be found in Johnson (2006).

In the context of crime, long-term processes reveal themselves as stable crime hot spots. These types of locations have the right combination of many offenders and many vulnerable targets.

Figure 1. Pump locations (red) and deaths (black) associated with London's cholera outbreak

- **Short-term processes that generate crime are like a foraging animal.** Foragers need to make a decision about the risk and reward whenever they hunt for food. Spending too much time in an area may result in wasting time and energy. Move on to a new patch too early could mean unnecessary energy expenditure. Also, the new location may be unsuitable for food or dangerous. In the case of offenders, they seek to hit as many targets in an area as possible but evade the detection of law enforcement.

  Short-term dynamics are likely to be generated by a single offender or small group of offenders. A group might "work through" a suburb and move on to fresh patches.

The distinction between long-term and short-term dynamics are not necessarily clear-cut. A crime hot spot may get too much police attention for a period and those offenders may spread out looking for other targets, only to return when police attention is diverted. Because crime hot spots typically require one or more environmental characteristics to sustain the supply of opportunities (shopping centre, public transport node, etc.), foraging offenders are likely to be familiar with hot spots of crime and operate. In other words, these two processes may overlap; some areas are subject to both sorts of dynamics.

This potential overlap presents the most serious but neglected issue for predictive policing. In terms of forecasting accuracy, most methods are developed for either long-term dynamics or short-term dynamics. When these overlap, it can impact the observed accuracy of forecasts. The solution to this is including predictive variables that are both long- and short-term in nature.

Putting the policing back into predictive policing

Each of these dynamics suggests a different policing approach. Long-term dynamics imply a problem-solving approach where the underlying causes of the opportunity surface are important to identify so that the potential for crime can be changed. The reasons for this relate to the likely multitude of offenders (there is no way you can arrest yourself out of this problem) and the difficulty in permanently suppressing crime rates without doing anything about the drivers of the problem. This is akin to a physician merely treating the symptoms of a disease rather than the cause.

In short-term dynamics, small numbers of offenders working through neighbourhoods are probably best tackled using a combination of focused patrolling, both overt and covert. This is because there is a small number of offenders whose removal would likely account for a sizable fraction of the crime problem. Also, there will typically be more precise spatial and temporal patterns of a distinct group of offenders.

Forecasting the prospects of predictive policing in Australia

One of the areas of research in this area is establishing what combination of long-term and short-term dynamics might be operating in a given area. This mix should inform the emphasis placed on the range of tactical options considered. It is possible to build models that incorporate information about both long-term and short-term dynamics. It's very early to say what this ratio is, but early signs from predictive policing experiments overseas suggest that long-term dynamics are more important than short-term dynamics. This does not mean that short-term dynamics are unimportant, simply that including short-term dynamics in forecasting models leads to a meaningful increase in the forecasting accuracy of future crimes.

What does this mean for Australian police? There are a number of areas that need to be considered before widespread adoption of predictive policing in Australia. First, much of the academic work in this area has been conducted overseas, which mean the models and applications have necessarily been localised to the context in which the research has been conducted. The street network of a city has a bearing on the spatial distribution of crime. Grid-based systems that are common in the U.S. generate spatial crime patterns that may be different to those observed in Australia. More importantly, the mix of long-term to short-term dynamics seen in other countries

may be entirely different here. The size and nature of the active offender population, the policing regime, the quality and spatial distribution of public housing, and the extent of public transport all interact to generate the opportunity surface of crime. There is no plausible reason why we would expect to observe the same relationship between dynamics here as those observed overseas.

An area surprisingly unexplored is the predictability of different crime types. Most predictive policing studies have focused on single crime types: burglary or violent crime. While it is understandable to focus on these kinds of offences, probably a result of data quality and offence seriousness, researchers and agencies may be missing a trick. Burglary and violent crime make up a fraction of police work (measured in numbers of crimes or time spent). For instance, looking at calls for service in the Detroit Police Department in 2016, burglary makes up less 3% of all calls for service[1]. Predicting rare events is usually more challenging than common ones. Why not develop predictive models for *all* call types or offences? Those crime events that are most predictable *and* most prevalent should be prioritised for attention. Reducing offences or calls that currently dominant police officer time will dramatically alter service demand. The most common call type in Detriot in 2016? Something labelled PRANK/OTHER at 44% of all calls. The predictability of this type of incident will almost certainly be substantively different to burglary. Freeing up resources away from minor incivilities would permit more attention to be placed on the types of crime problems that members of the public expect police to tackle.

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1. I used data from this website to make these calculations: https://data.detroitmi.gov/Public-Safety/DPD-911-Calls-for-Service/hxss-88i6/data#column-menu

Twenty-one Performance Indicators for Measuring Success in Family Violence Initiatives

A Manuscript Prepared for Submission to Police Science

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Introduction

Family violence (FV) is an umbrella term encompassing a range of forms, for example, intimidation, physical abuse, emotional abuse, and sexual abuse that occurs between people who have a family or family-like relationship (Goncales & Matos 2016). FV is an important issue because of its prevalence and the significant long-lasting impact it has on victims and their families (Her Majesty's Inspectorate of Constabulary [HMIC] 2014; World Health Organization 2013). Internationally, jurisdictions have called for and/or developed strategies to prevent FV and promote safer families. Commonly used strategies include increasing the awareness of harm induced by FV, increasing social disapproval for FV, encouraging victims and witnesses to seek help, developing multi-agency response to FV incidents, and improving police operating protocols (e.g., Angus 2015; Cussen & Lyneham 2012; HMIC 2014; Taskforce for Action on Violence within Family 2012). Evaluating the impact of these initiatives is crucial to understanding the effectiveness of strategies and developing future programmes.

Difficulties in evaluating the impact of FV initiatives have been discussed in previous research, and some commonly raised issues include data quality and data accessibility across agencies (Ellsberg et al. 2001; Guy, Feinstein & Griffiths 2014; Jaycox et al. 2006; Social Policy Evaluation and Research Unit [Superu] 2013). While these are important issues that need addressing, there is also a lack of literature that offers a comprehensive understanding of the different performance indicators that are relevant in FV evaluation, and their strengths and limitations. Having this understanding would assist researchers and evaluators to develop FV monitoring and evaluation frameworks, identify gaps and limitations of current data sources, and facilitate development of infrastructure that supports the collection and reporting of these metrics. This information gap has motivated the development of this paper, which aims to collate and appraise a comprehensive list of outcome indictors for FV initiatives based on international research.

To increase the applicability of the findings, we have also analysed the data environment in New Zealand, and made recommendations on how to improve the data environment and increase utilisation of existing datasets or data collection mechanisms. Since the challenges faced by FV researchers and evaluators are not unique to New Zealand, this paper should benefit other agencies that deliver FV initiatives.

Methodology

International literature on FV was searched and reviewed, including journal articles and official reports from governments and jurisdictions. Relevant publications were identified through Google searches, Google Scholar searches, and specific searches in organisation websites and the *Journal of Family Violence* (a journal that is dedicated to research on FV). Additional publications were identified by assessing the references of identified reports and papers. Because the aim of this work was to identify and gather a comprehensive list of performance indicators for FV initiatives, the current article does not report on the specific findings from these publications.

Family Violence Initiative Performance Indicators

Through the literature review, we noted that it is common practice for researchers and evaluators to report on multiple indicators of FV (e.g., Bentley et al. 2016; Guy, Feinstein & Griffiths 2014; US Department of Justice 2005). This has the advantage of capturing a range of potential outcomes of a FV intervention, and therefore increases the comprehensiveness of the evaluation. A total of 21 performance indicators were identified and separated into five broader categories. Having these broader categories helped to identify the similarities and differences across indicators, and improve understanding of the wide range of indicators that are relevant in FV research.

Key findings are presented in Table 1, which intends to serve as a stand-alone guide to researchers and evaluators. Table 1 contains a description of each of the indicators, how the indicators could be presented, and an assessment of the current data environment in New Zealand and opportunities for improvement. Additional commentaries are included below to assist the reader, including a more thorough discussion of the similarities and differences across indicators and the associated strengths and limitations.

Category 1: Volume of family violence

Category one performance indicators are basic statistics that describe the volume of family violence: 1) victims known to police, 2) offenders known to police, 3) callouts to police, and 4) prevalence of FV in the community. The first three indicators are specific to reported incidents, while the fourth captures both reported and unreported incidents. The recording of these indicators may be time-specific, and therefore could be used to assess patterns and changes over time.

The first three indicators are generally extracted from police official statistics, and there are clear distinctions between them. First, offender/offending statistics provide an indication on demand for services offered by the wider criminal justice system, while victim/victimisation statistics provide an indicator of demand for victim-oriented support services. Second, callouts to police are different from the measures on victims, victimisations, offenders, and offences, as the former also includes unsubstantiated cases (Lloyd, Farrell & Pease 1994). The relevance of these indicators depends on the objectives of the research and evaluation.

Apart from reporting the raw count of victims and victimisations (or offenders and offences) and a per capita measure ('*n* per 10,000 people' or '*n* per 100,000 people') (Canadian Centre for Justice Statistics 2015; NSW Bureau of Crime Statistics and Research 2016), having detailed breakdowns provides a better description of the incidents, and therefore improves the value of the statistics.

For example, demographic information of victims highlights the concentration of FV, and data on perpetrator–victim relationships assist the understanding on the motives and opportunities for FV and risks for future incidents (Moore & Browne 2016). For example, the Canadian Centre for Justice Statistics (2015) report FV data by relationship of the perpetrator to the victims (i.e., ex-spouse, current spouse, parent, child, sibling, and extended family member).

It is also important to acknowledge the limitations of police official statistics. Depending on how the data are collated and analysed, changes over time observed in these measures could be a reflection of changes in practice or reporting behaviours, and therefore might not necessarily reflect changes in the volume of FV in the community. Further, measures based on police data exclude behaviours that are not considered unlawful activities, such as emotional or psychological abuse (Canadian Centre for Justice Statistics 2015).

There are two types of community prevalence statistics: lifetime prevalence and point prevalence, and data are typically collected through self-reported surveys (e.g., World Health Organization 2013). Lifetime prevalence refers to the proportion of people in the community who have ever experienced a certain condition, while point prevalence captures incidents that occurred within a specific time period (12-month point prevalence is a commonly used measure in FV, e.g., used by Fanslow et al. 2010). In FV, point prevalence is a better performance indictor than lifetime prevalence. Limitations of lifetime prevalence include 1) retrospective self-reported lifetime prevalence may be distorted or biased towards more recent experience (Morris, Mrug & Windle 2015), 2) changes over an extended time period may be influenced by a cohort effect, and 3) the measure may not be sensitive enough to capture the impact of recent changes in policy and interventions.

As outlined above, data from both police official statistics and community surveys generate useful performance indicators in FV. There are also added benefits in comparing results between community prevalence and police official statistics, which helps to understand reported versus unreported incidents. This understanding could be substantiated by findings from population-based surveys that report on reasons for not reporting FV to police (Angus 2015; US Department of Justice 2005).

Category 2: Characteristics of FV incidents

Category two indicators provide contextual information around the frequency and nature of violent behaviours. Five of the seven indicators are derivable from usual recordings by police officers attending an incident: 1) repeat victimisation, 2) repeat offending, 3) chronicity, 4) severity of harm, and 5) escalation of harm. The remaining variables, 6) exposure to inter-parental violence, and 7) co-occurrence, are not always captured in police data but may be available from other data sources (e.g., administrative data from social service agencies and surveys).

Repeat victimisation refers to a person/household who experiences FV repeatedly (Lloyd, Farrell & Pease 1994). Measures of repeat victimisation could, therefore, be a raw count/proportion of FV victims who are repeat victims, or a raw count/proportion of households that experienced FV repeatedly (Lloyd, Farrell & Pease 1994). In contrast, repeat offending refers to people who are repeat offenders in FV, and may include violent behaviours enacted against the same *or* different persons (State of Victoria 2016). This indicator is measured by the proportion of FV offenders who re-offend (i.e., re-offending rate), and may be substantiated by the number of offences enacted by those repeat offenders (State of Victoria 2016). A better measure of repeat offending would separate the reporting of repeat offending enacted to the same victim versus that enacted to different victims (State of Victoria 2016).

Chronicity refers to the frequency and period of victimisation, and enhances the understanding of repeat victimisation. This may be measured by the number of victimisations experienced over a defined time period. For example, the *Conflict Tactics Scale* requires respondents to report experience of each violent behaviour in the past 12 months using response options ranging from zero to 20+ times (Straus 1979). By capturing frequency, the mean number of victimisations can be extrapolated (McDonald et al. 2016).

Another way to assess chronicity is to determine the number of years (or days/months) a victim has *not* experienced FV, sometimes expressed as the number of years lived free from FV (Superu 2015). The duration of repeat victimisation experienced by FV victims is another measure of chronicity. This measures the length of time victims have regularly experienced FV (Birdsey & Snowball 2013; Westmarland, Hester & Carrozza 2005).

It is also necessary to record the level of harm caused by FV to provide a qualitative understanding of the nature of the violent behaviour. The wide range of violent behaviours classified as FV makes it naturally difficult to assess and compare the level of violence. A recent study used the Cambridge Crime Harm Index (CHI) as a measure of harm severity in FV to assess changes in severity experienced by repeated victims over time (Bland & Ariel 2015).

The Cambridge CHI was derived based on the number of days of imprisonment for each offence type under sentencing guidelines, and therefore could only apply on FV behaviours that are classified as an offence under the criminal justice system. If there is a need to expand the scope of the indicator, harm severity may also be approximated according to perceived severity among the general population. A study of European Union citizens assessed the perceived seriousness of five broad categories of FV: sexual violence, physical violence, psychological violence, restricted freedom, and threats of violence (European Commission 2010). It might be possible to use this finding (or replicate the study) to develop a scale for use as a performance indicator.

As a related measure to chronicity and severity of harm, escalation of harm refers to an increase in the severity of harm (i.e., an evolution from psychological abuse to physical abuse), and/or frequency of victimisation over time (Machado 2016). An escalation of harm increases potential danger for victims, and therefore is important to assess (Department of Human Services 2012). The ability to assess changes in the level of severity of harm rests on the availability of a valid measure of severity (as discussed above).

This category also contains two indicators that specifically measure outcomes for children. The first indicator is on children's exposure to inter-parental or parent-to-partner violence, which is considered a form of child maltreatment because of the associated short- and long-term negative consequences (Rizo et al. 2016). The measure of exposure covers a continuum of activities, ranging from being aware of the conflict, overhearing the conflict, witnessing the conflict, seeing the aftermath, and/or being actively involved (e.g., trying to intervene) (Kimball 2016; Peisch et al. 2016).

Exposure may be self-reported by children or family members (McDonald et al. 2016; Morris, Mrug & Windle 2015; New Zealand Family Violence Clearinghouse 2016b; United Nations Children's Fund [UNICEF] 2014), although reporting from the latter may be biased or inaccurate (UNICEF 2014). Some measures, such as the Child Exposure to Domestic Violence Scale, provide a detailed account of the child's experience by assessing frequency, type and proximity of exposure to the violent behaviour (McDonald et al. 2016), while other studies merely assessed the 12-month prevalence of exposure to FV (e.g., New Zealand Family Violence Clearinghouse, 2016b). The other child-centred metric is co-occurrence, which refers to the co-existence of self-experienced and exposure to FV among children. Those who experience co-occurrence tend to have more negative internalising or externalising problems (Kimball 2016).

Category 3: Measures of response from police and other agencies

It is necessary to gather information on responses from police and other agencies to FV incidents. These performance indicators assist the understanding of the adequacy and quality of support received by FV victims (and offenders and witnesses in some instances), and the resulting legal actions. The first three indicators capture responses from 1) the criminal justice system including police, 2) other government and non-government agencies, and 3) medical providers. The fourth indicator is perceived quality of support and is relevant across service providers.

The measure on responses from police and the wider criminal justice system captures a range of activities, from initial attendance by police to probation (Kelly et al. 2013; US Department of Justice 2005). This may include generic measures such as raw count of investigations, proportion and outcomes of prosecutions, and number of protection/protective order applicants (New Zealand Family Violence Clearinghouse 2016a, 2016b), as well as measures that are specific to a jurisdiction. For example, in New Zealand, the monitoring of applications and outcomes of the Police Safety Order is highly relevant (New Zealand Family Violence Clearinghouse 2016a).

Apart from seeking support from the criminal justice system, formal support could also be provided by other government or non-government agencies, including social agencies, lawyers/counsellors, and victim support agencies (Cho & Huang 2016). Demand for these services could be captured through the monitoring of administrative data routinely collected by these agencies. Multi-agency collaboration improves outcomes for FV victims, as agencies provide support within their sphere of influence and expertise (Guy, Feinstein & Griffiths 2014). Cross-agency collaboration could be measured by capturing the interactions and referrals made between agencies (State of Victoria 2016).

Injury caused by FV is an objective measure of severity (Hughes et al. 2014). Medical attention, is therefore an important performance indicator in FV. This may be captured by need for medical help, admission to hospital, treatment required, length of hospitalisation, and resulting injury/disability (Hughes et al. 2014; New Zealand Family Violence Clearinghouse 2016b; US Department of Justice 2005). However, administrative data from health authorities are incomplete as they do not capture victims who did not seek health care for injuries (Superu 2013; World Health Organization 2013). This limitation may be overcome by supplementing with population-based surveys (World Health Organization 2013).

The fourth indicator in this category is perceived quality of support. A report from the United Kingdom (UK) noted the importance of incorporating victims' views to monitor police effectiveness in FV,

and recommended having a mechanism to routinely collect data from victims (HMIC, 2014). Metrics may include perceived timeliness and helpfulness of the service, and overall satisfaction with the service (HMIC 2014; Superu 2015), as well as the agencies/service providers being non-judgemental (Morrison et al. 2016). Findings on victims' perceived quality of support could be supplemented by observations of agencies' responses, such as police officers who attended the FV incident (HMIC 2014). While the examples provided above focus on law enforcement agencies, this measure may be applied on other support agencies and service providers (e.g., victim support services and health providers).

Category 4: Impact on victims

Victims of FV may suffer a range of severe and lasting effects. This may include impacts on their physical and mental health, employment and financial stability, education, social competence, and increased tendency for future offending/victimisation in violent crime (e.g., Jaffe et al. 1986; Johnson et al. 2014; Lagdon, Armour & Stringer 2014). It is, therefore, important to use multiple measures to develop a comprehensive understanding of victims' well-being. These measures are useful for assessing the impact of FV on victims, as well as to evaluate the effectiveness of FV interventions in alleviating harm caused by FV (pre–post intervention comparisons).

Victims of FV are susceptible to a wide range of physical and mental health issues as a direct and/or indirect consequence of FV (World Health Organization 2013). Health status may be objectively assessed using biological outcome measures or self-report. An example of a self-report instrument used in FV research is the *Short Form Health Survey (SF-36)*, which measures eight health domains: physical functioning, role-physical, body pain, general health, vitality, social functioning, role-emotional, and mental health (Asadi et al. 2016). Mental health and distress among children may be measured using age-appropriate instruments, such as the *Preschool Age Psychiatric Assessment* (Briggs-Gowan et al. 2015) and the *Trauma Symptom Checklist for Young Children* (Briggs-Gowan et al. 2015).

Apart from physical and mental health, victims' employment may be affected by their experience of FV, such as being late to work repeatedly (Machado et al. 2016) and reduced productivity (Rayner-Thomas, Fanslow & Dixon 2014). Employment, work performance, and financial stability may be used as performance indicators for FV interventions (Rizo et al. 2016). However, findings may need to be interpreted with caution because in some cases, financial stress may also be reported by victims who are still adjusting to changes in life, for example, those who ended their relationship with their abusive partner.

