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be sent to the Secretariat, Inspector Scott McLaren at mclaren.scott@police.qld.gov.au for initial consideration. They should be no more than 6000 words long (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.

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Message from the President



Stephen Brown APM M.St (Cantab)

Chairperson, Australian and New Zealand Society of Evidence Based Policing Deputy Commissioner, Western Australia Police, Australia

During the past six months, I've had the opportunity to travel and talk with other executive police officers around Australia and overseas. A recurring theme in these discussions is the quality and quantity of work being done by the society's members.

This will be our sixth Journal in this current format and is a fantastic example of the outstanding work that is being done within Australia and New Zealand. It is great to see the society flourishing and our members actively engaged in research and experimentation within Evidence Based Policing.

The feedback from the conference last week at the AIPM in Sydney, has been extremely positive. The multiplicity and experience of all of our presenters, speakers and panellists were outstanding and provided the conference delegates with an engrossing insight into the current scientific research that assists in guiding best practice in all aspects of evidence based policing, around the world.

On behalf of the Australian and New Zealand Society of Evidence Based Policing, I would like to extend our heartfelt thank you to Meme Styles, Eric Byrd, Peter Neyround and Charlotte Gill made a played such a major role in our fourth annual conference. I'd specifically like to thank Debbie Platz and Scott McLaren.

Moreover, everyone who attended, brought a wealth of expertise, knowledge and credibility to the conference. I encourage you to continue to prompt evidence based policing with your colleagues and look forward to seeing you at next year's conference.

The ANZSEBP Board has recently had a number of changes. It gives me great pleasure to introduce and welcome Assistant Commissioner Shane Chelepy (Queensland Police) and Assistant Commissioner Paul Dickson (South Australia Police) to the ANZSEBP board. Both officers have an extensive policing career, with a wealth of experience.

On a final note, earlier last week after 30+ years of service with Western Australian Police I announced my separation. I am leaving to take a short career break before pursuing new, yet undetermined opportunities in 2019. My last day with WA Police and therefore as the President of the ANZSEBP will be Thursday 29 November 2018. I have been a keen advocate for an evidenced-based approach to policing and I remain positive about the progress we have made over recent years. I look forward watching the continued success of the ANZSEBP and leave you in the capable hands of our Deputy President, Assistant Commissioner Debbie Platz.

I wish you all the very best in your endeavours and hope to catch up with you in the future.

Kind regards Stephen Brown APM M.St (Cantab) Chairperson, ANZSEBP www.anzsebp.com @ANZSEBP

American Society of Evidence-Based Policing (ASEBP)





Chris G. Vallejo ASEBP Executive Committee Member

The ASEBP celebrated the success of their second annual evidencebased policing conference held in Philadelphia, Pennsylvania. The conference saw a significant increase in attendance from our inaugural conference. The conference saw attendees from Canada, Mexico, The U.K., and Australia. Topics ranged from race and bias, predictive policing, body-worn cameras, and officer well-being to name a few. We would like to thank Professor Jerry Ratcliffe and Temple University for graciously hosting the event.

We are planning our third annual conference in Cincinnati, Ohio next year - hosted by the University of Cincinnati, May 20-21, 2019, so mark your calendars. Additionally, we have opened our call for presenters so send your bio and abstract of no more than 500 words to info@americansebp.org by November 1, 2018. We will publish more information soon.

We are proud of our relationships with our partner organizations and sponsors, and we are excited to announce the formation of a new partnership with the Academy of Criminal Justice Sciences and look forward to developing it further. We would also like to acknowledge the work done with Measure, a community-led, non-profit organization in Austin, Texas headed by President Jameila "Meme" Styles. Measure works jointly with local police departments to solve crime and community issues using data and research. For more information, visit them at www.measureaustin.org.

The ASEBP values its members and wishes to highlight and congratulate the following members for their recent book publications.

- Professor Jerry Ratcliffe, Temple University, Reducing Crime, A Companion for Police Leaders
- Professor Joel Caplan, Rutgers University, Risk-Based Policing: Evidence-Based Crime Prevention with Big Data and Spatial Analytics,
- Professor Meghan Hollis, Texas State University, The Handbook of Race, Ethnicity, Crime, and Justice

Do you want to write a blog post for the ASEBP? We are now accepting submissions from researchers to highlight their latest research. Email info@americansebp.org for submission details.

The ASEBP executive committee has been working tirelessly to "Advocate, Educate, and Facilitate the Use of Research in Policing" throughout the United States and within their organizations.

Dr. Mitchell is serving as the academic advisor to Measure, a community activist group in Austin, Texas that works jointly with local police departments to solve crime and community issues using data and research. Under Dr. Mitchell's mentorship, Measure and Lieutenant Chris Vallejo are developing an evidence-based, community-focused training curriculum. The program centers on police and communities using the best available research to co-produce public safety and

solve community issues. Measure and Lieutenant Vallejo piloted a 45-minute presentation of this concept in Austin and Dallas, Texas in August. The expanded program will be taught jointly by police officers and community members with the goal of developing a national framework to implement evidence-based practices that other cities can follow. Dr. Mitchell also became the first guest speaker for the Canadian Society of Evidence-Based Policing's webcast that asked, "Why evidence-based policing and how can we make it grow?" You can view the webcast here: http://www.can-sebp.net/ebpwebcasts

Lieutenant Potts of the Vallejo, California Police Department recently completed a study to test the long-held anecdotal belief that more crimes occur on full moons compared to new moons? The data encompassing 100-months and 70,0000 calls for service taken from their records management system showed a null hypothesis or that a full moon had no effect on crime compared to a new moon (no moon)a paper is to follow. Their study in partnership with BetaGov replicated the Queensland study. To determine whether increased patrol visibility reduces crime, the Vallejo, California Police Department has again partnered with BetaGov and plans to conduct a pilot trial to test the use of "code-two" cruiser lights to deter auto burglary in a highdensity shopping center during the holiday season. This 30-day trial will employ a randomized controlled trial design to test and compare the effectiveness of code-two cruiser lights (yellow amber lights) for deterring crime (intervention - lights on) with a control condition (business as usual - lights off).

Ivonne Roman founded the Women's Leadership Academy to address high attrition rates for women in policing in Essex County, New Jersey. The program is now expanding statewide in partnership with Rutgers University Police. A recruitment drive is being held on Sept 18. A randomized controlled trial is being conducted to test varying recruitment images (community policing vs. paramilitary) on flyers and applicants' preferred social media platforms. The WLA is hosting the Iowa State Police on Sept 18 and 19 and will visit multiple sites across New Jersey to gather data on female recruit attrition rates. Roman also completed a summer journalism internship at The Marshall Project and has commenced the 2nd year of her Ph.D. studies. Roman's recent article, "The Curfew Myth," which reveals the truth behind the ineffectiveness of juvenile curfew laws has raised questions in several major cities as to the continued need for these laws in their jurisdictions. The article is available here: https://www. themarshallproject.org/2018/07/31/the-curfew-myth?ref=collections

Lieutenant Chris Vallejo of the Austin Police Department and Dr. Meghan E. Hollis, Assistant Professor in the School of Criminal Justice at Texas State University, are working together to guide a wellness study with the Austin Police Department. In this study, they are taking a holistic approach to employee wellness. The research begins with a series of focus groups with sworn officers, civilian employees, and employee family members to identify the key employee wellness needs. The team will then work to identify programming that is already in place related to each area identified as well as model programs used elsewhere that could serve as the basis for new programming. The research team will then be developing and implementing a survey of sworn officers, civilian employees, and family members to explore these areas in more detail. At the conclusion of this research project, findings and recommendations will be presented to the Wellness Task Force at the Austin Police Department.

Lieutenant Vallejo and Dr. Hollis are also attempting to better understand early warning signs for officer concerns in policing. This project is working to identify early indicators of excessive use of force, citizen complaints, officer suicides, and other officer wellness concerns. This project will examine the predictors of these challenges for officers in an effort to develop an early warning model. That model will then be used to develop intervention and prevention programming to help police departments identify early warning signs for officer problems and prevent them before they occur. Lieutenant Chris Vallejo and Drs. Meghan E. Hollis, Scott Bowman, and Angela Jones of the School of Criminal Justice at Texas State University are examing racial disparities in arrests and the use of cite and release at the Austin Police Department. This team is exploring data to determine if there are concerns with racial disparities and to make recommendations for ways to reduce any disparities found.

For the second year, Dr. Magny presented his Evidence-Based Policing 101 training at the Big Data & Community Policing Conference in Dallas, Texas this August. Police officers, community members, and an assortment of professionals from the criminal justice field attended the training. The prior year, Dr. Magny served as the keynote speaker for the conference, hosted in Austin, Texas. Dr. Magny also serves as an advisor to Measure.

ASEBP is continuing to move the needle forward in the American law enforcement profession. To learn more about ASEBP – please visit our website at www.americansebp.org or follow us on social media – Twitter @ebpolicing, Facebook, and Linkedin: American Society of Evidence-Based Policing.

Canadian Society of Evidence Based Policing (CAN-SEBP)



Jacek Koziarski

Since our last update, things have really taken off here at CAN-SEBP, especially with respect to Community Engagement! Back in May we got together a group of academics, pracademics, and practitioners who comprise our "Community Engagement Team".

The team runs various Twitter-based engagement activities on a weekly basis, such as a day devoted specifically to crime analysis, or **#SundayFunDay** which entails various knowledge-based games. On a monthly basis we run **#MonthlyManuscriptMonday** where we engage our followers in discussion and other Twitter-based engagement about a single peer-reviewed article, and we also run a live interview-style **#EBPwebcast** where we have guests answer questions regarding a wide variety of evidence-based policing topics.

Through these engagement initiatives we hope to educate individuals and organizations in Canada about evidence-based policing, and hope to improve existent evidence-based policing practices as a result. You can learn more about what the team is up to, here: http:// www.can-sebp.net/can-sebp-ce. Should you have any questions regarding our Community Engagement Team, or would like to take part in one of our monthly webcasts, please feel free to email either Lorna Ferguson (Ifergu5@uwo.ca) or Jacek Koziarski (jkoziars@uwo. ca).

On another front, Laura Huey has started a weekly blog named "Dear Laura..." (https://www.lhuey.net/). As Director of CAN-SEBP, she is routinely asked for her knowledge and opinion of research evidence regarding different police practices, programs, and policies, so, in response, Laura created this blog to not only answer the questions that she receives, but also to explore the current state of research on Canadian policing issues.

So far, 2018 has been a busy year for us here at CAN-SEBP, but we cannot wait to see what the end of the year and early 2019 have in store for us!

United Kingdom Society of Evidence Based Policing (UKSEBP)

Alex Murray



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.

"Whether it is use of force, using nudges, domestic abuse, terrorism, legitimacy, or diverting offenders – there is so much new evidence coming out that it makes the work of SEBP's more important than ever. Our aims are to communicate, use and produce the best research evidence and we need to do more of all three.

SEBP UK had a sell-out conference with the Open University in Milton Keynes in March. With it came the biggest snowfalls in a decade where the UK came to a halt. We still managed to pull off day 1 but by Day 2 the University had to shut. In 2019 it is at the Royal Society in London partnering with UCL and the Dawes Institute for Crime Futures. It is always tricky pulling these off when SEBP is run by volunteers but we rely in great support from others. Some of the ground breaking evidence we have seen this year includes research by David Lawes from the City of London Police who ran a randomised control trial on the roll out of Taser. The results were confounding in that use of force by officers carrying Taser increased by 40%, and 20% by their partners who did not have Taser (and the increase in force used was not from the discharge of Taser). Assaults on officers also doubled. These results were compared to control groups. The findings maybe unique to the UK where officers don't carry guns – but there is a phenomena known as the 'weapon effect' where citizens take their cues from what they see – and seeing the Taser could escalate tension. Either way this needs to be replicated again to understand how we should act differently.

In Milton Keynes the Behavioural Insight Team (BIT) highlighted how police training evaluations were really poor. How often have you seen the question "what did you think of the training?" or "has your knowledge increased in this subject area?". BIT were able to demonstrate that self – reported knowledge had very little to do with real knowledge and presented much better ways of measuring effectiveness. Their examples were in relation to preventing violent extremism and would have relevance around the world.

SEBP UK is 8 years old and is undertaking a strategic review to try and increase its impact. In October, India will be launching an SEBP and many other countries seem interested. I think we need to work more effectively together around collaboration and the sharing of research but I am really encouraged by how the police is eager to improve its impact by understanding what works, what doesn't and what looks promising.

@society_ebp

Alex Murray OBE ACC Comprehensive Spending Review

Police Investigations of Domestic Violence: What Does the Evidence Say?

Christopher Dowling & Anthony Morgan

Abstract

Investigations of domestic violence constitute an important element of the overall police response to this form of crime, and significant reforms to how these matters are investigated are being undertaken across Australia. While a considerable body of empirical research has examined the effectiveness of police practices in preventing domestic violence, it is critical that ongoing reforms to how police investigate domestic violence also draw on available research to identify investigative practices best suited to achieving criminal justice outcomes. The current study reviews the findings of this empirical research on police investigations of domestic violence. Using a systematic literature search process, 49 empirical studies from Australia and overseas were identified for inclusion in this review. A narrative review of quantitative and qualitative findings highlights the need to enhance and better target the investigative capacities of police, as opposed to simply mandating increases in investigative effort, along with some of the tools and technologies that can help them to achieve this. Significant gaps are also identified in this body of research, highlighting the need for a further developed empirical evidence base to inform police investigations of domestic violence alongside that informing their efforts to prevent it.

Introduction

Recent decades have seen growing government and public scrutiny of how police in Australia respond to domestic violence. Several recent large-scale reviews, including the Victorian Royal Commission into Family Violence (State of Victoria, 2016) and the Special Taskforce on Domestic and Family Violence (2015) in Queensland, as well as earlier reviews of policing by the NSW (2006) and WA (2003) Ombudsman, Crime and Misconduct Commission Queensland (2005), and Victorian Auditor-General (2009) have examined the role and effectiveness of police in addressing domestic violence. While noting significant developments, they also identified areas for improvement. A number of recommendations made in these reports pertain to police investigative practices, with the aim of improving criminal justice outcomes for domestic violence matters. As a consequence of these reviews, police are undertaking significant reforms to how they investigate domestic violence. Notably, a number of jurisdictions have developed new investigative codes of practice specifically for domestic violence matters (e.g. NSW Police Force, 2013; Queensland Police Service, 2018; Victoria Police, 2014), while specialised police teams and units have been established to enhance the investigation of (particularly serious and complicated) matters (e.g. the Victoria Police Family Violence Command, ACT Policing's Family Violence Coordination Unit).

The emphasis of these reviews on police investigative practices is not surprising. Police investigations of domestic violence matters constitute a crucial element of the overall police response to this form of crime. The investigation of a domestic violence matter begins at the scene of an incident or upon the receipt of a report, as police gather information to identify and, if necessary, locate the primary aggressor, and establish whether there are sufficient grounds for arrest or a protection order. Further subsequent investigation is undertaken to support the laying of charges and, ultimately, the prosecution and conviction of perpetrators. Victim and, where available, witness statements are the most commonly collected and used forms of evidence in achieving these outcomes, although police also regularly gather medical, physical, forensic, and electronically recorded forms of evidence. Importantly, while investigations have the obvious goal of supporting the charging and prosecution of perpetrators, they can also have implications for the prevention of further victimisation, and enhancing victims' trust in police to deal with these matters when reported.

Critically, the scale of the reforms being undertaken to police investigations of domestic violence in Australia, coupled with the broader shift towards evidence-based policing (Sherman, 2013), highlights the importance of a robust body of evidence to help inform police practices. Put simply, research has a role to play in helping police identify investigative practices that are best able to achieve both criminal justice and other outcomes (e.g. Higginson et al., 2017; Wilson et al., 2011). Reviews of existing research into several policing responses to domestic violence, with a particular focus on the extent to which they prevent it, have been undertaken, including arrest (Berk et al., 1992; Maxwell et al., 2002; Vigurs et al., 2016), protection orders (Benitez et al., 2010; Dowling et al., 2018; Taylor et al., 2015) and second responder programs (Davis et al., 2008). However, no recent attempts have been made to consolidate and review the findings of research on police investigations of domestic violence, and highlight the implications of these findings for ongoing reforms to police investigative practices across Australia (for an older review see Henning & Feder, 2005). This is the aim of the current review.

Methods

Literature search strategy

The current review summarises the findings of research identified as part of a larger review on police responses to domestic violence (Dowling et al., in press). Ten academic and non-academic literature databases were searched to identify empirical studies on these responses, using standard search terms relevant to each response (Figure 1; for further information on the literature search strategy see Dowling et al., in press). A second search of four individual policing journals was also subsequently carried out, along with reference list searches of all peer-reviewed studies published between 2015 and 2016 identified during the initial search. Studies were included in the review if they met the following criteria;

- Published in English
- Published in or after 1980
- Examined one or more police responses to domestic violence
- Included quantitative and/or qualitative findings on the implementation and/or outcomes of one or more police responses
- Utilised samples of victims, perpetrators, police, stakeholders, incidents, policies and/or legislation in Australia, New Zealand, US, UK and/or Canada
- Contained sufficient information on research methods (i.e., research design, sampling methods, data collection strategies)

• Was not a duplicate (where peer-review and non-peer-review versions of the same study were identified, only the peer-review version was retained for inclusion in the final review).

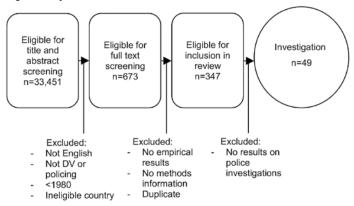


Figure 1: Systematic Literature Search Process

This larger review included 346 empirical studies. Of these studies, 47 examined police investigative practices. Importantly, since the current review focuses predominately on research examining the (particularly criminal justice) outcomes of police investigate practices, a small number of studies (3) from the larger review that examined issues with the implementation of these practices are not included. Additionally, five studies from the larger review concerning other police responses that contain findings relevant to investigation are included in the current review. All up, the findings of 49 studies are discussed as part of the current review. While most studies included quantitative findings (77%), less than a fifth used experimental or quasi-experimental methodologies (16%), and only a small number of investigative practices have been examined using these methodologies (i.e., body-worn cameras and specialised police domestic violence units). As such, findings are narratively reviewed, as it was not possible to synthesise findings using a more rigorous, systematic method (e.g., meta-analysis).

Limitations

Given the limited number of studies examining police investigations of domestic violence matters in Australia, this review has necessarily included international research. While care has been taken to include only research from comparable English-speaking countries with similar policing and judicial cultures, some of the findings from this international research may not be completely generalisable to an Australian context.

Critically, while the shift to evidence-based policing has, correctly, prioritised rigorous experimental evaluations of policing responses and strategies, only a small proportion of the studies included in the current review use this methodology. Noting the difficulties in applying this methodology to police investigations of domestic violence, and acknowledging that the results of non-experimental studies can still be informative, it is recognised nevertheless that any conclusions drawn from the current body of research should be interpreted carefully.

Finally, it is noted that there is currently considerable research interest in domestic violence, and a consequent acceleration in research activity surrounding it. As a result, there are undoubtedly important pieces of research published since the search for the current review was completed (November 2016) that could not be included (e.g., Yeong & Poynton, 2017). Nevertheless, this review provides a valuable snapshot of the existing knowledge base regarding police investigations of domestic violence.

What does research say about police investigations of domestic violence?

Investigative effort

A key recommendation in many of the large-scale reviews examining police responses to domestic violence has been to increase the effort police dedicate to investigating these matters. Investigative effort has typically been measured by researchers in terms of police decisions to undertake further investigations of domestic violence matters, time spent at the scene of domestic violence incidents by first responders, time spent investigating a matter prior to laying charges, and the variety of different types of evidence collected. Unsurprisingly, findings indicate that police put more effort into investigating more serious domestic violence, and matters where a more extensive history of domestic violence is evident (Bachman & Coker, 1995; Barrett et al., 2011; Holder, 2007; Kane, 2000; Rigakos, 1997; Trimboli & Bonney, 1997).

Findings also indicate that police are more likely to undertake further investigations of domestic violence matters involving victims of indigenous, minority or immigrant status, or victims with physical or psychological limitations, even after the level of violence is controlled for (Bachman & Coker, 1995; Barrett et al., 2011). Understandably, police target their limited time and resources at these matters since they are typically perceived as being the highest risk, while often also presenting the best chance of prosecution due to the availability of (particularly medical, physical and forensic) evidence. Conversely, police are often frustrated in their attempts to investigate domestic violence matters where there is no tangible evidence of physical violence or damage, particularly where victims are also unwilling to provide statements (Her Majesty's Inspectorate of Constabulary, 2015; Moore, 2002; NSW Ombudsman, 2006; Toon et al., 2005).

Policies, programs and training courses introduced across Australia and overseas have sought to encourage or mandate increases in the overall effort police devote to investigating domestic violence matters. Police are generally quite responsive to these, with research showing that their implementation typically precipitates increases in the time and effort police devote to investigating domestic violence matters (Cussen & Lyneham, 2012; Keys Young, 2000; Ruff, 2012). Most notably, the Victorian Auditor-General's (2009) review of Victoria Police's Code of Practice for the Investigation of Family Violence found that the average time spent by Victoria Police first responders at domestic violence scenes tripled from 35.5 minutes pre-implementation to 107.3 minutes post-implementation. Furthermore, increases in investigative effort have been shown to lead to increases in the rate of charges laid for domestic violence matters (Centre for Children and Families in the Justice System, 1991; Harrell et al., 2006; Jolin et al., 1998; Keys Young, 2000; WA Department of Justice & WA Police Service, 2002).

Greater investigative effort also appears to deter perpetrators from future offending by increasing the perceived chances of criminal justice sanctioning, while additionally encouraging victims to report any further incidents that do occur. Jolin and colleagues' (1998) evaluation of a specialist police unit carrying out more extensive investigations of domestic violence matters compared the revictimisation rates of victims whose cases were assigned to this specialist unit and to standard investigation. Victims in the former group were significantly less likely to self-report revictimisation in the six months following a perpetrator's arrest, but where revictimisation did occur during this period they were significantly more likely to have reported it to police. Similarly, White, Goldkamp, and Campbell's (2005) evaluation of a comparable specialist police unit found a region-wide decrease in domestic violence incidents with the establishment of the unit, although they noted that this corresponded with a general crime drop in the region of focus.

However, increases in investigative effort do not necessarily translate into increases in successful criminal justice outcomes. Indeed, studies are mixed in this regard, with some finding that greater effort improves the rate of prosecution and conviction (Hartley & Frohmann, 2003: Jolin et al., 1998; Keys Young, 2000; Nelson, 2013; Whetstone, 2001) and others reporting no improvement (Belknap & Graham, 2000; Friday et al., 2006; Harrell et al., 2006; Muir & LeClaire, 1984; Pennell & Burke, 2002; Smithey et al., 2004). The results of Friday and colleagues (2006) may shed some light on this discrepancy. Their evaluation of a specialist police unit found that, while cases assigned to this unit were far less likely to be declined by prosecutors for an absence of evidence (38.2%) compared to those subject to standard investigations (87.5%), they were far more likely to be declined for insufficient evidence (61.8% compared to 12.5%). This was due to the specialist unit receiving more serious and complicated cases to investigate (e.g., incidents involving a greater amount of violence or perpetrators who fled the scene), which demand a higher standard of evidence in order to proceed to prosecution and support a guilty verdict.

Additionally, mandated increases in police investigative effort, and associated increases in the proportion of matters for which charges are laid, can just as easily lead to criminal justice systems becoming bogged down with sudden increases in domestic violence cases. Indeed, Belknap and Graham (2000) found that increased prosecutor caseloads in the US were actually associated with a lower likelihood of conviction in domestic violence matters, and reduced sentence lengths for those that were convicted. It is also important to consider the broader rise in criminal justice system costs that can occur with the implementation of such policies (Victorian Auditor-General, 2009)

These findings highlight the issues with trying to improve the policing of domestic violence by simply increasing the amount of time and effort police spend investigating it. While victims appreciate their matters being taken seriously, and perpetrators may be deterred by the perceived chances of punishment, such an approach ignores the differences that exist in investigative complexity across domestic violence matters, along with the potential blowout in criminal justice system costs and workload that have been shown to accompany these increases. Relatedly, an over-emphasis on mandated increases in police investigative effort potentially comes at the expense of reforms focused on improving the capacity of police to better target their limited time and resources, and on maximising the gains of investigative effort they are currently expending with new investigative tools and techniques.

Evidence in domestic violence matters

As mentioned, victim statements are the most commonly collected and used forms of evidence by police in domestic violence matters. However, victims of domestic violence are also more likely than victims of other forms of violence to refrain from providing statements during police investigations, and to retract previously provided statements (Felson & Ackerman, 2001). Victim-focused qualitative research has revealed a range of reasons for retraction, the most common being a fear of reprisal, still wanting a relationship with the perpetrator, wanting the perpetrator to receive help instead of punishment, not wanting children to be without a parent, not wanting to subject children to the court process, fatigue with or pessimism regarding the criminal justice system, and financial reliance on the perpetrator (Belknap & Graham, 2000; Coorey, 1988; Erez & Belknap, 1998; Lewis et al., 2000; Moore, 2002; WA Department of Justice & WA Police Service, 2002). Embarrassment has also been identified in Australian research as a reason for retraction among victims of domestic violence in small towns, where there is a real possibility of being recognised while attending court (Coorey, 1988). Quantitative research has found that victims of more frequent and persistent domestic violence are less likely to cooperate with police investigations by providing statements (Bechtel et al., 2012; Robinson & Chandek, 2000), while victims who are employed and who had children that were present during the violence are more likely to provide statements (Robinson & Chandek, 2000).