For children and young people, self-experienced and exposure to FV is a risk factor for negative academic outcomes (Teasley 2003). Academic competence and involvement may be assessed by objective measures such as nationally standardised test scores, repeated grades, truancy, and school drop-out rates (Davis et al. 2005). Academic competence and involvement is not only a potential outcome of experiencing FV, it may also influence resilience towards exposure to FV (McDonald et al. 2016). A benchmark measure, if available, should be obtained.

Social competence includes social skills and relationship with peers, and is more commonly assessed among children and young people than adults. Similar to academic competence and involvement, social competence is not only a potential outcome of experiencing FV, but also may help to buffer negative consequences of FV. Compared with FV victims who have a low level of social competence, those with a high level of social competence have better physical and mental health, increased help seeking behaviours, and reduced child-centred

aggression (among parents) (Ridings, Beasley & Silovsky 2016). Children's social competence may be captured by parental report, including use of the *Child Behaviour Checklist,* which captures a wide range of social activities including sport participation, participation in other extracurricular activities, engagement in paid or unpaid work and chores, number of friends, and quantity and quality of time spent with friends (McDonald et al. 2016).

In the context of FV, the term "cycle of violence" refers to the association between exposure to FV (including self-experienced and witnessed incidents) during childhood and subsequent FV perpetration or victimisation during adulthood. This relationship has been demonstrated in a number of studies (Morris, Mrug & Windle 2015; Zvara, Mills-Koonce & Cox 2017). A recent publication from the "Birmingham Youth Violence Study" found that witnessing of FV between parental figures predicted subsequent perpetration of dating violence. Furthermore, experience of harsh discipline predicted both subsequent perpetration of and victimisation from dating violence (Morris, Mrug & Windle 2015). Reporting of the long-term impact of FV initiatives is rare, probably due to the challenges and resources required to gather individual-linked data over a long period of time.

Category 5: Impact on society

Societal changes in the awareness, perception, and tolerance to FV over time may be generated through single or multiple interventions, such as primary prevention programmes and policy development. These broader changes in society affect both the prevalence and reporting of FV (Superu 2015), and therefore are important performance indicators in FV.

Responses are generally collected via population-based surveys. With an adequate sampling methodology and sample size, survey responses can provide a representative view from the general population, and allow statistical comparisons across sub-groups. A Eurobarometer survey of European Union citizens undertaken in 1999 and 2010 focused on domestic violence against women specifically, but still provides good examples of how to measure societal views on FV in general (European Commission 2010). The survey included measures of awareness, perceived prevalence, and tolerance to domestic violence against women. Responses were tracked over time, and compared by country of residence, gender, age, levels of education, and level of proximity to cases of domestic violence against women (including proximity to both victims and offenders).

New Zealand Case Study

An assessment of the data environment in New Zealand is included in Table 1 to provide an illustrative case study of how to populate these 21 indicators. The assessment has a strong focus on the New Zealand Police databases and reporting practice. A number of limitations associated with the data capture protocol were identified, which have a strong impact on data extraction and reporting. These limitations were not unexpected, given that the primary function of these databases is to record administrative information for operational activities (Gulliver & Fanslow 2012). However, these problems should be addressed to improve monitoring and evaluation activities. Apart from this potential improvement, there are also opportunities to increase collaboration with other agencies, researchers and evaluators to maximise use of existing data collection mechanisms. This may include gaining access to data that has already been collected, or inserting questions into population-based monitors that do not currently capture FV performance indicators.

Conclusion

The purpose of this paper was to develop a comprehensive understanding of the range of performance indicators that could be used to measure success in FV initiatives, and 21 indicators were identified as a result. We believe this work serves as a helpful reference to researchers and evaluators when designing FV monitoring and evaluation frameworks. The list of performance indicators were collated through a review of the international literature, and we have demonstrated ways to adopt these indicators by using the New Zealand data environment as a case study. We encourage researchers and evaluators in other jurisdictions to use the current table format to analyse their data environment and identify opportunities. This would be an important step towards creating a better data environment for FV research and increasing utilisation of existing datasets or data collection mechanisms.

In the context of evaluating police-led FV initiatives, most performance indicators from categories one and two could be derived from existing police datasets. Developing and tracking these measures are therefore less resource intensive, and do not require additional input from victims, offenders, informants, or other agencies. Collating categories three to five indicators are, however, important for building a comprehensive understanding of the impact of FV initiatives. While the specific tasks of police in FV interventions may vary across jurisdictions depending on their operating strategy and practice, recent papers have emphasised the importance of police taking a guardian role (Stoughton 2016; Wood & Watson 2016). With this changing view and practice, it is important to not underestimate the sphere of influence police could have in FV incident attendance and response, and to reflect this thinking when designing an evaluation framework.

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Acknowledgements

End Notes for Table 1

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Table 1. A summary of outcome indicators for family violence (FV) interventions

Indicator	Description	Metric	New Zealand (NZ) case study	
			Data environment	Opportunities
Category one: Volume of family violence				
1. Victims known to Police	*Include number of victimisations, victims, offences or offenders. Based on offences reported to Police[1,3]*	• Raw count or number per 10,000 people (rate) • Detailed breakdowns (gender/age/ethnicity of victims and offenders, and victim-offender relationships)[2,3]	Data could be extracted from the NZ Police database 'NIA', which records all occurrence that were reported to or discovered by police and required follow-up actions. Victimisations and offences recorded in 'NIA' are linked to individuals via a unique person ID; however, there isn't a single offence code that captures FV. Instead, FV can be indicated by various proxies of varying reliability: Family Violence Flag, relationship between victim and offender, offence scene type code Dwelling.	• Improved NIA recording practice • Sub-population analysis, especially for regional differences and Maori (the indigenous people in NZ)
2. Offenders known to Police				
3. Callouts to Police	*Based on incidents or offences reported to Police[4]*	• Raw count or rate • Detailed breakdowns	Data could be extracted from the NZ Police database 'CARD', which records all callouts to Police. Each callout has an incident/offence code. Incident codes and offence codes that might relate to FV (e.g. domestic dispute) can be extracted. The system also has a Supplementary Flag that identifies incidents/offences as FV but under-count actual events.	• Improve practice around use of FV supplementary flag • Sub-population analysis
4. Prevalence in the community	*An estimate of the proportion of people in the community who are (or have been) affected by FV[5]*	• Lifetime prevalence: % who have ever experienced FV[5] • Point prevalence: % who have experienced FV during a specific time period	Prevalence is usually measured via population surveys, e.g. the NZ Crime and Safety Survey (CASS) provides an estimate on the proportion of adults (aged 15+ years) who have experienced one or more violent interpersonal offences enacted by a family member.[6]	• Comparison with callout pattern e.g. explore reasons for reporting/not reporting to Police • Sub-population analysis
Category two: Characteristics of family violence incidents				
5. Repeat victimisation	*People or households who are victimised repeatedly[4]*	• Raw count or % of victims who are repeat victims • Raw count or % of households who reported repeated FV[4] • Breakdown by number of repeat victimisation[4] • Detailed breakdowns (as per above)	NZ Police has a data reporting system 'SAS Visual Analytics' to report on Repeat Trends . This system provides statistics around re-victimisation and re-offending in the past 12 months, at national, regional, area, and station levels. Data are extracted on: 1) number of victims, 2) number of offenders, and 3) number of repeat calls to the same address. However, *it does not:* specify incident type (doesn't limit to FV), does not indicate number of repeat victimisations, and does not include repeats which occurred within the same calendar month. NZ CASS provides an estimate on repeat victimisation at a population level.	• Improve police recording and reporting • More in-depth analysis of existing datasets e.g. NZ CASS • Dedicated research to understand the nature of and context around repeat FV, e.g. risk factors for repeat victimisation/offending
6. Repeat offending	*People who offend repeatedly[8]*	• Raw count or % of offenders who re-offend • Detailed breakdowns (as per above)		
7. Chronicity	*Frequency & period of RV[9,10]*	• Number of victimisation, time interval between victimisations, period of RV[9,10,11]	Not currently reported in SAS Visual Analytics but relevant data can be extracted from NIA using date of occurrence.	
8. Severity of harm	*Level of harm caused directly by FV[12]*	• Severity could be approximated using measures like Crime Harm Index (CHI)[12]	Severity of harm is not routinely collected by police, but may be included in NIA record as free text. Offence code could be used as one indicator of severity (e.g. level of assault). NZ Crime Harm Index (CHI) is currently being developed by NZ Police. CHI could be used to apply harm weighting to offence codes to enable the measuring of severity and escalation of harm.	• Apply NZ CHI • Explore existing datasets e.g. NZ CASS, and administrative data from other agencies
9. Escalation of harm	*An increase in severity of harm and/or frequency of FV over time[12]*	• Changes in level of severity caused by FV[12] • Changes in frequency of FV victimisation[12]		
10. Exposure to inter-parental violence (among children)	*Awareness of, overhearing or witnessing the conflict[13,14]*	• Raw count or prevalence rate[15] • Detailed breakdowns (as per above)	Exposure may be recorded in NIA record as free text or via children linked to FV occurrences and Child Vulnerability Factors reports recorded by police, but this is not routinely extracted and reported on. Data on exposure and co-occurrence may also be available from other agencies.	• Explore existing datasets e.g. NZCASS, Youth2000 series, & administrative data • Enrich understanding of children's exposure to FV e.g. frequency, type, and proximity[16]
11. Co-occurrence (among children)	*Co-existence of self-experienced and exposure to FV[17]*			
Category three: Measures of response from Police and other agencies				
12. Police and wider criminal justice system	*Actions taken by law enforcement agencies in investigating and responding to FV[18]*	• Raw count of investigations[7] • Raw count and % resulting an outcome e.g. a prosecution • Raw count of Police Safety Orders (PSOs) and Protection Orders (POs), and % breaches/ application outcome[19]	FV Report in SAS Visual Analytics provide statistics at national, regional, area, and station levels on: 1) monthly total of FV investigations and outcomes e.g. % with offences, % with apprehensions, % with prosecutions, 2) PSOs issued and breached (fiscal year to date).[7] Number of PO applications and detailed breakdown (e.g. gender of applicants and respondents) available from Ministry of Justice.	• Explore administrative data across criminal justice system and data transfer between agencies for reporting purposes
13. Other formal support	*Government/non-government agencies[20] E.g. Victim Support, Women's Refuge, Age Concern*	• Raw count and detailed breakdowns[21] • Interactions and referrals made between agencies including Police[8]	Administrative data from agencies may include clients' characteristics, role in FV, interactions and referrals made between agencies.	• Explore administrative data from other agencies, and data matching
14. Medical attention	*E.g. hospital admission, treatment required, length of hospitalisation*	• Raw count of FV-related events • % caused by FV[23]	Administrative data collected by District Heath Boards and Ministry of Health.	• Explore administrative data from other agencies and data matching
15. Perceived quality of support	*E.g. feel safe, non-judgemental, responsive to needs[24]*	• % reported positive engagement • % indicated willingness to engage in future, if needed	The annual Citizen's Satisfaction Survey conducted by Police assesses quality of service experience.[25] The methodology is designed for a different purpose, and therefore, is not suitable for generating FV performance measures.	• Research with service users and service providers might be suitable in some contexts
Category four: Impact on victims				
16. Physical and mental health	*E.g. post-traumatic stress disorder, anxiety, injury, disabilities[26]*	• % of victims affected[5]	Administrative data collected by District Heath Boards and Ministry of Health. Mortality data collected by the Coronial Services and Mortality Review Committees	
17. Employment and financial stability	*E.g. employment status, work performance, financial stability*	• % of victims affected	Administrative data collected by government departments such as Work and Income and Inland Revenue Department.	• Explore existing datasets, including potential for data matching
18. Education	*E.g. school attendance, academic achievement, drop-out[17]*	• % of victims affected • By level of involvement e.g. exposure vs self-experienced	Administrative data from Ministry of Education and schools. Self-report in surveys with children e.g. Youth2000 series survey run by Auckland University.	
19. Social competence	*E.g. social skills, number of friends, relationship with peers[16]*	• % of victims affected • By level of involvement e.g. exposure vs self-experienced	Social competence assessed in existing surveys with children e.g. Youth2000 series survey.	
20. Cycle of violence	*Prior FV experience increases risk of future perpetuation & victimisation[28]*	• Analysis of life course occurrences • Acknowledge childhood experience as risk factors for violent behaviours	NIA recording practice of FV are noted above under 'Victims known to Police' and 'Offenders known to Police'. Extracting life course occurrences is possible.	• Analyse life course occurrences recorded in NIA, or existing longitudinal studies
Category five: Impact on society				
21. Broader changes in society	*E.g. awareness, perception, tolerance[29]*	• % of the general population[29]	A limited set of questions were included in 2014 NZ CASS.	• Alternative data collection tools • Include in population surveys e.g. health and social surveys

A Police Organisation is No Laboratory:
The Messy Side of Conducting Research in the Field

Laura Huey, University of Western Ontario, Canadian Society of Evidence Based Policing

There are many things for which neither life nor graduate school adequately prepare you. As a field researcher in the area of frontline policing, I have been in many situations on which textbooks remain eerily silent. For example, I have come to realise that despite one's desire to collect signs of "material culture", one should probably not pick up and pocket the orange cap on an addict's syringe and then absently play with it for weeks in said pocket. I have also learned one should never pull out a notebook to take field notes anywhere near an open air drug market, nor make eye contact with someone intent on selling you crack or heroin. Trial and error have also taught me that female researchers might want to avoid conducting field observations by standing on certain street corners.

I expect that someone reading this might observe that the type of frontline policing I have studied poses unique challenges not found in traditional policing research. This is undoubtedly true. However, it is also the case that the institution of policing can pose a myriad of challenges to the researcher beyond what I have described, and that in our eager embrace of evidence based policing we often gloss over some of the problems that can crop up to befuddle both the experienced and novice researcher. In this paper, I want to explore some of the issues that can crop up in order to make a relatively important point: police organisations are not typically designed to lend themselves to perfectly constructed research plans, and thus policing research is almost always a messy business. Thus, I present Huey's First Principle: Strive for methodological perfection, but expect to fall short. Always. Forever.

Let's take the process of program evaluation as a starting point. In a fairly ideal world, one might 1. identify a problem; 2. collect baseline data on the effects of that problem; 3. trial a program or strategy to address the issue; 4. identify any problems or unintended effects of the strategy, correct them; and 5. track the program over time. In an even more ideal world, one could even test the effects of an intervention by running a randomised control trial that would allow for some more sophisticated comparisons. Unfortunately, I live in neither of these worlds. The one I inhabit is frequently a place in which police organisations implement programs or strategies due to operational needs (real or perceived) and not the needs of researchers. Thus, when asked to evaluate a program, I am often confronted with something that has been in place for a dozen or more years, for which there is no pre-implementation data and/or no pre-set benchmarks upon which to measure effectiveness or efficiency.

If we are talking about a frontline program or strategy, I also likely cannot alter its operation by, among other things, scaling its size to control for unwanted effects, varying officer duties, controlling vacation times, or adjusting police strength to account for seasonal or other effects. Indeed, given that in the current economic climate many police organisations in Canada and elsewhere are strapped for resources, should I be fortunate enough to be able to alter, implement, evaluate or test any program or strategy affecting operations, I will have to work hard to barter from a 30-day grace period to achieve 90 days or more. And I will also carry the burden of making sure that within that period I eke out sufficient usable data to justify any commensurate burden on police operations. No pressure.

Another issue frequently encountered in the police world is also derived from operational imperatives: transfers. A central goal of evidence based policing is to increase expertise through the blending of practitioner experience and researcher knowledge. One of the best ways in which this knowledge transfer can take place is through having practitioners embedded as members of the research team. I once co-designed an entire research project with a police officer, only to receive an email one morning saying simply (and somewhat glumly), "I've been transferred." As a result, the officer had to learn an entirely new occupational role, which meant he was no longer able to continue on the team. For police officers conducting research for graduate or other programs in their own units or related to aspects of their daily work, the effects of such transfers could potentially be devastating. However, "needs must", and organisational priorities, particularly around meeting operational demands, tend to carry greater weight with police decision-makers.

I recently had the pleasure of hearing Larry Sherman speak on an issue that is near and dear to my heart: the role of emotions as a factor influencing policing research. Citing the EMSOU trial, a randomised control trial to test the utility of having scene-of-crime officers attend attempted burglaries, Sherman reflected on the extent to which release of news of this study generated a significant media firestorm, as well as harsh criticisms from members of the public and police professionals alike. What people were reacting to was the idea that crime victims might be denied a police service, despite the fact that, in reality, what the trial showed was that the chances of finding a perpetrator based on the collection of evidence at such scenes was fairly slim. In other words, the taxpayer was wasting their money on insisting on such levels of service.

Bowing to public pressure, no service came forward to state what is well-known within policing circles: for economic reasons, many police organisations have quietly developed informal policies of non-attendance for what are viewed as low-priority burglary calls. I raise this issue because the possibility of a public backlash, particularly around the removal or alteration of frontline services, can be a significant impediment to how research is conducted, or even to whether it is conducted at all. No police service wants to find themselves lambasted, as the Leicestershire Police did, for running an experiment, no matter how well-intentioned. Observing this case and similar others from afar has admittedly had a chilling effect on my own selection of research topics, methods and practices. I now routinely inform police agencies of not only the methodological and operational risks associated with different study choices, but also any likely political effects. By way of contrast, individuals working with petri dishes seldom have to worry about finding themselves at the centre of an unpleasant news story.

If there was to be a second Huey's Principle, it would likely be: be wary of letting others define the problem. I once provided support to an ongoing project on youth policing conducted by a colleague. The police agency had decided to make youth an organisational priority and wanted to implement diversionary processes to address issues related to young offenders. This pre-defining of problems and pre-setting of strategies is not uncommon.

My friend Peter Neyroud uses a case study—based on a version of an actual project—to teach budding EBP practitioners at Cambridge how to devise research plans. The case study is chock-full of the terrible problems that await researchers who blindly accept organisational dictates of problems and solutions. In the instant case, my colleague's role was to document practices in the field, recommend new strategies based on diversion, implement the strategies and then test and track them over time. As is sometimes the case, it was not quite clear why the organisation had settled on this particular priority. While youthful offending was an issue in some communities, it was not a universal issue and many police stations had little or nothing to do with young people. I once spent an entire week in one such station and the only youth call that came in involved a delinquent student who refused to come out of a bathroom stall at the local school. The officer joked about sliding a candy bar under the door to lure the student out, which, under the circumstances, I thought was a rather fine example of police problem-solving.

Compounding the difficulties of this entire situation was that the researcher needed a strategy to show the organisation's executive and thus justify the expense of the project. Based on what I had been told, and prior to entering the field, I suggested a program that had worked in another country in that it had been shown to increase crime reporting among those who might not typically report[1]. We then went into the field to solicit feedback, where it was universally panned. Rightly so. The mismatch between the organisational priority and operational realities meant we had constructed an overly complex solution for, in some instances, a non-existent problem. In other areas, this complex solution could not work because the police station would not have had the resources to implement it and it would have died the slow, lingering death that often befalls externally imposed solutions. Making matters worse, interviews across several stations revealed other issues more pressing in nature.

Then there is the matter of police culture. While it is the case that claims that police culture is inherently anti-research are not unusual within the policing research literature, and are often over-stated (see Willis & Mastrofski 2016), I have certainly encountered individuals within policing, and in some instances groups and strains within organisations, exhibiting signs of skepticism towards the value of research. As an example, I was once introduced at an event to a former commanding officer who huffily chastised me because, in his "experience", "researchers see all cops as knuckle draggers." He then proceeded to knock the utility of policing research. I might have excused this witty banter as a side effect of cocktail consumption, had it not been for the fact that similar comments were repeated in his speech for the entire assembly the next day.

This is hardly the first time I have battled the presumption that police experience is always inherently superior to science. Anyone who knows me knows that I rarely stand on ceremony and only infrequently use my titles[2] or flash bona fides. And yet, within one organisation, I frequently found myself beginning conversations with "in my 16 years of experience working with police organisations" as a way of being taken seriously. I picked up this speech tic after observing that conversations in which research was about to be derided frequently began this way. As an outsider I can afford to laugh at some of these "idiosyncrasies". Can they affect the quality of my research? Absolutely. A mid-level police manager who does not "believe in" research can effectively block a study, despite support from police executives. And certainly I have also had rank-and-file members literally run away when they see me coming, which has the unfortunate effect of bringing down the sample size. That said, I have found that there are usually ways of working around such biases, just as I have relied for years on my outsider status as a means of disregarding

excessive concerns for obeisance to matters of rank and hierarchy. For the individual officer starting out in evidence based policing, these issues are graver and can potentially have lasting career effects. For such reasons, this is an area in which it is imperative that pracademics (practitioner-academics) devise and share their own unique strategies, if we are to continue growing the field.

To sum, I urge readers not to be fooled. Each month a new crop of journal articles appears, all shiny and new, promising to shed light on some hitherto unknown or ill-understood aspect of policing and crime prevention. What is less frequently discussed, if ever, is the extent to which the words on the printed page are the products of compromises between researcher ideals and the often complex realities of policing. We talk about gold stars, quality scales and research standards, and so we should in our quest for quality evidence. However, we also need to acknowledge that quality, never mind perfection, can be difficult to achieve when working with organisations that were never designed for generating research, and which may harbour members who see research as directly opposed to what they believe in and do. We should never forget, if ever allowed to, that police organisations are not laboratories—*if only!*—and that evidence based policing practitioners will always have to contend with the messy realities of studying the policing world.

References

Willis, J & Mastrofski SD, 2016, 'Understanding the culture of craft: lessons from two police agencies', Journal of Crime and Justice, vol. 40, no. 1, pp. 84–100.

End Notes

1. Admittedly, not diversion-focused, but desperate times call for desperate measures.

2. I am firmly of the view that titles should be reserved for their proper use: in securing airline and hotel reservations on the off-chance of an upgrade. Note: it does work!

Conference and Awards

Detective Inspector Mike Newman, Evidence Based Policing Visiting Fellow, University of Queensland

Figure 1 – AIPM at Manly, Sydney, Australia

Figure 4 – Professor Lawrence Sherman, Cambridge University

The 3rd annual Australia and New Zealand Society of Evidence Based Policing (ANZSEBP) Conference was again held at the magnificent surroundings of the Australian Institute of Police Management (AIPM) from 30 May to 1 June 2017.

As can be seen from a photo taken by one of our participants (Figure 1), the AIPM is superbly located on North Head at Manly, Sydney, Australia and the weather was picture perfect.

A number of key note speakers and "Short Shot" presenters provided their perspectives around this year's conference theme: Police Engagement with Communities, Police Legitimacy, Innovation and Capability through Evidence Based Policing. A total of 79 participants made their way to this picturesque location for the two-day conference.

The conference was opened by Deputy Commissioner Stephen Brown as the Society's Deputy Chairperson and he introduced our first two key note speakers: Professor William Terrill (Arizona State University) and Dr Barak Ariel (Cambridge

University). Professor Terrill provided an outline of his research around "Assessing Police Use of Force Policies and Outcomes Project". The goals of his project were to identify the extent of variation in less lethal force policies nationally; determine policies officers find most useful in terms of offering discretionary guidance; and determine policies related to less force, complaints, and injuries.

Figure 3 – Dr Barak Ariel, Cambridge University

Dr Ariel presented on his research that looked at the effect body worn video cameras can have in significantly reducing police complaints.

Professor Lawrence Sherman, Cambridge University provided an overview of

evidence based policing, using the previous presentations as exemplars of the results that can be achieved using this approach.

Dr Justin Ready (Griffith University) began the next session by providing an enthusiastic presentation on his understandings of officers' memory after they are involved in critical incidents such as active armed offender incidents from a trial conducted with the Queensland Police Service.

This was followed by our first "Short Shot" delivered by Senior Sergeant Roy Newland, Western Australia Police (WAPol) who discussed the benefits of body worn video that were identified from a randomised control trial in Western Australia.

Figure 5 – Dr Justin Ready, Griffith University

Figure 2 – ANZSEBP Conference course participants

The themes of Police Engagement with Communities and Police Legitimacy, with particular emphasis on use of force, were then further explored with a panel of experts that included Deputy Commissioner Jeff Loy (New South Wales Police Force), Dr Ready, Dr Ariel and Professor Terrill. This panel was ably facilitated by Professor Sherman.

Figure 6 – ACC Alex Murray, West Midlands Police

Once again, Assistant Chief Constable Alex Murray flew out to give an overview of the evidence based work that is underway in the West Midlands Police. This included details around experiments they are conducting, the work of his Behavioural Insights Team and the use of digital technologies to prevent crime. In line with our theme around innovation ACC Murray presented a unique example of a trial they conducted regarding dedicated denial of service (DDOS) attacks to the mobile phones of drug traffickers to disrupt supply.

ACC Murray's presentation was followed by another seven Short Shots. During this session we heard presentations from Queensland Police Service, New Zealand Police, New South Wales Police Force, Victoria Police and South Australia conference participants. Each of these examined at a variety of ways in which each agency was their building capability.

This brought the Conference to a close for the first day. Jurisdictional representatives from every Australasian policing jurisdiction then came together for the Society's Annual General Meeting where Deputy Commissioner Stephen Brown was elected as the Society's second Chairperson. Deputy Commissioner Peter Martin was thanked for his significant leadership for guiding the Society since its establishment to the point where it is now. Mr Martin will continue his involvement with the Society as the new Deputy Chairperson.

All the participants then came together for a valuable networking opportunity during the Conference Reception that was followed by the Conference Dinner. As can be seen from ACC Murray's photo, arrangements were also made for those interested to watch State of Origin 1 rugby league clash

Figure 7 – Dr Darren Walton, NZPol

between New South Wales and Queensland after dinner.

Figure 8 – Inspector Carlene Mahoney, NSWPF

Figure 9 – Jennifer Dixon, Victoria Police

Figure 10 – Superintendent Philip Flogel, NSWPF

Figure 11 – Constable Tom Knight, SAPol

Figure 12 – Detective Superintendent Murray Reynolds

Day 2 of the Conference commenced with the Executive Director of the AIPM, Warwick Jones highlighting the strategic partnership that exists between the AIPM and the ANZSEBP. Warwick hinted at developments between the AIPM and Cambridge University and introduced Professor Sherman to further elaborate.

Professor Sherman announced that Cambridge University and AIPM would work together to deliver the Cambridge University Masters of Studies in Applied Criminology program. This will involve four visits to the AIPM and two visits to Cambridge University over a two-year program to undertake this course. This is a significant benefit to Australasian jurisdictions as it reduces the travel component of six visits to Cambridge University as the program is currently offered.

Figure 13 – Warwick Jones, Executive Director, AIPM

This news was followed by another four Short Shots, each of which were presented by alumni or current students of the Cambridge University Masters of Studies in Applied Criminology program.

These former and current students represented the Western Australia Police, the Queensland Police Service and another of our strategic partners, KPMG.

Figure 14 – Professor Lawrence Sherman, Cambridge University

Figure 15 – Inspector Darren Henstock, WAPOL

Figure 16 – Inspector Ian Thompson, QPS

Figure 17 – Jenna Bradley, KPMG

Figure 18 – Senior Sergeant Simon Williams, WAPol

Figure 22 - Superintendent Daniel Sullivan, NSWPF

Figure 23 – ACC Alex Murray and Stefanie Bradley, KPMG

Figure 24 – Eke Woldring, AIPM

Sessions 8 and further addressed our Innovation and Capability through Evidence Based Policing theme with a presentation from Associate Professor Michael Townsley on Predictive Policing. You can read more about Michael's presentation in his article in this issue: "Can predictive policing work in Australia?"

Figure 19 – Associate Professor Michael Townsley, Griffith University

Further Short Shot presentations were then received from the Queensland Police Service, Northern Territory Police Fire and Emergency Services, Western Australia Police, New South Wales Police Force and the Australian

Institute of Police Management around a variety of topics including bias motivated crimes, the reduction of drug supply in inner city hotel accommodation providers, data analytics for police decision making, research regarding organisational changes and a new model for delivering training to Detectives.

Figure 20 – Detective Sergeant Paul Morton, QPS

Figure 21 – Superintendent Rod Wilde, WAPol

The honour of the final session of the Conference was reserved for our first annual ANZSEBP Awards for a Distinguished Police Scholar and an Outstanding Police Experiment. These awards are proudly sponsored by KPMG and the Society was pleased to have the Deputy Chairperson of the UKSEBP, ACC Alex Murray and the Partner in Charge, People and Change of KPMG, Stefanie Bradley on hand to present these to the worthy recipients.

The Distinguished Police Scholar Award required the nominees to be or have been a member of a law enforcement agency, been central to the implementation of a documented rigorous scientific evaluation in their agency, and show a record of incorporating and translating evidence-based practices in their agency.

The ANZSEBP Management Committee was unanimous in awarding the first ever recipient of this award to Deputy Commissioner Stephen Brown. Deputy Commissioner Brown has led a number of evidence based policing initiatives, initially as a past student of the Cambridge University program and subsequently where he has endorsed and sponsored the establishment of a seventh stream of internal reform within the Western

Australia Police (WAPol), identified as the 'Evidence Based Police Division' (EBPD). An Evidence Based Policing (EBP) Unit was subsequently established in January 2015, consisting of an approved full-time employee strength of sixteen. The Unit is headed by a Superintendent and staff consist of a mix of both sworn police officers and unsworn data analytics and assessment officers. The EBP Unit has undertaken several large-scale trials, with others in development including:

- Crackdown in entertainment precincts;

- A body worn video trial;

- Turning Point which is designed to compare the effectiveness and cost benefit of managing low harm first time offenders through a 'Turning Point Agreement' rather than prosecution; and

- Communique, a state-wide randomised control trial commenced in February 2016 to measure the effectiveness of sending 'warning communication notices' to 'At Risk Drivers';

The Unit also has nearly 60 front line ideas proposed for testing which have been submitted by officers across the agency. These smaller scale local strategy evaluations will target local problems and embed the 'triple t' philosophy of targeting, testing and tracking from the ground up. Front line officers are supported by the evidenced based policing team who provide design, implementation and evaluation support in a paper to pavement approach.

Figure 25 – DC Stephen Brown, ANZSEBP Distinguished Police Scientist

The Outstanding Police Experiment Award recognises a single research project that contributes significantly to policing science that was conducted within the last five years. The research study must be an impact evaluation that assesses the effectiveness of a policing intervention and must use randomised experimental or quasi-experimental evaluation designs with a valid comparison group that does not receive the intervention. Assistant Commissioner Deborah Platz, Australian Federal Police (AFP) was awarded as the inaugural recipient of this award for her experiment regarding the the Voice4Values (V4V) program.

Figure 26 – Outstanding Police Experiment Award presentation

This is an incredibly innovative program that Deborah developed, whilst with the Queensland Police Service, after experiencing the Federal Bureau of Intelligence and the Anti-Defamation League program titled *Law Enforcement and Society: Lesson from the Holocaust,* which was designed to combat racism and prejudice and encourage people to be upstanding when they witness such events.

The central research question was: can a values education program at recruit level increase empathetic attitudes and a stated willingness to intervene to stop poor behaviour in the police workplace? This program, designed to include adult learning techniques and the successful active witness model, teaches participants to recognise and intervene in poor workplace behaviours.

Deb implemented the V4V program in the QPS academy under randomised controlled trial (RCT) conditions to train police recruits to recognise and understand harms in the workplace and foster values that encouraged them to intervene in workplace harassment incidents. Over three intakes in 2015, 260 recruits became part of the RCT. Randomised into experimental and control groups, the experimental group participated in the V4V program. What started as a simple question brought to light many issues that may impact on the training of recruits. Arguably more important than the V4V evaluation were

the findings that relate to the decay, over the course, of training of recruits' ability to recognise and intervene in workplace incidents such as racism and sexism. It appears the impact of training methods, personal and organisational values, as well as what is commonly referred to as 'police culture' can greatly affect recruits' attitudes in this area.

Assistant Commissioner Platz recognised the importance of this and as a result of this RCT, changes in training and policy were implemented in an effort to combat declining values, ensuring the QPS academy is safe and free of poor behaviours.

Unfortunately, Assistant Commissioner Platz could not be present to receive the award and it was accepted on her behalf by Inspector Ian Thompson, QPS and Federal Agent Marita Muller, AFP.

ACC Alex Murray also took the opportunity to present Professor Lorraine Mazerolle with a small token of appreciation for her unwavering support to the ANZSEBP in particular, evidence based policing in general and numerous policing jurisdictions around the world. Alex was pleased to present her with a West Midlands Police custodian helmet.

Figure 27 – Professor Mazerolle presented with a custodian helmet.

A Preliminary Examination of the Effect of Operation Turning Point Western Australia: An Evidence Based Policing Strategy

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Introduction

Turning Point Western Australia (WA) is a deferred prosecution initiative currently being trialled by WA Police as part of an evidence based policing strategy. The purpose of Turning Point WA is to divert first-time offenders away from the criminal justice system and into specific treatment programmes aimed at addressing the underlying causes of criminal behaviour. Within the context of this paper (incorporating the WA Police definition), first-time offenders are those who have never received a criminal conviction prior to committing the offence for which they have been apprehended. Turning Point WA is voluntary, and may be viewed as a pre-sentence diversionary option. Diversionary justice initiatives, such as Operation Turning Point have two primary purposes: to limit eligible offenders' contact with the traditional criminal justice system, and to provide treatment options that assist offenders in addressing the underlying causes of their criminal behaviour. Turning Point WA, therefore, requires eligible offenders to commit to a four-month personal agreement that is specifically developed for each individual to best assist them in overcoming issues that may lead to future criminality. Successful completion of an agreement results in charges against the offender being quashed. Failure to complete the agreement results in prosecution. As this evidence based policing strategy is one of the first to be implemented by WA Police, it provides a valuable opportunity to reflect on what was targeted, tested and tracked.

Traditional punishment and diversion

Policy makers and law enforcement have long been concerned with public satisfaction regarding the outcomes of criminal justice. A plethora of research exists to suggest that the general public are highly punitive, and favour judicial responses that are tough on crime (Cullen, Fisher & Applegate 2002; Doob 2000; Frost 2010; Mackenzie et al. 2012; Roberts & Indermaur 2009). Therefore, it is unsurprising that in WA, justice system responses to offending behaviour have been primarily based on the retributionist theory of "just desserts" (White & Haines 2006). According to the theory of just desserts, the purpose of offender punishment is to remind offenders that breaking society's rules will have severe consequences (Dzur & Mirchandani 2007; Gerber & Jackson 2013; Goodwin & Gromet 2014), and to allow society to retaliate against an offender for the harm caused by criminal behaviour (Braithwaite & Pettit 1990; Dzur & Mirchandani 2007; Gerber & Jackson 2013).

The principles underpinning the just deserts premise are drawn from the classical theory of crime. Classical theory posits that individuals are rational beings who have the ability to control their own behaviour (Giordano 2014; Torres 1996). Choice theorists postulate that engaging in criminal activity is voluntary and intentional, and that offending behaviour must be viewed as a motivated choice (Russell, Davies & Hunter 2011; Skog 2000). Offender accountability is, therefore, an important component of classical responses to criminality (Torres 1996). Under the principles of classicism, neither the therapeutic management of offenders nor the circumstances surrounding the provision of an offence are given consideration. Instead, punishment remains the singular focus.

Incarceration is the most common measure for punishing individuals who come into contact with the criminal justice system (Darley et al. 2000). The obvious advantage of incarceration over other forms of punishment is the incapacitation of offenders; an individual cannot harm the community when they have been detained (Marlowe 2009). Despite this, retributive punishments such as incarceration are not future oriented, as they exist solely to restore balance to society through retaliation (Darley, Carlsmith & Robinson 2000). Therefore, although incarceration can offer retributive solace to the victims of crime and society as a whole, it fails to assist offenders in addressing the underlying causes of criminality, and thus is mostly ineffective for reducing criminal recidivism (Andrews & Bonta 2003; Russell 2002). This is supported by statistics showing that within two years of release, between 45 and 50% of offenders return to prison (Department of Corrective Services WA 2014).

Statistics of this nature are highly concerning for policy makers, as perceptions research has shown that although the public are highly punitive, preventing the incidence of criminal recidivism and future crime are considered to be equally important (Cullen, Fisher & Applegate 2002; Doob 2000; Jordan 2015). A growing body of literature also suggests that prison populations are overwhelmingly comprised of non-violent offenders (Pakes & Winstone 2011). Whether incarceration is an appropriate response to criminal behaviour is particularly questionable in the context of non-violent offenders as the criminal justice system may be criminogenic (Freer 2013). Therefore, it is logical to suggest that diverting appropriate offenders away from the criminal justice system could be more beneficial to society. This point is particularly poignant, for ideally the best sentencing option is the one that most reduces recidivism, is least expensive, and seeks to improve the psychosocial circumstances of the offender (Marlowe 2009).

In recent years, law enforcement agencies and the criminal justice system have developed initiatives that may better reflect the desired outcomes of the general public and the needs of specific offender populations (Falco & Turner 2014). One broad initiative that has steadily gained momentum is diversion (Rigg & Indermaur 1996). Diversionary justice initiatives have the purpose of diverting certain offenders away from the criminal justice system and into alternative judicially supervised treatment programmes (Crime Research Centre 2003). Therefore, all diversionary initiatives operate within a rehabilitative rather than punitive framework, and attempt to solve the underlying causes of criminal behaviour so that criminal recidivism can be reduced (Crime Research Centre 2003; Rigg & Indermaur 1996). Diversionary programmes aim to target offenders' specific criminogenic risk factors, with the ultimate goal of "breaking the cycle of crime" (Crime Research Centre 2003). Diversion is viewed by many stakeholders within the criminal justice system as a more appropriate and effective method for dealing with certain types of offenders. Specifically, diversionary programmes are seen as being a suitable option for low level first-time offenders (Government of WA 2015).

Diversion is informed by the theoretical principles of therapeutic jurisprudence (Burke, 2010; Eckley 2006; Freiburg 2003b; Jones 2013; Roberts & Indermaur 2003). Therapeutic jurisprudence is based on the premise that the law and legal actors have a strong influence on the emotional and psychological experiences of offenders (Wexler 2000; Wexler & Winick 2003).