Difficulties in the collection of victim statements aside, research has consistently shown that this type of evidence is critical to successful criminal justice outcomes in domestic violence matters. Internationally, Dawson and Dinovitzer (2001) and Kingsnorth and colleagues (2001) found that the availability of videotaped victim testimony and victim cooperation with investigators, respectively, increased the rate of cases accepted for prosecution. Victim cooperation with police investigations of domestic violence matters has also been shown to improve the chances of a conviction (Bechtel et al., 2012), while older studies have found that victim retraction increases the chances of case dismissal or charges being dropped (Cook et al., 2004; Konarski, 2002; Sanders, 1988; WA Ombudsman, 2003). Research in WA found that in around half of domestic violence matters where no charges were laid, the decision not to press charges was due to a lack of victim assistance with the investigation (WA Department of Justice & WA Police Service, 2002).

Research examining the impact of witness statements on criminal justice outcomes has generated mixed findings. Most international studies have found that the availability of witness statements does not influence whether a case is accepted for prosecution (Dawson & Dinovitzer, 2001; Schmidt & Steury, 1989). Nelson (2012) found that the number of witnesses from whom statements were collected improved the chances of misdemeanour charges being accepted for prosecution, but not felony charges, misdemeanour and felony charges, or restraining order violations. Only Kingsnorth and colleagues (2001) found that the availability of witness statements improved the chances of a domestic violence case being accepted for prosecution. However, neither the presence (Kingsnorth et al., 2001) nor number (Nelson, 2012) of witnesses has been found to increase the chances of conviction in domestic violence matters.

In Australia, prosecutors have highlighted the importance of collecting as much additional evidence as possible during domestic violence investigations in order to strengthen cases (Westera & Powell, 2017). Interestingly, international research has found that medical reports or forensic evidence, photographic evidence of crime scenes and victim injuries, and emergency call recordings and transcripts do not improve the chances of a domestic violence case being accepted for prosecution (Cook et al., 2004; Dawson & Dinovitzer, 2001; Kingsnorth et al., 2001; Nelson, 2012; Schmidt & Steury, 1989). However, if accepted for prosecution, photographic and medical evidence has been shown to increase the chances of conviction and the severity of sentences (Belknap & Graham, 2000; Cramer, 1999, Garcia, 2003). Additionally, photographic evidence has been shown to support the prosecution and conviction of perpetrators for more serious over less serious charges (Kingsnorth et al., 2001).

Findings regarding the impact of evidence types outside of victim statements may seem underwhelming, but it is important to consider that this research has typically considered the impact of each evidence type independent of all others in domestic violence matters.

Given that many of the studies examining this are now quite dated, and analyse older police investigations, it may be that police in these matters only turned to the collection of other types of evidence where victims had not provided statements. Therefore, a disproportionate number of these domestic violence matters may already have had a substantially reduced likelihood of prosecution or conviction. Updated research is needed that examines samples of more recent police investigations conducted under new policy and operational regimes routinizing the collection of additional evidence on top of victim statements. Relatedly, there is a need for research examining the impact of different evidence types in interaction rather than in isolation. Certain forms of evidence may be more valuable when used to corroborate other forms of evidence.

Innovations in domestic violence investigations

The last two decades have seen an increased use of various technologies by police in their investigation of domestic violence matters. Similar to photographic evidence, body-worn cameras allow police first responders to domestic violence incidents to record critical crime scene images and events, including injuries, property damage, and the comments and behaviours of those present. Findings indicate that incidents responded to by officers with body-worn cameras are significantly more likely to result in charges being laid, prosecution, and convictions, even after officer and incident characteristics are controlled for (Dawson & Dinovitzer, 2001; Morrow et al., 2016; Owens et al., 2014). In addition to facilitating the collection of better quality evidence that directly supports prosecution and conviction, body-worn camera footage may also indirectly support criminal justice outcomes by increasing the participation of victims and witnesses in investigations, and the willingness of police to undertake further investigations.

Overseas, police and public attitudes towards body-worn cameras are also very positive, with many indicating a belief that these cameras increase the amount and quality of evidence collected about domestic violence incidents, overcome the difficulties posed when victims refuse to provide statements or retract their statements, and reduce complaints against the police (Ellis et al., 2015; Owens et al., 2014; Miller et al., 2014). However, interviews and informal surveys of police reported in Miller and colleagues (2014) revealed a number of potential issues with the implementation of body-worn cameras.

These include the problem of recording children and the interior of private residences without permission, the potential for police to feel increased scrutiny and pressure to handle domestic violence incidents perfectly, and issues wearing the camera and remembering to turn it on or getting it to work. Senior police in the US have also noted the considerable costs of implementing these cameras, particularly in larger agencies, with camera prices ranging from \$120 to almost \$2,000 each, along with associated costs for data storage.

Relatedly, there have been recent moves across Australia to make pre-recorded video and audio victim statements admissible in court for domestic violence matters. Aside from reducing the trauma associated with victims having to appear in court with offenders and recount their abuse, these reforms also allow victims to provide admissible statements soon after a domestic violence incident while they are able to recall it more accurately. In 2015 NSW became the first jurisdiction to allow pre-recorded victim statements to be used as evidence in proceedings for domestic violence matters. However, a recent evaluation of these reforms, published outside of the search period for the current review, concluded that this form of evidence did not increase the chances of guilty pleas, and only slightly increased the chances of conviction for domestic violence matters (Yeong & Poynton, 2017).

Duress alarms, which facilitate easy and immediate contact with police in domestic violence emergencies, also typically incorporate audio recording functions that can generate additional evidence for police investigators. Natarajan's (2016) examination of a mobile phone panic button application highlighted several examples of this, including one case where the application recorded a victim's ex-partner trying to coax her into his car on the street after being activated, and another where a perpetrator was recorded entering a victim's residence. However, to date no evaluations have examined the impact of this evidence on criminal justice outcomes in domestic violence matters.

Finally, while risk assessments are intended principally to guide the initial actions of police first responders to domestic violence incidents, along with subsequent preventative and criminal justice responses, they can also have investigative value. Observations and interviews with key criminal justice stakeholders reported in Cook and colleagues (2004) revealed that the mandated completion of risk assessment instruments can prompt more thorough investigations by requiring officers to ask questions and collect evidence they would not otherwise collect. Again, no evaluations have been undertaken examining the impact of risk assessment completion on criminal justice outcomes.

Conclusions

There is a growing body of research examining police investigations of domestic violence matters. Drawing on the findings of this research, a number of conclusions regarding different domestic violence investigative practices can be drawn, and some empirically-supported best practice principles can be distilled. Equally important in reviewing this body of research is the identification of areas that have not been subject to extensive or rigorous empirical examination.

Research highlights the limits of recommendations that police should simply "do more" in their investigations of domestic violence to achieve positive criminal justice outcomes.

Mandating agency-wide increases in the effort police devote to investigating domestic violence ignores the time and bureaucratic constraints that officers operate within, and the differences that exist in investigative complexity across domestic violence matters. Findings indicate that, while police will understandably want to lay charges for matters they have investigated more thoroughly, simply telling police to do more investigating will not necessarily have the desirable flowon effects of improved prosecution and conviction rates. Indeed, increasing the time and effort police spend implementing a domestic violence response can just as easily lead to criminal justice systems becoming overloaded with a sudden influx of cases, a larger proportion of cases being dismissed by prosecutors or courts, and no better outcomes for victims. Instead, enhancing the investigative capacities of first responders and specialist investigators, and better targeting investigative effort, may be a more effective approach.

Where police are seen to take domestic violence matters seriously, perpetrators can be deterred from further domestic violence, and victims can feel encouraged to report further incidents that do occur.

Despite questionable impacts on criminal justice outcomes, research suggests that perpetrators can be deterred from further domestic violence where police put more effort into investigating a domestic violence matter.

Some (particularly first time) perpetrators may come to view the possibility of sanction as unacceptably high if police are seen to be taking their matter seriously, or feel shamed by their protracted involvement with the criminal justice system. Relatedly, seeing how seriously police are taking their matter also appears to build victims' confidence and trust in the police, encouraging them to report any further incidents.

Victim statements are critical to successful prosecutions and convictions in domestic violence matters, but additional types of evidence may also further strengthen cases.

Research indicates that the provision of victim statements significantly improves criminal justice outcomes for domestic violence matters. Despite recent moves towards evidence-based charge policies across Australian police agencies encouraging the charging and prosecution of domestic violence offenders regardless of victim support, and the use of recording technologies to circumvent issues created by victim non-participation, securing victim statements and cooperation with investigations should still be prioritised by police where practical. Additionally, while international research suggests that medical and photographic evidence have little impact on prosecutorial decisionmaking regarding whether to proceed with charges, these forms of evidence can increase the chances of conviction once proceeded against. Interestingly, despite calls from prosecutors in Australia for the collection of as many different types of evidence as possible in domestic violence matters, including witness statements, emergency call recordings, and other forensic and physical evidence, international research suggests that their collection does not influence criminal justice outcomes. However, it is important to note the limitations that exist in this research, specifically its failure to consider the corroborative value of such evidence. Certain types of evidence may be useful in domestic violence matters when used to support other forms of evidence, as opposed to having a stand-alone influence on case outcomes.

Technologies and practices that improve the recording of evidence may enhance the investigative capacity of police, and offer the best chance for improving criminal justice outcomes.

A number of new and innovative police investigative practices for domestic violence matters have been examined. Much of this research focuses on body-worn cameras, with a small number of rigorous studies suggesting that their use positively impacts on a range of criminal justice outcomes for domestic violence matters. These findings are consistent with the evidence for body-worn cameras more broadly (e.g., Jennings et al., 2015). The investigative value of duress alarms and risk assessments has also been considered. While rigorous examinations of their efficacy in this regard are non-existent, current information suggests that they may increase investigative effort, and overcome some of the difficulties with evidence collection, particularly in less physically violent incidents where there are fewer obvious signs of domestic violence.

Importantly, the potential benefits of these new technologies for domestic violence investigations must be considered against their likely costs, real and perceived. Police have noted technical and practical difficulties in using electronic recording equipment when responding to domestic violence incidents and undertaking further investigations. Additionally, senior police have highlighted the costs associated with agency-wide rollouts of this equipment. Similar difficulties have been noted in policing technologies more broadly (e.g. Lum et al., 2016), and point to the need to maximise the ease with which police can incorporate these technologies into their investigations of domestic violence matters.

There are significant gaps in empirical research on police investigations of domestic violence.

There is a paucity of empirical research, particularly experimental outcomes-focused research and research in an Australian context, on most police investigative practices. While this is understandable given the practical and ethical challenges associated with undertaking these studies, the shortage of rigorous research limits the certainty with which conclusions regarding the effectiveness of most police investigative practices can be stated. As police decision-making shifts further to an evidence-based approach, there is a concurrent need for more experimental research to best inform police investigative practices and improve criminal justice outcomes for domestic violence matters. This issue is further compounded by the fact that studies are typically only able to evaluate the implementation and impact of police investigative practices in relation to reported cases of domestic violence. There are important differences between the domestic violence matters that have been more and less likely to come to the attention of police (Voce & Boxall, in press), and the conclusions of this review regarding police investigative practices may be less applicable to the latter (e.g., less physically violent and harmful domestic violence cases, or cases of sexual assault). This is especially likely in cases of financial and emotional abuse, which will no doubt come to the attention of police with increasing frequency as a result of recent efforts encouraging its victims to report. Finally, as previously highlighted, there is a need for further research on the use of certain types of evidence in domestic violence matters, and on the investigative value of certain increasingly used technologies and practices.

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One Statement at a Time: How Memory Research Can Facilitate Prosecution of Domestic and Family Violence

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Abstract

Domestic and family violence is a prolific social issue in Australia, and takes the life of one woman each week. The current paper explores the idea that memory research can provide a theoretical and practical base when developing avenues to help those at risk. An overview of recent research on memory for repeated stressful events (such as incidents of domestic violence) indicates that while victims of multiple incidents may not provide as accurate and detailed accounts as victims of a single incident, the former are still able to remember the general experiences. Unfortunately, forgetting details and/or providing inconsistent statements can cause issues regarding how people perceive the truthfulness of the testimonies. This is particularly concerning because there is still a widely spread misconception that women are willing to lie about domestic violence incidents. Unfortunately, research to date suggests that there are no fail proof techniques to distinguish between truthful and deceptive accounts of repeated events. However, we may be able to increase the accuracy of accounts by encouraging victims to write contemporaneous notes shortly after each incident. Immediate recall has shown to increase accuracy of memory reports for repeated events. To improve quality of these notes, iWitnessed, a mobile phone application that uses guided recall with multimedia options, can be used. By increasing the accuracy and consequently credibility of testimonies of victims of repeated crimes, memory research can facilitate prosecution of domestic violence.

Introduction

Domestic violence is a prominent social, political, and legal issue within Australia and New Zealand, as well as globally. Statistics show that from the age of sixteen, approximately 1 in 6 Australian females and 1 in 16 Australian males have experienced violence, either physical or sexual, at the hands of a previous or current partner (Australian Bureau of Statistics. 2017. Australian Institute of Health and Welfare. 2018). The economic costs of such violence is substantial, with close to 12.6 billion Australian dollars spent annually on addressing partner violence perpetrated against women (PricewaterhouseCoopers Australia, 2015). While domestic violence directly impacts upon victim's physical health and wellbeing, other long lasting consequences for victims include increased suicide risk, and risk of developing depression, anxiety, or post-traumatic stress disorder (World Health Organization, 2017). With these individual and societal costs in mind, it is critical to reduce instances of domestic violence, as well as to assist victims in the reporting of domestic violence offences.

One particular issue that exacerbates the negative effects of domestic violence is that victims often experience instances of abuse repeatedly at the hands of their partner (Weinsheimer et al., 2017). Specifically, more than half (54%) of women who reported experiencing current partner violence reported more than a single incident of abuse (Australian Bureau of Statistics, 2017; Australian Institute of Health and Welfare, 2018). Problematically, when victims experience domestic violence on repeated occasions, they are expected to provide specific, accurate information about each instance of abuse. If victims of domestic violence struggle to remember specific instances of abuse, this can impact upon their credibility, which may then stand in the way of the offender being found guilty of the offence. As a result, understanding the issues that victims of domestic violence face in regard to their memory of repeated offences, and whether they are

perceived as truthful or deceitful, is paramount in increasing successful prosecutions of domestic violence offences in Australia and New Zealand.

Historically, research examining repeated events in adults, both in terms of memory and credibility, has been limited. However, recently researchers have started investigating adult memories for repeated events due to an increased focus on the pervasive problem of domestic violence-type offences in many jurisdictions. The current paper aims to highlight these current directions in research. Firstly, we will outline issues with regard to memory for repeated events, particularly, stressful repeated events such as domestic and family violence. Secondly, we will discuss research on credibility assessments of individuals who come forward with reports about repeated events. Finally, we will discuss a novel, evidence-based technique for enhancing memory and credibility of repeated domestic violence events, using guided immediate recall for each repeated instance of abuse. The research covered in this article will inform both law enforcement agencies and victims in gathering the most accurate, detailed, and compelling accounts of domestic and family violence, to assist with the prosecution of offenders, and to ensure that justice for victims is better achieved.

Memory for Repeated Events

Until recently, research investigating memory for repeated events has primarily been conducted in children (e.g., Powell & Thomson, 1996), and very little has been conducted in adult populations (cf. Theunissen et al., 2017; MacLean et al., 2018), the logical reason being that the majority of crimes children are exposed to, either as victims or as witnesses, tend to be repeated in nature (e.g., child sexual abuse). Additionally, it was assumed that adults would not place themselves into situations where they would be repeatedly exposed to a crime. However, as described above, there are various situations in which adults can find themselves being victimised repeatedly (e.g., domestic and family violence, workplace bullying). Given there are differences in memory between children and adults (Goodman & Reed, 1986), it is important to determine whether the findings in the child literature can be generalised to adults.

A key focus in the child literature has been to assess the difference in memory accuracy when reporting an instance of a repeated event (i.e., target event) compared to a single event (e.g., McNichol et al., 1999; Powell & Thomson, 2002). In a typical experiment, children are exposed to either one event, or four highly similar events. After a delay, all children are interviewed about their memory for the target event (usually the first/last event). Many studies have consistently found that memories for repeated events, on average, are less accurate than memories for a single event. More specifically, children's repeated memories tend to be better for what "usually happens", but worse for incident-specific details (e.g., Brubacher et al., 2012; Powell & Thomson 1996). Furthermore, children exposed to multiple events struggle to discriminate between the different events, and thus report details that are from other (non-target) events (Roberts & Blades 1998).

So far, the findings in the adult research appear to show a similar pattern of results as the child literature. We recently conducted an experiment adjusting the previously mentioned paradigm used in children, for adult participants (Deck et al., 2018). In the experiment, mock-witnesses were assigned to one of three conditions. One group of participants experienced a single event, whilst another group

(repeated events witnesses) experienced that same target event, and additionally experienced three prior similar sessions. A final group of participants received a description of the event that all truth-tellers experienced and were asked to generate a convincing account of themselves experiencing the event. After a delay, all participants were interviewed about the same target event. Consistent with the child literature, adults memories were significantly better in the single event group compared to the repeat event group.

Using a slightly different approach, Theunissen et al. (2017) had adult participants watch either one (single event group) or three (repeat event group) traumatic car accident films. Participants were then interviewed a week later about their memory for a target film (the last film). The results showed poorer memory accuracy for the target film in the repeat event group than in the single event group. All of the above findings are consistent with the child literature so far. One theoretical explanation for the differences in memory quality between single and repeated events is that for repeated events, both adults and children rely on their script knowledge of the event (stereotyped knowledge about common events; Schank & Abelson, 1977). When similar events happens multiple times, people will form a so-called script for this type of event. Having a script will facilitate recall for details that usually happen; because it follows the normal script, the broad outlines are recalled. As demonstrated above though, challenges will arise when people try to remember the specifics of individual incidents, and thus not the generic script (Hudson et al., 1992; Schank & Abelson 1977).

Overall, the research on memory for repeated events highlights implications for understanding victims' testimony of domestic violence. Generalising this limited research suggests that while victims of multiple incidents may not be as accurate in their memories as victims of a single incident, the former are still able to remember the incidents of abuse they have experienced (the script), but they may struggle to differentiate between the events or to provide incident-specific details.

The Effect of Stress on Memory for Repeated Events

For ethical reasons, much of the literature examining memory for repeated events has been conducted using neutral stimuli (e.g., interactive play sessions). In contrast, many victims of domestic violence often find incidents of abuse extremely stressful (Basile et al., 2004; Kemp et al., 1991). As such, it is critical to consider what effect stress might have on memory for repeated events, and thus, how this might influence a victim's testimony (Price & Connolly, 2008). While there is a plethora of research investigating the effect of stress on memory for single events, there are only two studies that have examined the effect of repeated stressful events on memory (Price & Connolly 2007; Theunissen et al., 2017).

Price and Connolly (2007) conducted a study with children and found that stress had no effect on memory for repeated events. It is possible that the null finding was the result of the events not being emotionally arousing enough to test the effect of stress on memory (Deffenbacher et al., 2004). In Theunissen et al.'s (2017) study, adult participants watched traumatic car accident videos, but there was no neutral (stress free) comparison group, making it difficult to determine what impact the stressful component of the event(s) had on participants' memories. These two studies suggest that further research is required to determine how stress influences memory for repeated events.

While more research is needed to assess the effect of repeated stressful events on memory, the research examining memory for single stressful events may offer some insights into the effect of stress on memory. In a review by Christianson (1992), stress was found to enhance memory for central details of a crime but not peripheral details. In contrast, Deffenbacher et al. (2004) found that stress promotes memory only until it reaches a peak point, after which, stress has a detrimental impact on memory. More recently, Shields et al. (2017) found that the effect of stress on memory depends on

the source of the stress. Specifically, they found that when the to-beremembered material (e.g., the crime) induces stress, memory should be enhanced for that material. Together, these findings suggest that when confronted with a stressful crime, victims of domestic violence should have fairly accurate memory for the central aspects of the crime (e.g., the type of abuse), but this may depend on how stressed they are at the time of the event. Importantly, research is needed to say whether memory for repeated stressful events would be less accurate than memory for a single stressful event.

We are currently investigating in our laboratory the potential differences in memory accuracy for repeated and single stressful events in adults. Since ethical considerations put restraints on what participants in research can be exposed to-that is, it would be unethical to expose participants to multiple instances of actual abuse-an innovative solution has been found to create "experiences" of domestic violence in the laboratory. Participants are asked to imagine either one (single event group) or four (repeated event group) hypothetical scenarios as the to-be-remembered events. To make the study as ecologically valid as possible, the hypothetical scenarios depict either a domestic violence encounter (stress group) or a closely matched neutral relationship encounter (non-stress group). The imagining of hypothetical scenarios has been proven to be a strong simulant of actual experiences in previous research (e.g., Flowe et al., 2016). In the final session, participants report everything they can remember about the target event (first/final session).

This project is ongoing, but our preliminary pilot data indicate that, overall, repeat event memory is less accurate than single event memory, and that the domestic violence experiences are better remembered than the neutral relationship experiences. That is, similar to the child literature, less incident specific details are remembered for the repeated events, compared to "what usually happens". Moreover, stress appears to have a protective function when trying to remember repeated events. These results are very promising; however, we will need to collect more data to determine whether memory accounts for repeated stressful events (i.e., multiple incidents of domestic violence) are less accurate than for a single stressful event. While progress is being made in untangling the intricacies of adults' memories for repeated events, it is not just important to establish theoretical grounds, it is essential to demonstrate how these findings can inform policing/legal practice. For example, with better understanding of what can be expected in terms of accuracy of memory in these situations, police, lawyers and other legal personnel can adjust their questions and expectations. An additional way in how experimental research into repeated event memory can improve practice is by evaluating the link between accuracy and truthfulness.

Assessing the Veracity of Domestic Violence Allegations

While it is important to understand the accuracy of memory for repeated events, it is equally important to understand how credible people will perceive the witnesses to be. A recent survey suggests that the majority of Australians believe that claims of domestic violence are often fabricated or exaggerated to improve the outcome of custody disputes (VicHealth 2013). Such beliefs persist even when the rates of false allegations appear to be low (Melville & Hunter, 2001).

This is reflected in procedural reform, where recent guidelines have sought to educate judges and legal practitioners on the inaccuracy of this myth (Australian Institute of Judicial Administration, 2018). Problematically, domestic violence is often a word-against-word crime—the primary evidence being the allegation of the alleged victim, which typically contradicts the account of the alleged perpetrator. Especially with allegations of repeated abuse, there can be little corroborating evidence to support the victim's claim that the abuse has occurred. Given this likely absence of supporting evidence, it is important to ask how we can estimate if allegations of domestic violence are true? Unfortunately, people are not much better than chance at judging another's truthfulness (Bond, Jr & DePaulo, 2006). Specifically, a large-scale meta-analysis on thousands of judgements suggested that accuracy rates are only about 54%, which is unimpressive considering that chance rates are 50% (Bond, Jr & DePaulo, 2006). Worryingly, despite having higher confidence levels in the veracity of their decisions, professionals (e.g., investigative professionals, psychiatrists) are no more accurate than non-experts (Vrij, 2008). This highlights the importance of ascertaining whether there are potential evidence-based methods for determining the veracity of allegations. Unlike popular belief, there is no "Pinocchio's nose" when it comes to deception detection-there is not one cue which is exclusively displayed by liars and is absent from the accounts or demeanour of truth-tellers (Vrij, 2008). However, there are some cues, which when co-occurring, increase the likelihood that an account is deceptive or truthful.

Surprisingly, these cues are more likely to be found in *what* people are saying, rather than how they are behaving. Content analysis techniques, for example, analyse the verbal reports of people to assess their testimony for the presence and richness of series of cues (e.g., level of detail). These techniques are underpinned by the assumption that the quality of accounts will differ according to whether the individual is truthful or deceptive. Reality monitoring is an example of such an approach. This technique posits that truth-tellers' accounts will contain more sensory details (e.g., what the witness saw or heard), temporal details (e.g., when the event occurred, and the sequence of the event), spatial details (including where the event occurred, and the layout of the event location) and affective information (i.e., reference to how the witness felt) (Porter & Yuille, 1996). Conversely, reality monitoring posits that liars' accounts will contain more cognitive operations (i.e., reference to thoughts and reasoning about the event). Research indicates that reality monitoring can effectively discriminate truth-tellers from liars in laboratory settings, with an accuracy rate of about 70% (e.g. Granhag et al., 2006; Nahari et al., 2012). .

Such investigations however, have almost exclusively used truth-tellers who recalled a single event. This is in contrast to cases of domestic violence, where victims typically recall abuse which has occurred repeatedly over time prior to making the allegation (Weinsheimer et al., 2017). Thus, current research on reality monitoring in laboratory settings can therefore most likely not be generalised to instances of repeated events.

Preliminary research provides support for this assumption—at least in children—as a number of studies have used verbal content analysis techniques to examine differences between children's reports of repeated events, relative to single or fabricated events (Blandon-Gitlin et al., 2005; Connolly & Lavoie, 2015; Pezdek et al., 2004; Strömwall et al., 2004). The main finding was that content analysis techniques are better at discriminating *repeated event* truth-tellers and liars than *single event* truth-tellers and liars in children. Just like memory research, deception research has not investigated how to potentially distinguish between the reports of *adult* liars and truth-tellers, when truth-tellers recall a repeated event. Given that the quality of memory changes with age, which corresponds to changes in the reality monitoring details that witnesses produces (Vrij et al., 2004), this is clearly an important direction for research.

We recently conducted an experiment that investigated the effectiveness of reality monitoring in determining the veracity of adult repeated event witnesses (Deck et al., 2018). This experiment adapted the methodology typically used to examine memory for repeated event witnesses in children. That is, one group of adults experienced a single event whilst another group experienced a repeated event. This experiment also included an additional condition in which participants received a description of the event that all truth-tellers experienced, and were asked to generate a convincing account of themselves experiencing the event. After a delay, all participants were interviewed about the same event, and responses were analysed using the reality monitoring technique. Overall, reality monitoring did not distinguish

between the three types of witnesses. However, when participants were asked specific questions about the experience, reality monitoring significantly distinguished between single event truth-tellers and liars, but not repeated events witnesses and liars. This result seems to be a product of the nature of memory for repeated events, which causes witnesses to easily recall typical features of an episode of a repeated event, but have greater difficulty recalling details about individual episodes of a repeated event. The finding that deception detection techniques do not seem to distinguish between liars and truthful repeated events witnesses is alarming, but not surprising. There is clearly a need for more research into techniques which better distinguish between the reports of honest repeated event witnesses and liars. While establishing such techniques will benefit both researchers and practitioners, a big hurdle is the dividedness in the academic field on the efficacy of lie detection techniques in general, with not one technique to be proven to reliably work in the field. The uncertainty on how to prove the veracity of an accusation of domestic violence, and the perpetuation of general disbelief in domestic violence claims, has led to the research on how to improve recall accuracy, and with that, the truthfulness of these types of repeated events.