Therapeutic jurisprudence works on the assumption that the law and its representatives where possible should promote offenders' health and well-being by providing support and encouragement throughout the judicial process (Freiburg, 2003b; Wexler & Winick, 2003). Diversionary measures can be seen as a natural application of therapeutic jurisprudence, as law enforcement, the court and its actors (i.e., the judiciary, prosecution and defence) all work to assist offenders in overcoming the underlying causes of criminal behaviour (Freiburg 2003b; Roberts & Indermaur 2003). Most diversionary options promote offender well-being through a combination of judicial interaction and community based treatment (Freiburg 2003a). Diverting an offender away from the criminal justice system can happen at multiple stages of the judicial process including pre-arrest, pre-sentencing and post-sentencing (Criminal Justice Commission 1999). WA has a number of diversionary options available for the management of offenders and examples include police cautioning, Drug Court programs and the Mental Health Court. Diversion is also integral to processing juvenile offenders and is inherent in the Young Offenders Act 1994 (WA).

Cost-effectiveness of diversion

Although policy makers often imply that diversionary initiatives are a cost-effective alternative to traditional judicial responses, there is limited empirical data to support this position. Most research that has explored the costs and benefits of diversion has focused on drug court programmes and made cost comparisons with the traditional judicial process (Guydish et al. 2001; Lind et al. 2002). While the limited breadth and focus of these studies could be considered problematic when trying to make generalisations about the cost of diversion in general, perhaps the more poignant issue is that the majority of research conducted in this area appears to be either dated, underdeveloped or methodologically unsound (Guydish et al. 2001).

Guydish et al. (2001) conducted a meta-analysis to assess the effectiveness of drug courts in California across a four-year period. Although the research was primarily concerned with assessing the drug courts' capabilities in reducing the incidence of criminal recidivism, a secondary aim was to determine whether drug courts were a cost effective alternative to traditional judicial processing. Guydish et al. concluded that the small number of studies that explored the cost of drug court programmes were of limited value because no established framework for evaluating the cost of drug court programmes exists, and different studies consistently omitted essential components of the drug courts' operating costs. For example, a number of studies included in the analysis merely compared traditional court costs with the specific court processing costs of the drug court. Given that processing times are substantially shorter in drug courts than traditional courts, and an agreement to participate has already been acknowledged by the court and the offender, the costs associated with drug court participation were found to be significantly lower than traditional judicial processes. However, as Guydish et al. argue, this finding is misleading as drug court programmes involve a myriad of other costs not associated with conventional sentencing practice, such as treatment services and sanctions. Guydish et al. concluded that based on the findings of their meta-analysis it was not possible to make a determination on whether drug court programmes are a cost-effective alternative to traditional processes.

Controlling for these methodological issues, Lind et al. (2002) examined the cost effectiveness of the New South Wales Drug Court. In this research, the daily cost of putting 309 participants through the drug court programme was calculated to be $143 per offender, per day. This was marginally less than the daily costs per offender, per day, processed traditionally ($152). However, a review of the Victorian

Drug Court suggested the opposite; in that research, participation in the drug court programme actually cost more per day ($184) than imprisonment ($168; Law Reform Commission of Western Australia [LRC] 2008). Despite contradictory findings, it is argued that because drug courts reduce the incidence of future crime they are more cost-effective than traditional responses in the long term (LRC 2008). Lind et al. (2002) also suggest that because drug courts reduce the incidence of recidivism, this would result in future financial savings for the criminal justice system. However, these arguments do not take into account the cost of sentencing programme terminates. For example, $13.5 million was spent on the NSW drug court participants, and of this, $8 million was spent on treatment and supervision for offenders that failed to graduate from the programme (Lind et al. 2002). From a cost–benefit perspective, this is concerning, as programme terminates are then sentenced traditionally, representing further expenditure for the criminal justice system.

Victim satisfaction

Although the literature suggests that offenders' experiences of diversion are mostly positive, and that offenders often view diversionary justice initiatives as a just response to criminality (Atkin-Plunk & Armstrong 2016; Cresswell & Deschenes 2001; Fischer, Geiger & Hughes 2007; Goldkamp, White & Robinson 2001; Henry 2011), it is also important to consider the perspective of victims. Although little is known about victim satisfaction, victim perceptions of justice indicate that like the general public they are often highly punitive and support initiatives that punish rather than assist offenders (Commissioner for Victims and Witnesses in England and Wales 2011; Marlowe 2009). For example, in a review of 22 articles relating to victim attitudes, Laxminarayan et al. (2013) found that victims of crime heavily favoured retributive responses to criminal behaviour. Freer (2013) argues that victims, more than the general public, are likely to be dissatisfied with responses that are perceived to be lenient because they have actually suffered harm as a result of a criminal act. However, it must be acknowledged that victims of crime are not a homogenous group and therefore victim expectations are likely to differ on the basis of offence type and degree of harm (Jordan 2015).

Current research

Being committed to the evidence based policing paradigm, WA Police developed Turning Point WA as a unique diversionary option targeting low level first-time offenders. The diversionary strategy was modelled on a randomised controlled trial (RCT) implemented by West Midlands Police (UK) in partnership with Cambridge University (Neyroud & Slothower 2012). Turning Point WA was similarly designed to apply only to juvenile and adult offenders at the point of being criminally charged. Police officers were required to consider all forms of diversionary options available (i.e., caution), and to have decided that none were appropriate before considering putting the offender before Turning Point WA. For those offenders agreeing to participate, the deferred punishment was prosecution. Although Turning Point WA was not a RCT, research was designed to determine if Turning Point WA influences recidivist offending, time to subsequent offending, and the harm of subsequent offences. Turning Point WA was trialled in one metropolitan district and one regional sub-district. In conjunction with these elements, research sought to determine police officer perceptions of the value of the Turning Point WA process. This paper provides a preliminary examination of findings six-month post completion of Turning Point WA agreements.

Study 1: Prevalence, severity and time

Method

Design

The present study adopted a two group experimental design, where group one consisted of Turning Point WA participants and group two consisted of a like-to-like matched comparison group.

Participants

Participants in this research comprised 224 offenders, 112 offenders who had participated in Turning Point WA between the 20th July 2015 to 31st July 2016 and 112 offenders who comprised the like-to-like matched comparison group. For the whole sample, 146 (65.2%) were male and 78 (34.8%) were female. The average age was 30.10 years (SD = 13.12 years, ranging from 14 to 81 years), 192 (85.7%) were from metropolitan regions and 32 (14.3%) from regional. For the 112 offenders who had participated in Turning Point WA, 96 were from the South East Metropolitan policing district (metropolitan) and 16 were from the Broome sub-district (regional). This represents 1.7% of the total number of offenders (N = 6,582) who were entered by arresting officers into an online decision-making tool designed to process offenders for eligibility into Turning Point WA.

This research was approved by the University human research ethics committee and was conducted in accordance with the requirements of the National Statement on Ethical Conduct in Human Research.

Procedure

This research considered juvenile and adult first-time offenders who committed low harm offences in metropolitan and regional WA. Eligibility was not based on a list of eligible offences, rather offenders were deemed ineligible based on a list of excluded offences, which were deemed of a serious nature or constrained by legislative requirements. Scope for exclusion based on officer discretion in specific circumstances was also written into the eligibility criteria.

Turning Point WA was intended to be a final pre-court option, accessed only after all current WA Police discretionary options had been rejected, including move-on-notices, cautions, Juvenile Justice Team (JJT) referrals and other diversionary options. Prior to consideration for Turning Point WA, all aspects of investigation into the offence must have proceeded as normal, including evidentiary considerations and the requirements of the *Criminal Investigations Act 2006* (WA) s.318. For equity and fairness, participation in Turning Point WA was entirely voluntary. Juvenile offenders required permission from a guardian to be considered eligible.

Turning Point WA agreements were administered to participants by police officers assigned to the Turning Point Management Team (TPMT). Eligible offenders who agreed to participate were required to attend a meeting with the TPMT normally within 72 hours of their arrest. The TPMT officer used an online decision-making tool designed to assess criminogenic indicators and was required to design an individualised agreement comprising a set of conditions and actions that the offender agreed to abide by for the duration of the four-month agreement.

As a condition of all Turning Point WA agreements, the offender had to agree to not reoffend for the duration of the agreement. The agreements incorporated interventions and treatments targeting criminogenic indicators, which may have influenced offending. These indicators included substance abuse, mental health, financial difficulties, family and parenting, education, employment and training, accommodation and transience. Offenders identified as having criminogenic indicators

were offered relevant rehabilitative actions, such as obtaining help for substance abuse from external service providers. If an offender was not assessed as having any criminogenic indicators that would justify referral to a service provider, other conditions could be added to the agreement including restrictive actions, such as exclusion zones or not associating with named individuals; and/or restorative actions, such as a letter of apology or restitution of a stolen item.

For the purposes of building a comparison group, each participating offender was compared to a like-to-like matched offender sourced from jurisdictions with similar reoffending rates to the target jurisdictions. The comparison group was established by ascertaining the WA district and sub-district most similar in reoffending prevalence to the metropolitan and regional districts, based on data extracted from the WA Police Information Management System (IMS). This was achieved by identifying offenders who committed offences in the 2011/2012 financial year, and tracking reoffending from financial year 2011/2012 to 2015/2016.

The metropolitan and regional district datasets were then filtered to identify all first-time offenders who offended in the Turning Point WA reporting period 20 July 2015 to 31 July 2016. These offenders were further filtered by Turning Point WA eligibility criteria, including offence type, resulting in a "likely" eligible cohort of 1,022 offenders for the metropolitan district and 75 offenders for the regional district. Each Turning Point WA participant was then matched with the most similar comparative group offender using the case control matching function in SPSS 22 and by manual matching. Four categories were used for the matching procedure: gender, offence grouping, age group, and ethnic appearance. Both groups will be tracked for 24 months, from the date of when they were linked to an offence as an offender, to determine reoffending prevalence. For the purposes of this research, data six-months post completion of Turning Point WA agreements were used for preliminary analyses.

Offence severity was estimated by application of the Cambridge Crime Harm Index to Western Australian offences. The Cambridge Crime Harm Index draws on UK Sentencing Guidelines to provide a relative score of crime seriousness based on day in prison equivalent. Offences under Western Australian legislation were matched to their UK equivalent to provide a locally relevant scale.

Results

Reoffending prevalence

When considering the prevalence of reoffending in the treatment (n = 112) versus the control (n = 112) condition, findings showed that 13 (11.6%) offenders in the treatment condition reoffended within 168 days (6 months) and 19 (17.0%) offenders in the control condition reoffended within 168 days (6 months). This difference was non-significant: χ^2 (2, N = 224) = 1.31, p = .252.

When considering the prevalence of reoffending for those who had completed a Turning Point WA agreement (n = 93) versus the control (n = 112) condition, findings showed that 4 (4.3%) offenders in the treatment condition who completed their agreement reoffended within 168 days (6 months), and 19 (17.0%) offenders in the control condition reoffended within 168 days (6 months). This difference was significant: χ^2 (2, N = 205) = 8.18, p = .004.

When considering the prevalence of reoffending for those who had breached a Turning Point WA agreement (n = 19) versus the control (n = 112) condition, 9 (47.4%) offenders in the treatment condition who breached their agreement reoffended within 168 days (6 months), and 19 (17.0%) offenders in the control condition reoffended within 168 days (6 months). This difference was significant: χ^2 (2, N = 131) = 8.94, p = .003.

Therefore, there is no significant overall difference when the treatment and control conditions are compared. However, offenders in the treatment condition who completed their agreement were significantly less likely to reoffend than offenders in the control condition, and offenders in the treatment condition who breached their contract were significantly *more* likely to reoffend than offenders in the control condition.

First and second offence severity

When considering the severity of the first offence in the treatment (n = 112) versus the control (n = 112) condition, findings showed that the average first offence severity was 22.91 (SD = 141.64) for offenders in the treatment condition and 11.63 (SD = 34.63) for offenders in the control condition, t(222) = -.82, p = .414.

When considering the severity of the second offence in the reoffending treatment (n = 13) condition, versus the reoffending control (n = 19) condition, findings showed that average second offence severity was 6.04 (SD = 6.35) for offenders in the treatment condition and 42.42 (SD = 90.85) for offenders in the control condition, t(30) = 10.75, p = .162.

When considering the severity of the second offence in the reoffending treatment who completed their agreement (n = 4) condition, versus the reoffending control (n = 19) condition, findings showed that average second offence severity was 4.25 (SD = 3.95) for offenders in the treatment condition who completed their agreement and 42.42 (SD = 90.85) for offenders in the control condition, t(21) = .83, p = .419.

When considering the severity of the second offence in the reoffending treatment who breached their agreement (n = 9) condition, versus the reoffending control (n = 19) condition, findings showed that average second offence severity was 6.83 (SD = 7.24) for offenders in the treatment condition who breached their agreement and 42.42 (SD = 90.85) for offenders in the control condition, t(18.48) = 1.70, p = .107.

Therefore, findings showed offenders in the treatment condition had a higher average first offence severity than offenders in the control condition (although this is skewed by a particularly high severity rating in the treatment condition). With regard to the average second offence severity, offenders in the treatment condition had a lower average than offenders in the control condition (irrespective of whether they completed or breached their agreement). However, these differences were non-significant.

Second offence time

When considering time to the second offence in the reoffending treatment (n = 13) condition, versus the reoffending control (n = 19) condition, findings showed average time to second offence was 43.00 days (SD = 41.41) for offenders in the treatment condition and 64.42 days (SD = 59.38) for offenders in the control condition, t(29.97) = 1.20, p = .239.

When considering time to the second offence in the reoffending treatment who completed their agreement (n = 4) condition, versus the reoffending control (n = 19) condition, findings showed average time to second offence was 35.00 days (SD = 39.06) for offenders in the treatment condition who completed their agreement and 64.42 days (SD = 59.38) for offenders in the control condition, t(21) = .94, p = .358.

When considering time to the second offence in the reoffending treatment who breached their agreement (n = 9) condition, versus the reoffending control (n = 19) condition, findings showed average time to second offence was 46.56 days (SD = 44.20) for offenders in the treatment condition who breached their agreement and 64.42 days (SD = 59.38) for offenders in the control condition, t(26) = .89, p = .383.

Therefore, findings showed that offenders in the treatment condition reoffended sooner than offenders in the control condition (irrespective of whether they completed or breached their agreement). However, these differences were non-significant.

Study 2: Police officer perceptions of the Turning Point WA process

Method

Participants

Police officers (N = 778) participating in Turning Point WA were asked to complete an online survey designed to assess their satisfaction with Turning Point WA. A total of 217 responses were received from officers. Of the 217 officers who participated in the survey, 171 (78.8%) were male, and 37 (17.1%) were female (9 [4.1%] did not specify gender). The average age of participants was 35.33 years (SD = 8.64 years, ranging from 19 to 60 years) and the average years of service was 9.38 years (SD = 7.29, ranging from 0 to 32 years).

Materials

An online survey instrument was developed to assess officer perceptions of the Turning Point WA process. Survey items assessed officer perceptions of the (a) likelihood of Turning Point WA reducing re-offending, (b) likelihood Turning Point WA would benefit day-to-day policing, victims and offenders, and (c) the effectiveness of Turning Point training.

Procedure

The survey was administered using Survey Monkey. A link to the survey was emailed to officers from the Evidence Based Policing station mail account. At the conclusion of the two-week response period, data was exported from Survey Monkey for use in analysis.

Results

Benefit

Findings showed that police officers were not of the view that Turning Point WA would be of benefit to day-to-day policing (M = 2.29, SD = 1.21), t(216) = −8.66, p < .001. Furthermore, findings showed that police officers were not of the view that Turning Point WA would be of benefit to victims (M = 2.16, SD = 1.16), t(216) = −10.67, p < .001, and although they were of the view that Turning Point WA would be of benefit to offenders (M = 3.01, SD = 1.37), t(216) = .10, p = .921, the difference was not significant. Overall, police officers somewhat disagreed that Turning Point WA would be of benefit to day-to-day policing and victims. However, they neither agreed nor disagreed that Turning Point would be of benefit to offenders.

Training

Findings showed that police officers were of the view that the training about Turning Point WA was effective (M = 3.10, SD = 1.14), t(216) = 1.31, p = .192. Overall, police officers were of the view that the training about Turning Point WA provided them with a firm understanding of the objectives of Turning Point WA (M = 3.23, SD = 1.14), t(216) = 2.97, p = .003, and the knowledge required to process first-time offenders (M = 3.34, SD = 1.08), t(216) = 4.58, p < .001, and increased their understanding of evidence based policing (M = 2.67, SD = 1.17), t(216) = −4.13, p < .001.

Other

Findings showed that police officers found the Turning Point WA online eligibility tool simple to use (M = 3.80, SD = 1.03), t(214) = 11.49, p < .001. Police officers also found the information located on the Turning Point intranet useful (M = 3.25, SD = 0.94), t(214) = 3.93, p < .001. Processing offenders through the online eligibility tool was not seen to impact negatively on other officer duties (M = 2.55, SD = 1.21), t(214) = −5.41, p < .001, and supervisors were perceived to be supportive of Turning Point WA (M = 3.34, SD = 1.08), t(214) = 4.68, p < .001.

Discussion

Although Turning Point WA is fundamentally different to other forms of diversionary initiatives (i.e., drug courts and mental health courts), consistent with the body of research (Crime Research Centre 2003; Rigg & Indermaur 1996), the purpose of Turning Point WA was to address the causes of criminal behaviour in order to reduce the likelihood of reoffending. On that basis, it would be expected that the prevalence of reoffending would be lower for Turning Point WA participants. Although no significant differences in the prevalence of reoffending were observed for Turning Point WA and control condition participants, it is important to acknowledge that those who completed their agreements were less likely to reoffend, and those who breached their agreements were more likely to reoffend. This pattern of findings implies that there may be a direct relationship between agreement completion and reoffending.

Despite this suggestion, it must be acknowledged that offenders are not a homogenous group, and the nature of the agreement administered may have an influence. Although research does imply that diversion is a suitable option for low level first-time offenders (Government of Western Australia 2015), it also emphasises that initiatives should target offenders' specific criminogenic risk factors (Crime Research Centre, 2003). In Turning Point WA, a range of criminogenic indicators were identified (i.e., substance abuse, mental health, financial difficulties, family and parenting, education, employment and training, accommodation and transience), and deemed to be present or absent by the TPMT. When community services for a particular indicator were available to refer offenders to, they were included in Turning Point WA agreements. However, this was not possible for all indicators as community services were not available. Therefore, although criminogenic needs were targeted by Turning Point WA agreements (needs principle), there was no strategy in place for matching levels of supervision, and the nature of Turning Point WA agreements, with the offenders' level of risk (risk principle), or for including services and strategies that research has shown to be most effective for those with equivalent individual characteristics (responsivity principle). Therefore, it is important to consider that there may be a relationship between the nature and content of the Turning Point WA agreement and the likelihood of completing the agreement.

The importance of more fully considering the nature and content of Turning Point WA agreements is also supported by findings showing that those Turning Point WA participants that do reoffend, reoffend sooner (irrespective of whether they complete or breach their agreements). Although no significant differences were observed, the pattern of findings is still counterintuitive, and implies that the nature of the intervention may not have been suited. Despite this, the second offence severity was lower for all Turning Point WA offenders (irrespective of whether they completed or breached their agreement), suggesting that some form of intervention may be more beneficial than nothing. However, it should also be acknowledged that police officer preparedness in terms of administering the Turning Point WA programme, as well as their perceptions of Turning Point WA and

associated processes, might influence the experience of Turning Point WA participants. Although findings showed that police officers perceived training to be effective, and processes simple to follow, police officers somewhat disagreed that Turning Point WA would benefit day-to-day policing and victims, and were neutral in terms of their views on the potential benefits for offenders.

Turning Point WA was one of the first evidence based policing strategies to be implemented by WA Police. Although the evidence based policing method has been embraced agency wide, there are clear lessons to be learned from the analysis of preliminary data relevant to the Turning Point WA programme. Specifically, the nature of the interventions that form part of an evidence based policing strategy requires further consideration. Furthermore, increased police officer knowledge of the rationale underlying programme design, and associated benefits for police, victims and offenders, might influence the way in which programmes are administered and delivered.

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Inspector Corey Allen

Operational Police and Researchers in the Field

Police working in partnership with the community and sharing responsibility for problem solving has become an essential strategy if not core business for many police jurisdictions. (Alpert, Rojek & Hansen 2013). As fiscal resources tighten and the scope of police business evolves and diversifies, the combination of resources, skills and capacity represented in partnerships with community will continue to be more effective and efficient than individual effort (Vigoda, 2002).

A recent research partnership between the Queensland Police Service and Griffith University engaging the community around alcohol related harm has taken that relationship a step further. A fresh research methodology has shown the benefits of police and researchers working operationally to achieve a worthwhile policing outcome on the street.

Smart Start Project – Reducing Alcohol Related Harm

The *Smart Start* project began with modest aspirations and ended up making a significant contribution to preloading study, the first of its kind to include front line police on the beat and a focus on operational outcomes. Other alcohol harm studies, including the Miller et al (2013) POINTED study, included breath testing and engagement of patrons in and around licensed premises without the presence of police. With the help of federal funding from the National Drug Strategy Funding Committee, police and researchers from Griffith University surveyed more the 3200 people as they entered entertainment precincts in Fortitude Valley, Brisbane, Mackay and the Gold Coast.

The joint engagement model, timed to coincide with the arrival of patrons in the busy entertainment precincts, included a detailed

on-line field survey and the opportunity for participants to take an accurate breath test. Methodology to support the collection of real time data, particularly in the dynamic area of alcohol related harm was challenging as researchers were to engage patrons quickly as they entered the entertainment precincts, tailoring efforts to match the stakeholders (Brandon et al 2014).

When drafting the project proposal, performance measures included:

- Number of persons engaged
- Number of breath tests and drug tests obtained
- Number of surveys completed
- Level of alcohol related harm in the vicinity of engagement activities.

The intentional inclusion of an operational outcome in what was perceived to be a research based activity helped frame a new relationship between police, researchers and the expectations of their collaboration.

The project addressed challenges presented by the environment, the level of public intoxication, the safety of the participants and the integrity of the data by creating a positive engagement model aimed at achieving research, educational and operational outcomes whilst enhancing face-to-face contact in high value locations.

Support from Griffith University Ethics Board and sound working protocols, briefings and team selection negated risk throughout the project engagement phases. Many participants expressed that the engagement represented a unique opportunity to participate in an accurate breath test and engage with police in a positive manner. For some it was the first time they had taken a breath test and the first time they had spoken with a police officer (when not in trouble).

Participating police identified that on a usual night performing patrols aimed at engaging patrons as they enter the precinct, they would usually talk with the few people who showed obvious poor behaviour or drew adverse attention. Engagement as part

of the research team created fresh and more frequent opportunity for conversations between police and the public, demonstrating that police were interested in hearing and listening to patron's views about a recent, topical issue.

The project successfully located, engaged, and connected with people attending entertainment precincts prior to peak times. The team took part in more than 3200 conversations with patrons at the right time in the right place, as well as many other interactions involving persons who were interested in the research but did not participate.

Participants were provided information and took part in positive discussion with front-line police and researchers as they attended the entertainment precincts. This project increased awareness of preloading, the effects of excessive consumption of alcohol and associated alcohol related harms.

The surveys identified preloading behaviours, energy drink usage and gauged levels of awareness surrounding the associated issues. The subsequent publications and research associated with the project will continue to influence alcohol related policy, education initiatives, engagement models and public safety in this topical area.

First response officers from City Central, Fortitude Valley, Mackay and Gold Coast were exposed to project engagement activities and facilitated mentoring, modelling and opportunities for personal communication skills development with respect of this cohort. Officers were also exposed to concepts and evidence based policing in practice as they were included in the core project activities.

The engagement methodology, inclusive of front-line police, had an effect on public safety and associated alcohol related harm at the locations where engagement was conducted. A scan of personal crime, disturbances and calls for service compared to the same days and times in the previous year identified some promising results (see Tables 1 & 2).

Table 1: Change in personal crime where the research happens in relation to police utilisation generally

	2013/14	2014/15	Totals
Personal Crime	21	7	28
Calls for assistance	419	488	907
Totals	440	495	935

$X2$ (df = 1, N = 935) = 9.05, p = .001, Phi = 0.098; Yates' Correction = 7.26, p = 0.002; Fisher's Exact Test = .002

Table 2: Change in public order crime where the research happens in relation to police utilisation generally

	2013/14	2014/15	Totals
Public Order	43	32	75
Calls for assistance	419	488	907
Totals	462	520	982

X2 (df = 1, N = 982) = 3.45, p =.03, Phi = 0.06; Yates' Correction = 3.02, p = 0.04; Fisher's Exact Test = .004

Historical reliance on the influence of findings of research partnerships (Hansen, Alpert & Rojek 2014) may have underestimated the value of front-line police participation in research. From this experience during the Smart Start project, the perception of police who are seen to be listening the wider community has enhanced validity, provided fresh opportunities for engagement and supported operational objectives.

Previous assertions tend to focus on the benefits for police as a result of the involvement of researchers in partnerships. Researchers from the Smart Start project identified that the collection of data and engagement with patrons was greatly enhanced when front-line police were involved, contrary to the expectation that uniform police may thwart open engagement (Devilly et al 2017). Police participation enhanced and supported the research by increasing the level of engagement, limiting risk and adding to the positive perception of the police and the project.

The *Smart Start* project methodology has continued as a sound basis for ongoing research partnerships including the *Last Drinks* project surveying patrons as they exit the entertainment districts and the *What's on Board* project examining drug use using voluntary ion scan testing.

With more than 4500 participants having taken part in the *Last Drinks* study it is clear that there is high level public support for the involvement of police in what could be framed as a more thoughtful and engaging approach to walking the beat.

The *Last Drinks* research project continued as proposed changes to Queensland liquor licensing laws were set to take place. Together the two projects have surveyed more than 7500 patrons, providing a significant evidence base for further evaluation and enhancing the public perception of police as interested, listening to patrons and participating in a credible process to support strategies into the future. Project staff have since been requested to deploy the engagement model at events such as the racing carnivals, the start of university "Toga Party" events and at music festivals.

The project demonstrated the Queensland Police Service's ability to respond positively and overtly to the expectations of patrons of the night-time economy at a time when alcohol harm related policy was (and remains) topical. The project team successfully worked across traditional boundaries between police and academic institutions to develop an operationalised research model that achieved results outside the scope of traditional expectations.

The operationalisation of partnerships between police and researchers presents significant opportunity for the development of effective models of engagement and diversion across sectors. It was suggested by one Fortitude Valley officer who participated that this was the first time she had seen university research having an immediate effect on the beat.

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About the Author

Inspector Corey Allen joined the Police Service in November 1986 and has served in a wide range of roles including Officer in Charge Brisbane City, Officer in Charge Indooroopilly Division, Operations Tactician for Brisbane West District, team leader with the Public Safety Response Team and a team leader in the Tactical Crime Squad. He is currently appointed as the Inspector, Operational Training Services.

In 2011 Corey travelled overseas on a Churchill Fellowship studying police engagement of young homeless and rough sleepers. In October 2013 Corey was awarded Alumnus of the Year for Griffith University School of Criminology and Alumnus of the Year for the faculty of Arts Education and Law. He is a member of the Australia New Zealand Society of Evidence Based Policing, a member of the Griffith University Community Criminology Advisory Board and a TEDx presenter.

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Enhancing Gender Diversity in Police Recruitment

Jack Spence, Claire Putt, Lydia Chan, Julien Barrett, Sarah Bennett & Mike Newman

Abstract

Gender representation is essential to quality outcomes in police services. Currently, the Queensland Police Service (QPS) contains 26% women, compared to the 50.4% of women in the Queensland population (Yallamas 2016; Queensland Police Service 2016b). Our research supports the QPS goal of achieving a gender representative police service by highlighting gendered barriers and facilitators from the point of career consideration through the stages of the police application process. Findings outlined in this paper aim to improve the QPS application process to enhance future representation and the quality of the police service.

Our research employed a three phase, mixed methods approach which followed a metaphorical 'pipeline' to a career with the QPS. The first phase explored gendered public perceptions of policing as a career, which may influence women's decision to apply. The 86 questionnaires gathered from public respondents found a belief that perceptions of a male-influenced police culture exists and that men were likely to believe women were too emotional for policing. Such perceptions may impact the 'pool' or pipeline of potential QPS applicants. The subsequent phases of our research explored the QPS application process from the lens of recent successful and unsuccessful recruits. Specifically, we surveyed a cohort of recently recruited QPS officers (N=47), interviewed a subset of this cohort (N=17), and interviewed two unsuccessful applicants to identify barriers in the cognitive, physical, communication, and panel assessments. The research and resulting recommendations strive to facilitate an equally gendered police service in Queensland and other police services in Australia, and worldwide.

Introduction

Gender-representative police services are vital for accurately reflecting the composition of the community, and drawing upon a variety of skills and experiences (Sarre 2016; Robinson 2015; Prenzler & Sinclair 2013). To achieve a gender representative police service, the QPS implemented a 50:50 gender quota for incoming recruits in July 2016 (Yallamas 2016). This research explores potential barriers and facilitators to achieving a gender equivalent police service.

Consider the QPS application process as a metaphorical pipeline. Prior to the application pipeline, there is a reservoir of potential applicants in the community who hold certain perceptions of a policing career. These individual perceptions influence one's decision to apply to the QPS. Ultimately, those with positive perceptions of the QPS proceed to apply to join and form the pool of applicants - as depicted in the pipeline diagram.

As applicants enter the pipeline, they must pass through numerous assessment stages - each of which is designed to measure each applicant's suitability for a policing career. As assessments are undertaken, the number of applicants becomes smaller, until a select percentage remain and are chosen as police recruits. The three phases of the current research bring to light the gendered barriers and facilitators prior to and within the pipeline. The research conducted identifies barriers in the application process and provides recommendations to better facilitate the 50:50 quota and contribute to a more representative service.

Figure 1: 'Pipeline' diagram representing the Queensland Police Service application process. Note the key to the bottom left of the diagram, outlining the stages of the process which facilitate or hinder applicant progression.

Background

The Significance of Women in Policing

Numerous studies reinforce the benefits of gender balanced police services both in Australia and abroad (Sarre 2016; Robinson 2015; Prenzler & Sinclair 2013). For example, a report released by the Victorian Police Force discusses gender equality as a matter of workplace equity (Leane & Durand 2002, p.2).

Additionally, the Australian Federal Police (AFP) notes the importance of equal gender representation; "…equality has been found to enhance productivity, improve development outcomes for the next generation and make institutions more representative…" (Australian Federal Police 2016, p.1). Moreover, the literature notes that gender representation enhances an organisation's reputation in the community as it is reflective of the public, and allows for a wider range of skills, perspectives, and experiences to be drawn upon (Australian Government 2013, pp.5-7). The QPS goal of gender equivalency aligns purposefully with this literature.

Barriers and Facilitators

Perceptions

Perceptions of an existing 'male dominated' police culture endure as an obstacle to female recruitment. Cordner & Cordner (2011) define a male-dominated culture as a culture in which persons must adhere to certain masculine social norms and behaviours. These behaviours range from competitiveness to strong assertiveness and loyalty (Robinson 2013). Consequently, females introduced into a male-dominated police service may feel out of place, uncomfortable, and/or isolated due to the number imbalance between genders (Robinson 2013). As a result, an average female citizen's negative perception of a male-dominated police culture existing may deter them from applying.

Literature regarding gendered perceptions of policing as an organisation is limited, however, from the research identified it appears that, in Australia, gender biases exist and are enduring. Research has found that male citizens reported having an unsatisfactory experience with, or a lesser respect for police more frequently than female citizens (Swanton, Wilson, Walker, Mukherjee 1988; Foster, Olsen, Ferguson 2011). Further to this, Foster *et al.* (2011) also noted than males had less confidence in the police than females that a lodged complaint would be properly investigated. Sargeant & Mazerolle (2014) also found that males consistently reported having more negative perceptions of the police and the law in comparison to females. In contrast to this, a report from the Office for National Statistics (2015) for England and Wales found that there was no significant gendered difference between perceptions of the police.

Application Process Assessment

A range of literature highlights the gendered barriers in the application process, particularly physical testing. Robinson (2015, p.38) stated, "An unintentional barrier to women's entry into policing is the police organisation's reliance on familiar recruitment assessment tests which emphasise male characteristics such as physical strength, agility and physique and the handling of weapons... this unnecessarily obstructs many women from gaining employment in policing." The concept of physical ability as an obstruction was also considered by Wimshurst (1995), who found that the need to prove physical capability was a masculine concept, whilst women are more likely to prove themselves in other ways, including but not limited to, academic ability. Such articles also note that an emphasis on physical assessment can be unnecessary in preparing recruits for modern-day policing tasks (Robinson 2015, Wimshurst 1995, Chu and Tsao 2014, Schuck 2014). Modern-day policing has reportedly evolved to be largely sedentary with tasks usually located in cars, or offices (Robinson 2015, p.37).

Alternatively, literature points to an increased focus on academic abilities, communication skills, and interpersonal skills as facilitators to female applicants. Whilst police services are hesitant to have tertiary education requirements for fear of limiting applicant pools, research shows otherwise; "[education requirements] do not negatively impact on the number of diverse applications" (Schuck 2014, p.70). Additionally, research has found that an emphasis on educational requirements will signal organisational legitimacy and career progression to women, making them more likely to apply to become a police officer (Schuck 2014, p.70).

Gender diversity is more likely to become evident where assessments are focused on higher education and similar requirements. Schuck (2014) investigated higher education in the context of policing and concluded that, "...higher education requirements were associated with more gender diversity, whereas physical fitness tests were associated with less gender diversity" (Schuck 2014, p.68). Despite these findings and the sedentary aspects of the career, an element of physical fitness must persist as an integral trait of police officers. Recruits must be trained to be able to respond (psychologically, logically and physically) effectively in both everyday duties, in addition to the "...rare critical incidents that require police to physically engage with an offender", as it is these encounters which may place the life of either officer or citizen at risk (Robinson 2015, p.37).

The Future of Policing

Following the recognition of the discussed assessment barriers, some police services have introduced alternative strategies. One of these strategies is utilising modern technology to generate realistic simulations of police operations. Such an approach, used in assessment centres, assesses skills such as problem solving, report writing, interpersonal skills, and crime scene analysis. Training like this could prove to be a viable option to replace or reduce the weight on previous physical testing approaches (Jordan, Fridell, Faggiani & Kubu 2009, p.334).

Numerous articles have pointed towards new age marketing methods to increase female recruitment. Such methods placed importance on targeting universities as not only possible applicant pools, but as a tool for organisational growth and policing research (Sarre 2016, p.10). Targeting universities has also been adopted by other states; "New South Wales and Western Australia police academies have been integrated with universities, while in other states and territories there is considerable weight given to tertiary education in recruit selection and in framing promotion criteria" (Sarre 2016, p.10).

Methods

Research was conducted to support the QPS goal of developing a more gender representative police service in three-phases, with each phase explained in detail below. This was done to measure the perceptions of three target groups – the general public, successful applicants, and unsuccessful applicants. Measures were carried out in late 2016 at both the University of Queensland (UQ), and the QPS Academy in Oxley.

Phase one: Public Perceptions

The first phase used close-ended questionnaires as a method of data collection. Questionnaires were distributed to people attending the annual UQ Open Day[1] and to UQ students enrolled in courses within the School of Social Sciences. The questionnaires were distributed electronically and as paper copies. Open day attendees were approached on the 7th of August, 2016 at random and asked if they would respond to the questionnaire. Students enrolled in Social Science Courses were presented with a link to the survey through their course correspondence and invited to participate. Questionnaires asked for respondents' perceptions of the QPS, women in policing, and if they would consider applying. Phase one sought to develop an understanding of public perceptions of police behaviours and legitimacy, in addition to why females may or may not consider a career in policing, and how to widen the potential applicant pool. A five-point Likert-scale (strongly disagree to strongly agree) was used to measure the perspectives of 101 total respondents. However, 15 respondents failed to complete the target questions, leaving 86 viable questionnaires for analysis. The sample comprised 61.6% (n=53) females and 38.4% (n=33) males between the ages of 18 and 63[2], with an average age of approximately 34 years. The majority (68.2%) of respondents were born in Australia, and a minority of respondents (2.4%) identified themselves as being Aboriginal or Torres Strait Islander. The data gathered was analysed in SPSS using independent t-tests to identify significant gender differences between the mean responses for each question.

Phase Two: Recruit Perspectives

Phase Two focused on the application pipeline to uncover the concerns, perceptions and experiences of recently inducted police recruits. Semi-structured interviews and close-ended questionnaires were employed to form a mixed methods approach. These semi-structured interviews were conducted on the 13th of September, 2016 with recently inducted recruits at the QPS Academy (QPSA), Oxley campus. The aim of these interviews was to unearth areas of the application process which were easy and challenging for male and female recruits, to understand the work environment which recruits are exposed to, and to gain some knowledge of which prior perceptions of the QPS may have influenced their decision to apply. A total of 17 recruits were interviewed, composed of 47% (eight) males and 53% (nine) females. Age was not recorded. The data obtained was analysed through thematic coding, with recordings broken down and isolated into key statements.

Close-ended questionnaires sought to understand recruit perceptions. These questions pertained to the relevance and difficulty of the applicant assessments, the characteristics recruits believed were necessary for police officers, and their opinion on the potential for gender bias in these assessments. T-tests were then conducted to isolate significant gender differences. The entire cohort of recruits present at the academy responded to the questionnaire, producing a total of 47 responses. However, only 44 respondents consistently answered all items, and were composed of 50% (22) males and 50% (22) females. Respondents' ages ranged from 19 to 54, with an average age of 30 years. The majority (81.8%) of respondents were born in Australia, and none of the respondents identified themselves as being Aboriginal or Torres Strait Islander.

Phase Three: Unsuccessful Recruit Perceptions

The third phase of inquiry employed semi-structured interviews with two unsuccessful applicants (one female, one male) in order to understand their perceptions of the application process, the amount of support or information they received both during and after their exit from the pipeline, and what advice and recommendations they would provide to the QPS and future applicants. Audio recordings of these interviews were analysed through thematic analysis, with keywords and phrases highlighted alongside respondent answers to isolate consistent themes within responses, which could be compared to those of successful applicants.

Results

Public Perceptions

Independent t-tests were conducted on the public questionnaires to identify statistically significant gendered differences within respondents' answers. Within the following data, the p-value indicates the probability of a reported finding occurring by chance, M represents the population mean (e.g. the total respondents' mean/average response), SD indicates the population standard deviation (e.g. how much the mean for a specific group of respondents, such as males or females, differed from the mean value of all of the respondents), and the t-value (often referred to as the 'test statistic') measures the difference between the two compared sample means. In this context, p-values of less than 0.05 are considered statistically significant, meaning that there is less than a 5% probability that an obtained result has occurred by chance.

When asked whether respondents would consider working for the QPS, it was learned that males (M=2.70, SD=1.26) were significantly more likely to agree to consider working for the QPS than females (M=3.33, SD=1.25), t(83)=2.26, p=.03. Furthermore, females (M=3.25, SD=1.27) agreed that they would be discouraged from working for a police service due to the culture of the police in the QPS, significantly more than males did (M=2.76, SD=0.88), t(83)=-2.2, p=.03.