Improving reports of domestic violence through immediate recall

Domestic violence is an inherently difficult crime to prosecute. Victims often feel unable to leave the relationship or report the abuse due to fear of escalating violence. Moreover, the cyclical nature of the abuse and the escalation over time can create a feeling of uncertainty in victims about when to speak out (Birdsey & Snowball, 2013). An additional fear of victims is not being believed when finally disclosing the abuse. Consequently, various initiatives have been successfully implemented to help victims. Legislative changes, such as the introduction of (provisional) apprehended domestic violence orders, which can be requested by police without the consent of the victim, as well as the admissibility of video statements taken on the scene (DVEC), have facilitated prosecution of these cases (Redfern Legal Centre, 2015). Unfortunately, even though an intention of the DVEC is for the victim to avoid having to go through the traumatic experience of being cross examined in court altogether, in practice the victims will often still be called for their testimony to be scrutinised by defence barristers. This happens especially with cases where the defendant does not go for an early guilty plea. Within these settings, inconsistencies, errors or omissions between statements and and/or other evidence can be cause for a mistrial. The accuracy and truthfulness of the victim can be questioned when mistakes are made when reporting details of specific incidents.

However, as described above, it is clear that people who have experienced multiple similar events will struggle to report details of each, specific event or differentiate between the details of these events. To tackle the issues of accuracy and credibility of people who report repeated events, research on how to protect memory from decaying over time can provide a theoretical base.

Research has shown that memory decay occurs very rapidly (e.g., Schacter, 2001). Within the first hour after experiencing an event, a large proportion of details will be forgotten, with a small percentage of details remembered in the long term. Unfortunately, this rapid forgetting can be detrimental to police investigations and other legal processes. Victims and witnesses will often not be able to provide their statements to police till hours, days, weeks, or sometimes even months after an event has occurred. Given that it can take years for a case to appear in court, the damaging impact memory decay can have within a forensic context becomes apparent. When memory decays and consequently "gaps" appear, people will (unconsciously) try to fill in these gaps, especially when questions are asked about these specific details. This "filling in" can happen by using information encountered after the event has happened (see Loftus, 2005 for a review). This post-event information can be provided by various sources such as, but not limited to, co-witnesses, media accounts, and suggestions in

questions asked by third parties (Wright & Davies, 1999). Once a gap has been filled with new (potentially incorrect) information, it is almost impossible to recall the original detail. However, if incorrect information is incorporated into a witness/victim's memory, and this detail is later proven to be incorrect, both accuracy and credibility of this person will decline.

One potential solution to the problems associated with delay and associated memory decay, is having witnesses record their own accounts of the incident immediately after it has occured, while memory is optimal. That is, witnesses can record their own contemporaneous notes. Contemporaneous notes are records made at the time or very soon after the event, and they can come in all forms, ranging from a scribbled note to a detailed diary entry about the event. According to the Evidence Act 1995 (NSW) (sections 32 and 34), contemporaneous notes or other contemporaneous recordings of events can be used to refresh the memory of a witness. That is, the court may grant a witness permission to read from such notes during their testimony (e.g., R v Qaumi & Ors (No 38) [2016] NSWSC 743; Abdollahi [2013] NSWSC 480; Cassar & Sleiman [1999] NSWSC 651; Yammine & Chami [2002] NSWCCA 289).

While these physical notes can serve as protection, and backup for forgotten details, research shows that the act itself of writing down memories as soon as possible can enhance the accuracy and completeness of eyewitness memory (Gabbert et al., 2009; Gabbert et al., 2012; Hope et al., 201 4). That is, compared to those who witnessed an event and did not note down their memories immediately after, those who did were more accurate and more complete when asked to recall the witnessed event at a later time (Gabbert et al., 2009). More impressively, those who participated in immediate recall were also less likely to incorporate post-event information into their memories, than those who did not have the opportunity to note down their initial memories (Gabbert et al., 2012). These are very promising results, and turning to domestic violence, the question remains whether these findings would hold up when people report multiple, similar events. Will memories be protected from forgetting if they are noted down as soon as possible after each event has occurred? Not only would a positive result improve accuracy, and with that credibility, of people who report multiple events, it would, in turn, be a relatively "simple" intervention to aid prosecution of repeated incidents.

Van Golde, Paterson, Cullen, and Marsh (2017) investigated these questions. Participants were asked to view four separate videos showing incidents of workplace bullying, with one week in between each viewing (due to ethical considerations we were restricted in content we could show, and the choice was made to use workplace bullying incidents, rather than domestic violence).

Half of the participants were asked to write down everything they could remember from the video immediately after watching each of the videos, while the other half simply watched the videos. All participants returned in week 5 and were asked to write down everything they could remember from each individual video. All of the videos had the same "victim" and the same "perpetrator", and there was always a work related bullying act (building a "script" for the incidents). There were also details that varied, such as who else was present, what the specific act of bullying was (e.g., making the victim stay behind, making him trip and fall, destroying his work), and where the bullying took place.

Surprisingly, there were no differences in the average number of details recalled in the final recall (after five weeks) between participants in the immediate recall group and the participants who simply watched the videos. Moreover, the number of accurate recalled details did not differ either. However, when assessing accuracy of the final statements (number of accurate details as a proportion of total details recalled), the immediate recall group was significantly more accurate than the no-recall group. This was driven by a vast number of confabulations (made-up details that never happened) that the no-recall group reported in their final recall. These results indicated that immediate recall for repeated similar events may improve overall

accuracy by protecting people from reporting details that never happened. When this is translated to potential real life settings, we would strongly encourage anyone in a situation in which they are repeatedly victimised to document the events as soon as possible after. Even if they never review the notes again, the chance that they will report inaccurate details will decrease significantly. This, in turn, will improve their credibility when providing their statement.

In addition to researchers, legal practitioners around the world have begun to appreciate the value of immediate recall. Unfortunately though, in general the police do not always have the resources necessary to interview witness straight after the incident. Furthermore, as discussed earlier, witnesses and victims do not always report incidents to police immediately after they have occured. This delay in reporting is particularly common in cases of domestic and family violence and can have a negative influence on memory recall and witness credibility.

Naturally, detailed contemporaneous records are more beneficial for law enforcement when solving and prosecuting a case. Consequently, formal tools have been developed to guide witnesses in their recall and enhance witness testimony. For example, the Self-Administered Interview © (SAI; Gabbert et al., 2009) is a paper booklet that police officers can distribute to witnesses at the scene of a crime. The booklet uses memory mnemonics and guided questions to prompt the witnesses to report important details about the incident that they might otherwise have forgotten to report. Indeed, there is compelling evidence to suggest that the SAI is an effective means of enhancing the accuracy and completeness of eyewitness memory (Gabbert et al., 2009; Gabbert et al., 2012; Hope et al., 2014).

Despite the promising findings associated with the SAI©, the tool has several limitations. First, the tool is only appropriate for one-off events that are attended by the police, and not incidents that are unreported or ongoing, such as domestic violence. Additionally, the tool does not accommodate the needs of different types of witnesses (e.g., those with lower literacy who do not feel comfortable with the written format of the tool and those who speak different languages).

In response to these limitations, we have worked closely with the New South Wales Police Force to improve several aspects of the SAI© and develop a more contemporary practical tool.

As a result of this consultation, we have developed iWitnessed, a smartphone application that collects and preserves contemporaneous eyewitness accounts (Paterson et al., 2018a, 2018b).

Using our collective expertise in empirical memory research, policing practices, legislation and admissibility of evidence, we have developed a tool that will facilitate police investigations and prosecutions.

There are several benefits of iWitnessed. First, it uses a guided recall procedure that has been specifically designed to enhance witness recall. It can be used to document either one-off events or repeated crimes, such as domestic violence, to store details of each specific incident. Each entry can be "stamped" with information about date, time, and GPS location. Witnesses can enter information as text, images, screenshots, and/or audio recordings. This flexibility of modality ensures that witnesses who do not feel comfortable writing are able to provide detailed accounts.

iWitnessed is designed for witnesses of all types of crimes, but it could be particularly beneficial to victims of domestic and family violence. iWitnessed has the potential to empower victims and help them gather information that will facilitate the prosecution of offenders. Victims of domestic violence may be particularly concerned with the security of the information that they enter into the application. An important security feature of iWitnessed is that the entries can be protected with a PIN; however, the PIN does not work like most PINs. That is, if the user enters an incorrect PIN code, they will still be able to access iWitnessed; however, they will not be able to see any of the information entered under the correct PIN code. An additional security feature is that the accounts are stored only on the user's device. If the witness chooses to share the information with the police or to backup the information, they can simply email the report as a PDF. Another advantage of iWitnessed is that it provides victims with access to support services and information about the psychological effects of trauma. Early detection of post-traumatic symptomatology and access to support networks can be extremely beneficial in helping victims recover (Bryant, 2003). It is our belief that this phone application has the potential to assist victims, not only in Australia, but also internationally.

We would like to further develop iWItnessed to ensure that it meets the specific needs of victims and witnesses of domestic and family violence. In particular, we want to ensure that iWitnessed meets the needs of people who are at high risk of domestic violence, including Aboriginal and Torres Strait Islander women; women with disabilities and mental ill-health; women from culturally and linguistically diverse communities; gay, lesbian, bisexual, transgender, intersex and queer people; younger women; and women in rural and remote communities (Tayton et al., 2014).

We are currently consulting with a range of domestic violence organisations and evaluating the usability of the tool in this context. This will help us ensure that iWitnessed addresses their specific requirements (e.g., usability of the app for people who are at high risk of domestic violence; provision of information and support services relevant to domestic violence). We will then modify and improve the app on the basis of these findings. For example, we plan to make iWitnessed available in several languages. Currently iWitnessed can be answered in different languages; however, the questions are only available in English. We would also like to make iWitnessed available internationally. It is currently only available (for free) from Apple and Android app stores in Australia.

With continuous discussion with industry and community we strive to not only improve the usability of the app, but also elicit more accurate and complete evidence to facilitate legal processes, which in turn can provide a safeguard for those victims that need it most.

Conclusion

While there are various facets to consider when tackling the issues of domestic violence, memory evidence for ongoing similar events is one aspect which has recently been of interest to researchers. While theoretically interesting, the studies conducted do not only inform academics, they form an evidence base for legal practices as well. From various studies conducted in our lab it has been established that adults will remember the general aspects of repeated events, while they grapple with specific details of particular incidents. Fortunately, informed by research on memory decay, it is possible for victims of repeated abuse to protect their memories by noting down their recall as soon as possible after an incident has occured. The act of noting it down will make testimonies more accurate due to reduced recall of incorrect/non-existing details at a later time. While this immediate recall can be done in any way shape or form, we recommend using the iWitnessed app. The guided questions and multimedia options available will not only serve memory consolidation in itself, it will also facilitate further prosecution. Ultimately, by gaining better understanding of the mechanisms involved in adult memory for repeated events, direct recommendations can be made to serve those most at risk.

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Background

The levels of violence and sexual assault experienced by Indigenous populations is well documented (Robertson, 2000; Victorian Indigenous Family Violence Task Force, 2003; Wild & Anderson, 2007). Data collected through numerous surveys have found rates of nondisclosure of up to 90% for Indigenous women compared to 82% in general populations (Australian Bureau of Statistics [ABS], 2017; Willis, 2011). Indigenous women are more likely to become victims and suffer more severe forms of violence than non-Indigenous women (Memmott et al., 2001; Wundersitz, 2010), with some studies suggesting Indigenous people experience violence at two to five times the rate of non-Indigenous people as either victims or offenders (Willis, 2011). Numerous inquiries have linked the statistical over-representation of Indigenous people involved in interpersonal violence to historical impacts of colonisation, including the effects of intergenerational trauma, dispossession of land, forced removal of children, interruption of cultural practices that historically mitigated against violence, and economic exclusion (Day & Jones, 2013). For Indigenous women, the intersection of both gender and racial inequality can also create conditions for a high prevalence of violence perpetrated against them (Day & Jones, 2013).

Introduction

The aim of this review is to examine relevant literature regarding domestic and family violence in Queensland's Indigenous communities and explore factors that inhibit Indigenous women's reporting of family violence. The paper will first provide an overview of domestic and family violence within Queensland's Indigenous communities before exploring inhibiting factors of reporting victimisation. The terms "domestic" and "family" violence are used interchangeably throughout this paper and refer to the physical, emotional, social, physiological, spiritual or economic abuse perpetrated by a former or current intimate partner, family member, relative or community member (Buxton-Namisnyk, 2015). Domestic violence within intimate partner relationships creates a specific gender dynamic when compared to other forms of violence. This paper seeks to examine the Indigenous experience, which involves a broader range of violence than found within the general narrative (Nancarrow, 2010).

Literature Review

Willis (2011) conducted a meta-analysis of non-disclosure of domestic and family violence (DFV) in Australian Indigenous communities. The study included literature from academia and government papers, official statistics and reports. Willis (2011) identified two types of violence as most under-reported within Indigenous communities: sexual assaults and domestic and family violence (N = 77). This paper found the main reasons for non-disclosure of DFV included fear of repercussions and consequences, fear and distrust of the justice system and other government agencies, cultural considerations and coercion, and a lack of awareness and/or access to services (Willis, 2011). The study explored articles similar in context to identify and recommend ways to encourage disclosure. However, it failed to provide an understanding of the specific factors that inhibit reporting of Queensland Indigenous females.

Morgan and Chadwick (2009) completed a meta-analysis of the key issues in domestic violence within Australia. Their study focused on the broader context of domestic violence, including a detailed definition and characteristics involved with DFV, the prevalence and impact DFV has on the Australian community, the situational factors that increase the likelihood of the occurrence of DFV and the increased likelihood of vulnerable persons becoming a victim (Morgan & Chadwick, 2009), including Indigenous women. Specific factors that lead to this include residing in rural Australia, specifically remote Indigenous communities (Morgan & Chadwick, 2009). Morgan and Chadwick (2009) also found that socioeconomic status, cultural identity, age, location, ethnicity, Indigenous status and English language proficiency compounded a victim's likelihood of experiencing DFV, as well as being contributing factors for non-disclosure.

Cunneen (2006) used a combination of legal research, qualitative interviews and quantitative analysis to study the Queensland response to DFV within Indigenous communities. The qualitative component of this study consisted of 32 semi-structured in-depth interviews with Indigenous victims of DFV from a broad range of communities across Queensland. Chapter 6 of this report, Barriers to Reporting Violence and Accessing Protection, was directly relevant to this research. Cunneen (2006) identified fear of the perpetrator, family and kinship issues, the nature of Indigenous relationship issues, fear of child removal from the Department of Communities, Child Safety and Disability Services (DCCSDS), lack of availability of support and community services, empathy for the perpetrator, and perceived lack of QPS presence and responses as key factors for non-disclosure. These findings highlighted fear of removal of children as one of the most significant barriers to non-disclosure of violence within Indigenous communities (Cunneen, 2009). There was a unanimous understanding that reporting violence might lead to the intervention of DCCSDS (Cunneen, 2009). This was reflected not only by victims but also by DFV service providers (n = 44) across all locations throughout Queensland (Cunneen, 2009).

Willis's (2010) study attempted to understand the perceptions of community safety within Indigenous communities. This research primarily draws on the perceptions of people providing services to Indigenous communities. Willis (2010) studied the safety issues that affect Indigenous communities, from community perspectives as well as from the service providers for these communities. Willis (2010) employed a mixed methods approach, utilizing a quantitative survey (n = 104) and qualitative focus groups. The survey found that 67% of respondents residing in small country towns perceived DFV as a "serious issue affecting community safety", 66% of respondents in remote locations regarded it as serious and 77% in large towns/ regional centres regarded it as serious (n = 159) (Willis 2010). The qualitative component found that participants felt most unsafe regarding alcohol related violence (n = 12) (Willis 2010). There was also discussion surrounding the perceptions of Indigenous women as to where they felt most vulnerable to violent victimisation. Many focus group participants cited being most concerned with victimisation in the home from partners and/or family members (Willis 2010).

Memmott et al. (2001) conducted a study that focused on forms of Indigenous violence, violence prevention programs in Indigenous communities and combating Indigenous violence. The meta-analysis component of this study found spousal assault and violence, particularly by males towards their female partners, was a major concern. The study found violence was experienced at alarmingly high rates throughout Indigenous Australia and more likely to occur on remote communities (n = 66) (Memmott et al., 2001). Spousal violence was the most common type of violence in the Northern Territory, with roughly one third of Indigenous women suffering spousal violence (n = 6,000) (Memmott et al., 2001). Memmott et al. (2001) also found that alcohol was the main contributing/situational factor leading to spousal violence related offences and sometimes led to members of the offender's family becoming hostile to the victim (Memmott 2001).

Prevalence

Indigenous women are 32 times more likely as non-Indigenous women to be hospitalised for non-lethal domestic and family violence (AIHW, 2018). Indigenous males are also more likely than non-Indigenous males (23 times as likely) to be hospitalised due to family violence (AIHW, 2018). Within some Australian jurisdictions, such as New South Wales, South Australia and the Northern Territory, 54%-65% of all police reported Indigenous assaults involved family violence (ABS, 2017b). Of these, an intimate partner committed 30%-47% of assaults, nearly three times that of non-Indigenous intimate partner assaults reported to police (ABS, 2017b). Indigenous women were five times more likely to experience physical violence and three times more likely to experience sexual violence as non-Indigenous women (Australian Government Department of Social Services 2014). Of all female homicides, 55% related to domestic and family violence, with Indigenous women five times more likely to be victims than non-Indigenous women (Australian Government Department of Social Services, 2014). In Queensland between 2006 and 30 June 2017, 263 people (81.8% of which were female) lost their lives to domestic and family violence (Domestic and Family Violence Death Review and Advisory Board [DFVRAB], 2017). When examining this figure further, 18.1% of victims identified as Aboriginal or Torres Strait Islander (ATSI), accounting for almost five times that of non-Indigenous victims (DFVRAB, 2017). Unlike most domestic and family violence incidents, Indigenous family violence can spread to public spaces and involve not two people but a number of participants (Phillips & Vandenbroek, 2014). Indigenous women are more likely to fight back than non-Indigenous women (Phillips & Vandenbroek, 2014), which not only increases the severity of injuries but may also be a significant factor in the high number of cross-order applications made by police.

Rates of recorded sexual assault victimisation (2016) also suggest Indigenous women are 3.4 times more likely to report being a victim of sexual assault than non-Indigenous women in Queensland (261 per 100,000 compared to 77 per 100,000) (ABS, 2016). The Australian Institute of Criminology (AIC) (2007) report titled Adult sexual violence in Indigenous and culturally and linguistically diverse communities in Australia reported that sexual, family and domestic violence is endemic in many Indigenous communities. In a recent report, rates of hospitalisation from Indigenous family violence increased with the remoteness of the location (1,044.4 per 100,000) and could be up to seven times the volume to that in major cities (156.6 per 100,000) (Steering Committee for the Review of Government Service Provision [SCRGSP], 2016). The rate of family violence related hospitalisations for non-Indigenous persons in remote areas (24.6 per 100,000) was approximately twice that of major cities (12.4 per 100,000) (SCRGSP, 2016). Some reports stress this type of offending behaviour is inevitable

in some communities, particularly in remote and rural locations (AIC, 2007; Phillips & Vandenbroek, 2014). The hidden nature of domestic and family violence has also enabled this type of victimisation/ perpetration to continue unchecked in many communities (Willis, 2011). The associated stigma, shame and potential risks of ostracism from family and community means DFV incidents remain unspoken within many Indigenous and non-Indigenous communities (Willis, 2011). This is also true of sexual assaults (AIC, 2014).

A large portion of domestic and family violence incidents are never reported to police, leaving the true extent of the violence unknown (Nancarrow, 2010). Crime victim surveys assist in identifying the possible extent of the issue, with some research suggesting under one third (31%) of violent domestic and family incidents are reported to police (Nancarrow, 2010). According to the Australian Bureau of Statistics (2014), data obtained through the New South Wales Bureau of Crime Statistics and Research (BOCSAR) suggest that less than half of all persons experiencing domestic violence within the previous 12 months reported the incident to police (Phillips & Vandenbroek, 2014). Of all domestic violence incidents, those committed by a current partner were less likely to be perceived as a crime (11%), when compared to those committed by a former partner (38%) (Mouzos & Makkai, 2004). Within a large percentage of this unreported "dark figure of crime" lies the human experience, which can leave victims unsupported, perpetrators not held accountable and cycles of domestic and family violence continuing unbroken (AIC, 2011). Authors suggest the statistics on family violence within Indigenous communities do not adequately represent the experience of Indigenous women (Nancarrow, 2010; Willis, 2011). The significant non-disclosure of violence against Indigenous women (90%) highlights the need for improved understanding of the factors that inhibit reporting of family violence within Indigenous communities. The identification of these factors has great implications for future strategies attempting to address this issue.

The Special Taskforce on Domestic and Family Violence in 2015 suggests violence within ATSI communities is so disproportionate compared with the general population that it has become normalised over the generations. This normalisation has resulted in part from the social policies of the past, colonisation, racism, substance addiction and the high rates of incarceration for ATSI persons (DFVRAB, 2017). Within this normalisation, various forms of violence were more prevalent than within the general population. Findings from the DFVRAB (2017) highlighted that ATSI DFV victims were nearly twice as likely to be the object of sexual jealousy (84.6%) than other victims of DFV (47.2%), with children also harmed or threatened with harm at 1.5 times the rate of those in non-Indigenous households (19.4%). ATSI perpetrators were also 2.5 times as likely to have a history of violence outside of the family (92.3%) than non-Indigenous perpetrators from the sample (36.1%), higher prevalence of assaults with a weapon (61.5%) and higher rates of failure to comply with authority (84.6%) (DFVRAB, 2017).

Factors inhibiting reporting of DFV against Indigenous women

Research on the reasons for under-reporting of violent victimisation has focused mainly on sexual assault rather than domestic and family violence; however, it is assumed these factors will be relatively similar within Indigenous and non-Indigenous communities (AIC, 2011). Within Indigenous communities, compounding factors such as historical, social and cultural factors also exist (AIC, 2011). Alcohol consumption and narrowly defined gender roles may also contribute to greater rates of violence within remote communities (Phillips & Vandenbroek, 2014). To build on prior research, the current paper will incorporate findings from both regional and metropolitan studies with barriers to reporting categorised as personal and criminal justice barriers. Personal barriers to reporting violent crime include individual, interpersonal, family and community inhibitors whilst the criminal justice barriers include the criminal justice system, police and official responses to violent crime victimisation/perpetration and individual experiences of the judicial process (AIC, 2011).

Personal Factors inhibiting reporting

One of the main inhibitors to reporting relational violence in general is the relationship status between the victim and perpetrator (AlC, 2011). Findings from the Women's Safety Australia Survey concluded women were far more likely to report victimisation at the hands of a stranger (35%) than by someone known to them (AlC, 2011). Only 5% of participants from this survey indicated they would report a current partner for physical assault and less than one percent would report a sexual assault (AlC, 2011).

These findings are similar to those reported in a Canadian study (Gartner & Macmillan, 1995 cited in AIC, 2011). Reasons for this underreporting of known perpetrators vary; however, for Indigenous women specifically, factors such as retribution and isolation may play a big role in non-disclosure of abuse (AIC, 2011). Some studies have found up to 75% of Indigenous women sexually assaulted did not report the abuse due to fear of repercussions from the wider community and family members or because of poor perceptions of police attitudes to victims (Robertson, 2000 cited in AIC, 2011). Other studies have identified escalation of violence and issues of anonymity as additional barriers to reporting victimisation (FVPLS Victoria, 2010b cited in AIC, 2011). As well as barriers based on fear, victims have also reported feelings toward the perpetrator and the impacts of separation on children as reasons for non-disclosure (AIC, 2011). For victims within Indigenous communities, reporting of violence may lead to separation from not only the victim and children but also the wider community, and this is likely to affect rates for reporting abuse (AIC, 2011).

Cultural "payback violence" is specific to Indigenous communities (Willis, 2010) and adds a layer of complexity when policing family violence in these areas. Those living in rural/remote communities also have the added isolation brought about through lack of transport infrastructure and deficiencies in telecommunications services (Phillips & Vandenbroek, 2014), which leads to lower rates of reporting family violence. A lack of specific, culturally appropriate support services in many communities is another factor in the prevalence of violence within Indigenous communities. Reporting of DFV within Indigenous populations has historically being discouraged to protect the reputation of the community and wider Indigenous population from stigmatisation and stereotypes associated with high rates of DFV (Taylor & Putt, 2007). Cultural coercion also contributes to the denial and minimisation that domestic and family violence exists (Willis, 2011).

Women in Queensland's Indigenous communities reported that DFV was a private matter dealt with behind closed doors rather than as a "real crime" requiring a criminal justice response (Cunneen, 2009). This is similar to general population studies, with findings from Mouzos and Makkai (2004) suggesting rates of reporting of current partners was limited due to perceptions that the violence was not a crime when compared to violence committed by former partners. The minimisation of violence may also be an example of how cultural coercion can influence the way in which violence within Indigenous families is viewed and internalised (Personal Communications, 11 August, 2017).