Males (M=2.88, SD=1.17) perceived that female officers are treated equally to male officers significantly more than women did (M=3.45, SD=1.05), t(83)=-2.36, p=.02, as shown below in figure 2. Additionally, females (M=4.53, SD=0.67) disagreed with the statement that women are not 'resilient' enough to be police officers, significantly more than males did (M=4.15, SD=0.87), t(84)=-2.26, p=.03.

It was identified that males (M=2.21, SD=1.19) agreed that the QPS treated everyone equally, significantly more than women did (M=2.81, SD=0.98), t(84)=-2.53, p=.01. Similarly, males (M=2.03, SD=0.77) agreed that Queensland Police represented their personal values significantly more than women did (M=2.42, SD=0.77), t(84)=-2.25, p=.03. Lastly, males (M=2.25, SD=1.18) agreed that Queensland Police must be willing to shoot someone significantly more than women did (M=3.11, SD=1.01), t(84)=-2.76, p=.007, as shown in figure 3.

Figure 2: (Public Survey) "Please indicate how much you agree/ disagree with the following statements: Women in the QPS are treated as well as men."
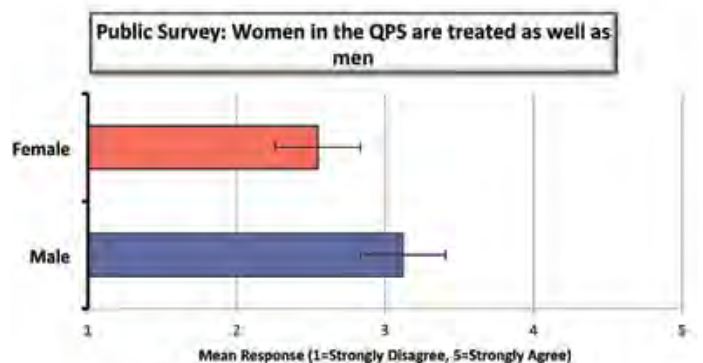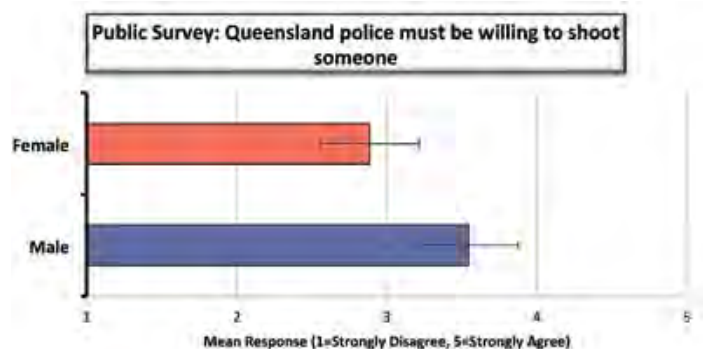

Figure 3: (Public Survey): "How much do you agree with the following statements: Queensland police must be willing to shoot someone."

Overall, these results suggest that females are less likely than males to perceive policing as a vocation or career suited to them (especially if a male-influenced police culture exists), and that women are more likely to believe that men and women may not be treated equally within the QPS. Furthermore, the results suggest that the QPS may represent males' personal values more than women, males may believe that the ability to shoot someone is important to the policing profession more than women do, and males may believe that women are not emotionally resilient enough to be a police officer, within the population sample.

Recruit Questionnaires

Independent sample t-tests were conducted on recruits' questionnaire data to assess significant gender differences between responses. Males (M=1.05, SD=0.22) considered communication skills to be significantly more critical to their performance as a police officer than female recruits (M=1.27, SD=0.46), t(42)=-2.05, p=.047. Alternatively, female recruits (M=2.27, SD=0.70) felt that a tertiary education was a significantly more important characteristic for potential officers than male recruits (M=2.91, SD=1.15), t(42)=2.21, p=0.03.

Figure 4: Question 2 (Both Recruit and Public surveys): Mean responses to sub-questions under, "On the whole, how confident are you in the ability of the police in Queensland to:" These questions outlined the perceptions of the 'trust in police'.
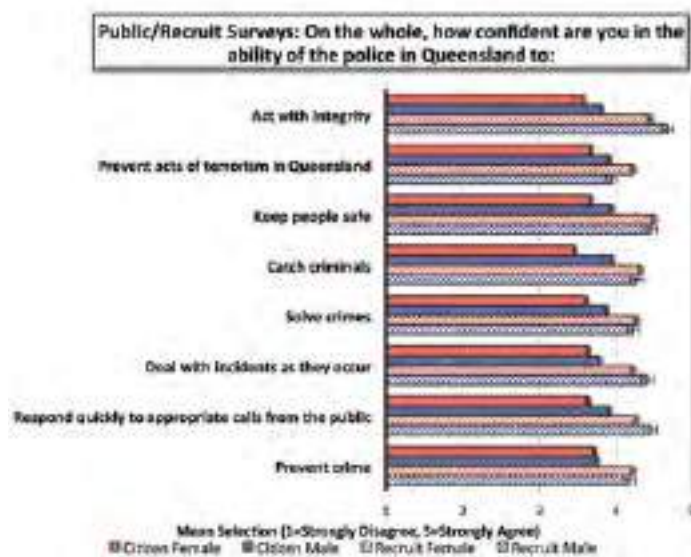
Figure 5: Question 2 (Both Recruit and Public surveys): Mean responses to sub-questions under, "On the whole, how confident are you in the ability of the police in Queensland to:" These questions outlined the perceptions of the 'behaviour of police'.
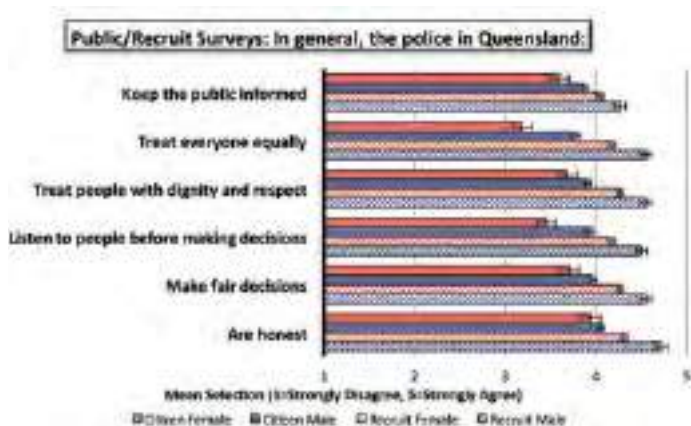
Questions 1 and 2 were asked in both the public and recruit questionnaires and asked respondents about their perceptions of the behaviour of (Question 1) and personal trust in (Question 2) Queensland police. Figure 3 shows the mean responses of citizen males and females for Question 2 (trust in police), contrasted with the mean responses of recruit males and females. Note the higher approval indicated by recruit respondents in addition to the male gender. Figure 4 displays the same trend emerging through perceptions of police behaviour (Question 1).

Responses from these questions have been merged to form Figure 5, an aggregate representation of the differences between both citizens and recruits, with respect to gender.

Figure 6: Questions 1 &2 (Both Recruit and Public surveys): Average scores of all sub-questions within question 1 & 2, represented through two key themes, 'Trust in police' (Question 2) and 'Behaviour of police' (Question 1).
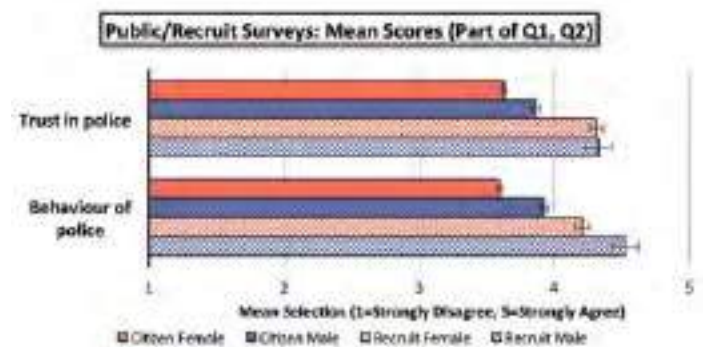
Additionally, male recruits (M=3.00, SD=1.02), suggested they had struggled significantly more with the communications assessment than female recruits (M=3.77, SD=0.61), t(42)=-3.04, p=.004. Male recruits (M=0.27, SD=0.46) were also significantly more inclined to suggest applicants under the age of 30 were unlikely to become police officers than female recruits (M=0.05, SD=0.21), t(42)=2.12, p=.04. Female recruits (M=3.09, SD=1.07) were also more likely to suggest that physical assessments were biased towards their male counterparts than male recruits (M=3.91, SD=1.44), t(42)=2.14, p=.038.

Recruit Interviews

On the 13th of September 2016, 17 recruits were interviewed at QPSA, Oxley Campus. Eight interviewees were male and nine were female. The following sections summarise the key themes relating to the applications process and recruit perceptions of it.

Overview of the application process

On average, male applications took 16.25 months to process, whilst female applications took 6.15 months (with an outlier omitted – they had applied twice within 36 months). Six participants indicated that the most challenging aspect was waiting for feedback; "The waiting does get you down after a while… you think, well they obviously don't want me". Those who did not live locally found it hard travelling to and from Brisbane. Many were not aware of the expectations in each assessment.

Assessment Criteria

Questions about the cognitive assessment process indicated that 13 recruits found it easy and 14 believed it was necessary. Many interviewees sought out online support and training for the test via a Facebook page. A female interviewee noted that university or school grades should be considered more than the cognitive test.

There were 11 interviewees who found the psychological testing easy, two found it challenging. Two women noted discomfort in the psychological testing. One stated that there were too many questions which were asked repeatedly. Another stated it was "… Monotonous…a bit strange". Three female interviewees noted that the psychological interview was helpful in clarifying discrepancies in the psychological testing.

One female reported difficulty interpreting some questions in the test due to language differences associated with the differing interpretations of words.

There were 12 interviewees who found the physical testing easy (though some interviewees did not initially pass). The push-ups and hang test were the hardest components. All interviewees believed it was necessary with four believing it should be harder.

Ten interviewees noted the communication assessment as easy. Four of these interviewees who found it easy had previous emergency services or military experience. Four interviewees found it particularly challenging – three of whom were female. However, 16 found it necessary. Six interviewees found the panel interview to be challenging. All but one found it to be necessary. Many appreciated the presence of a community member and a gender-balanced panel, which did not always occur.

Police Culture

In regards to the workplace experience of recruits, all 17 felt welcomed by their fellow recruits, all felt valued by the staff (however, most mentioned that it was too early to tell), all were aware of the support services available for recruits, and all said recruits were treated the same (however, one noted that the group itself was not ethnically or age diverse). All 17 interviewees had the support of their parents, friends, children and partners. The reasons given for applying to the QPS include: wanting a career change, wanting to be a police officer since a young age, or the influence of a family member who was a police officer.

Unsuccessful Applicants Interviews

On the 26th October 2016, two unsuccessful applicants were interviewed via telephone. One was male and the other was female. Interviewees were unsuccessful at the cognitive testing stage. The female applicant had completed the on campus cognitive assessment whilst the male applicant had completed the new online cognitive assessment (being one of the first in June 2016).

Both applicants independently sought out materials to prepare for the cognitive assessment. Resources sought included a purchased online book, advice from previous applicants, family members, and current and retired police officers. Both applicants did not find the cognitive assessment to be particularly challenging, and both questioned the applicability of the assessment to performing police duties. The female interviewee had done extensive study, had done well in her High School studies, and achieved a notable Grade Point Average in her current tertiary education. She believed that her current study should have been considered before her performance on the cognitive assessment. Both interviewees had the support of their families and had wanted to become a police officer for many years.

The male interviewee stated that future applicants must be willing to chase down any information, "...even if you have to sit on the phone for two hours and trying to get one answer, it's better to be prepared than wait for a year after being denied..." The female interviewee similarly stated that applicants should be cautious not to put their lives on hold in the hope of becoming a recruit. The male applicant stated a clear timeline should be provided to all applicants to show what to expect in the process. A transparent process with guidelines and expectations was noted as important. The female interviewee noted that greater access should be given regarding feedback on exams.

Discussion

Barriers towards applying to join the QPS

Research set out to find if there were any public perceptions which presented as barriers to joining the police. The findings from the public

questionnaire found that women were less likely to consider working for the QPS than men. Hence, barriers towards recruiting females exist at the beginning of the 'pipeline' when women consider applying to the QPS, suggesting that public perceptions of a policing career may discourage female citizens from applying.

Previous research has demonstrated that a male-dominated, 'police culture' exists within many policing services, fostering norms and practices that have the potential to isolate women, and lead to high attrition rates of female recruits and female police officers (Cordner & Cordner 2011; Robinson 2013). Whilst a male-dominated culture may or may not exist, findings from these results indicate that possessing just the belief of the culture may be enough to discourage women from applying. Indeed, incidents of female isolation being publicly reported through the media may reinforce such beliefs and amplify this issue (Moore 2016).

Findings from the public questionnaires also indicate that women are less likely to believe that police officers represent their personal values in contrast to men. Thus, women may be discouraged from pursuing a career in policing due to a belief that the ideals of the profession would not coincide with their values. Such a finding may also relate to the above discussion, as a woman who is under the belief that a male-dominated, 'police culture' exists will likely be less inclined to agree that the organisation upholds their values.

Since males (more than females) believed that the ability to shoot someone was important in the profession, this finding may reflect wider public beliefs that policing is a profession that values handling weapons and physicality over other qualities such as communication skills (Cordner & Cordner 2011).

Thus, it is possible that women 'autonomously' discount themselves out of pursuing a career in policing if they believe that (due to masculine stereotypes), males may be deemed by the police service as more suitable for the job. The research conducted found that whilst females disagreed with the statement that "women are not emotionally resilient enough to be a police officer," men were more likely to select neutral, suggesting that misconceptions that women are not emotionally capable of being a police officer may still exist, and may impact females' decisions when considering applying to join the QPS (Rabe-Hemp 2007).

Successful Recruits

The first challenge that recruits noted was the time duration of the application process. On average, male recruits from the previous application process had a 16.25-month long process whilst females had an average 6.15-month long process. Due to the recent change to a 12-week, 50:50 gender quota process earlier in 2016, the application process wait time will likely be less of an issue.

The psychological assessment was found to be a possible barrier for women. Two women noted their discomfort regarding the psychological testing due to questions, with one woman referring to the test as being, "Monotonous and strange." Three female interviewees noted that the follow-up psychological interview was helpful in clarifying discrepancies in the psychological testing. For those who had the psychological interview, this was perceived as a facilitator to their application.

In regards to the physical assessment, the majority of interviewees stated that they found the physical testing to be easy (12) and necessary (17). Four (both males and females) believed that the testing should be more challenging. Conversely, the recruit questionnaires found that females were likely to believe that physical assessments were biased towards males suggesting that, women are aware of gendered barriers in the physical testing. The discrepancies between the interviews and questionnaire findings suggest that the women who were interviewed truly did not find the physical assessment difficult.

Alternatively, other assessment items are perhaps more important. Take for example the communication assessment; "… the very nature of police work requires the police to communicate with a diverse range of people in a variety of different circumstances … it increases the trust the public has in the officers..." (Robinson 2015, p.38). From the 17 interviewees, 16 stated that the communication assessment was necessary. The questionnaire also found that males were especially more likely to believe that the communication assessment was important. Despite the importance of the communication assessment, males indicated that they were more likely to struggle at the assessment when compared to their female counterparts.

Six interviewees considered the panel interview to be difficult. However, the questionnaire showed no significant findings. Thus, the panel interview was not regarded as a barrier or facilitator to gender. Whilst recruits noted that the interview was no more challenging than a regular job interview, many (both male and female) noted that a gender balanced interview panel is appreciated where it occurred. Therefore, it is recommended that a consistent gender balanced panel should be implemented by the QPS in the future.

From the 17 interviewees, 13 found the cognitive assessment easy. Many noted the additional importance of school or tertiary marks. The results from the questionnaire support the trend of females being more likely to indicate that tertiary education was more important than a cognitive test. Literature also supports the trend, which shows that women are more likely to be attracted to an organisation that values tertiary education; "Higher educational requirements were associated with more female representation. Rather than being viewed as a hurdle, educational requirements may be attractive to women because of the commonly held association between education and professionalism..." (Schuck 2014, p.70).

Whilst organisations are hesitant to implement tertiary education requirements for fear of further marginalising gender or ethnic minorities, further education requirements only encouraged women to consider policing as a career (Jordan et al. 2009).

Unsuccessful Applicants

Both applicants were unsuccessful in the cognitive stage. One recruit had completed the previous cognitive test whilst the other had completed the new online 'Wonderlic test'. Both found that the assessment was testing the applicant's ability to quickly respond to questions rather than measuring intelligence. Time pressure can create anxiety and stress that can negatively impact respondents' performances and test outcomes, meaning that it is possible that without the time pressure, respondents may achieve higher cognitive scores (Chen 2004).

It is acknowledged that cognitive testing may include a time pressure aspect in order to assess the candidate's ability to make appropriate decisions quickly and accurately under stresses. However, this task may not fully capture the cognitive capacity of applicants who may otherwise perform very well under other time pressured tasks which capitalise on communication and other social skills. Consistent high performance in tertiary education may be an additional metric to use alongside cognitive testing to provide a more rounded view of the applicant, as suggested by a female interviewee.

The description of the process given by the unsuccessful male interviewee may be a side-effect of the QPS' newly introduced 30:70 split. The split refers to the previous intakes where 30% of those who applied were female, and 70% were male. The new application process cuts down the number of selected applicants after the cognitive assessment into 70% female and 30% male. Therefore, fewer males (compared to previous intakes) will be taken in, increasing the competition between male applicants to emerge successful.

The interviews highlighted the need for the QPS to provide clear guidelines and timelines for applicants regarding how long the process will take and what the expectations are for each assessment stage. It was also recommended that the QPS direct applicants to the correct channels to find preparatory resources and note that online books, Facebook pages, and hearsay are often misleading resources. Interviewees urged future applicants to clarify any questions with the QPS rather than be rejected due to unknown information.

Recommendations

The following provides four key recommendations to reconcile the gendered barriers and facilitators discovered. These recommendations are drawn from current literature and evidence collected by this research.

Tertiary Education Requirements

The literature highlights the benefits of valuing tertiary education. Heightening the importance of a tertiary education will attract an audience applicant pool that possesses learned communication and written skills, and would result in recruits who have life experience to draw upon such as working in teams, keeping to deadlines, and managing expectations. Targeting applicants with a tertiary education would give the QPS a defined demographic to target for marketing, and would allow expansion through tertiary graduate programs (Sarre, 2016).

Targeted Marketing

Targeted marketing is an effective tool for attracting female applicants. Marketing campaigns can have the ability to remove public misconceptions about policing and show that policing as a career extends far beyond purely physical activities (Wager & Bedi 2016). Advertisements such as these could promote the value of tertiary education, empathy, and communication skills within policing, illustrate the QPS' values of fairness, pride and courage, and emphasise policing duties involving community-based services, instead of law-enforcement based work.

Furthermore, such campaigns could re-emphasise the QPS' commitment to gender diversity (Queensland Police Service 2016a) and highlight positivity around the nature of the QPS culture to overcome perceptions that it could be male-dominated. Targeted recruitment has been shown to increase application rates of up to 14% for women in some occupations, and shows promising results for male-dominated occupations (Cordner & Cordner 2011; Prenzler 1996). It is acknowledged that the QPS has progressed this type of marketing with the 'That Could be Me' campaign in 2016, it is recommended that it be extended and taken beyond a social media campaign.