The distinct lack of willingness to report family and community members who commit violence not only leads to the minimisation of violence, but it may also be attributed to the close-knit nature of families and communities in remote areas (Mullighan, 2008). As discussed earlier, the shame of being a victim of violence by an intimate partner or family member (Mullighan 2008) compounds the impacts of DFV. As well as these issues is the fact that for many rural and remote communities, adequate and appropriate support services are not available. This lack of services, viewed in conjunction with a long history of distrust between ATSI communities and government services (Communities, Department of Justice, and Police), provides some understanding as to the low rates of reporting in many Indigenous communities.

Official disclosure of domestic and family violence in Indigenous communities is heavily influenced by the extent to which people are aware of it occurring; perceive these behaviours as unlawful and whom they should be disclosed to. The Aboriginal and Torres Strait Islander Women's Task Force on Violence in 1999 found that DFV is often hidden in communities and some were unaware of its high prevalence. Many who suspected this type of violence was occurring reported not knowing how to respond to it, or the formal avenues available to report it (Robertson, 2000).

Numerous communities have expressed their desire to stamp out DFV but did not have a clear understanding of what it is or what actions and behaviours constitute DFV (Willis, 2011). The Victorian Indigenous Family Violence Task Force (2003) found that family violence is often not viewed as negatively as it should, largely due to acceptance stemming from the widespread and prevalent nature of domestic and family violence in Indigenous communities. Indigenous women reported that they were unaware of concepts such as relationship or marital rape, identifying that they had been victims but did not identify these acts as domestic or family violence (Taylor & Mouzos, 2006). The somewhat "normalisation" of violence within Indigenous families and communities was discussed in the DFVRAB (2017) annual report and requires a whole of community response if violence is to be stopped.

Finally, a lack of knowledge, awareness and access to domestic and family violence services further compounds incidence of reporting. An absence of Indigenous specific victim support services and the lack of Indigenous staff within mainstream services impedes disclosure of Domestic and Family Violence. Willis (2010) has discussed the deficit of available services and the lack of awareness of available services in many rural, remote and regional Indigenous communities as a further impediment to the disclosure of DFV. Police in the Northern Territory (where there is a large Indigenous population) have cited concerns surrounding a lack of government and non-government services and limited policing resources, particularly specialist personnel that have had training to deal with DFV (Wild & Anderson, 2007).

In Queensland's remote and rural locations, there is little support available such as welfare, police or health services to discourage violence and abuse and encourage reporting of such incidents (Gordon et al., 2002). Skelton (2008) describes how individuals living in remote locations face substantial travel distances to access services, making disclosure difficult or impossible, and pointless. Indigenous people in remote communities are marked with social disadvantage and lacks the means to travel long distances to access DFV services, which affects their ability to seek help (Skelton 2008). It has also been reported that Indigenous DFV victims are not aware of their fundamental human rights and do not have the awareness or confidence to exercise and assert them (Victorian Indigenous Family Violence Task Force, 2003).

Criminal Justice System factors inhibiting reporting

Many service providers (health, sexual assault and victim support) have reported that Indigenous victims of DFV were unlikely to disclose victimisation to police (Willis, 2010). Respondents in Willis's (2010) report said they would report victimisation to elders, family, and kinship or health services before they would consider reporting to the police. It is noted this is similar to trends within the general population, with the majority of DFV victims saying they were much more likely to disclose to their friends and family than to the police (ABS, 2011). Unlike the general population however, failure to report family violence in Indigenous communities is based on numerous barriers associated with the criminal justice system. Fear that reporting DFV will involve social services leading to the removal of children and separation of families is one key factor in the under-reporting of DFV. This fear was a factor identified from the Domestic and Family Violence Death Review and Advisory Board (2017), which noted that mandatory laws for reporting children at risk could limit help-seeking behaviours due to fears child safety would remove children and increase the possibility of persons disconnecting with services. The use of threats made by perpetrators in regards to child removal by social services is another key factor limiting the disclosure of family violence in some instances (DFVRAB, 2017).

In 2013 the Queensland Indigenous Family Violence Legal Service reported that Indigenous mothers were failing to report DFV for fear of child removal. Boni (2001) states removing members of Indigenous communities can further exacerbate already existing issues and damage crucial support networks (QIFVLS, 2013). Queensland Departmental figures show that in the northern region of Queensland (where Indigenous persons make up 10% of the population) almost three times as many Indigenous children (275) were placed in out of home care when compared to non-Indigenous children (93), reinforcing the perception that children will be taken if DFV is disclosed. Another important issue is the perception of victims, particularly Indigenous women, that perpetrators are still caring and compassionate fathers and losing contact would be extremely detrimental to their children (Wild & Anderson, 2007). In addition to fears regarding child removal and feelings towards perpetrators, some scholars believe Indigenous victims feel a strong sense of ambivalence towards reporting DFV (Rex & Anderson, 2007). This is mainly due to perceptions that disclosure will not result in positive change. Again, the most commonly cited reason for this ambivalence is fear of child removal, shame and disruption to the community and lack of formal punishment of the perpetrator (Rex & Anderson, 2007).

Another commonly held attitude is the element of uncertainty in pursuing these matters formally through the criminal justice system, with lengthy court hearings and the low likelihood of a successful prosecution and conviction (Willis, 2011). The role of Westernised criminal justice interventions and incompatibility between this and Indigenous restorative justice practice may also limit opportunities for disclosure of family violence (Nancarrow, 2010). Indigenous women have also expressed concerns over contact with police based on unsatisfactory responses they have personally experienced or heard about (Blagg, 2002). It is important to note here that police have previously cited issues with language barriers and lack of understanding of Indigenous culture and relationships as a compounding factor when dealing with family violence (Mullighan, 2008). Another important aspect to consider is the nature and context of Indigenous DFV and the impacts of this on formal responses by the criminal justice system. Memmott et al. (2001) discussed how family violence in Indigenous communities often occurs in the public domain, involving large numbers of individuals.

These circumstances create a different dynamic to DFV and does not fit the stereotypical image of helpless and passive victims. Within the Indigenous context, women are more likely to fight back when confronted with violence compared to non-Indigenous women and this factor can make it difficult when police attempt to identify the key aggressor (Blagg, 2002). Furthermore, the victim may themselves face criminal charges for public order and violence related offences, because responders may view it as reciprocal violence (Robertson, 2000). The stereotypical assumptions about passive victims of DFV are particularly problematic in the Indigenous context as victims are many times more likely to defend themselves (Wundersitz, 2010).

Indigenous women's decisions to report DFV is based on the victim's belief that disclosure will achieve the desired outcome and that prosecution will be effective (Willis, 2010). As discussed earlier, levels of Indigenous reporting of DFV are low, often reflecting a lack of confidence in the criminal justice system to respond effectively. This is due in part to the expectation that perpetrators would be held accountable for their behaviour and punished accordingly (Willis, 2011). Victims that are not reasonably confident in the criminal justice system may elect not to face the trauma, effort and risk involved with officially disclosing DFV (Willis, 2010). Differences in the perceptions of Indigenous and non-Indigenous victims of DFV can sometimes make it difficult for justice agencies to provide the right form of assistance. For example, studies have concluded that Indigenous women were open to alternative measures of punishment and redress within the criminal justice system than non-Indigenous victims of family violence (Nancarrow, 2010). These differences are noted in The Aboriginal and Torres Strait Islander's Task Force on Violence report (Robertson 1999), which highlights that the majority of Indigenous participants in the study reported a desire for restorative justice options and alternatives to formal criminal justice responses for perpetrators of DFV. In contrast, the Taskforce on Women and the Criminal Code in 2000, comprised overwhelmingly of non-Indigenous participants, argued that restorative justice approaches should never be an option when responding to DFV. These disparate opinions highlight the fundamental differences in the ways in which these two groups perceive the role of the state versus the role of the community in responding to DFV (Nancarrow, 2006).

Conclusion

There are a multitude of factors that may inhibit reporting of DFV within Indigenous communities. These factors may be personal factors such as retribution and isolation from family and community members, as well as from the perpetrator, and fear of losing children because of the violence. Criminal justice factors may also play a role in lower rates of reporting. This may be due in part to a lack of understanding of the criminal justice process, fear of police and government agencies due to historical mistrust and fear of child removal by the Department of Child Safety. The different dynamics involved in Indigenous women's experiences of domestic and family violence can sometimes make it difficult for police to identify who is most in need of protection. As discussed above, Indigenous women are more likely to defend themselves when confronted with violence and are also less likely to seek medical treatment for injuries they have sustained.

To address the high rate of violence perpetrated within Indigenous families, a new approach is needed. As mentioned in the Task Force report in 2015, Indigenous persons desire a more restorative approach to dealing with the issue of domestic and family violence. This should be further researched to identify the best approach moving forward to ensure Indigenous persons can be free from violence.

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Each issue Police Science will focus one justifications efforts within evidence based policing

WA Police

2018 has seen WA Police Force contribute a wealth of new evidence to policing, both at home and abroad. Some of this new evidence was presented to delegates at the recent ANZ Society of Evidence Based Policing, with some presented for the first time in this edition of Police Science – we're of course referring to Operation Safer Hotels, a WA replication of the Queensland Police and University of Queensland's Operation Galley.

This year also saw the introduction of a WA Police Crime Harm Index, locally known as the WACHI, which was born as a result of a Cambridge Master's Thesis. Paul House, the Data Analytics Manager from the WA Police Evidence Based Policing Team produced this index based on actual sentences handed down by WA courts to first time offenders. The days imprisonment, or monetary fine, act as a weighting which enables police to compare raw crime counts with a measure of how harmful those crimes have been to the community. This is done by simply multiplying the number of crimes by the median sentence days handed down by courts for those offences.

The WACHI has undergone rigorous testing and comparison to indexes used by police and governments in New Zealand, the UK and Northern Europe. These comparisons show that the WACHI holds similar weightings to those countries which provides further confidence that this can be adopted as a legitimate tool for WA Police, state government and the community. Work is well underway to integrate the WACHI into WA Police business analytics systems and become part of everyday conversation around our decision making.

In the last edition of Police Science, AFP Assistant Commissioner Debbie Platz spoke about the importance of programmes such as the Cambridge Masters in Applied Criminology and Police Management. The work around developing a harm index for WA, alongside field experiments and large scale data analysis, has all been heavily influenced through direct partnership with, or having students within tertiary education. The impact on policing and keeping our community safer as a result of this investment in our officers and staff should not be underestimated. 2018 has also seen WA at the heart of producing ground-breaking new evidence in the area of hot spot policing. A 248-day experiment saw officers in a metropolitan police district target 15 hot spots. Hot spots were re-randomised each day to receive hot spot patrol or business as usual policing. This first test of hot spots policing across the ANZ region resulted in a 22% reduction of recorded crime on treatment days and a 62% reduction in crime harm, as measured by the WACHI. Well over 150 crimes were prevented, and the severity of crimes still taking place was reduced. These findings also suggest that hotspots can remain unpatrolled for several days until crime begins to increase. Look out in 2019 for a full write-up of our experimental findings.

EBP SPOTLIGHT

It is a measure of the evidence created as a result of this experiment that the wider findings are beginning to influence not only targeted patrol work in WA, but further afield, with the National Police Chiefs Council in England and Wales citing the work in an address to U.K parliament – it's good to see evidence based policing in ANZ getting this kind of recognition.

If 2018 was a productive year, what are WA Police planning for 2019? Thanks to another Master's student and our Office of Applied Criminology, WA Police have now developed a highly accurate forecasting model to predict those drivers who are likely to be involved in killed or seriously injured collisions within the next 3 year period.

As a result, WA Police are in the early stages of planning a series field experiments to target those drivers with a range of interventions aimed at preventing these collisions from occurring. This is ground-breaking analysis, using large and complex sets of data – something that WA Police hope will aid in reducing the tragic loss of life and serious injury on WA roads in the coming years.

The team are also continuing to pass on their knowledge of evidence based policing to Sergeants and Senior Sergeants passing through a newly designed 'Managers Course'. This will see over 200 officers introduced to EBP principles and evidence based research during 2019.





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Yerra was established by Canberra local Indigenous man and entrepreneur, Dion Devow. Of both Aboriginal and Torres Strait Islander descent, he is the current 2018 ACT Australian of the Year, and was one of 3 Indigenous finalists for The Australian of the year along side Jonathan Thurston and Dr Tracy Westerman.

New Directions in Systematic Reviews in Policing and Law Enforcement



Peter Neyroud¹

Introduction

The capacity for evidence to influence policy and practice is central to evidence-based policing. As Sherman emphasised, in his seminal definition, evidenced-based policing is the "use of the best available research on the outcomes of police work to implement guidelines and evaluate agencies, units and officers" (Sherman, 1998, p. 3). Systematic reviews provide the most rigorous and reliable form of "best available research" with which to guide policy and practice.

A systematic review is not to be confused with a literature review (Farrington & Petrosino, 2000). Literature reviews tend to be one-off exercises, usually confined to a single national literature and frequently not focused on a tight set of pre-published criteria. In contrast, a Campbell Collaboration systematic review must follow a set of transparent international standards (Campbell Collaboration, 2017) that require peer reviewed agreement of the title and the protocol, a clear description of the scope of the searches and components of the agreed topic to be covered and the criteria for assessing the intervention under review. Critically, when the reader—whether policymaker or practitioner—approaches a systematic review they should be able to see the process laid out clearly and, therefore, be able to assess the weight and significance of the conclusions with confidence.

The Systematic Review Process

The Campbell Collaboration standards specificy that the most important parts of the systematic review process are:

- Title registration: Title registration requires a clear rationale for addressing the problem, a clear and specific question to be addressed, the relevant outcome variables that are intended to be measured, the relevant target populations of interest and the relevant interventions that will be included in the review. This clarity becomes all the more important when the review is intended to cover a wide-ranging and diverse topic such as "community policing".
- Protocol: The protocol builds on the initial title registration by expanding on a number of key areas: the criteria for inclusion and exclusion of studies in the review, the search strategy for identification of relevant studies, the description of methods used in the component studies, the criteria for determination of independent findings, the details of study coding categories, the statistical procedures and conventions for meta-analysis, and the treatment of qualitative research. Even though there has been a significant increase in research in policing, the number of randomised controlled trials and quasi-experimental studies remains relatively small when compared to fields such as medicine and education (Neyroud, 2017). However, although experimental designs are likely to form to the core of any systematic review analysis, the wider literature remains important for the interpretation and context of the results.
- Synthesis and analysis: Once the search process is complete, the synthesis and analysis of the eligible studies must conform to the MECCIR standards, which are designed to ensure that the review process is transparent, robust and replicable. A key part of this is the meta-analysis of the outcomes of the studies against the parameters set out in the protocol.
- **Report:** Given that the process of conducting a systematic review is such a structured process, it is unsurprising that the demands on the reviewers when they come to report the review are also stringent. The requirements are aimed at several different audiences: the academic community, in order to ensure transparency and potential replication; the policy community, in order to demonstrate robustness of the reported outcomes; the practice community, in order to encourage dissemination. One key product designed to support this last aim is the Plain Language Summary (PLS). Divorced of forest plots and statistics, the aim of the PLS is to identify and explain the key messages from the review.

New Directions for Systematic Reviews in Policing

Systematic reviews provide an important source for evidence-based strategies in policing. There are, as yet, a limited number of reviews in policing and some important gaps: there has, as yet, been only one review published on terrorism (Lum et al., 2006) and one on serious and organised crime (Van der Laan et al., 2011). These gaps were largely a result of the relative paucity of controlled design studies in these areas. However, as a result of an exponential increase in research on terrorism and radicalisation and preventive strategies (Schuurman, 2018), the Campbell Collaboration has been funded by the US Department for Homeland Security for a major programme of systematic reviews over the next four years. Four reviews are already under way and more will follow as part of the programme.

However, there are other key areas—domestic violence, body worn video and electronic monitoring of offenders—where there are studies but no systematic reviews. These gaps are primarily the result of funding priorities. Until there were sufficient systematic reviews in the field, it was difficult for potential funders, policymakers and practitioners to see the benefits of investing time and effort in this type of research product. However, the Laura and John Arnold Foundation have funded one of the key gaps—the systematic review of body worn camera use in policing—and that review is under way.

Finally, there is the need to keep pace with the growth of research in policing and revisit and update existing reviews as new studies are published. One such review—into problem oriented policing (Weisburd et al., 2008)—has now been funded by the UK College of Policing and South Yorkshire Police to be updated.

Conclusions

Systematic reviews provide an authoritative statement on the impact of important interventions in policing. They can also help to identify the gaps in primary studies and research agendas for the future. They require a significant investment in specialist academic skills to complete. They need practitioners and policymakers to do three things: be clear about areas of policy and practice where it is not just essential but a priority to have best evidence; support and encourage organisations like the Campbell Collaboration to deliver the reviews that are needed in a timely fashion; and use the evidence that is provided.

End Notes

 Dr Peter Neyroud is the Co-Chair of the Crime and Justice Co-ordinating Group of the Campbell Collaboration and the Deputy Director of the Police Executive Programme at the Institute of Criminology, University of Cambridge: email: pwn22@cam.ac.uk

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Operation Safer Hotels: An Inn-Telligence Gathering Strategy at Perth Hotels

Jesse Parmar, Rhett Wilkinson, Simon Williams and Geoffrey Barnes

Abstract

Objectives. To test the effect of police engagement strategies in increasing both the quantity and quality of intelligence reports from the hotel community in the Perth metropolitan area.

Methods. The study employed a randomised experimental design in which 126 hotels were matched into triplets based on size, CAD demand (calls for service) and quality (based on online reviews). Hotels within each triplet were then randomly allocated to one of three groups: a control group, Treatment Group 1 or Treatment Group 2. The control group received business-as-usual policing. Treatment Group 1 received personal engagement from a police officer, using a procedurally-just checklist. This group was provided with: literature on drug related behaviour, a dedicated Operation Safer Hotels phone number and a monthly email outlining positive interaction and outcomes of reporting. Treatment Group 2 received a letter outlining the Operation and the literature on drug related behaviour. Key outcome measures included intelligence reports, recorded offences, crime harm (as measured by the WA-CHI) and quantity of drugs seized.

Results. Compared to the control group, Treatment Group 1 provided three times as many intelligence reports, nearly three times as many drug related intelligence reports, four times the number of offenders identified from a 39% increase in reporting, and had a greater quantity of drugs seized from those offenders.

Conclusions. The findings suggest that face-to-face, procedurally just engagement that includes feedback and regular contact with members of the hotel community has a positive impact on uncovering hidden offending; specifically drug related offending taking place on hotel premises.

Introduction

A pioneer of forensic science in the 1920s, Dr Edmond Locard, formulated the basic principle, best described as "every contact leaves a trace" (Sutherland, 2017; Walls, 1968). In other words, an offender will bring something to the scene of a crime and leave with something from it. We know this is the case with finger prints, foot marks, broken glass and even CCTV footage. However, this principle could equally apply to the everyday contacts we, as police officers, have with members of the public.

Building relationships takes time, involves contact with others and every time we communicate we leave behind a trace. These traces or impressions matter. They can mean the difference between the public trusting the police, having the confidence to contact us or turning a blind eye and carrying on as normal. In the case of intelligence, often referred to as the life-blood of policing (Cooper & Murphy, 1997), this paper adds to the growing evidence base that the manner of police contact matters and can contribute to improving both the quantity and quality of intelligence received form the community.

The inception of intelligence-led policing heralds back to the late 1980s (Ratcliffe, 2003). In the decades subsequent, "intelligence"

has become embedded in the vernacular of academics and senior policing personnel, and is often a key component of policing strategic directions (Parliamentary Joint Committee on Law Enforcement, 2013; Peterson, 2005). The plethora of forums, conferences and textbooks on the subject of intelligence-led policing further typifies the utility and the ever-expanding uptake of the strategy (Organisation for Security and Co-Operation in Europe, 2017; U.S. Department of Justice, 2009). However, despite the frequent use of the phrase, there remains considerable misunderstanding over what intelligence actually means.

Whilst there are a number of different of definitions of the term intelligence, all definitions frame intelligence as a "value added product" utilised with an aim to "facilitate crime reduction and prevention through effective policing strategies" (Ratcliffe, 2003, p. 3). Intelligence is more than just raw information; it is information given context and meaning relevant to a policing issue at hand. As such, intelligence is best utilised as a core (if not central) component in police's "decision making apparatus" (Ratcliffe, 2003, p. 1).

Consistent with this definition of the term, intelligence continues to be gathered, developed and employed in order to address many contemporary policing issues. These issues range from human trafficking and counter-terrorism to the sale and distribution of illicit drugs (Australian Criminal Intelligence Commission, 2017a).

Irrespective of the array of contexts in which intelligence-led policing can be applied, at its core, intelligence-led policing principally centres on four key aims (National Criminal Intelligence Service, 2000), namely:

- Targeting offenders
- The management of crime and disorder hot spots
- The investigation of linked crime series and incidents
- The application of preventative measures, including working with local partnerships to reduce crime and disorder.

Consistent with these four key applications, intelligence-led policing has sizeable benefits for police not just in the context of macroscopic, global or national issues, but also in addressing local policing issues.

As per the above aims, intelligence-led policing has a theoretical application in the creation of "local partnerships" and in the "management of crime and disorder hot spots" (National Criminal Intelligence Service, 2000, p. 14). In the context of local policing measures, two question arise. Firstly, what is the best means by which to gather intelligence at a local level? And secondly, how actionable will that intelligence be?

Operation Safer Hotels sought to investigate these questions. Anecdotally, intelligence officers in Perth, Western Australia (WA) felt that there was an "intelligence gap" concerning law enforcement's understanding of criminal activity occurring in metropolitan hotels and short-stay apartment locations. This perceived intelligence gap is illustrated in Figure 1.

Figure 1: The Intelligence Gap in Hotels and Short-Stay Accommodation



In order to establish how best to address this intelligence gap, WA Police's State Intelligence Operations, in partnership with the Evidence Based Policing Division, instigated a randomised control trial, *Operation Safer Hotels*. The Operation was, from the outset, explicitly an intelligence gathering operation. In contrast to other police-led operations, *Safer Hotels* did not aim to directly drive down recorded crime, but instead to investigate how intelligence reporting from members of the public could be enhanced.

Firstly, *Safer Hotels* sought to better understand what criminal activity was actually occurring in hotel premises. Secondly, in addressing this intelligence gap, *Safer Hotels* sought to ascertain the "best" means of engagement. Does a simple letter to hotels suffice to improve intelligence reporting? Alternatively, is face-to-face engagement with hoteliers more effective in reducing this intelligence gap? And finally, how do these two methods compare to current police practice in terms of intelligence gleaned from the community.

Irrespective of whichever engagement strategy was employed, both methods sought to instigate a third-party policing (TPP) partnership with relevant hoteliers. TPP is any attempt by law enforcement to "persuade or coerce other regulators or non-offending persons", in this case hoteliers, "to take some responsibility for preventing crime or reducing crime problems" (Mazerolle, Higginson, & Eggins, 2013, p. 2). Numerous studies have reiterated the sizeable benefits of TPP and, accordingly, the strategy has been cited as one of the eight key policing innovations of the 21st century (Weisburd & Braga, 2006, cited in Mazerolle et al., 2013). For WA Police, the application of TPP in an experimental framework, within the context of hotel engagement, represented an innovative approach to partnership building and intelligence gathering practices.

Whilst *Operation Safer Hotels* was envisioned as an intelligence gathering operation, there were a number of alternate benefits that could potentially arise from the experiment. Previous literature on the topic of proactive engagement with members of the community has found that the engagement often yields alternate, largely intangible, dividends in improving attitudes towards police, particularly in the area of police legitimacy (Tyler & Jackson, 2014). Thus, a proactive partnership often leaves members of the community with greater levels of trust and confidence in police, which translates into a greater willingness to report criminal activity. Accordingly, the experiment also examined the degree to which the intelligence received was actionable. Specifically, did the intelligence received during the Operation translate to a higher count of associated offences, offenders identified and contraband seized?

Methodology

Operation Safer Hotels sought to replicate the Queensland Police experiment, *Operation Galley* (Morton, M, Luengen, & Newman, 2018). Accordingly, the experimental design, randomisation process and engagement strategies employed in *Safer Hotels* are largely synonymous with those utilised in *Galley*.

Hotels and Randomisation

The experiment began with identifying 126 hotels, motels, selfcontained apartments, resorts and backpacker hostels (hereafter referred to as "hotels" for simplicity) from the Perth metropolitan area. The majority (n = 56) were from the central business district located within the Central Metropolitan policing district.

Each of the 126 hotels was then ranked according to three metrics:

- a) The size of the hotel (in terms of maximum occupancy)
- b) Total Computer Aided Dispatch (CAD) tasks at the hotel in the one year preceding the experiment
- c) The "quality" of the hotel (based on online reviews).

Having matched hotels as per these rankings, the hotels were grouped into triplicates. This process ensured the hotels within each triplicate were theoretically similar in terms of scale, previous policing demand and clientele. Hotels within each of the triplicates were then randomly allocated into one of three groups, each of which was targeted via a different engagement strategy.

Engagement Strategies

Treatment Group 1-Personal Engagement

Hotels allocated into Treatment Group 1 received personal, faceto-face, engagement of management by intelligence officers. In meeting with relevant hotel managers and security personnel, officers used a locally developed "cookbook" that provided a checklist for officers during each conversation. This checklist covered the four key elements of procedural justice described by M et al. (2014); specifically, demonstrating WA Police Force core values of respect, explaining our motives in "doing the right thing" by disrupting criminality, encouraged hoteliers to report suspicious behaviour by stressing they have a voice and we are listening, and providing transparency through regular feedback of outcomes. Officers made the deliberate effort to frame these meetings as the beginnings of a *partnership* in which police personnel and hoteliers could work together to make their hotels a safer, and hence more desirable, place for customers and staff.

Hoteliers were also provided pamphlets that informed staff as to the signs of suspicious drug-related activity and provided the contact number of an intelligence officer. The intended dividends of a direct contact number were primarily twofold. Firstly, via this number hoteliers had 24-hour access to an intelligence officer who remained their point of contact throughout the experiment. Secondly, in providing a direct contact number, hoteliers could forge a working relationship with an intelligence officer, mitigating any perceived barriers to reporting suspicious behaviour. Via this personal contact, officers hoped to better strengthen ties with the hotel community and bolster that community's confidence in WA Police. It was postulated that this direct and personal access would allow hoteliers to report intelligence to WA Police with added confidence that the information would be actioned.