Females-Only Careers Forum

A QPS careers forum targeted towards women holds potential to educate women on the significant role they play in the QPS. These forums could inform female attendees of what their experiences working for the QPS was like, what policing would involve, and can inspire female applicants by having female role models there. Female attendees would be presented with an opportunity to share their concerns about working for the QPS, particularly regarding misconceptions of women in policing. The goal of these forums would be to educate women on factual information about the QPS and highlight the benefits of working for the QPS. Again, it is acknowledged that the QPS ran the "Recruiting for our Future" Expo in November 2015 that was designed to celebrate the diversity of the QPS and promote the recruitment of women and people from all backgrounds and cultures within the community (Queensland Police Service 2016c). However, it would be ideal for these forums or expos to be conducted on a more regular basis, ideally prior to each application intake.

The research indicates the benefits that having experienced female officers on hand to educate and support applicants during the early stages of the process can bring to recruitment and retention rates (Cordner & Cordner 2011).

Conclusion

The QPS has recognised the importance of workplace gender diversity through their commitment to the 50:50 gender quota, the restructuring of the application process, and engaging research to be undertaken to examine the issue. However, these strides towards a diverse workplace are inhibited by public perceptions of the application process itself in addition to the perceived culture of the QPS. Following the pipeline, this study's analysis of perceptions towards the QPS and the application process highlighted existing gendered challenges which may hinder the abilities of the QPS to fulfil its goals of workplace equality. Following this, recommendations informed by literature and respondent feedback were proposed, with particular focus on the treatment of diverse target audiences, educational requirements, and physical evaluation.

It would appear from the research that the greatest obstacle on the path to enhancing gender diversity in policing is community perceptions. These are perceptions that believe policing is a physical occupation best suited to males, and perceptions of police services retaining a male-dominated culture. The results of this research have a particular focus on the treatment of diverse target audiences through marketing and career forums.

These targeted campaigns can be further supported by placing emphasis on educational requirements and including this as part of future campaigns in an attempt to make policing a more attractive occupation for women, thereby enhancing gender diversity in policing.

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Sustaining Domestic Abuse as a Priority: Insights from Wales and Australia

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Introduction

The widespread and serious nature of domestic abuse is one which is recognised by the World Health Organization (2013) as a worldwide problem of epidemic proportions. Adding to this severity are the findings from a commission that has been carried out by the European Union (2010:5) who claim that "domestic violence is a high priority for the European Union". In acceptance of this view, the UK Government have stated that "domestic violence and abuse is unacceptable and addressing the issue is a priority for the government" (Gov, 2016b, Online). However, whilst it would appear that domestic abuse has been outlined as a priority for the UK Government, all of the 43 Home Office police forces in England and Wales (HMIC, 2014), and for the Australian police, therefore this article will question whether measures of austerity have had an impact on the sustainability of policing domestic abuse, and if so, one may question whether the commitment on paper is reflected within practice.

Austerity within the Police

The very notion that policing does not exist in a vacuum (Rogers, 2014), is one which refers to external and internal factors having some influence on the operational efficiency of services, such as the police. Said influences are said to include Political, Economic, Social, Technological, Environmental and Legal factors, as outlined within the PESTEL analysis model (Marshal, 2016). Notwithstanding how these factors may individually influence the way in which the Police operate in the UK and in Australia, this article will examine what impact measures of austerity are currently having on the delivery of policing services in the UK and Australia (Reiner, 2000).

In Australia, it has been widely reported within media sources that the police services are under pressure to improve their efficiency and to reduce their expenditures. The measures that have been applied to meet such aims, appear to be evidenced within the Australian Federal Police workforce figures. For example, the data released by the Australian Federal Police appear to suggest that overall number of police staff has decreased by 252 since June 2013, which equates to a 3.6 % degree of the workforce. It is suggested by The Advisor (2013, online) that the police budget will be cut by "$19.3 million in 2012-13, $31.8 million in 2013-14, $44.5 million in 2014-15 and $57.1 million in 2015-16". Thus claim being represented within the descending trend that is outlined within figure 1.
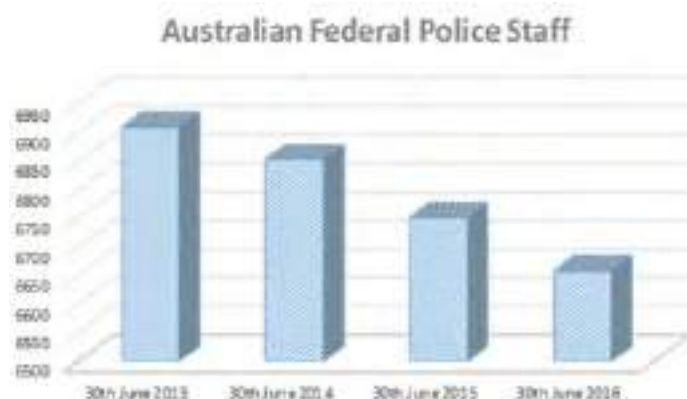

Figure 1 – Source: Australian Federal Police, 2016, Online

Whilst the above discussion appear to highlight a parallel change between police funding and workforce figures within Australia, the same features can be viewed within comparable data from England and Wales.

In England and Wales, it has been well documented that in 2010 the UK Coalition Government formulated a spending review across all Governmental department. The review had suggested that the police budget will be reduced by up to 20% between 2014 and 2015, a saving of £2.4 Billion (Gov, 2015). As outlined within figure 2, on the 31st March 2016, the UK government claimed that there were 124,066 employed police officers in the 43 police forces. What these figures appear to illiterate, is a year on year decline in the number of police staff since 2010. For example, figures from 2010 show that there were a total of 141,631 police officers, which highlights a decrease of 17,565 to date (Gov, 2016c, online).

It is no surprise that the year on year declined in the number of Police staff co-insides with timing that the coalition government conducted its spending review across all governmental organisations.
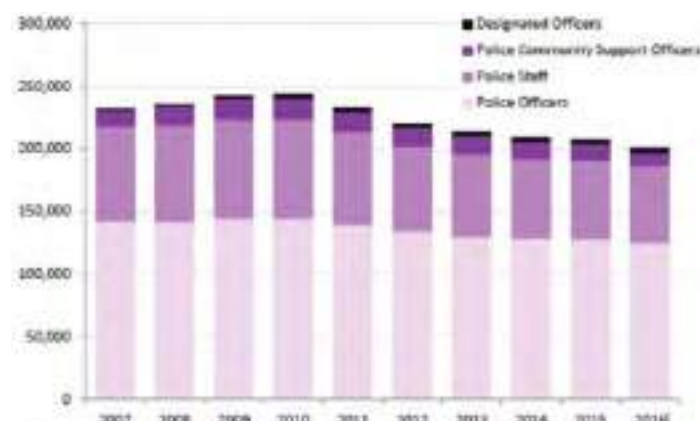

Figure 2 – Source: Gov, 2016c, Online

Although, whilst acknowledging such changes to police funding in both England and Wales, and in Australia, the question remains as to what extent austerity has had on the delivery of policing services and whether there has been a change in policing style towards certain crimes; as a method of maintaining operational resilience and delivery of services across forces. The impact of austerity within these countries appear to provoke further discussion upon the police response to domestic abuse - a discussion which has been ongoing for many decades, with many criticising the way in which the police respond to these incidents (Myhill & Johnson, 2016; HMIC, 2014).

Domestic Abuse as a priority

The focus by some overarching political bodies such as the European Union and Council of Europe appear to have placed significant pressure upon policy makers and practitioners whom implement interventions which aim to prevent and reduce domestic abuse (European Commission, 2010; Sullivan, 2011). There can be no mistake, that on paper, domestic abuse is a priority for the UK Government, and all Police forces across England and Wales (Gov, 2016a; HMIC, 2014). It would also appear that this view is replicated within Australia, with the Parliament of Australia (2011, online) outlining domestic abuse as an "Australasian policing priority".

The notion of domestic abuse being a government and policing priority, is one which can be related to the nature of the offence, but also the shift in political and social philosophy towards domestic abuse. For example, within England and Wales it would appear that in recent years, the social and political awareness and understanding of domestic abuse has changed. This view is best understood within a research study that has been conducted by the European Commission (2010: 10) where it was found that "98% of people are now aware of domestic violence across the EU compared to 94% in the previous survey". This rise of 4% appears to not only illustrate the increasing social awareness of domestic abuse, but it is also supported by the social detest of the behaviour, which is recognised by 97% of UK respondents as an unacceptable act of behaviour (European Commission, 2010). Following on from the research conducted by the European Commission in 2010, it had been identified that 94% of UK respondents believed that it is the government's responsibility to effectively deal with domestic abuse. Utilizing this view, it would appear that the UK government have acted upon the social viewpoint, as they have outlined their commitment to tackling domestic abuse by outlining it as a priority. From this, it would appear that the social view of domestic abuse is somewhat represented within the Governments vision, more so as domestic abuse is a regarded as an explicit priority in England and Wales by the police services, and other governmental agencies (HMIC, 2014). However, the full commitment and vision of the government and police service to effectively and efficiently tackle domestic abuse, appears to be greatly questioned when critically examining the police services response to the issue.

Police response to domestic abuse

The police service are a unique governmental organisation who appear to hold an exclusive position within society (House, 2013). Their role is positioned at the forefront of the Criminal Justice System (Schucan-Bird, No year), a position which allows them to decide through their legal powers, whom gets projected through the Criminal Justice System. Deciding on whom gets projected through this justice system is often left to the discretion of individual police officers, and therefore, it is a position which places great emphasis upon the ethical judgment of police officers. However, when discussing the use of police discretion at incidents of domestic abuse, it would appear that much academic debate has been focused on the unethical use of police discretion at domestic abuse incidents; a problem which appears to be a reoccurring issue for the police service (Myhill and Johnson, 2016). Many have suggested that this negative viewpoint may be attributed from some of the historical police responses to domestic abuse, with some officers being seen to 'downplay' the severity of domestic abuse (Myhill & Johnson, 2016), and also with some officers referring to domestic abuse incidents as "not worthy" of their time (Myhill & Johnson, 2016, P9). Whilst one may recognise this to be a continuing criticism of the police response to domestic abuse incidents, it must be acknowledged that in recent years and decades, considerable changes have been made to the way in which police officers respond and handle domestic abuse cases. Although whilst acknowledging these profound changes, one must maintain objectivity, and examine the current policing response to domestic abuse. In order to understand the true extent of the police services response to domestic abuse, this article will examine figures that have been sought following Freedom of Information Requests to Police forces within Wales in September 2016, in the hope that these figures may provide an insight into some of the questions that surround police response at domestic abuse incidents.

Insights from Wales

Understanding the true extent of domestic abuse in England and Wales is evidently challenging. This article is unable to provide a discussion upon the practicalities of the police responses to domestic abuse cases in Wales, although, this article has collated data following responses from Freedom of Information requests made to South Wales Police in 2016, which will provide some insight into the police response – at a time where economic measures have been implemented.

From examination of the data from South Wales Police, it would appear that in 2016 South Wales Police recorded 34,317 domestic abuse incidents. This would appear to be a year on year increase within the South Wales police area, which is also echoed within other force areas within England and Wales. Whilst one may speculate upon the reasons for the continuing increase of recorded domestic abuse incidents in South Wales, and subsequently within England and Wales; the Crown Prosecution Service CPS (2011, online) suggest "some good progress has now undoubtedly been made since those administering criminal justice woke up to domestic violence". Whilst these claims appear to place emphasis upon the positive changes that have been made surrounding the administration and application of domestic abuse legal processes, one must question the extent and certainty of such claims. From a further and detailed examination of the data supplied by South Wales Police, it would appear that further questions have arisen, with regards to the current practical policing response to domestic abuse which will provoke some discussion. Of which, may question the nature and degree of changes that have been made within the administration of criminal justice within domestic abuse cases, as outlined by the CPS.

In order to provide this insight, further data has been obtained within Freedom of Information requests. The figures obtained from South Wales police suggest that 21,246 domestic abuse incidents occurred in 2014, but with only 9,619 (45.27%) being "closed", or considered as domestic abuse offences.

Domestic Abuse figures from South Wales Police
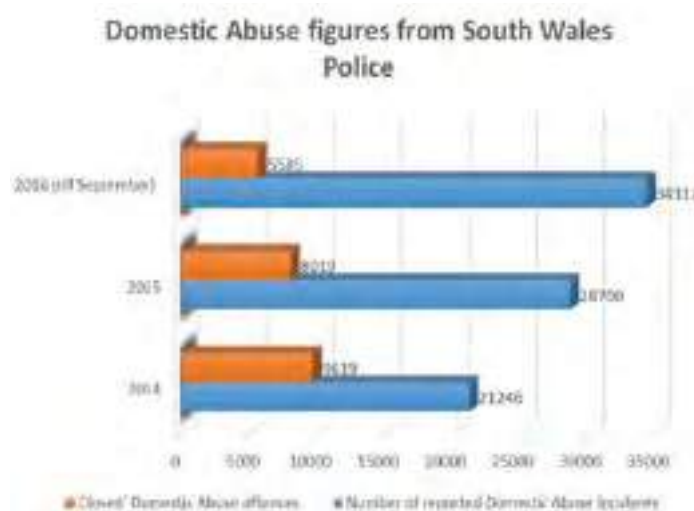
When examining the same data sets for the following years, it appears that in 2015 South Wales Police recorded 28,700 domestic abuse incidents, with only 8019 (27.94%) being "closed" as Domestic abuse cases. Finally, in 2016, South Wales police dealt with 34,317 incidents, with only 5,585 (21.62%) being defined, or closed as a domestic abuse case.

What these figures appear to illustrate, are that there is a continuing increase in the number of recorded domestic abuse incidents by the police, whilst at the same time, there would appear to be a proportionately lower amount of cases being defined, or closed, as domestic abuse incidents throughout each year in South Wales. This graph appears to best illustrate the year on year decrease in closed domestic abuse cases. The data appears to suggest that between

'Closed' as Domestic Abuse cases
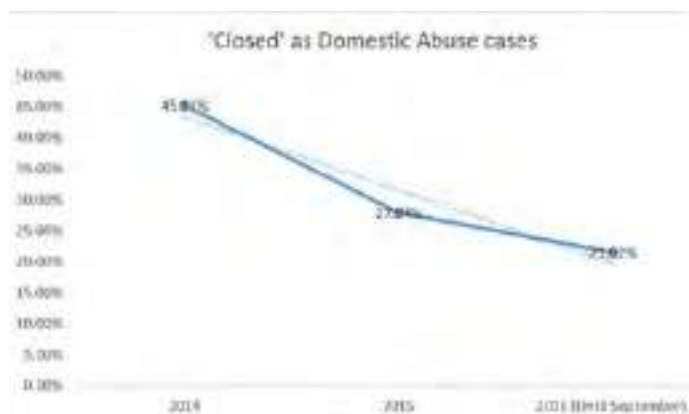
2014 and 2016, South Wales Police have dealt with an increasing number of reported domestic abuse incidents, whilst at the same time, less and less of these incidents have been "closed" or labelled by the police as authentic domestic abuse occurrences. Arguably, these figures highlight a number of concerns regarding the policing response to some domestic abuse incidents within the South Wales area. The figures appear to suggest that the response to policing domestic abuse in South Wales has changed in recent years. Whereby one could argue that the figures suggest that incidents of domestic abuse in South Wales have been 'cuffed', or downplayed into non offences by officers (Myhill & Johnson, 2016). Furthermore, what these figures could suggest is that the year on year impact of austerity, is one which coincides with the changes in the police response to domestic abuse in South Wales; with less incidents being considered as domestic abuse occurrences by the police as a way of drawing resources to other types of crimes.

If the suggestion is that measures of austerity have influenced the processes and response to domestic abuse, with it still potential being viewed by some officers as "not worthy" of their time (Myhill & Johnson, 2016, P9), then further questions are forthcoming to the Police Service, questions which may suggest that some victims are being exposed to greater risks because the police service are attempting to maintain operational services by prioritising other types of crimes. These raises the proverbial question; is domestic abuse a priority in practice, or just on paper?

Culture

The ethical application of policing services is recognised as a philosophical ethos here in England and Wales. This transparent and ethical approach is one of fundamental importance to the legitimacy of the police service, more so when the actions and delivery of policing services are carried out in a fair and indiscriminate manner (Tyler and Fagan 2008). However, the influence of negative cultural views and norms is one which raises concerns when examine the police services response to certain crimes, such as domestic abuse.

For a number of decades the concept of police culture has been a well-debated topic. Goldstein (1963), Waddington (1999) and Reiner (2010) being some of the major commentators, amongst others (see, Young, 1991; Westmarland, 2001, and Loftus, 2009). Probing from this, it has been suggested by some that negative cultural attitudes are deeply embedded with the police organisations structure (Cain 1973; Manning 1977), and are believed to be focused around aggressive tactics, high adrenaline-pumping incidents, and selective law enforcement (Terrill, et al, 2003; Toch, 1976). Whilst it is suggested that domestic abuse is viewed by the police as a "low priority" (Myhill & Johnson, 2016, P.6) or "not real police work" (Terrill,

et al, 2003, online), one must firstly question why this is? Secondly, one must question the impact that this stance has upon the quality of service that those involved in domestic abuse incidents receive? But thirdly, are those police officers whom downplay or 'cuff' domestic abuse cases, abusing their position of power, by selectively enforcing aspects of law and focusing on specific crimes?

It is understood that the philosophy ethos of policing in England and Wales is underpinned by the doctrine of 'policing by consent'. This philosophical stance does not only place focus upon the interests of the community, whilst also placing an obligation and duty upon police officers to use discretion whilst they carry out their duty (Rogers & Lewis 2007). . In essence, this narrative heavily relies upon police officers using fair, ethical, and indiscriminately decision making (Rogers and Lewis, 2007). However, one may question the ethical decision making of some police officers at domestic abuse incidents, more so when the notion and impact of police culture is considered (Buzawa & Buzawa, 2003).

It has been well-commented that the cultural view towards the issue of domestic abuse within the police service, has unquestionably had a negative impact upon the application of service delivery, police policy and legislation (Starmer, 2011; HMIC, 2014; Myhill & Johnson, 2016). These views appear to be evidenced with the recent claims by the then Home Secretary Theresa May in May 2016, who states that victims of domestic abuse are still being let down by police services in England and Wales (Gov.uk, 2016a). It would appear from the statistics shown above, that the police response to domestic abuse has altered at the same time that austerity measures have taken place. Therefore, one could suggest that measures of austerity have fuelled the negative cultural view of domestic abuse, with officers downplaying domestic abuse incidents as they feel it is too resource intensive.

Conclusion

This article has highlighted the challenges faced by the police services in England and Wales, and in Australia, when being faced with a change in demand whilst still managing and dealing with the impact of austerity. There is no doubt that the domestic abuse is a complex, vast, and challenging area for police services in the UK, Australia and across the world, and whilst on paper it would appear that domestic abuse is a priority, the practical response may suggest otherwise.

There is no doubt that measures of austerity have had implications on police resources, which have subsequently influenced the police response to most types of crimes. Although, the image that domestic abuse is a priority, is one that appears to only stretch as far as the paper it is written on. Whilst there is acknowledgement that many police officers and staff provide a great level of support to victims of domestic, one could argue that this approach may not be replicated across the board. For domestic abuse to be tackled effectively, it is paramount that officers understand and appreciate the importance of a victim-centric philosophy, which must be replicated across all policing services.