Treatment Group 2–Letter Engagement

Hotels allocated to Treatment Group 2 received a letter and no personal engagement from any officers beyond business-as-usual policing (responses to calls for service). The letter mailed to hotels contained similar information to that conveyed at the face-to-face meetings, likewise encouraging hoteliers to report suspicious drug-related criminal activity and reminding hotel staff of their statutory duty to do so. In addition, the letter also included the information pamphlets provided to hotels in Treatment Group 1, but instead of being given the contact number of an intelligence officer, hotels in Treatment Group 2 were provided the contact number for *Crime Stoppers*.

Control Group

Hotels allocated to the control group received no engagement whatsoever, in person or via a letter, outside of business-as-usual policing.

Timeframes and Periodic Engagement

The experiment was a blind design. Accordingly, intelligence officers were not aware which hotels had been allocated to Treatment Group 2 or the Control Group. The experiment phase of *Safer Hotels* began in December 2017 for a period of six months, during which time hotels in both treatment groups were engaged twice. Over a 16-day period (3rd December–19th December 2017), intelligence officers personally engaged with hotel staff from all hotels in Treatment Group 1 and letters were sent recorded delivery to the manager at each hotel in Treatment Group 2.

In April 2018 (halfway through the trial) hotels in Treatment Group 1 and Treatment Group 2 were "re-engaged". In this, the letter mailed to Treatment Group 2 hotels was re-sent to hoteliers. Concurrently, intelligence officers re-visited the hotels in Treatment Group 1. In meeting again with hoteliers, officers sought to build upon their existing relationships by answering any questions or addressing any of their concerns.

Over the course of the experiment, officers would, on a monthly basis, email hoteliers within Treatment Group 1. Emails would provide feedback to the hoteliers on the various means in which officers were able to operationalise the intelligence received from hotels and thank hoteliers for their continued engagement in the trial. This feedback provided hoteliers with a story, outlining the real impact calls to the Safer Hotels team had in apprehending offenders involved in criminal behaviour within the hotel community.

Operation Safer Hotels sought to test the following hypotheses.

Targeted engagement of hotel staff, encouraging the reporting of suspicious drug-related behaviour, will lead to:

- An increase in intelligence reporting (Hypothesis 1)
- An increase in the number of associated offences (Hypothesis 2)
- An increase in the severity of associated offences (Hypothesis 3)
- An increase in the number of identified offenders compared to a control group receiving no engagement (Hypothesis 4).

Data

Three principle metrics were employed in assessing the efficacy of the various engagement strategies.

1. Intelligence

Intelligence data was drawn from WA Police's State Intelligence portal, IDM. The intelligence reports were identified via automated searching for hotel names and variations thereof. In some instances, the exact detail of highly caveated information/intelligence would not be accessible to the analyst team. However, to minimise the threat of these sensitive reports to internal validity, care was taken throughout to identify their existence to ensure accurate recording of intelligence received from each hotel across all three groups.

Recorded Offences: Data pertaining to criminal offences/incidents was derived from the WA Police Incident Management System (IMS) based on location matching.

2. The Severity of Recorded Crime

Alongside the count of offences, the Western Australian Crime Harm Index was used to provide a metric for the severity of criminal offences (House & Neyroud, 2018).

3. Drugs Seized

Like the offences data, the quantities of drugs seized was also derived from IMS. The quantities of drugs seized were cross-referenced against approximate, street-value price of the drugs from the latest Illicit Drug Data Report from the Australian Criminal Intelligence Commission (2017b).

Findings

The experiment began with 126 hotels grouped into 42 triplicates. However, in the course of the experiment, two hotels closed. Both hotels were incidentally from the same triplicate. Accordingly, the entire triplicate was removed from the dataset. As a result, the analysis below is predicated on the 123 hotels left in the experiment, grouped into 41 triplicates.

Operation Safer Hotels was explicitly an intelligence gathering' operation. Accordingly, the total count of IDM intelligence reports received relating to the targeted hotels was the principle metric by which the success of the operation was adjudicated. A significant difference was found in the total number of intelligence reports received from the hotels across the three engagement strategies (F(1,120) = 3.150, p = .046). Post-hoc testing (Tukey's HSD) found that the statistically significant difference was between the count of intelligence reports from personally engaged hotels and the control group. In this, hotels that had received personal engagement from officers were associated with over three times as many intelligence reports compared to hotels that received business as usual engagement.

In addition, there were also substantial differences in the overall count of intelligence reports between treatment groups and the control group. Hotels from Treatment Group 1 reported over twice as many IDM reports (41 reports) compared to the Treatment Group 2 hotels (20 intelligence reports), while the control group provided 13 intelligence reports (See Figure 2). However, the only statistically significant difference was the aforementioned difference in the count of intelligence reports between Treatment Group 1 and the control group.

Exclusively analysing drug-related intelligence reports (this time at a 10% level of significance) hotels from Treatment Group 1 also recorded nearly three times as many intelligence reports compared to hotels from the control group and over twice as many reports compared to hotels that received a letter only (F(1, 120) = 2.500, p = .086).



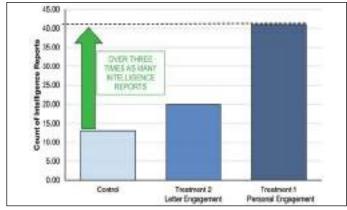
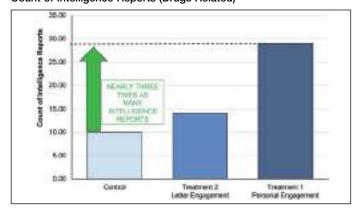


Figure 3: Count of Intelligence Reports (Drugs Related)



The above findings demonstrate the efficacy of personal engagement with hoteliers. Further, these findings are entirely consistent with the findings of *Operation Galley*, reiterating the efficacy of personal engagement to encourage intelligence reporting.

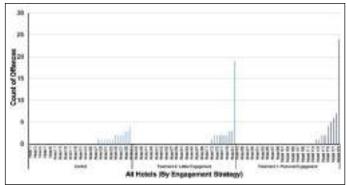
In line with the theoretical framework surrounding police legitimacy and the aims of the experiment, hoteliers were more willing to report crime to the police. In this, hotels that had been personally engaged by officers were associated with a higher number of recorded offences. Specifically, over twice as many offences were recorded relating to Treatment Group 1 hotels compared to hotels from the control group. Furthermore, in terms of crime harm (House & Neyroud, 2018), over three times as much "harm" was recorded from hotels in Treatment Group 1 compared to the control group.

Differences in the count of offences and corresponding crime harm, whilst sizeable, were not statistically significant. Consistent with the literature on spatial criminological studies, a "power few" phenomenon emerged when analysing the rates of criminal activity (Sherman, 2007). In this experiment, criminal activity was concentrated at a small number of hotels. Specifically, just five hotels (out of the sample of 123) were responsible for over half of all offences analysed and just 34 hotels (27% of the sample) were responsible for *all* offences (Figure 4).

While this affected the outcomes of the statistical analysis, it remains clear that the hotels that had been personally engaged by intelligence officers were overall associated with the identification of substantially more offences than hotels from Treatment Group 2 or the control group.

The quantitative differences in intelligence resulting from each engagement strategy were also associated with an apparent qualitative difference in the utility of intelligence received. In terms





of the approximate values of drugs seized from hotels during the experiment period, approximately \$11,000 worth of drugs were seized from hotels in Treatment Group 1 compared to approximately \$5,500 worth of drugs seized from Treatment Group 2 hotels and only a few hundred dollars' worth of prescription medication seized from control group hotels.

In addition to drug seizures, over four times as many offenders were identified at Treatment Group 1 hotels compared to the control group, and twice as many identified compared to Treatment Group 2. Herein, it is worth noting that there were 39% more criminal incidents associated with hotels from Treatment Group 1 (compared to the control group) but 400% more identifications. These results reiterate not just a difference in the quantity of intelligence, but a difference in the quality of the intelligence received subsequent to personal engagement; intelligence which appears to be comparably more operationally actionable.

Discussion

Consistent with the findings of *Operation Galley*, Operation Safer Hotels empirically demonstrates the positive effects of proactive engagement with hoteliers and their staff to encourage intelligence reporting. The Operation suggests that hotel staff, having received personal engagement, are both more cognisant of the signs of suspicious criminal activity and, thereafter, more willing to report criminal activity to police. In effect, via personal engagement, hotel staff have been encouraged to take up a role in the form of third party policing; the dividends of which are clearly apparent. While the use of a letter has less resourcing impact, the impact of personal engagement was found to be consistently worth the effort expended in making personal contact.

There are a number of points that bear further attention. Firstly, across all engagement strategies, there was a clear demonstration of the power few effect, wherein a small number of hotels were responsible for all associated offences. Specifically, just 27% of the hotels in the dataset were associated with any offence whatsoever¹. The realisation of this power few suggests that actual criminal activity may be concentrated at a select number of hotels.

This provides avenues for specified targeting of hotels. For example, further analysis could seek to identify one or more particular factors that could serve as indicators of likely criminal activity at a hotel. Correlation analysis between total CAD activity at the hotel and the average price of a room, hotel reviews, and size of the establishment has so far yielded negligible results. However, it is worth noting that a number of the high-crime hotels involved in Safer Hotels are situated near a highway, freeway or major road network.

The reliability of this association warrants further analysis. However, preliminary analysis does suggest that the comparable accessibility of the hotel may be a factor in the level of criminal activity in the hotel.

Alternatively, it is possible that certain characteristics of the staff or business arrangements within the power few hotels led to these establishments being more inclined to engage with officers and subsequently make reports of suspicious behaviour. For example, further research may find that the presence of single or multiple managers, and/or specific security staff or arrangements, may make some establishments more "rewarding" to engage than others. This also makes it possible to conclude that our intelligence gap relating to true criminal activity at some hotels remains, and there is room for further innovation in the development and assessment of targeting strategies for these establishments.

The benefits of the personal engagement strategy were achieved within the existing resources of the intelligence unit that led the Operation. The Operation did not generate any negative reaction from hoteliers or the hoteliers' professional body, the Western Australian Hotels Association and the Operation was, in fact, largely welcomed by hoteliers. Finally, it is clear that police contact with the community matters, as does the type of contact we choose. In an intelligence gathering environment, every police contact does indeed leave a trace.

End notes

 Of the 27% of hotels that were associated with an offence, the spread of the hotels was largely consistent across the engagement strategies – 10 were from Treatment Group 1, 10 were from Treatment Group 2 and 14 were from the control group.

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Asset Rich, Peelers Poor: Measurement and Efficacy of Resilience Training in Policing

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Abstract

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Wellbeing, performance and productivity have been subject to academic scrutiny over a number of years. The capacity of individuals to work effectively under pressure and deal with set-backs and adversity is of great interest. This study is carried out in a provincial police force in the UK and examines and reports on the efficacy of a work-based personal resilience training programme that increases this capacity. According to the World Health Organization, stress is the 'health epidemic of the 21st century.' Policing is both customerfacing and high on emotional labour. The underlying hypothesis is that resilience training can have a positive impact on the dimensions affecting workplace stressors. In this study a perceptual map was developed using correspondence analysis. Correspondence analysis provides a visual relationship between the essentials and attributes, in this case position (rank/grade) within the police, and whether or not the respondents had undertaken resilience training. This paper models the results of a study of 350 responses. It provides evidence that the use of resilience training programs for improving employee resilience is effective in reducing workplace stressors by identifying and addressing the sources of stress, and by educating the workforce.

Keywords

Resilience; Wellbeing; Stress; Training; Performance; Public Service

Introduction

Employee wellbeing has received a burgeoning amount of interest throughout many workplaces, in particular, the impact of stress on the workforce as the nature of work changes (Kowalski et al., 2015). One of the fundamental challenges facing organisations is how to sustain employee wellbeing in the face of unprecedented challenges, both on an organisational level and a personal one (Hesketh et al., 2015).

This study is concerned with the sources and causes of workplace stressors, and how personal resilience can mitigate the negative effects of stress (Southwick & Charney, 2012a). The connections between organisations that perform well and organisations in which wellbeing is afforded a high priority are well made out (Edgar et al., 2015; Wright & Cropanzano, 2000). Yet less is known about the effects of programmes that promote and maintain employee resilience. For example, in a systematic review of 14 workplace resilience-training studies Robertson et al. (2015) identified, and concluded, that there had been no meaningful synthesis of resilience training efficacy. Their research proposed that, ultimately, resilience training could improve both employee wellbeing and subsequent performance. The research modelled in this paper seeks to explore, examine and report on the extent to which resilience training can potentially improve the working life of employees and thereby increase organisational performance.

Correspondence analysis (Ivy, 2001) is a model that provides insight into similarities and differences, by representing the underlying structure and position of the attributes. The host for this research was a UK police force, where a series of multiple cross-sectional surveys have established the efficacy of personal resilience training.

Literature

The cost of workplace stress can be significant. According to the Health & Safety Executive (HSE) (2016), and based on the Labour Force Surveys for the UK, work related stress, depression or anxiety in the year 2015/16 had a prevalence rate of 1510 per 100,000 workers. In the UK that amounted to 488,000 cases, or 11.7 million lost working days. Stress accounted for 37% of all work-related ill health cases. Stress is also more prevalent in public sector occupations. Sickness absence of course is not the sole consequence for the employer or the employee. Other phenomenon can have a significant impact on workplace performance, such as presenteeism (Johns, 2010), leaveism (Hesketh & Cooper, 2014) and engagement (Robertson & Cooper, 2010).

One organisational response to concern about the effects of stress lies in resilience, "an idea whose time has come" according to Cooper et al. (2014, p.2466). Haglund et al. (2007) refer to resilience as the "ability to successfully adapt to stressors" (p.899). The word stems from the Latin *resilire*, to rebound (Masten, 2014, p. 6). In support, Luthans (2002) refers to the ability to "bounce back" from adversity, or rebound. Being resilient is about having the capacity and capability to deal with and process mental challenges, "it is not about eliminating risk and stress, but being able to deal effectively with adversity and the stressors encountere" (Smith et al., 2015, p. 36).

Many organisations have utilised resilience training in an attempt to help employees deal effectively with stress. Yet, in a systematic review of resilience training in the workplace, Robertson et al. (2015) concluded that more work-based studies are required to determine the effectiveness of resilience training interventions. In particular, there is a need to identify and more fully understand potential mediators.

These interpretations suggest that people are dealing with emotional labour, "the psychological processes necessary to manage emotions" (Biron & van Veldhoven, 2012, p. 1260).

Researchers investigating resilience have paid particular attention to emergency service providers and their ability to overcome day-today stressful and the highly emotional situations that they encounter: see, for example, police (Paton, 2006), ambulance service (Gayton & Lovell, 2012), nursing (Zander et al., 2013), and social work (Grant & Kinman, 2013). The police force provides a suitable site to investigate the effectiveness of resilience training since the extant literature draws attention to high levels of stress involved in this work. Policing has been described as amongst "occupations [that] involve emotional labour, an element of work which has been described as relevant to the experience of work related stress" (Johnson et al., 2005, p. 184). Shane (2010) emphasises the stressful aspects of police work in well in the observation, "Organizational stressors are the niggling aspects of the working environment that pervade [US] police organizations" (p. 815). In addition to the considerable demands of the job, the occupation is currently experiencing enormous change, set against a backdrop of unprecedented austerity for UK policing (see, for example, Hesketh et al., 2015).

Despite the general stressful nature of generic police work, some authors assert that different people react differently to what effectively are the same stressors. As noted by Palmer and Cooper, "One person's pressure is another person's stress." (2010, p. 303). Johnson et al. (2005) found that senior police officers scored less in terms of stress (and higher in terms of job satisfaction) than their lower ranked colleagues.

Balmer et al. (2014) questioned whether police resilience is so different from the general population, and instead argued that police culture may contribute to factors that seem to help in terms of personal resilience, or what they term "favourable dispositional attributes" (p.270). Summarising numerous studies of policing, Loftus provides a useful insight that may go some way to explain this:

Police, it is said, have an exaggerated sense of mission towards their role and crave work that is crime oriented and promises excitement. They celebrate masculine exploits, show willingness to use force and engage in informal working practices. Officers are continually suspicious, lead socially isolated lives and display defensive solidarity with colleagues." (2010, p. 4)

All of these traits suggest incongruence with a stress-free, peaceful working life and include dimensions that Maslach et al. (2001) identified could lead to exhaustion, or burnout, this being "when the individual perceives that the demands made upon them exceed their ability to cope" (Cartwright & Cooper, 2002, p. 6). These "demands" were referenced in the pioneering work on stress by Hans Selye (1956) as aversive stimuli, or stressors.

The purpose of this research is to establish to what extent resilience training has a positive impact on the wellbeing of police officers and police staff. It also seeks to explore to what extent does being a police officer or a police staff member impact on stress and wellbeing, and as such is it worth HRM's investing in resilience training programmes? The following hypotheses have been developed:

Hypothesis 1: Resilience training has a positive impact of police officer wellbeing

Hypothesis 2: Police officers and police staff face similar levels of work related stress and are impacted equally with respect of their wellbeing

This Study

Resilience Training

In order to establish to what extent personal resilience training is effective, a series of group-based resilience training sessions took place within the workplace of the subject organisation. These were conducted by a professional independent company outside of policing, and predicated on the assumption that resilience is based on personal characteristics and skills that can be learned and developed through appropriate training. These covered areas including building personal levels of resilience and managing wellbeing in a workplace setting. The objectives were for delegates to understand resilience and to learn how to build and maintain resilience, both in themselves and others. Input on how to recognise signs of stress, what areas of personality help or hinder resilience and how social support can play a defining role were all contained within the training programme. The programme included a mixture of presentations framed around psychosocial factors, such as positive emotion, optimism, resilient role models, selfmastery, cognitive reframing, social support, coping mechanisms and so on (Southwick & Charney, 2012b). Also included were a number of case studies and interactive tasks to probe delegates' thinking and encourage them to speak and share their own experiences where they felt comfortable, and how they could potentially build up their personal resilience. These elements of one-to-one training, group sessions and support based on individual needs are all elements that require empirical evidence.

Instrument

This paper models the data that was gathered the year after completion of the resilience training, using A Short Stress Evaluation Tool, *ASSET* (Faragher et al., 2004) that has previously been used in policing studies. This wellbeing psychometric instrument is used to measure sources of stress in the workplace.

The instrument measures participants' attitudes towards the workplace and perceptions of the job they are engaged in. The questions capture attitudes and perceptions that are known to cause stress in the workplace and are referred to as the six essentials (Cooper et al, 2005) These are *Resources and Communications, Control, Work Relationships, Balanced Workloads, Job Security and Change,* and *Job Conditions.*

The survey instrument also measures several aspects relating to the organisation and the employees' perception of their relationship to the organisation. Items therefore measure *Engagement, Commitment* of *Employees to the Organisation and Perceived Commitment of Organisation Towards Employees.* The questionnaire was administered electronically via a Sharepoint platform and employed an online self-reporting approach.

Questions on perceptions of the job and attitudes towards the organisation were measured using a 6-point Likert scale, ranging from Strongly Disagree to Strongly Agree. The Cronbach's alpha reliability score for the 46-item ASSET measure was 0.804 and considered acceptable. All the items in the instrument were in the acceptable range for reliability using the Cronbach's alpha measure. If individual items were removed, Cronbach's alpha scores ranged from 0.791 ("I do not have the proper equipment or resources to do my job") to 0.816 ("Overall, I am happy with my organisation") (see Appendix 1).

Sample Description

The study reports on the responses captured from those who underwent resilience training against those who did not, but were in the same working environment. A census was undertaken (in the subject police force) of all police officers and police staff (non-police) or staff who performed office-based functions who had undergone resilience training. A response rate of 52% resulted in 34 completed questionnaires. A convenience sample of 268 respondents (who had not undergone resilience training) were included in the study, from a self-completion questionnaire distributed via Sharepoint.

In total, a sample of 350 completed questionnaires from police officers and police staff employed in a county police force in the north of the UK were analysed. Of the respondents, 42% were female, 20% were employed in police staff function, and 20% were in part-time roles. Forty-eight respondents did not indicate their rank or grade. No significant differences existed in whether or not respondents were employed as police officers or police staff (chi-square = 1.853, *df* = 1, p = .173), see Table 1, or average age of respondents (t = 1.755, df = 264, p = .04). In the case of gender, there were significantly more females who had undergone resilience training (chi-square = 4.403, df = 1, p = .036).

Table 1 – Sample distribution showing respondents who had and	
had not attended Resilience training	

		Not attended Resilience training		Attene Resilience				
	Frequency		%	Frequency	%			
Rank	Police officer	216	80.6	24	47.1			
	Police staff		19.4	10	29.4			
	Total	268	268 100		100			
		Chi-square =	= 1.853, <i>df</i> = ⁻	1, <i>p</i> = .173				
Gender	Male	188	59.9	14	41.2			
	Female	126	40.1	20	58.8			
	Total	314	100	34	100			
<i>Chi-square</i> = 4.403, <i>df</i> = 1, <i>p</i> = .036								

Table 2 – Sample distribution showing differences is age between respondents who had and had not attended Resilience training)

Employment	Employment			t-tests			
	Item	type	Mean	sd	t	df	p
	A	Not attended resilience training	2.40	0.877	1 755	55 264	09
Age	Attended resilience training	2.68	0.684	1.755	204	.08	

Findings

Analysis of ASSET

Hypothesis 1: Resilience training has a positive impact of police officer wellbeing

There were improvements in scores in all but one of the essentials measured, where respondents had undertaken resilience training. These were in relation to *Resources & Communications, Control, Work Relationships, Balanced Workload, Work-life Balance, Job Conditions, Engagement, Commitment of Employees to Organisation and Perceived Commitment of Organisation Towards Employees.*

With regards to Job Security and Change, 3 out of the 5 items that made up this essential measure showed differences to suggest an increase in stress, but these tended to offset each other as illustrated in Table 3. This may be attributable to a realisation that the nature of work is actually going to change significantly over the coming years.

Hypothesis 2: Police officers and police staff face similar levels of work related stress and are impacted equally with respect of their wellbeing

In the case of police officers, the *Control* dimension showed a significant improvement in ASSET scores, with respondents who had

been on resilience training having a mean score of 2.88 (sd = 0.97) while those police officers who had not undergone resilience training (mean = 3.40, sd = 1.15) felt they had significantly less control of aspects that affect their work (t = -2.57, df = 348, p = .01).

Whilst *Work Relationships* within the force were considered good for all respondents, these improved further amongst respondents who had undergone resilience training. Similarly, respondents who had resilience training reported improvements in *Balanced Workload* and their *Work-life Balance*.

In the case of police staff respondents who had undertaken resilience training, they reported that their *Work-life Balance* (mean = 2.45, sd = 1.06) was significantly (t = 2.213, df = 32, p = .034) better than police officers (mean = 3.32, sd = 1.04).

In respect of respondents who had not undergone resilience training, police officers had significantly (t = 2.315, df = 266, p = .021) more concerns regarding Balanced Workload (mean = 3.37, sd = 0.928) than police staff (mean = 2.65, sd = 1.0).

In the case of police officers who had undergone resilience training, respondents reported that they had significantly (t = -2, df = 238, p = .43) more *Control* (mean = 2.9, sd = 1.0) than those officers who had not undergone resilience training (mean = 3.39, sd = 1.08). In a similar vein, police officers who had undergone resilience training reported significantly better (t = -2.2, df = 238, p = .031) *Job Conditions* (mean = 2.88, sd = 0.72) than those who had not (mean = 3.28, sd = 0.86).

With regard to individual items in ASSET that showed significant differences between police officers who had undergone resilience training and those who had not, the following items illustrated in Table 4 showed significant improvement.

With regard to differences between police staff and police officers, there were significant differences in the ASSET essentials.