For this to be achieved, there is requirement for some officers to shift their cultural views and attitudes towards the topics of domestic abuse.

This article has acknowledged the impact of austerity on police resources within Australia, and in the UK. It would appear that the response towards domestic abuse by some police services in the UK has altered at the same rate of measure of austerity, which may pose significant risks to victims of domestic abuse.

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Development of a Police and University Partnership in Waikato New Zealand

Abstract

In 2015–2016, the Waikato District of the New Zealand Police and the University of Waikato (UoW) established a collaborative, multidisciplinary, research programme supporting evidence based policing. Key factors in the collaboration were support by senior managers from both parties, and the appointment of a police intelligence analyst embedded within the Faculty of Computing and Mathematical Sciences (FCMS) to liaise between the parties. The collaboration has produced operational and theoretical research from police data, provided work and research experience for students; the UoW has established the New Zealand Institute of Security and Crime Science based in the FCMS, and a Master of Security and Crime Sciences degree programme.

Introduction

Sherman, in the first issue of Police Science, recalls his frustration that '… research … rarely got discussed, let alone used, outside the universities, by police or anyone else' (Martin & Sherman 2016, p. 5). Although Sherman was recalling his early formulation of evidence based policing (EBP) from 1998, it remains difficult to translate and promulgate research findings through to practice (Braga & Davis 2014).

In their experience, embedded researchers benefited police departments by providing unbiased, objective findings for police considerations. However, this is not the only benefit of police/university partnerships; both partners stand to gain. Academic skills and expertise can assist the development of analytical and detection tools to improve policing; advanced training increases opportunity and skills for the police; police can provide 'real data', research and self-development opportunities for academic staff, and workplace experience for students; society benefits by a developing a cohort of non-police personnel with experience and understanding of policing problems and requirements; and we all gain from more effective and engaged policing.

Despite these theoretical benefits, collaboration can be difficult. Front-line police often remark that research has little relevance to practice, especially at 1 am on a wet morning dealing with domestic or mental illness occurrence. Academics rarely have direct experience of policing or crime management. Police can be hostile or sensitive to criticism. Then there are the wider contextual and background issues: public scrutiny, declining resources, changing technology and crime patterns. Few police are trained in statistical, exploratory or hypothesis analysis, all skills that are essential to assessing 'strength and validity of evidence'. These demands constrain the ability of police to define questions, develop research to become smarter, better informed, and more responsive to public need. Well-run partnerships have the potential to benefit all partners.

This article reports the initial experience of collaboration between the University of Waikato (UoW) and the Waikato Police District (WPD) intended to overcome some of these constraints.

University of Waikato and Waikato Police District

The WPD comprises two rural (Waikato West and East) and one urban area, Hamilton City (population 150,000 and rapidly growing). The District runs from Te Kauwhata in the north, Benneydale to the south, Raglan to the west and the Coromandel Peninsula to the east. In June 2015, WPD employed just over 600 sworn staff and 90 other employees, including a District Intelligence Group (DIG).

Hamilton is also home to the UoW. This University was established in 1964, caters for over 12,000 students, and has seven Faculties/Schools of Study. These cover Arts and Social Sciences, Computing and Mathematical Sciences, Education, Law, Management, Maori and Indigenous Studies, and Science and Engineering. Within the Faculty of Computing and Mathematical Sciences (FCMS), the subject of Computer Science is ranked by QS Subject Rankings as being in the top 250 in the world. FCMS supports major world-class research programmes in Data Mining and Machine Learning, Cyber Security and Networks, and Digital Libraries. It hosts the country's first dedicated Cyber Security Laboratory. The Faculty of Arts and Social Sciences supports a Transport Research Group and the School of Psychology has current research programmes with the Department of Corrections.

In 2014, WPD DIG suggested to the FCMS that they might develop a mobile application to promote student safety. Although this suggestion came to naught, the conversation eventually led to the part-time secondment of one intelligence analyst (the author) to the university to promote research liaison.

Eighteen months later, the UoW has established the New Zealand Institute for Security and Crime Science; the collaboration has produced a proof of concept for a mobile bail management application, a research paper on 'Spatio-temporal modelling of crime', (Brown et al. 2016), two research projects modelling Geographical Information Systems, a new concept on strength of (statistical) testing (McCarter and McBride pers.comm.), and a programme for a Master's degree in Security and Crime Science. Other projects at various stages are underway. In this paper, I describe two of these developments and discuss the critical factors affecting the collaboration.

Development of the collaboration

The initial proposals arose from a perception that WPD do not successfully reach the UoW student population. Almost 8% of the total Hamilton City population are students at UoW or Wintec, the local polytechnic. Every year, the city receives 4,500 young, sometimes naïve and vulnerable persons, many of whom are from out of town or overseas and therefore without familiar support.

The DIG asked FCMS to develop a simple mobile phone application, to be provided free to students, which would push information and support directly to this population.

Although this proposal failed, the conversation between the WPD and the FCMS rapidly expanded to propose undergraduate and staff research programmes that used police data to test ideas or applications, and related professional training for police and other stakeholders in crime, public safety, and security. As a first step, the WPD agreed to part-fund summer scholarships for two students to be embedded with the DIG. The WPD aligned the scholarship proposals with police needs and the existing research priorities.

In general terms, these priorities are intended:

1. To better inform deployment decisions;

2. To demonstrate the effectiveness and/or impact of current tactics or interventions; and

3. To develop a range of plans/tools in support of improving evidence based' decision-making, that is, knowledge, capability and capacity.

The DIG developed specifications for 25 possible projects under six headings:

1. Prediction of localities with an elevated risk of offending in the following month from historical data, for example, develop a model of spatio-temporal risk of burglaries;

2. Provision of information that assists management and deployment decisions, for example, develop a bail management application for front line officers;

3. Improvement of the analysis of incident and offence frequency and location, for example, develop response models of offence frequency to different tactical options;

4. Testing of the effectiveness and efficiency of different tactical uses of uniformed staff; what is the influence of different preventative activity, for example, traffic red-light prevention tactics;

5. Provision of public information and communication, for example, provision of information to the student population;

6. Miscellaneous projects, for example, automated scanning of Twitter and Facebook feeds for drug or stolen property disposal.

The projects were presented at a set of seminars for students and staff; two software engineering students were selected on recommendation of FCMS staff and by interview and began work in November 2015.

Bail Management Application

The students were given a week's induction training, similar to that provided for Intelligence Support Officers, to familiarise them with police data management tools and procedures.

After consultation with WPD management and front-line staff, the students were asked to develop a proof of concept for a tool that would map checks obtained from the Bail Management (BM) system. The current NZ Police BM system relies on data, entered by court staff, which are then piped into the police system. The BM system then produces checklists of bailees for specific shifts and areas that identify bailee by name, age, number and address, as well as the offender's bail conditions.

The issue for operational staff is that the system produces the lists in tabular format by alphabetical order based on the bailee's last name. As a consequence, there was no easy way to identify location, near-neighbour bailees, or overlay bailee locations against
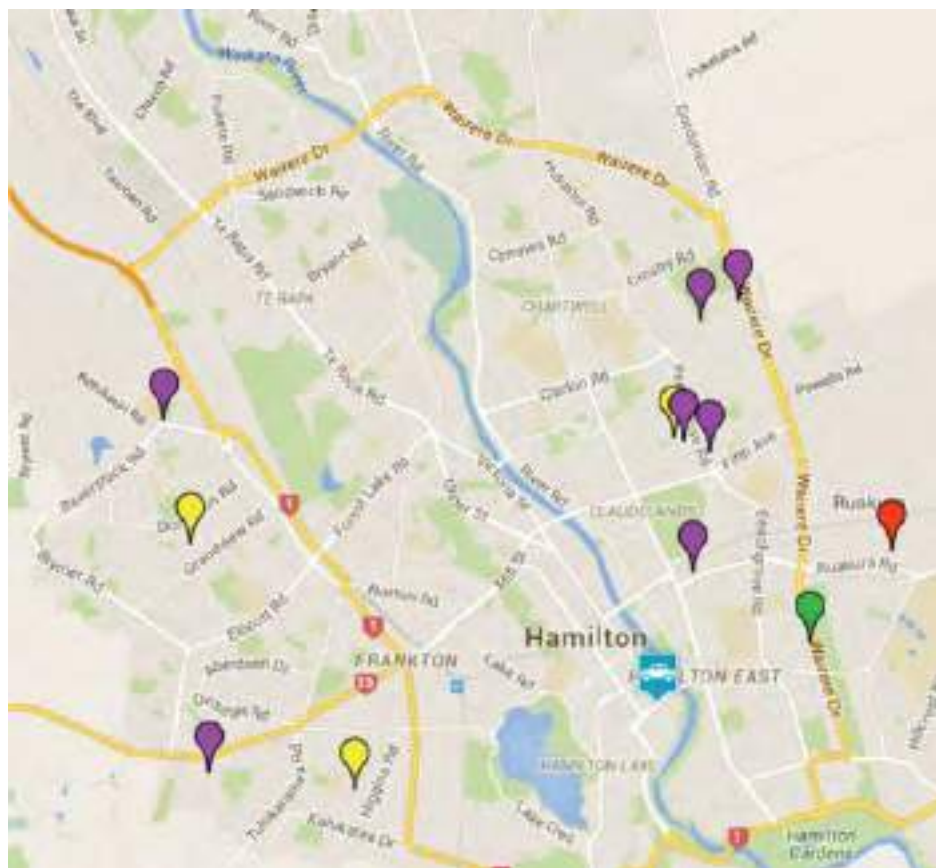

Figure 1 – map output

crime spots. A front-line officer has to discover near-neighbour bailees by searching each check-sheet by area and shift-time, and use local knowledge to find nearby the bailee addresses. Further, route selection between bailee locations is challenging; the students observed on section that route planning often took more time than actual travelling and check completion. As officers usually conduct bail checks during the time available between incident responses, any tool that enhances route finding between bail checks and current location will increase efficiency.

In eight weeks, our two students developed and field tested a mapping application that:

• plotted bail addresses and status using Google Maps (Figure 1)

• identified near-neighbour bailees to enable multiple checks at close locations

• filtered output by current status (Figure 2)

• provided pop up boxes for bail checks and breaches (Figure 3 a-c)

• functioned on mobility and desktop machines.

This paper does not describe the application in detail, but readers can discern some details from the figures. Apart from the obvious benefits to efficient and effective policing, the project also demonstrated the value to operational policing of short-term projects using skills and expertise not otherwise available to police, and provided the

students with an income and valuable work experience, and the Faculty with additional research and reputation opportunity. The project also identified several issues, for example, security and data verification, and colour blindness that required further work.

The results were presented to the New Zealand Police National Tactical and Co-ordination Meeting in May 2016 and the project is now under development for issue on New Zealand Police Mobility devices.

Master of Security and Crime Science

The UoW Academic Plan 2012–2016 states 'The development of 180-point masters and professional master's degrees is important to the strengthening of our postgraduate enrolments and culture and allows us to compete with countries such as the UK that also offer one-year masters programmes.'

Current NZ Police strategic documents call for police to further develop capabilities in the interpretation of crime data, and to develop tools to promote the optimal deployment of police resources to the criminal environment in real time. This requires the use of evidence-based information, which together with scientific approaches and methods will enable precise use of resources in real time to reduce victimisation. In 2015, WPD suggested UoW establish an Institute for

Figure 3 – pop up boxes

Figure 2 – application menu

Security and Crime Science, and a Master's programme in Security and Crime Science to support these aspirations.

Over the last year, WPD and UoW staff have developed a programme to complement and draw upon existing UoW programmes in Cyber Security, Computer Science, Statistics, Geographic Information Systems, Psychology, and Management, and meet the needs of a range of stakeholders from government (including Police, Defence, Corrections, Customs and Immigration) and private organisations. The Master's programme is designed for actual and potential practitioners in law enforcement and security, and will be accessible to students from a range of backgrounds. The proposed degree differs from existing criminology degrees in Australasia by focusing on crime science (aka EBP) rather than the causes of criminality or the effects of criminal behaviour. The proposal includes five compulsory papers (courses):

- Foundations of Security and Crime Science
- Preventing Crime and Security Risks Through Operational and Environmental Analytics
- Research Methods
- Strategy, Technology, and International Security
- Quantitative Methods for Security and Crime Science,

three elective papers from:

- Cryptography
- Cyber Security
- Machine Learning Algorithms
- Information Visualisation
- Information Management
- Developing Mobile Applications
- Applied Geographic Information Systems for Research and Planning
- Cyber Security and Cyber Warfare
- Exploratory Spatial Data Analysis
- The Social Psychology of Anti-Social Behaviour
- Family Violence: Research and Interventions
- The Psychology of Criminal Conduct
- Advanced Quantitative Methods in Security and Crime Science
- Project management

and a dissertation.

Further elective papers will be offered at a later stage, but note that the degree is multidisciplinary and will be delivered from several subject areas (Computing and Mathematical Sciences, Psychology, Social Sciences, and Geography, Maori and Indigenous Studies).

Part of the commitment from WPD is to provide example data and seminars by operational staff to each of the papers. So for example, the Exploratory Spatial Data Analysis paper proposes to use recent crime data to examine hot spots, which will lead to consideration of police deployment tactics. Similarly, the Quantitative Methods paper proposes to use real crime and traffic data to demonstrate trend analysis.

The programme has received widespread support from NZ Police, Defence, Department of Corrections, District Health Boards, and global security professionals, and the UoW will launch the programme in January 2018.

Discussion

Successful collaboration between two partners, with very different remits and cultures, depends on several factors. First, it is essential that the partnership enjoys high-level support and commitment from both parties. From the UoW, this was provided by the Vice-Chancellor and the Dean of FCMS as well as by individual academic staff. From the WPD, support was provided by the District Commissioner, the District Manager Intelligence, and by other senior management staff. Although the funding demands are not great, the project did require the reallocation of staff time, in particular from the DIG, and funds for student scholarships and academic consultancy. Research costs money and further development will need to secure long-term funding.

A second key step was to place one intelligence analyst within the FCMS to liaise between academic and WPD staff, and students. The FCMS provided office space and computing facilities; WPD provided staff (part time) and data. To some extent, embedding a police analyst within the Faculty is similar to embedding a criminologist in a police department (Braga & Davis 2014). This physical link is critical to the development of working relationships.

Although modern electronic systems enable communication, there is no substitute for a physical presence within the tea and seminar rooms, to promote contact, float ideas, and organise personal meetings. However, the WPD appointment was at analyst, not commissioner level. Whilst there are advantages to high-level collaboration, the ground floor offers a different perspective of operational needs, and is considerably cheaper. However, to be effective, the embedding must be fully supported by senior managers from both partners.

These contacts promote linkage between research proposals and operational requirements such as the bail management application. Liaison and collaboration need to accommodate both parties to bridge the apparent gap between academic aspirations and operational needs of police management (Neyroud & Weisburd 2014). A good example is the continuing work on spatial-temporal modelling. The academic interest is in the development of low discrepancy sequences in Bayesian modelling (Joshi, pers. comm.); police are interested in the development of models to predict the risk of burglary at particular locations, and relate environmental conditions back to risk (Brown et al. 2016). Although operational benefits are still some way off, even the early stages of the project have been mutually beneficial.

However, not all projects need be directly related to operational requirements, assessment of tactical or strategic interventions, or management decision-making (Lum & Koper 2015). A key aspect of academic research is an accommodation of failure. Negative results can be as useful as positive ones and allow organisations to refine, accept, or reject ideas. In contrast, operational police and intelligence analysts are always under pressure to produce information on 'what works', and rarely have the luxury of exploring 'what if' research projects. A downside of the 'what works' approach is a reluctance to test concepts that might not work. Academic research has the freedom to explore concepts and projects that may not produce a successful outcome within a set time frame, but can inform and refine police effectiveness over the long term.

This does not to diminish the importance of links to operational requirements. The bail management application succeeded not only by the hard work of two very smart students, but also through the feedback and participation by operational staff. Front-line officers were able to specify and test requirements, discard some proposals, and identify shortcomings, thus linking the project closely to operational needs and practice. For example, the project identified a need to verify and geocode bailee addresses at

source (at court). This is not yet feasible, but we have added this project to our research list. The students were able to accompany operational staff on visits and identified the issues of near-neighbour bailees and route mapping, neither of which were previously identified as bail management issues. We conclude that the project would not have succeeded without mentoring and supervision by both WPD officers and academic staff.

Further issues surround the definition and specification of research projects. As Braga & Davis (2014, p. 294) note, '… police operate in a reality in which decisions must be made quickly, and issues of finance and efficiency can be as important as effectiveness'. It is not uncommon for police managers to make tactical decisions, and then expect analysts to assess effectiveness after the event. That is not a recipe for good experimental design and is less likely to produce sound verifiable evidence than planned research.

These and similar considerations influenced the structure and composition of the Master's programme. Police and other public safety entities operate in a complex social and technical environment. Modern thinking and research have demonstrated that social problems such as crime cannot be solved by simplistic solutions. For example, deterrence of antisocial behaviour does not simply depend on the risk of apprehension (Nagin, Solow & Lum 2015; Watling, Freeman & Davey 2014). Similarly, new criminal activities such as cybercrime need different methods of detection and evidence acquisition. Even traditional crimes such as shoplifting now employ social media to market stolen goods. This implies that police and public safety entities need to draw on a wide range of techniques to detect and tackle crime patterns. However, operational police cannot be expected to have a detailed knowledge of geographical information systems, cybernetics, Bayesian statistics, or bail risk algorithms. But the officer of the future must know such ideas exist, where to get the information to improve our criminal and traffic policing, and be willing to use new techniques.

In this context, collaborations such as that between UoW and the WPD are essential to the future of policing. The proposed Master's programme offers considerable opportunity for undergraduates and mature students to discover research methods and analytical techniques, and to develop skills for strength-of-evidence based decision-making. And we should expect the methods available for EBP to expand and develop. Modern computing power enables analyses that were impossible for the slide-rules and counting machines prior to the 1970s when randomised controlled trials were promoted

as a gold standard for science research. In the same way that DNA and scientific forensics changed the way policing gathered evidence, exploratory data analysis, machine learning, data mining, and other tools will change the way future police combat future criminal behaviours. Police departments are unlikely to develop these techniques in isolation. Partnerships between public safety entities and universities will be an essential part of that development.

Conclusions

Within a remarkably short space of time, the collaboration has produced a body of work that benefits all parties. Participants anticipate further developments, particularly as the Master's programme and research projects at the New Zealand Institute for Security and Crime Science develop. Subsequent to the preparation of this article, in April 2017 the NZ Police and the University of Waikato agreed to collaborate on the development of an Evidence Based Policing Centre. The centre will be based in Wellington to house Police, University and other researchers, who will work on joint research projects. The development of the centre will be described in a future article in Police Science.

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TRAINING AND EMERGENCY MANAGEMENT

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Training and Emergency Management (TEM) has developed training courses specific to industry that meet client needs and national accreditation requirements. Training is provided in a number of fields including; fire team, breathing apparatus, confined space entry, work safely at heights, hazard material management, vertical rescue, road crash rescue, bushfire and incident management.

Our Purpose

To lead industry through the development and delivery of innovative training and emergency management solutions, and to exceed customer expectations by providing a quality, professional and responsive service.

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- Work Safely at Heights
- Fire Team Training
- Hazardous Materials Management
- Vertical Rescue
- Road Crash Rescue
- Bushfire Management
- Incident Management Systems

- Accredited Aviation Rescue and Fire Fighting (CASA Approved)
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