Table 3 - Job Security	y and Change Dimensior	and the items from	which it is dorived
Table 5 - 500 Security	y and onlarige Dimension	i and the items nom	

ltem	Resilience Training	Mean	sd	t	df	р	Change	
Job security & change	Yes	3.32	0.83	0.741	348	.46	No change	
Job Security & change	No	3.20	0.912	0.741		.40	(Not significant)	
Mariah is ant annound	Yes	2.68	1.57	1 051	040	.18	No change (Not significant)	
My job is not permanent	No	2.30	1.52	1.351	348			
	Yes	3.47	1.83	2.33	346	.02	Ciartificanth, and used	
My job in insecure	No	2.79	1.61				Significantly reduced	
My ich skille may become redundent in the pack future	Yes	2.21	1.34	0.001	348	.35	No change (Not significant)	
My job skills may become redundant in the near future	No	2.44	1.38	-0.931				
Martin in Harborn sharpen in the fathers	Yes	5.09	1.03	0.005			Ciarificanth, and used	
My job is likely to change in the future	No	4.61	1.30	2.065	348	.04	Significantly reduced	
My organization is constantly changing for changes sake	Yes	3.18	1.42					
	No	3.87	1.54	-2.51	348	.01	Significantly improved	

Table 4 - Items showing significant differences between police officers who had resilience training and those who had not

Item	Resilience Training	Mean	sd	t	df	р	Change	
Castal	Yes	2.88	0.97	0.57	0.40		Significantly improved	
Control	No	3.40	1.15	-2.57	348	.01		
lak anaditiona	Yes	2.88	0.72	-2.2	338	00	Circuition attacks in a second	
Job conditions	No	3.28	0.86	-2.2	338	.03	Significantly improved	
I have little another a surround of my lish	Yes	3.25	1.42	0.1	007	0.4	Circuition attacks improved	
I have little control over many aspects of my job	No	3.88	1.41	-2.1	237	.04	Significantly improved	
	Yes	3.04	1.85		337	.01	Significantly improved	
My job involves the risk of actual physical violence	No	4.07	1.78	-2.7				
Mariah is Kishida sharar is day fatara	Yes	5.08	0.97	0.005	348	.04	Ciercificantly, and yourd	
My job is likely to change in the future	No	4.59	1.30	2.065			Significantly reduced	
	Yes	3.08	1.50	0.51	0.40	01	0	
My organization is constantly changing for changes sake	No	3.88	1.53	-2.51	348	.01	Significantly improved	
	Yes	2.75	1.48	0.0	337	00	Circuificantly, improved	
I have little or no influence over my performance targets	No	3.46	1.53	-2.2		.03	Significantly improved	
	Yes	2.79	1.69	0.10	338	.03	Significantly reduced	
My job is not permanent	No	2.12	1.40	2.19				

Item	Employment	Employment	sd		t-tests	Levene's Test		
	type	Mean		t	df	р	F	р
Resources and communications	Police Officer	2.67	0.976	-3.09	34.9	001	3.89	.05
Resources and communications	Police Staff	3.22	0.748 -3.09 34.9	34.9	34.9 .001	3.09	.05	
Control	Police Officer	3.29	1.037	-2.47	145	.01	2.12	.15
Control	Police Staff	3.90	1.241		140	.01		.15
Delegend workland	Police Officer	3.54	0.947	3.08	145	.001	2.17	.14
Balanced workload	Police Staff	2.88	0.812					.14
Maula life beleves	Police Officer	3.75	1.082	4.17	112	.001	0.88	.35
Work life balance	Police Staff	2.70	0.934					
Job security and change	Police Officer	3.00	0.823	4.01	25.9	.01	4.62	22
Job security and change	Police Staff	4.13	1.202	-4.31	20.9			.33

Table 5 – Dimensions showing significant differences between Police Officers and Police Staff

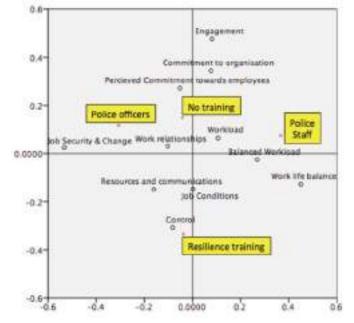
Police officers were significantly more positive about *Resources and Communications*, levels of *Control* in their work and *Job Security and Change* than were police staff, whilst police staff were more positive about their *Balanced Workload*, *Work-Life Balance* and *Workload* (See Table 5).

Correspondence Analysis

The perceptual map in Figure 1 was developed using correspondence analysis. Correspondence analysis provides visual relationships between the essentials and attributes, in this case position within the police, be it police staff or police officer, and whether or not they had undertaken resilience training. Correspondence analysis provides insight into similarities and differences, by representing the underlying structure and position of the attributes (Ivy, 2001). Items in the map having the greatest proximity are the most similar in terms of their underlying structure.

In this case police officers show a more positive association with *Job Security and Change* and *Work Relationships*, while police staff show greater association with *Balanced Workload*, *Work-life Balance* and *Workload*. Police Staff who had undergone resilience training felt they had better Control and Job Conditions. While *Engagement* and *Commitment* and *Perceived Commitment* to the employees was more strongly associated with respondents who had not undergone training.

Figure 1 – Perceptual map showing association between ASSET dimensions, training and employment type



Thirty-three out of the 46 items measured (72%) in ASSET showed improvement with male respondents who had undertaken resilience training. Of these, two were significant improvements: "I have little control over many aspects of my job" (*Control*) and "My organization is changing for change's sake" (*Job Security & Change*).

With "My job is likely to change in the future", this item showed a significant increase (t = 1.60, df = 200, p = .002); this, however, need not be a stress inducer, but recognition of the changing roles that exist in policing.

Like their male colleagues, females reported 33 items from ASSET showing improvement after resilience training (72%), with four showing significant differences between respondents that had undergone resilience training and those that had not. "My physical working conditions are unpleasant", "I have little or no influence over my performance targets" and "Outside of my particular job, I take an interest in many aspects of the running and success of this organisation" all showed significant improvements, while *Job Security* showed a significant decline.

However, in terms of resilience, this study noted significantly lower (better) scores for females in stressors such as *Work-life Balance*—males mean score = 3.5, sd = 1.1; females mean score = 3.2, sd = 1.1 (t = 2.8, df = 346, p = .05) and *Job Conditions*—males mean score = 3.2, sd = 0.8; females mean score = 3.0, sd = 0.8 (t = 2.5, df = 346, p = .015). As above, the results of this study model significantly better scores for women in items such as *Work-life Balance* and *Job Conditions*. A detailed inventory of all the mean scores between respondents who had undergone resilience training and those who had not is provided in Appendix 1.

Concluding Remarks

This research contributes to the call for work-based studies into the effectiveness of resilience training. The data modelled clearly illustrates that improvements in relation to measures of *Resources & Communications, Control, Work Relationships, Balanced Workload, Work-life Balance, Job Conditions, Engagement, Commitment of Employees to Organisation and Perceived Commitment of Organisation Towards Employees* are evident for respondents who had undertaken resilience training. We can, therefore, only provide qualified acceptance of our first hypothesis: Police officer wellbeing was improved across all dimensions, with the exception of Job Security and Change; the decrease, however, was not significant.

In a systematic review of resilience training in the workplace, Robertson et al. (2015) concluded that more work-based studies are required to determine the effectiveness of resilience training interventions, and particularly for understanding and identifying potential mediators, noting that the empirical evidence for resilience training efficacy is tentative. Also, highlighted within this paper, is the element of one-to-one training suggested to optimise practitioner understanding and individual need, this being the approach employed in delivering the sessions upon which this research is based.

With regard to the second hypotheses, which stated that "Police officers and police staff face similar levels of work related stress and are impacted equally with respect of their wellbeing", with the exception of the dimension *Resources and communications*, police officers and police staff were facing equal levels of stress in the work place. This suggests that both police employee categories would benefit equally from resilience training.

Previous research has proven that organisations with effective wellness programmes have less absenteeism and presenteeism (Johns, 2010), and that such organisations perform better (Bierla et al., 2013; Braakman-Jansen et al., 2011; Gosselin et al., 2013; Robertson et al., 2015). The findings in this research provide support to those studies. Whilst organisations have a moral obligation to the wellbeing of those they employ, it is more often than not the impact of productivity, performance or absence that is the trigger for wellbeing interventions. As work becomes increasingly complex so too does the focus on what employee wellbeing can bring to an organisation in terms of HRM.

Within [UK] policing, a period of unprecedented change in almost all aspects of work has amplified the need for wellbeing interventions, such as resilience training. Further research into police-specific resilience training programmes, and links to police leadership are needed to optimise efficacy, but this research illustrates how resilience training can dramatically improve multiple wellbeing aspects of working life for employees. As such, this should be considered by human resource managers as an effective means to reduce workplace stress and increase employee wellbeing.

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Appendix 1 - Reliability statistics

	Scale if item deleted	Scale variance if item deleted	Corrected item- total correlation	Cronbach's alpha if item deleted
I work longer hours than I choose or want to	143.49	429.777	0.371	0.796
I work unsociable hours e.g. weekends, shift work etc	143.1	425.409	0.362	0.796
I spend too much time travelling in my job	144.25	439.817	0.212	0.802
I have little control over many aspects of my job	143.13	424.47	0.482	0.793
My work interferes with my home and personal life	142.86	422.185	0.516	0.792
I may be doing the same job for the next 10 years	143.4	436.991	0.207	0.802
My physical working conditions are unpleasant	144.21	428.832	0.405	0.795
My job involves the risk of actual physical violence	143.27	425.476	0.349	0.797
My boss behaves in an intimidating and bullying way towards me	145.24	441.356	0.308	0.799
My performance at work is closely monitored	143.29	439.778	0.263	0.8
I do not receive the support from others (boss/colleagues) that I would like	144.2	427.469	0.451	0.794
My job is insecure	144.04	444.961	0.127	0.804
My job is not permanent	144.56	448.511	0.09	0.805
My pay & benefits are not as good as other people doing the same or similar work	143.71	434.445	0.269	0.8
The technology in my job has overloaded me	144.39	432.627	0.396	0.796
My organisation is constantly changing for change's sake	143.04	425.201	0.447	0.794
My work is dull and repetitive	144.67	444.943	0.19	0.802
I feel isolated at work e.g. working on my own or lack of social support from	144.49	434.965	0.368	0.797
I am not sure what is expected of me by my boss	144.79	432.369	0.484	0.795
Other people at work are not pulling their weight	143.42	425.42	0.435	0.794
I am set unrealistic deadlines	144.27	423.547	0.562	0.791
l am given unmanageable workloads	143.93	420.345	0.539	0.791
My boss is forever finding fault with what I do	145.24	443.027	0.336	0.799
Others take the credit for what I have achieved	144.15	429.703	0.419	0.795
I have to deal with difficult customers/clients	142.5	424.269	0.429	0.794
My relationships with colleagues are poor	145.2	445.016	0.258	0.801
I do not feel I am informed about what is going on in this organisation	143.99	431.471	0.392	0.796
l am never told if l am doing a good job	143.82	424.834	0.482	0.793
l am not involved in decisions affecting my job	143.26	424.906	0.463	0.793
I am not adequately trained to do many aspects of my job	144.54	435.098	0.387	0.797
I do not have the proper equipment or resources to do my job	144.04	421.112	0.534	0.791
I do not have enough time to do my job as well as I would like	143.01	416.828	0.547	0.79
My job is likely to change in the future	142.18	442.68	0.222	0.801
My job skills may become redundant in the near future	144.42	441.395	0.224	0.801
My ideas or suggestions about my job are not taken into account	143.97	425.568	0.475	0.793
I have little or no influence over my performance targets	143.52	424.109	0.46	0.793
l do not enjoy my job	144.68	442.31	0.229	0.801
I feel valued and trusted by the organisation	143.7	471.966	-0.29	0.815
If necessary I am prepared to put myself out for this organisation e.g. working long hours and/ or unsociable hours	142.13	456.862	-0.041	0.809
If asked, I am prepared to take on more responsibility or tasks not in my job description	142.19	459.49	-0.086	0.81
I enjoy working for this organisation to the extent that I am not actively seeking a job elsewhere	142.42	466.903	-0.195	0.814
I am proud of this organisation	142.4	469.767	-0.254	0.814
Outside of my particular job, I take an interest in many aspects of the running and success of this organisation	143.53	462.182	-0.122	0.812
Overall I am happy with my organisation	143.09	474.346	-0.333	0.816
I feel that it is worthwhile to work hard for this organisation	142.53	467.678	-0.212	0.814
am committed to this organisation	142.12	466.214	-0.205	0.812

Appendix 2: t-test results of Resilience Course attenders and no-attenders

Resources and communications	Yes No Yes No Yes No Yes No Yes	2.46 2.77 2.50 2.88 2.59 3.88	0.93 0.97 1.24 1.41	-1.78 -1.49	348	0.08	Improved Not significant
I do not feel I am informed about what is going on in this organisation	Yes No Yes No Yes No	2.50 2.88 2.59	1.24	-1.49	0.40		
I am never told if I am doing a good job	No Yes No Yes No	2.88 2.59		-1.49	040		
	Yes No Yes No	2.59	1.41		348	0.14	Improved Not significant
	No Yes No		1.54	-1.83	348	0.07	-
I am not adequately trained to do many aspects of my job	No		1.41	1.00	010	0.01	Improved Not significant
		2.18	1.17	-0.64	347	0.53	Improved
		2.31 2.56	1.21	-0.93	347	0.35	Not significant
I do not have the proper equipment or resources to do my job	No	2.30	1.50	-0.93	347	0.35	Improved Not significant
							<u>.</u>
Control*	Yes	2.88	0.97	-2.57	348	0.01	Significantly
_	No Yes	3.40 3.25	1.15 1.42	-2.10	347	0.04	improved
I have little control over many aspects of my job*	No	3.88	1.42	-2.10	347	0.04	Significantly improved
I am not involved in decisions affecting my job	Yes	3.44	1.44	-0.53	347	0.60	Improved
	No	3.59	1.54				Not significant
My ideas or suggestions about my job are not taken into account	Yes No	2.50 2.98	1.29 1.45	-1.50	347	0.13	Improved Not significant
	Yes	2.75	1.48	-2.20	346	0.03	Significantly
I have little or no influence over my performance targets*	No	3.46	1.53				improved
Work relationships —	Yes No	2.24	0.79	-0.23	348	0.82	Improved Not significant
	Yes	1.59	0.78	-0.12	346	0.91	-
My boss behaves in an intimidating and bullying way towards me	No	1.61	1.09	0.12	010	0.01	Improved Not significant
I do not receive the support from others (boss/colleagues) that I would like	Yes	2.47	1.35	-0.76	348	0.45	Improved
	No Yes	2.67 2.15	1.44	-1.06	348	0.20	Not significant
I feel isolated at work e.g. working on my own or lack of	No	2.15	1.11	-1.00	340	0.29	Improved Not significant
I do not feel Low informed about what is going on in this appariation	Yes	2.88	0.72	-2.2	238	0.03	Significantly
I do not feel I am informed about what is going on in this organisation	No	3.28	0.86				improved
I am not sure what is expected of me by my boss	Yes No	2.00	1.13 1.16	-0.41	348	0.68	Improved Not significant
	Yes	3.59	1.48	0.52	348	0.61	Reduced
Other people at work are not pulling their weight	No	3.44	1.60				Not significant
My boss is forever finding fault with what I do	Yes	1.59	0.78	-0.28	348	0.78	Improved Not significant
	No Yes	1.64 2.74	0.96	0.09	347	0.93	Reduced
Others take the credit for what I have achieved	No	2.71	1.30		•		Not significant
My relationships with colleagues are poor	Yes	1.79	1.15	0.88	347	0.38	Reduced
5 · · · · F· · · · · · · · · · · · · · ·	No	1.64	0.94				Not significant
	Yes	2.96	1.01	-1.34	348	0.18	lanana
Balanced work load	No	3.2	1.08				Improved Not significant
Work life balance	Yes	3.07	1.11	-1.89	348	0.06	Improved
_	No	3.45	1.12	1.76	240	0.09	Not significant
I work longer hours than I choose or want to	Yes No	2.91 3.40	1.40 1.56	-1.76	348	0.08	Improved Not significant
I work unsociable hours e.g. weekands, shift work ato	Yes	3.21	1.95	-1.72	346	0.09	Improved
I work unsociable hours e.g. weekends, shift work etc	No	3.78	1.83				Not significant
I spend too much time travelling in my job	Yes No	2.41 2.64	1.46 1.58	-0.79	348	0.43	Improved Not significant
	Yes	3.74	1.58	-0.97	348	0.33	Improved
My work interferes with my home and personal life	No	4.00	1.50				Not significant
Workload	Yes	2.85	1.15	-0.48	348	0.64	Improved Not significant
	No Yes	2.95 2.18	1.18 1.14	-1.22	348	0.22	-
The technology in my job has overloaded me	No	2.47	1.14	1.22	010	0.22	Improved Not significant
I am set unrealistic deadlines	Yes	2.47	1.31	-0.53	348	0.60	Improved
	No	2.60	1.34	0.14	0.47	0.00	Not significant
I am given unmanageable workloads	Yes No	2.94 2.90	1.52 1.52	0.14	347	0.89	Reduced Not significant
I do not have enough time to do my job as well as I would like	Yes	3.79	1.70	-0.14	347	0.89	Improved
I do not have enough time to do my job as well as I would like	No	3.83	1.65				Not significant

Item	Resilience Training	Mean	sd	t	df	р	Change
	manning						
	Yes	3.32	0.83				Paducad
Job Security & Change	No	3.20	0.91	0.74	348	0.46	Reduced Not significant
	Yes	3.47	1.83			0.02	Significantly Reduced
My job is insecure*	No	2.79	1.61	2.33	346		
My job is not permanent	Yes	2.79	1.69	2.19	348	0.03	Significantly
	No	2.12	1.40	2.10	010	0.00	Reduced
My job is likely to change in the future*	Yes	5.08	0.97	2.07	348	0.04	Significantly
., , , ,	No	4.59	1.30				Reduced
My job skills may become redundant in the near future	Yes	2.21 2.44	1.34	-0.93	348	0.35	Improved Not significant
	Yes	3.08	1.38 1.50				-
My organisation is constantly changing for change's sake $\!\!\!\!\!\!^*$	No	3.88	1.53	-2.51	347	0.01	Significantly improved
		0.00	1100				
	Yes	2.88	0.72				Significantly
Job Conditions*	No	3.28	0.86	-2.2	348	0.07	improved
	Yes	3.59	1.76		0.17		Reduced
I may be doing the same job for the next 5 to 10 years	No	3.28	0.86	0.44	347	0.66	Not significant
My physical working conditions are unpleasant	Yes	2.29	1.43	-1.33	-1.33 348	0.18	Improved Not significant
(e.g. noisy, dirty, poorly designed).	No	3.65	1.50	-1.55			
My job involves the risk of actual physical violence*	Yes	3.04	1.85	-2.70	337	0.01	Significantly
···· ,) ··· ··· ··· ··· ··· ··· ··· ··· ···	No	4.07	1.78				improved
My performance at work is closely monitored	Yes	3.32	1.23	-1.00	347	0.32	Improved Not significant
	No	3.57	1.36				-
My work is dull and repetitive	Yes 1.88 0.91	-1.61	348	0.11	Improved Not significant		
	No Yes	2.24 4.29	1.28 1.80	-0.13	347	0.90	Improved Not significant
I have to deal with difficult customers/clients	No	4.33	1.65				
	Yes	1.91	1.04		344	0.23	Improved
l do not enjoy my job	No	2.19	1.31	-1.20			Not significant
My pay & benefits are not as good as other people doing the same	Yes	2.85	1.64	1.10	247	0.00	Improved
or similar work	No	3.22	1.72	-1.19	347	0.23	Not significant
			1	•			1
Engagement	Yes	4.8	1.04	1.15	348	0.25	Improved
	No	4.56	1.18				Not significant
I feel that it is worthwhile to work hard for this organisation	Yes	4.32	1.49	0.03		0.98	No change
	No	4.32	1.46				
If necessary I am prepared to put myself out for this organisation	Yes	5.06 4.66	1.18 1.41	1.59			Improved Not significant
	Yes	5.03	1.41		348	0.17	Improved Not significant
I am committed to this organisation	No	4.71	1.23	1.39			
	Yes	4.68	1.17		348		Improved Not significant
Commitment of employees to organisation	No	4.51	1.28	0.71		0.48	
	Yes	4.32	1.49	0.02	240	0.00	No chonce
I feel that it is worthwhile to work hard for this proprietion	No	4.32	1.46	0.03	348	0.98	No change
I feel that it is worthwhile to work hard for this organisation		5.00	1.11	1.39	348	0.17	Improved
ů.	Yes	5.03					
I feel that it is worthwhile to work hard for this organisation I am committed to this organisation	No	4.71	1.30	1.05	040		Not significant
ů.	No Yes	4.71 3.74	1.14	- 1.34	348	0.18	Improved
I am committed to this organisation	No Yes No	4.71 3.74 3.44	1.14 1.23				Improved Not significant
I am committed to this organisation	No Yes No Yes	4.71 3.74 3.44 3.50	1.14 1.23 1.26				Improved Not significant Improved
I am committed to this organisation Perceived commitment of organisation towards employees	No Yes No	4.71 3.74 3.44	1.14 1.23	- 1.34	348	0.18	Improved Not significant

* Significant differences between respondents who attended a resilience course and those that had not.

Kicking Down the Barriers to Evidence-Based Policing: An Australian Case Study



Vanessa Coli, Nathan Edwards, Sue Haertsch, Tom Kearney, Will Kerr & Darren Youngs

Abstract

Evidence-based policing describes a way of applying scientific evidence to the practice of policing in a similar way in which these principles are applied by the medical profession (Sherman, 1998). It is characterised by a focus on rigorous scientific research, preferring randomised controlled trials (RCTs) as the best evidence, together with an approach to implementing research into guidelines for practice, and a formalised approach to program evaluation (Sherman, 1998).

Much of the research to date has looked at the application of evidence-based policing yet little research has considered what the actual barriers and enablers might be to adopting evidence-based policing. This research paper looks at how an Australian police jurisdiction has adopted evidence-based policing and what the key enablers and barriers to its adoption have been.

The research found that the police had not adopted a systematic approach to evidence-based policing and that there were five key enablers and barriers to the police adopting evidence-based policing.

Introduction

The promise of evidence-based policing is more effective and efficient policing by better targeting police resources using a scientific method, as opposed to relying solely on experience and intuition (Sherman 1998). At the same time, an evidence-based approach can also increase the legitimacy and transparency of police-citizen interactions, improve information management, and improve performance accountability (Lum 2009).

The value of evidence-based policing, its connection with 'crime science', its priority on gold standard evidence (randomised control trials) and its implementation challenges are all hotly debated in the literature (Bayley, 2016; Laycock, 2012, 2014; Lum & Kennedy 2012; Welsh et al., 2013). The scope of this paper is contained to just one of these areas of focus—the implementation of evidence-based policing.

Implementation matters, and while many scholars and police leaders have put forward suggestions as to the key barriers and enablers to implementation, these theories need to be cross referenced against the history and practice of implementation. There have been no rigorous assessments of how and why evidence-based policing has been adopted by an Australian police force.

This paper contributes to the emerging literature on evidence-based policing by examining how one particular Australian police jurisdiction has adopted the practice, and assessing what the key enablers and barriers have been. It is built on an extensive literature review, combined with surveys of senior members of the police and targeted in-depth interviews, to provide a rare internal perspective on policing practices.

The Context

What is evidence-based policing?

The application of scientific analysis and research to policing and crime prevention was first discussed by Sherman in 1984. Building on this work, Sherman coined the term "evidence-based policing" in 1998 to describe a way of applying scientific evidence to the practice of policing. Evidence-based policing is a unique form of policing, distinct from other methods that also use information to inform decisions. Three of the most common methods often confused with evidencebased policing are *problem oriented policing, intelligence-led policing* and *hot spot policing,* all of these methods are summarised in the boxes below.

Problem-oriented policing, or problem-solving policing, systematically identifies crime problems, analyses the factors contributing to them, develops responses to directly eliminate or reduce the magnitude of them, and then assesses the effectiveness of the strategies (Mazerolle, 2001, p. 5).

Intelligence-led policing involves applying criminal intelligence analysis as an objective decision-making tool to facilitate crime reduction and prevention, through effective policing strategies and external partnership projects drawn from an evidential base (Ratcliffe, 2003, p. 3).

Hot Spot policing consists of having a police patrol presence systematically concentrated in crime hot spots at hot times. The doubling of patrol presence in crime hot spots, with a 15 minute stop, is the optimal length of time that the police need to visit a hot spot for the purpose of deterring crime (Mazerolle, 2001, p. 4).

Evidence-based policing applies scientific evidence to the practice of policing. It is characterised by a focus on rigorous scientific research, a preference for evidence obtained from randomised controlled trials as the "gold standard", an approach to implementing research into guidelines for practice and rigorous evaluation (Sherman, 1998).

As with other evidence-based practices, evidence-based policing is characterised by a focus on rigorous scientific research, a preference for evidence obtained from randomised controlled trials as the "gold standard", an approach to implementing research into guidelines for practice, and rigorous evaluation (Sherman 1998). As Sherman states, it uses the best evidence of "what works" as a guide to police decisions (Sherman 1998). It is an approach which focuses "equal attention on the methods used to conduct research as on its subsequent translation and use" (Huey & Ricciardelli, 2016, p. 124).

Evidence-based policing is promoted as a way to obtain more effective and efficient policing by better targeting police resources through the use of scientific methods. Evidence-based policing involves two main types of research: academic or theoretical, on what works best when implemented, and ongoing outcomes research about the results actually achieved by applying (or discounting) the results of research to a feedback loop for continuous improvement (Sherman, 1998). Sherman further posited that a new "police science" should be based on "targeting, testing and tracking".

He states that police should conduct and apply good research to target resources, and once high-priority targets have been identified, review or conduct tests of police methods to help choose what works best to reduce harm. In addition, police should generate and use internal evidence to track the daily delivery and effects of those practices, including "public perceptions of police legitimacy" (Sherman, 2013, p. 7). This requires agencies to regularly access information and data to carry out evaluation and analysis, which can lead to better managerial accountability, data recording and efficiencies (Lum & Koper, 2015, p. 3).

Future prospects: The push for reform

Three key external factors are likely to create the impetus for police in all Australian jurisdictions to change policing practices over the coming years. The first is the emergence of the global evidence-based policing movement. The second is a commitment from government to implement a more rigorous approach to program evaluation, and the third is a likelihood of future budget cuts. These factors mean that the adoption of evidence-based policing is likely to become increasingly important in the years ahead.

Since the term evidence-based policing was first coined in 1998, it has been championed by numerous academics and adopted by various police agencies, particularly in the United States, Canada, New Zealand and by some Australian jurisdictions (Martin & Mazerolle, 2015). Internationally, there are many examples of evidence-based policing programs. For instance, the Boston Police Department's *Safe Streets Team* was an evidence-based approach to combat a spike in violent crime (Bragam et al., 2004). In the United Kingdom, London's Metropolitan Police adopted its *One Met* strategy that commits it to "an evidence-based approach to tackling crime" (London Metropolitan Police, 2013). In 2011, New Zealand Police adopted its *Prevention First* National Operating Strategy boasting a strong evidence-based focus (Stanko & Dawson, 2016).

Within Australia, there is also considerable interest in evidence-based policing. Victoria Police formally adopted evidence-based policing in 2002 (Bradley & Nixon, 2009), and Western Australia Police has recently established an Evidenced-Based Policing Unit (Western Australia Police, 2016). Evidence-based policing also sits as a core policing value in the Services' Operational Plan for Queensland Police (Queensland Police, 2016).

The Western Australian experience in many ways exemplifies the international trend towards evidence-based policing. The reasoning behind the adoption of evidence-based policing in Western Australia is the demand to achieve better outcomes with limited resources, as the state "is experiencing a population boom but cannot rely on a continued mining boom to help support it" (Easton 2016, p. 1), as well as the sponsorship of senior officers who "have seen the value of augmenting their years of experience and knowledge with empirical evidence" (Easton 2016, p. 1).

The second likely push for police to adopt evidence-based policing comes from the adoption by government of formal program evaluation guidelines. For example, these guidelines were first adopted in 2013 in New South Wales (NSW) to drive a more consistent approach to evidence-based policy development and improve transparency and justification for government programs (NSW Department of Premier and Cabinet, 2016). In 2016 these guidelines were revised and strengthened. Compliance with the guidelines is intended to be mandatory and government agencies (including the police) are expected to regularly evaluate their programs to assess relevance, efficiency and effectiveness.

The final likely driver for Australian police forces to change their policing practices is the prospect of future budget cuts. Again, using the NSW example, the NSW Treasury released its Intergenerational Report that projects Government expenses will continue to grow at a faster rate than revenues over the next 40 years, and on this basis forecasts a "fiscal gap" in 2056 in NSW of equivalent to \$17 billion in today's terms (NSW Treasury 2016, p. 5). Across Australia there will be mounting financial pressures like this, to do more with less. This is likely to create strong incentives to implement more efficient and effective policing procedures. In this context, it is important for any Australian police jurisdiction to understand the barriers and enablers to the systematic implementation of evidence-based policing.

The Research

Method

Respondent interviews, surveys and secondary research were determined to be the best fit for this research project. The survey was designed as a structured questionnaire based on examples by Weng et al. (2013), Panagiari (2008), Polk et al. (2010) and Ubbink et al. (2013) that had been developed for the medical field to understand the enablers and barriers to evidence-based practices in medicine.

The six targeted survey participants were senior commissioned officers (Superintendents and Inspectors), selected because they were considered more likely to influence policing strategies.

Limitations

A total of 52 surveys were started and 41 were completed. The response rate was low, potentially around 4.6%; however, the respondents' data was consistent between the interviews and surveys.

Survey results

Knowledge and understanding of evidence-based policing

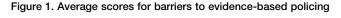
The majority (82.9%) of respondents stated that they were somewhat or very familiar with the term evidence-based policing. However, less than a quarter (22%) selected the correct definition of evidencebased policing in the subsequent question. Nearly one-third (31.7%) of respondents selected the intelligence-led policing definition while under half (41.5%) selected the problem-solving policing definition. Notwithstanding this, nearly two-thirds or 65.9% of respondents considered that their policing decision-making to be evidence based.

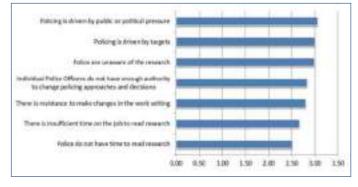
A majority of respondents (87.8%) believed that policing decisions by their police force were somewhat or strongly evidence-based. At the same time, 75.6% thought there could be somewhat or significantly greater use of evidence by their police force for policing decisions. Respondents also reported that in just under half of their decisions (46.3%), they used research that they accessed at least on a weekly basis. It was reported that this research was sought or obtained from a variety of methods including the library, journal articles, research reports, and reference texts, with the internet most often used.

Barriers to evidence-based policing

Respondents were asked to rate barriers to the adoption of evidencebased policing in their police force. While a large proportion of respondents incorrectly defined the term evidence-based policing, all views on the barriers (and enablers) to its adoption were considered. This is another limitation, and it highlights the importance of also using in-depth interviews to test the survey findings.

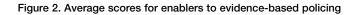
To determine the strongest preference, responses were given a score based on the veracity of agreement (1 for *to no extent* to 4 for *to a great extent*). Statements which scored an average of over 2.5 are highlighted in Figure 1.

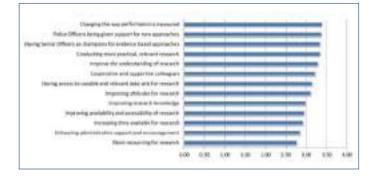




Enablers to Evidence-Based Policing

Respondents were also asked to rate enablers to evidence-based policing on the same scale. All statements scored an average of over 2.5, and these are highlighted in Figure 2.



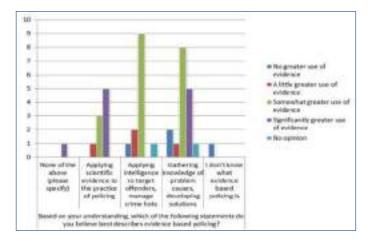


Cross-tabulation of results

Cross-tabulation of the results highlights the extent to which the term evidence-based policing is misunderstood. For example, less than half (44.4%) of the respondents who selected the correct evidence-based policing definition reported that their policing decisions were evidence-based. In comparison, nearly three-quarters (66.7%) of those who associated evidence-based policing with hot spot or problem-solving policing believed that their policing decision-making was very evidence-based.

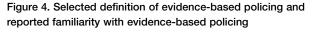
The survey results suggest that evidence-based policing has in fact had very limited adoption by this police force. Over half (55.6%) of the respondents who defined evidence-based policing correctly, noted that their police force could make significantly greater use of evidence. In comparison, relatively few respondents (16.7%) who selected the definition of hot spot or problem-solving policing felt there was the same potential to increase the use of evidence in decision-making. A bivariate analysis was conducted to see if there was a correlation between these responses, however the relationship was not found to be statistically significant (p = .136).

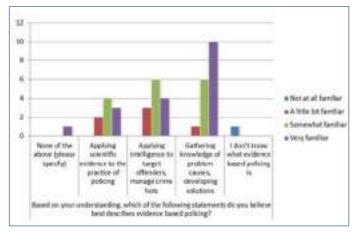
Figure 3. Selected definition of evidence-based policing and belief in more evidence could be used in decision-making by their police force



The majority (86.7%) of respondents that identified the definition of evidence-based policing as hot spot or problem-solving policing believed they were somewhat or very familiar with the term evidence-based policing. A chi-squared test of statistical significance was

conducted to see if there was a correlation between these responses and a statistically significant relationship was found (p < .001).





Interview results

Interviewees fell into one of two groups: those who understood what evidence-based policing was and those who did not. As with the survey responses, the level of understanding of evidence-based policing tended to influence whether they thought evidence-based policing was being undertaken by their police force. Those who correctly grasped the term evidence-based policing believed that it was not being practiced in the agency. Those who appeared to misunderstand the term were more likely to believe evidence-based policing was happening.

The interview discussions highlighted a few key similarities with the survey results on the enablers and barriers to implementing an evidence-based policing approach. For example, policing targets and the focus on reporting measurements were in the main, reported as a barrier in the survey results and by interviewees who had an accurate understanding of the concept.

Indeed one interviewee commented that such targets invariably led to a focus on "solving" crimes (that is, identifying a perpetrator) rather than addressing the precursors and enabling the citizenry to feel safe.

The interviews also lent weight to the hypothesis that the term evidence is particularly confusing because it is strongly connected to the legal context of policing. That is, evidence is necessary to prove an offence (so it is a ubiquitous aspect of police work). A number of the interviews highlighted the potential for confusion that this can cause as police strive to ensure their actions are evidence-based. This appears to be a subtle, yet potentially significant barrier to evidence-based policing that has not been widely considered in the literature.

Another interesting theme to emerge from the interviews relates to the structure of the police force and the freedom that is provided to Commanders in how they prioritise and allocate resources. While there are locally based crime targets for the police force, this was reported in a number of the interviews as still enabling Commanders to exercise considerable discretion in terms of the policing and intervention strategies implemented in the particular local context. This can make it difficult to implement organisation-wide policing reforms.

Finally, the interviews highlighted an interesting conundrum for this police force. Everyone interviewed emphasised that they considered that their police force, on the whole, does an excellent job of fighting crime, and it has an extremely dedicated workforce. Furthermore, they pointed out that there is a high level of trust in their police force and crime has steadily declined.



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All of the interviewees wanted to continue their existing work fighting crime, but those that genuinely understood what evidence-based policing was believed that to continue to improve and to "future proof" the organisation, an evidence-based approach was essential. However, they also acknowledged there is in general not a perceived need to change within the organisation, and it would be a great challenge to effectively implement it.

Discussion

Analysis of key themes

The research results support a number of the common barriers identified in previous studies, such as the observation of Martin and Mazerolle (2015) that evidence-based policing is easier said than done and Bradley and Nixon's (2009) conclusion about the importance of having relevant and available academic research to help guide policing practices. The dominance of traditional policing practices acting as a barrier to implementation of evidence-based policing, as observed by Engel and Whalen (2010), was also reflected in the results. Interestingly, the stability and strong reputation of the agency also appear to reduce the incentive to change existing practices—a theme not reported in the literature to date.

The literature indicates that adopting evidence-based policing is difficult (see for example, Martin & Mazerolle, 2015), therefore it is not surprising to find that this Australian police jurisdiction appears to be facing a number of difficulties in its adoption. In particular, the research from this study suggests that:

There is widespread inconsistency and confusion between some senior members of the police force about what evidence-based policing is.

- There is a recognised need for more relevant and better communicated research of effective policing practices.
- This police force does not currently have a "burning platform" to drive the operational and cultural shift towards evidence-based policing.
- What is important to the police force is what is measured by the police force. Currently, this does not include the use of evidence beyond hot spot and intelligence-led policing.
- The authority given to Commanders is significant enough to allow for champions of evidence-based policing to enable and embed this new way of operating. Equally this operating environment, with high levels of local autonomy, makes it difficult to rollout organisation-wide change.

Understanding of evidence-based policing

The survey and interview results indicate that the concept of evidencebased policing is poorly understood and prone to confusion within the police force (particularly in relation to hot spot and intelligenceled policing, which are two complementary but different policing approaches). This is consistent with Martin and Mazerolle's (2015) finding that implementing evidence-based policing is much more complex in practice than in theory. There are two aspects to this issue: understanding what comprises evidence (which is aligned with data/intelligence or factual information gathered to meet a standard of proof), and a common disconnect between a familiarity with the term evidence-based policing and correctly interpreting what it means.

One of the critical questions that typically emerges in discussing evidence-based policing is what counts as evidence (Herrington, 2016, p. 13). This question relates not so much to the data used but to the method of evaluation of the policing program. The Maryland

Scientific Methods Scale was developed as an evidence hierarchy by Sherman and others in reviewing police programs for a report to the United States Congress on what works (Sherman, 1998), to help provide an answer to the preferred evidence for the evaluation of policing programs (Herrington, 2016, p. 14).

Our research indicates that data and intelligence are commonly understood to comprise "evidence" within the Police Force. By extension it is commonly assumed that if policing methods make use of data and/or intelligence, then it must be "evidence-based". What this fails to appreciate is that data is just one aspect of evidence-based policing, and the critical use of rigorous scientific methods to evaluate the effectiveness of police practice is a cornerstone of evidence-based policing.

Question 10 of the survey asked respondents to select the correct definition for the term evidence-based policing. Less than half (46%) of survey respondents chose the correct definition, despite a majority (87%) saying they were somewhat or very familiar with the term. The most commonly selected alternative definitions were problem-solving policing (four in ten respondents) and intelligence-led policing (three in ten respondents). This pattern was corroborated in the interview discussions where in a number of cases, interviewees spoke confidently of particular policing decisions being strongly informed by data and intelligence. However, through the discussions it became apparent that the term was being used interchangeably (and incorrectly) to describe hot spot, problem-solving or intelligence-led policing strategies.

Adoption of evidence-based policing

The pattern of inconsistency in the understanding of evidence-based policing was evident through the cross-tabulation analysis of the survey results and in the interview data. The survey data shows a correlation between the understanding of evidence-based policing and perceptions of its use. While the bivariate analysis did not find a statistically significant relationship, the interview discussions confirmed its validity. Indeed, both survey respondents and interviewees who demonstrated an accurate understanding of evidence-based policing were also more likely to indicate that evidence-based policing was not being used and that it should be used more. In particular some interviewees said that proper evaluation of practice was not being done to demonstrate whether police actions were effective. In some cases there is a correlation between police actions and reduction in crime, but there is no rigorous evaluation of the reasons why, and the question of whether police practice is causative of the reduction, or coincidental, remains. If police took no action would the result happen anyway, or could different action improve the result, or make it worse?

Interview discussions also highlighted a significant use of intelligence and local crime data, with resources often deployed on this basis. This was sometimes cited as evidence-based policing, reinforcing the challenge that police officers have in differentiating the multiple uses of the word "evidence". While the interviewees resoundingly praised the work of the police force, it was apparent that approaches to policing could make better use of rigorous evaluation, and that, overwhelmingly, current practices are predominantly consistent with hot spot, problem-solving and intelligence-led policing.

Why change existing practices?

The primary research results confirmed a hypothesis from the literature review: at present there does not appear to be a burning platform for change within this Australian jurisdiction police force. The free text survey and interview responses affirm the strength of leadership within the police force and the commitment at all levels of the agency to high performance. While the results also indicate that evidence-based policing is not currently a focus within the police force, overwhelmingly, those surveyed and interviewed see the agency as doing a very good job with excellent leadership and innovative approaches to the use of data. Numerous examples were given in the interviews of innovative policing strategies.

The survey interrogated the potential for cultural barriers to change, finding that a majority (85%) of survey respondents felt that, to some extent, the police force is unwilling to change or try new ideas. Survey responses highlighted the need for senior officers to be seen as champions for evidence-based approaches as the most significant enabler for change. Similar comments were recorded in interview responses, while consistently acknowledging the agency's achievements in innovative approaches to the use of information. What appears to be needed is a powerful advocate from within the agency and buy-in from a critical mass of front-line practitioners to achieve the necessary fundamental cultural change.

Access to research

The need for more relevant and better-communicated research on effective policing practices emerged as another strong theme. In particular, survey responses noted gaps in the knowledge base, lack of clear or directly relevant recommendations, and research not being relevant to practice. These findings are consistent with the findings of Bradley and Nixon (2009), and highlight the particular challenge of adopting the findings of academic research among a workforce of highly experienced practitioners.

Interview responses further elaborated on this theme, suggesting a common view among experienced police officers that if evidencebased policing is about having the best available evidence, then in lieu of scientific evidence, evidence from experience is the next best thing. For example, one Commander suggested that he was at the cutting edge of policing in implementing strategies to build relationships with Middle Eastern communities, many of whom have recently fled wartorn regions and settled in the area. The Commander queried whether academic policing research could possibly provide solutions to such situations. The challenge of academic research providing solutions to such specific and diverse scenarios was identified as another key barrier to implementing evidence-based practice.

The majority (91%) of survey respondents indicated that the lack of clear recommendations in research for practice is a barrier to evidence-based policing. Furthermore, 75% of respondents indicated that the available research is not relevant to practice. The interviews did not fully support this view, with some interviewees citing connections between the police force and tertiary institutions.

Discussions with interviewees suggest that relevant evidence is available. However, this mostly comprises intelligence gathering and crime data rather than the empirically based evidence demanded by evidence-based practice. Irrespective, nearly half (47%) of survey respondents reported that they search for new research or practices to enhance their policing decisions on at least a weekly basis.

A common theme emerging from the interviews was that evidencebased policing cannot and does not replace experience and expertise. A number of interviewees noted the contested nature of what constitutes evidence. That decision-making is not a mutually exclusive dichotomy of evidence or experience was also apparent from the survey responses, in which respondents indicated that use of research or evidence (64%), experience (68%) and standard operating procedures (57%) informed their decision making, while instinctive "gut" responses (25%) were a minor factor.

Overall, the results show a consensus view that despite differing views of what constitutes evidence in the context of evidence-based policing, decision-making by police does, and must, come from a variety of information sources.

Challenging traditional performance measures

Data from both the survey and interviews highlight that adopting evidence-based policing challenges traditional approaches to policing practice, particularly in the context of performance driven targets. The change that evidence-based policing demands is both cultural and operational.

From an operational perspective, interviewees and survey respondents indicated that an organisational focus on targets for particular crime data was a common barrier to the adoption of evidence-based policing. In particular, 75% of survey respondents indicated that target-driven policing is a barrier to evidenced-based policing. This was emphasised in one interview with the apt phrase "you get what you measure".

Furthermore, interviewees and survey respondents identified that current systems do not facilitate good information sharing. Interviewees stated that it is not easy to check if another part of the organisation has tested (or is using) a particular policing strategy and survey respondents indicated that having access to useable and relevant data sets for research was the sixth most important enabler of evidencebased policing.

A strong and stable agency

Two aspects of the agency's public sector context were evident from the research. The first relates back to the strength of the agency's "brand", reflected in the high levels of support it enjoys from both senior levels of government and the community (its "authorising environment"). The second is associated with the agency's structure.

The lack of a burning platform to drive a change towards evidencebased policing became apparent from the interviews. The discussions consistently noted that the police force is performing well. The agency is enjoying high rates of community acceptance, crime rates are down and policing practices are effective. Therefore, against existing measures there appears to be little reason to change. This perspective was consistent with survey results, which highlighted that changing the way performance of police is measured is the second most important enabler of evidenced-based policing.

The discretion available to Commanders was identified through interview discussions as both a barrier and potential enabler for evidence-based policing. Although covering relatively small geographic areas, the Commanders have enough discretion in determining priorities to enable and promote evidence-based policing practices.

Conclusion

When effectively implemented, evidence-based policing can improve the effectiveness and efficiency of policing by better targeting how police resources are deployed (Sherman, 1998). It can also increase legitimacy and transparency to police–citizen interactions, improve information management, and performance accountability (Lum, 2009). Effective adoption and implementation of evidence-based policing is therefore an understandable and desirable objective for any modern police force.

Since 1998 there has been a reasonable amount of literature published on the topic of evidence-based policing. However, very little has focused on the enablers and barriers to its adoption, and none has systematically examined the extent to which a police force has adopted it. The findings from this study therefore begin to fill a large gap in the existing literature on evidence-based policing.

Following the collection of qualitative and quantitative data in the form of a survey and interviews of senior police officers, we found that the implementation of evidence-based policing in this police force is at an early stage. The willingness to reform exists among some senior officers, but there are many barriers to its widespread adoption.

Interestingly, many survey respondents believed the adoption of evidence-based policing to be more commonplace than it is, and this is partly due to a misunderstanding of the term. In particular, evidencebased policing was found to be commonly confused with intelligenceled policing and hot spot policing.

Many enablers and barriers were identified, and these were largely consistent with what the literature suggests them to be. Specifically, it was found that implementing evidence-based policing is "easier said than done", as has been indicated by Martin and Mazerolle (2015). A lack of empirical research in policing was identified by Ratcliffe (2002) as well as by Bradley and Nixon (2009), and this too was also found this study. Similar barriers were also found in that there is insufficient time to read the research and a lack of ease in accessing the research.

Some barriers suggested in the literature were not particularly supported by the findings from this study. For example Engel and Whalen (2010) found the language of academics' can imply intellectual superiority and drive a distrust by police. Furthermore, Telup and Lum (2014) argue that it is naïve to think that officers would be proactively scanning the academic literature and Laycock (2014 p.398) concluded that is reasonable to presume "the police will not read journal articles" yet this study found that many Police Officers claim to be doing just that.

Engel and Whalen (2010) suggest that a notable barrier to evidencebased policing is the change required from traditional policing methods. This study took this a step further and found that this barrier can be separated into operational and cultural components. From an operational perspective some barriers for this police force include a shift from a traditional focus on crime reduction performance targets, limits to existing information systems and access to useable and relevant data sets. From a cultural perspective, there is a degree of unwillingness to try something new and a need to have senior officers as champions for evidence-based approaches.

Both past research (Martin & Mazerolle, 2015) and this study have found that implementing evidence-based policing is more effective with senior police championing the change. This is even more powerful with a burning platform for change requiring the authorising environment to do something different.

Police forces around Australia and the world are at various stages of implementing evidence-based policing. Like all other Australian jurisdictional police forces, the agency in this study has a great challenge ahead to further adopt evidence-based policing practices and embed them in a systematic way both operationally and culturally. The barriers are not insurmountable and the enablers provide considerable promise.

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Rewarding Operationally-Relevant Research: A Critical Role for the University



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In May 2017, Howard Spivak, the Acting Director (at the time) of the US Department of Justice, National Institute of Justice (NIJ) explained that the NIJ is stressing the importance of translating research findings and making them available in practical terms to policymakers and practitioners. He wrote: "... we are also calling on research organizations, particularly academic institutions, to critically reflect on what they value when assessing a professor's qualifications for receiving tenure."¹ His plea for both the need to share research findings with those who can implement them, and rewarding the researchers for translating the findings into evidence, is an important step toward bridging the gap between researchers and practitioners (see, Lum & Koper, 2017, and Rojek et al., 2012).

In Great Britain, the four Higher Education Funding Councils have encouraged academics and institutions to produce "impact statements", to include forms of assessable outcome measures for applications. Following the British model, the Australian Research Council has recently looked at the impact of university-based research on real world applications. While these efforts have not systematized their approach to "impact", they have encouraged broadening of the concept, and made suggestions on how to measure it. In the United States, the NIJ now requires researchers to articulate in their proposals the potential impact of the study on policy and practice, and plans to disseminate the research to practitioners and policy makers, but these efforts to incorporate these considerations only influences the small number of academics who compete and receive NIJ research grants. For the larger portion of the academic community, the conceptualization of research impact largely remains citation counts and other traditional measures.

While there are some academics in all these (and other) countries who take the time and effort to put findings into an understandable and useable form, many remain content to publish their results so other academics will cite their work, which helps improve the metrics by which they are currently recognized and rewarded. In other words, because publishing in outlets other than those recognised by the academic community is timely and unrewarded in the academy, it is rare. As Dr. Spivak suggests, this emphasis on limited metrics must be modernised to encourage members of the academic community to contribute to the important base of information used by practitioners, by recognising and rewarding their efforts. The growth of translating research into practice is increasing, but largely remains a desired goal rather than a development to be examined. By contrast, the study of the translational process has been an area of interest in medicine, public health and education (Chambers et. al., 2011; Huberman, 1994; Jacobson et al., 2005; Lavis et. al., 2003). The growth of similar efforts in criminology would not only inform the practice of translation, but also improve its relevance in the discipline (Martin & Mazerolle, 2016).

In many disciplines, applied research is considered secondary to the development and testing of theory. Some departments and universities even limit the journals in which articles count as having impact, based on a complicated and manipulable set of measures. Researchers do what brings them rewards, so how can the academy modify behaviour and willingness to spend time and effort translating academic research

findings? If academic leaders would recognise the importance and the influence of evidence, they could redefine the measurement of impact.

The suggestions made by the British and Australian councils and the NIJ should be used as a springboard so university administrators can begin the process to redefine how applied researchers are rewarded. This change will not be a substitute for high-quality, peer-reviewed research published in prestigious academic journals. Any young scholar will have to prove her or his worth by competing successfully in the world of publication that has been around since the beginning of the academy. Time taken away from that world will reduce the traditional measures of impact.

However, these traditional measures do not show, in the mid-2000s, what is real impact. The Internet has changed the way we receive and share information. For example, ideas are presented by scholars on a variety of websites where others can comment and provide insight to the scholar on the ideas. Blogs are often important ways to share and comment on ideas as well. Reads, downloads, shares, and other actions are all ways to measure impact. For example, the growth of the evidence-based policing movement, and the establishment of collaboration between researchers and policymakers, shows the willingness of practitioners to accept research findings as evidence. We are still struggling with ways to evaluate the utility of published findings and other evidence, but the implementation of ideas in the real-world certainly indicates impact. The question becomes to capture the influence of a particular scholar on practitioners or policymakers.

Our incremental way of rewarding academics remains, with the goal of professorship and named chairs having the highest earned status. Perhaps a conventional path to the first promotional level should remain in place so traditionalists are pacified and young academics are force to continue to demonstrate abilities and show acceptance. At the next point in the promotional process, however, applied research and translated findings must be encouraged and rewarded. While measures are not yet well defined, evidence generated by research can be demonstrated and clarified in a systematised "impact statement" that includes organizational and behavioural measures of success, to be evaluated by academics and practitioners.

Starting at the department level in applied fields, a scholar should be rewarded as one who contributes to the real-world and makes a difference not just to other scholars, but to those responsible for managing the systems the scholar studies, and the public who benefit from the changes. For example, the term commonly used is "evidence", and we argue for a concept that includes evidence and other, broader contributions and ways to measure them. Beyond the traditional matrices, we think other outcomes and outputs should be recognised. Again, we do not suggest that all scholars should be held accountable to illustrate a real-world impact of their work, but to suggest a framework that values and rewards such efforts.

In Australia, promotion to a Senior Lecture position, and in America, promotion to an Associate Professor may remain true to the old system of impact.

Beyond the first level, and after proving one's abilities, impact should be comprehensive and include measures of practicality and usefulness. The successful scholar has proven themselves at one level, and the goal of success should be broadened to include not only traditional measures, but real-world recognition. Today, scholars are reviewed by peers for promotion (and tenure in the US). Perhaps the assessment of a skilled practitioner should be included in that analysis? Other, more senior scholars are often asked whether a candidate is well-known or has developed a reputation in the field. Who better to supplement assessment information to help answer that question than practitioners? An applicant could explain his or her efforts in an impact statement critically reviewed by practitioners who are aware of the true impact of the research. For example, if the authors were to develop an impact statement, it would include the reports and data from almost a decade working together in a partnership between Griffith University and the Queensland Police Service to combine research evidence and officer experience into organisational and behaviour change. In just the areas of pursuit driving and use of force many lives have been saved, injuries averted and costs reduced, based on the use of evidence to change policy and influence behaviour. This impact statement could be evaluated by those in the agency management chain and their conclusions could help the university administrators evaluate the work of the academic. The critical issue is the value ascribed to the real-world impact. For example, the impact statement could include contributions to national standards, or best practices. Certainly, invitations to testify to national or regional policy boards or panels, task force reports, coroner's inquests, and court proceedings or investigations, would all be important efforts. Research that has been translated to reach the practitioners and which has made a difference is perhaps the most important contribution. While the list could be expanded, the point here is to get the conversation started.

We argue that real-world impact must be part of the criteria that reward academics, and the more value that is added, the more realworld impact we will see. The academic work conducted, translated and published in professional outlets will not replace traditional academic publication outlets. The academy will never be void of a journal hierarchy, Journal Citation Reports, Google Metrics and other ways to evaluate scholarship traditionally, but the thoughtful interpretation of these measures (and others) is always dependent on experts and personal perspectives. Finding a way to combine these diverse but related reward metrics will benefit researchers, universities, agencies and the public.

End notes

1. https://nij.gov/about/director/Pages/spivak-communicating-science.aspx

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2018 ANZSEBP Conference – AIPM 25/26 October 2018





Inspector Scott McLaren, Secretary ANZSEBP, Queensland Police Service

This year was the fourth annual conference hosted by the Australia and New Zealand Society of Evidence Based Policing (ANZSEBP), from the 26th to 27th October. Once again, we were privileged to hold the conference at the historic Australian Institute of Police Management (AIPM) picturesquely situated at stunning Manly in Sydney.

The AIPM remains one of the premier locations for law enforcement conferences. Not only does it boast some of the best views in the country, the quality of the facilities and equipment are amazing, not to mention the outstanding levels of service and dedication by the Institutes staff, all of which contributes to the success of these conferences.

The AIPM is located within the lands of the Guringai people, the traditional owners of this vast area of northern Sydney. We were privileged to have Uncle Allen Madden (pictured below), an elder of the Eora nation, welcome the conference delegates to his country. Uncle Allen provided delegates with an in-depth appreciation of the area's history and its people, in an informative and often humorous manner.



Once we'd been welcomed to country, the conference was opened by Assistant Commissioner Debbie Platz as the Society's Deputy Chairperson, providing an overview of the sessions through the two-day conference as well as introducing the three key note speakers. Mrs Meme Styles and Mr Eric Byrd (Measure Austin) and Dr Peter Neyroud (University of Cambridge).

Meme Styles and Eric Byrd lead the not-forprofit organisation, Measure Austin in the US state of Texas and are leading forces in ensuring the community law enforcement initiatives are evidence based.

Together, Meme and Eric provided a thought-provoking presentation that gave

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delegates a unique, community-based perspective of EBP. The examples and anecdotes they shared demonstrated the community's appreciation and desire to see the implementation of evidence-based strategies into everyday interactions between law enforcement and the communities they police.



Dr Peter Neyroud offered a fascinating presentation on evidence based approaches to combatting with transnational organised crime. Peter also provided a different and timely perspective on the utilisation of EBP in dealing with counter terrorism and tackling the issue of violent extremism.

Peter's engaging presentation demonstrated the great value and benefit, that his law enforcement and academic experience delivers to this extremely important area of policing.



The next session focused on Body Worn Video was opened by Dr Justin Ready (Griffith University). As usual, Justin amused and bedazzled everyone with his experience, insight and wit, as he stepped delicately through his current research on body worn video (BWV).

Justin's research will provide a greater understanding on the impact body worn video has on the interaction between the community and law enforcement.

Dr Peter Neyroud followed up with an overview of the systematic reviews conducted by the Arnold Foundation around Body Worn Video and its implementation in policing. To close out this session Supt David Cowan (VICPOL) led a lively panel discussion on BWV with Meme Styles, Dr Peter Neyroud, DC Jeff Loy (NSWPOL) and Dr Justin Ready.

The afternoon sessions delivered a preview of the amazing work being done by some of our members around Australia and New Zealand. Dr Sarah Bennett (UQ) discussed EBP training and a body of work QPOL and UQ are conducting in the space.

This was followed by a series of 'shortshot' presentation Dr Mark Kebbell (Griffith University), Mr Paul House (WAPOL), Dr Patrick Tidmarsh (VICPOL) and Senior Sergeants' Simon Williams (WAPOL) and Bruce Peel (QPOL).

Whilst these presentations were time limited, the quality of the presentations and content was outstanding. These presenters demonstrated the very high quality and quantity of work that we are developing within our members.

The last session of the day saw three panels run concurrently looking at differing views of EBP, including the testing of new practices to address real world policing issues, identifying





the benefits & mitigating the risks to policing agencies and the significance of strong leadership to make the evidence work.

These panels were an outstanding success but would not have been possible without some amazing panellists, Supt Dave Cowan, Dr Geoff Barnes, Dr Justin Ready, Dr Charlotte Gill, Supt Andrew Pilotto, Meme Styles, ED Mark Evans, Prof Lorraine Mazerolle, AC Deb Platz, AC Paul Dickson, DC Jeff Loy and Mr Eric Byrd.

The evening gave everyone an opportunity to socialise over a reception and later conference dinner. Whilst the day's sessions provided the fuel, the evening really ignited the fires with some wonderful collaborations and future strategies being planned and organised late into the evening. Truly a superb evening, reaffirming friendships and developing new alliances.

ED Mark Evans (NZPOL) opened Day 2 revealing the breakthrough work being done in NZ around EBP. The following session provided an enthralling series of presentations that focussed on combatting Drugs and Alcohol. Dr Don Weatherburn (NSW BOCSAR) regaled the five arguments against prohibition, followed by Mr Anthony Morgan (AIC) who looked at strategies to target organised crime.



Dr Joe Clare (UWA) gave delegates a unique look at medical marijuana and its impact on drug and associated crime. The final presentation was from A/D/Supt Michael Cook, who exhibited the exceptional effort NSWPOL is doing in strategically targeting drug crime across the state.

The final session for the conference, focused on finding the evidence. Dr Geoff Barnes (WAPOL) delivered a distinctive presentation on forecasting of incredibly rare events when policing a large pool of offenders.

Not to be outdone by her Australian counterparts, A/Prof Charlotte Gill (George Mason University) demonstrated the value and benefits that systematic reviews have on evidence based policing.





The hardest presentation of all, the final one, was provided by Dr Angela Higginson (QUT). Angela gave delegates a look 'under the hood' of the Global Policing Database (GPD) and tantalised the audience with the possibilities of what was to come.



The 2018 ANZSEBP Conference was an outstanding success. The quality and diversity of the presentations were outstanding throughout the conference and a shining example of the collaborative partnerships that we've established between 'pracademics' and academics.

On behalf of the ANZSEBP Executive Committee thank you to everyone who helped make this year's conference the success that it was, including all of the outstanding staff from the AIPM.



Does Sex Matter?

Domestic Violence Investigations with a Male Victim

Det Sgt Owen Hurley, Serious Sexual Offence Team, Police Headquarters, Welwyn Garden City, Hertfordshire

Introduction

The past 30 years have seen the definition of the term "domestic violence" change repeatedly and dramatically, with the law now forbidding all forms, both emotional and physical (Shipway, 2004), and recognising that domestic violence may emerge in many guises, each with its own long-term consequences for the victim (Home Office, 2013). The definition of domestic violence that the UK Government currently operates on is specifically worded to make no distinction between relationship type, gender or type of abuse: "[Domestic violence is] any incident or pattern of incidents of controlling, coercive, threatening behaviour, violence or abuse between those aged 16 or over who are, or have been, intimate partners or family members regardless of gender or sexuality. The abuse can encompass, but is not limited to: psychological, physical, sexual, financial and emotional" (Home Office, 2016).

Coercive behaviour and controlling behaviour are considered to be distinct terms here. The former refers to acts of assault, humiliation, threat and intimidation, or other abuse that may frighten, harm or punish a victim (HO, 2013). The latter, meanwhile, covers actions meant to force another person into a dependent or subordinate role. Thus, controlling behaviour means isolating people from sources of support, depriving them of any opportunity to claim and assert their independence, exploiting their resources and means of living or securing happiness, and also preventing escape and resistance. Imposing rules on their everyday behaviour may also qualify depending on the nature of the demands (Matthews, 2004; Home Office, 2013).

The new definition is in very sharp contrast to the traditional one of 1973, which referred to civil unrest and violence within a country (as opposed to violence inflicted by an external power) (Willis, 2014). Even later definitions, which switched focus on to families and households were skewed compared to the most recent one, being generally defined as physical violence against wife and children. The meaning began to include emotional and controlling behaviour later, but at the same time set the focus exclusively on women.

The 1993 definition exclusively defined domestic abuse as abuse against women, and was issued as part of the United Nations Declaration on the Elimination of Violence Against Women (General Assembly, 1993): "[Domestic abuse means] *physical, sexual and psychological violence occurring in the family, including battering, sexual abuse of female children in the household, dowry-related violence, marital rape, female genital mutilation and other traditional practices harmful to women, non-spousal violence and violence related to exploitation,"* (General Assembly, 1993).

Only in the last three decades has public awareness been awakened to the other side of domestic abuse, the side that acknowledges the existence of male victims. And not only existence but frequency (Matthews, 2004; NHS Choices, 2015). This has been partially owing to the increase in agencies established to provide help and support to victims of domestic abuse, voluntary and statutory agencies alike (Salter, 2013; Houghton, 2015). However, the increased presence of such agencies is not the only reason. There have also been policy changes at an institutional level, with support expanding from the traditional female-centric model (Jenkins and Davidson, 2001). While the offenders identified by these agencies continue to be predominantly male, the view that domestic abusers are always male has begun to lose ground with the public, marking a major shift from the 1990s when virtually all domestic abuse was equated to female subordination and male dominance (Dobash and Dobash, 1992).

Since it is ultimately the job of the police to handle all abuse cases, as it is for crimes in general, the above facts raise some serious concerns regarding the police's ability, or even willingness, to uncover and deal with such cases (Veenstra and Ivonne, 2013). Such concerns are exacerbated by how the media applies pressure to this institution to hold men responsible for abusive actions and to accept no excuses, whereas women are afforded much lenience and may even apply a stock series of excuses for inflicting domestic violence, including postnatal depression, PMT and stress (Johnson, 2008).

Aims and Objectives

The primary aim of this research was to explore the investigative processes utilised by the police and other relevant organisations and agencies in cases of domestic abuse inflicted by women on men. By this means, it will be possible to determine whether any institutional bias affects the police in such situations. Five objectives will be pursued to enable such a diagnosis:

- Determine whether male victims are treated differently from female ones.
- Establish whether the support system available to males is different from the one available to female victims.
- Uncover the main types of domestic abuse suffered by men.
- Investigate the initial response of the police to reports of femaleon-male domestic abuse.
- Examine the law to see how it protects male domestic abuse victims.
- Assess the public view on domestic abuse inflicted upon males.

To achieve these objectives, a Literature Review was first carried out to piece together the background and main phenomena defining the topic background. Based on this foundation, reports by the British police, government agencies, and even domestic abuse agencies such as the ManKind Initiative, were gathered from the public domain and analysed via a qualitative research model, specifically the mixedmethod approach.

This paper concludes that there is, indeed, evidence of institutional police bias against men, in cases of female-on-male domestic abuse. However, the most significant reason for the low level of effectiveness in dealing with such issues may ultimately be traced to the stigma associated with reporting such cases, as well as the dearth of support agencies for men in comparison to those available to women.

Literature Review

Domestic violence - definition of the concept

According to the Association of Chief Police Officers (ACPO), domestic violence (DV) was defined by ACPO, the Crown Prosecution Service and the government (until recent changes were made) as, "any incident of threatening behaviour, violence or abuse (psychological, physical, sexual, financial or emotional) between adults, aged 18 and over, who are or have been intimate partners or family members, regardless of gender and sexuality (Family members are defined as mother, father, son, daughter, brother, sister and grandparents, whether directly related, in-laws or step-family)" (ACPO, 2008:7). This definition was modified, in September 2012, in order to raise awareness that young people in the 16 to 17 age group are also exposed to the risk of becoming victims of DV. Currently the definition states that DV is: "any incident or pattern of incidents of controlling, coercive, threatening behaviour, violence or abuse between those aged 16 or over who are, or have been, intimate partners or family members regardless of gender or sexuality. The abuse can encompass, but is not limited to: psychological, physical, sexual, financial and emotional" (HO, 2016).

Domestic violence, associated offences and support services

The ACPO (2008) lists the following among offences that may be associated with domestic abuse: harassment, homicides (domestic homicides are estimated at 30% of all homicides in England and Wales – ACPO, 2008) including "honour killings", "honour based violence" (HBV), violence for which cultural justification is provided (i.e. control of sexual activity, threats to kill, forced marriage etc.), prostitution and sexual abuse.

Although the definition of domestic violence does not imply that it applies solely to females, ACPO guidance documents on domestic violence and abuse include a section where the fact of domestic abuse being viewed as primarily experienced by women is obvious. One of the steps towards dealing with domestic abuse entails referring the victims to voluntary sector support organisations. Police officers are not supposed to routinely refer victims to victim support (VS), but they should do so if victims give explicit consent (ACPO, 2008). Under such conditions the document states that the police should refer victims to Women's Aid and Refuge. It is also noted that in the case of areas where specialist services do not exist, police officers are expected to acquire information from the National Domestic Violence Freephone Helpline. The document suggests that some situations might be seen as special cases and in order to highlight the increased difficulty experienced in dealing with such cases it notes that - "There are a small number of specialist refuges and support for women with learning disabilities, ethnic minority women and gay men" (ACPO, 2008:39). All further observations made in this section rely on the assumption that the victims of domestic violence are women. The only reference to men is the one quoted above which refers specifically and exclusively to gay men.

Reasons for considering women's violence towards men

Kimmel (2002) posits that gender symmetry is a myth; however the author found several reasons as to why women's violence towards men should not be disregarded. The first of these is that compassion, support and interventions should be provided to all victims of violence, regardless of the percentage they represent in the total number of victims. Kimmel considers that this idea reflects, to a certain extent, the point made by those who argue for gender symmetry in domestic violence, as they describe their intention as not that of questioning the existence of DV experienced by women, but, instead, of asking for male victims to be similarly defended and supported. Another reason for considering women's violence towards men is, for Kimmel (2002:1354), to "illuminate the gender symmetry in intimate violence among gay men and lesbian couples". The third reason considered is inspired by a notion which reveals a women-centred orientation, namely that investigating women's violence towards men will reveal useful insights respecting "the dynamics of men's aggression against women" (2002:1354).

Considering that women may manifest violence towards their spouses in an attempt to defend themselves, observing and analysing the circumstances of their reactions, the researcher argues, might prove helpful. The fourth reason is clearly female-centred as it suggests that investigating women's violent actions towards their husbands might provide an insight into further protecting them, since their violence undoubtedly exposes them to retaliatory violence from their male counterpart. The fifth and final reason noted by Kimmel is determined by a gender-biased attitude, and it argues that just as men benefit from interventions directed at reducing their own violent behaviour (i.e. being less exposed to homicides), so might women.

Distinguishing between victim and perpetrator – a challenging endeavour

Another delicate aspect considered in the report compiled by Respect (2013) is that of perpetrators trying to manipulate and to reduce the gravity associated with their actions in others' perception. As this is considered to be a common approach among perpetrators it also influences practitioners' approaches to those who present themselves as male victims of DV. "A significant number of men calling the Men's Advice Line who initially identify as victims change their own identification by the end of the call or provide information about the violence in their relationships which strongly suggests that they are either not a victim or in fact are the perpetrator" (Respect, 2013:60). Being aware of these possibilities influences practitioner decision-making as they are less able to dedicate their time solely to male victims and are concerned that they may not be able to correctly identify the victim, and thus endanger that person's safety (Respect, 2013).

The fact that female victims' protection was emphasised, to the detriment of male victims of DV, this may result in male victims' reticent attitudes towards reporting the violent assaults they experience. Such reluctance is confirmed by those calling Men's Advice Line, who consider that calling the police would not prove effective as their call would be treated with suspicion, or not taken seriously at all. It is relevant at this point to mention that, irrespective of the gender of the perpetrator, a male victims' needs are different from those of females, this should be addressed specifically and service providers should increase their efforts to raise awareness among male victims that they have the same rights as females. The report produced by Respect in 2010 also points out the importance for services "to make active efforts to reach male victims and to learn how to respond appropriately" (Respect, 2010).

A study conducted by Douglas and Hines (2011) suggests that male victims who succeed in overcoming their reluctance to report DV do not necessarily address the DV service system. Male victims resort primarily to family, friends and medical providers. Moreover, 67% of male victims canvassed by Douglas and Hines reported that the support services available to them were not helpful or even in some cases, refused.

By contrast, 89% of women victims of DV considered by Douglas and Hines in a study conducted by the 119 service, responded that they found the services to be helpful. A similarly high percentage of satisfied support seekers (95%) was reported by a study which, according to Douglas and Hines, reviewed the opinions of female victims of DV participating in a hospital-based support group for DV. The negative experience reported by male victims of DV is shown to have been impactful not only in respect of discouraging them from seeking further help, but also in the form of "lasting implications for their mental health" (2011:11).

The results of the study are consistent with those presented above and serve as one more argument that, although significant advancement has been achieved in addressing the needs of male victims of DV (Wright, 2016), there is still much to be done towards providing services specifically designed to meet their needs, and equivalent to those offered to women. Male victims (both homosexual and heterosexual) remain, as Wright suggests, "marginalised in a system originally designed for women" (2016:340). The way men are socialised (as self-sufficient) together with a misinterpretation of how domestic abuse might manifest, encourages discrepancies between female and male victim treatment. As Wright argues, the fact that society fails to understand the coercive control dimension of abusive behaviour encourages disbelief with respect to men as victims of domestic abuse, and consequently discourages victims to reach for help, or even to admit their circumstances- "Men appear to struggle to accept that they are a victim of domestic abuse, as it undermines their sense of what being a man means" (2016:343).

Methodology

The research used a mixed method, qualitative approach. Mixed method research constitutes a system of methods for carrying out studies which entail gathering, assessing and incorporating quantitative (for instance, trials, inquiries) as well as qualitative (for instance, focus cohorts, interrogations) research. This study method was employed in the hope that such an incorporation will deliver a more appropriate comprehension of the study issue in comparison with each individually (White, 2016).

Quantitative data comprises close-ended data, such as that used to assess viewpoints (for instance, appraisal measures), conducts (for instance, surveillance checklists) and efficiency tools. The evaluation of this form of information comprises statistically evaluating results gathered on tools (for instance, surveys) or checklists to respond to study queries or to trial assumptions.

Qualitative data comprises open-ended data, typically collected by the investigator via interrogations, focus cohorts and remarks. The evaluation of qualitative information (phrases, documents or conducts) customarily applies the strategy of grouping that information into classes of data and demonstrating the variety of concepts collected through information gathering.

Thus, "Mixed methods" is a term that is used to denote a developing methodology of study which promotes the methodical incorporation, or "mixing", of quantitative and qualitative information in an exclusive examination or continuous strategy of investigation. The fundamental postulation of the aforementioned methodology is that this type of incorporation allows for a more comprehensive and interactive use of information in comparison with individual quantitative and qualitative information gathering and evaluation procedures (AHRQ, 2013).

The origin of mixed methods research may be traced to the social disciplines. Recently, this type of research has extended to the healthcare and medical disciplines consisting of domains such as

nursing, family medicine, welfare, psychiatry, pharmaceutics or allied healthcare etc. Throughout the past ten years, its methods have been expanded and improved in order to accommodate a diversity of study queries (Creswell and Plano Clark, 2011). Such methods comprise promoting precision, providing alternate mixed methods models, stipulating a stenographical annotation framework for designating the plans to enhance connection across disciplines, envisioning methods via charts, recording study queries which may specifically profit from incorporation, and generating motivations for carrying out diverse types of mixed methods researches (AHRQ, 2013).

The key attributes of an adequately-devised mixed methods research are listed below.

- 1. Gathering and evaluating both quantitative (closed-ended) and qualitative (open-ended) information.
- 2. Employing meticulous methods in gathering and evaluating information adequate to the practice of every method, such as guaranteeing a suitable specimen measure for quantitative and qualitative evaluation.
- 3. Incorporating the information through information gathering, evaluation, or debate/discussion.
- 4. Employing methods which apply qualitative and quantitative elements either simultaneously or consecutively, with the same specimen, or with distinct specimens.
- 5. Integrating the methods in metaphysical/academic patterns of study, such as in a social constructionist pattern which attempts to comprehend numerous viewpoints on an exclusive topic: for instance, in which people, policies, liaisons and medical personnel would be involved when responding to reports of domestic abuse against men. This is similar to building a list of caretakers, physicians, etc. who might be involved in medical homes, to give one example (AHRQ, 2013).

For this study, the concurrent nested method of mixed method research has been selected.

Concurrent nested mixed-method research

This model was selected owing to how it employs a singular information gathering stage, through which a prevalent technique (either quantitative or qualitative) shelters or inserts the technique with less precedence (either qualitative or quantitative). This sheltering may imply that the inserted technique tackles a distinct query in comparison with the prevalent technique or searches for data from distinct stages. The information gathered from the two techniques is combined through the evaluation stage of the programme (White, 2016). Thus, concurrent nested research allows for wide and thorough viewpoints on the chosen topic, as well as in order to counterbalance possible deficiencies of the prevalent techniques or data types (in this case, quantitative and statistical reports) (Creswell, 2008).

Strengths:

- Two forms of information are gathered concomitantly, minimising duration and assets (for instance, number of partakers).
- Supplies a study with the benefits of both quantitative and qualitative information (Bergman, 2008).
- Offers strong points which counterbalance the deficiencies of both quantitative and qualitative studies. For example, quantitative studies are poor at comprehending the circumstances or environment in which individuals conduct their affairs; such a position is compensated for by taking a qualitative approach.

Conversely, qualitative studies are regarded as flawed owing to the possibility of prejudiced explanations being devised by the investigator, and due to the hardship of extrapolating results to an extensive group. The aforementioned deficiencies are not encountered in quantitative studies. Consequently, by utilising both forms of study, the strong points of each method may compensate for the deficiencies of the other.

- Offers a more accomplished and inclusive comprehension of the study issue in comparison with either quantitative or qualitative methods separately.
- Offers a method for devising superior, more background-specific tools. For example, qualitative studies offer the possibility of collecting data concerning a specific subject or concept for the purpose of creating a tool with enhanced concept cogency i.e., which assesses the concept that is meant to be assessed.
- Aids in defining results, or the way in which causative procedures function (White, 2016).

Weaknesses:

- The information has to be converted in a manner that will allow the integration of both forms of information throughout the evaluation. This may be hard to accomplish.
- Disparity among distinct techniques may lead to uneven evidence in the research. This may constitute a drawback when explaining the findings (AHRQ, 2013).
- The study model may be highly intricate.
- The implementation of this form of study consumes a great deal of time and assets.
- It may be hard to design and apply one technique by drawing on the results offered by a different method.
- The manner in which dissimilarities that emerge in the explanation of the results is settled may be ambiguous (White, 2016).

Summary

The incorporation of quantitative and qualitative information as a mixed methods research offers the significant prospect of enhancing the meticulousness and augmenting the assessment and results of any PCMH analysis. By the careful selection of a mixed method model which provides the best answers to the analysis' queries, and meets its asset limitations, analysts may promote a more comprehensive and significant knowledge relating to the productiveness and application of measures in the given subject: in this instance, to determine whether or not there is evidence of intuitional prejudice by law officers in cases of victims of familial brutality being men (AHRQ, 2013).

4. Findings

The Home Office, CPS (Crown Prosecution Service), the College of Policing and the ACPO (Association of Chief Police Officers) have been collaborating towards the goal of reducing domestic violence, as well as safeguarding the victims of acts that still occur (NPIA, 2012). As a part of this strategy, the ACPO carried out a risk assessment for domestic abuse, safeguarding and harm (DASH), based on questions which returned scores indicating whether victims are at a standard, medium or high risk of suffering further harm at the hands of their abuser. The framework is alternatively known as The Domestic Abuse, Stalking and Honour Based Violence Risk Identification, Assessment and Management Model, and was released in 2009 (DASH, 2009). However, there is no version of DASH for male victims, which was a first major sign that there might, indeed, be institutional bias against male victims of domestic abuse in the UK.

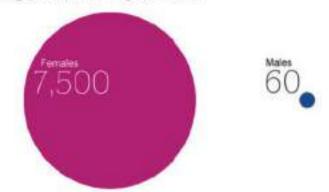
Statistical Facts

To begin with, there is a massive disparity between the numbers of refuge places available for women as opposed to those available for men, as shown in Figure 1.

Figure 1: Number of refuge places available by gender in England and Wales for victims of domestic abuse (Campbell, 2010)

Provision of refuge

Refuge places available in England and Wales



Considering that, according to the Home Office's findings that female victims of domestic abuse amount to 27.1% of females, the difference in provisions and refuge places available to them compared to men can only be labelled egregious, and has led to the establishment of movements such as the ManKind Initiative, whose purpose is to eliminate this discrimination, knowing or otherwise (ManKind Initiative, 2016). In more practical terms, the organisations above received subsidies worth £3.5 million in December 2015, all of which went towards helping female-related charities (Baroness Williams of Trafford and Department for Communities and Local Government, 2015).

Of at least equal relevance is the British Crime Survey for the years 2001-2007, which shows that 24% of all victims of domestic violence were inflicted upon men.

Table 1: British Crime Survey 2001-2007, in units of thousands (Home Office, 2008)

BRITISH CRIME SURVEY

Thousands						
Year	Total	Male Victims	Female Victims	% of Men		
2001-02	621	117	511	19		
2002-03	501	135	366	27		
2003-04	446	150	298	34		
2004-05	401	92	308	23		
2005-06	357	72	285	20		
2006-07	407	94	313	23		
Total	27,332,733	660	2,081	24.33		

All figures subject to BCS roundings

According to the ManKind Initiative, these figures have not been acted upon in any meaningful way by other parts of the British government and agencies of the state (ManKind Initiative, 2016).

The ManKind Initiative is a charity whose purpose is to provide male victims of domestic abuse with a dedicated help-line. Based in Taunton, this agency is one of only three performing similar functions, the others being the Male Advice Line and Mens Aid. Moreover, it provides training to police and local government for giving proper assistance to, and processing of, male abuse victims (House of Commons Home Affairs Committee, 2008).

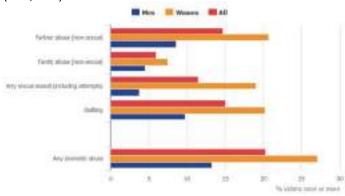
That it is virtually alone in this endeavour embodies the compelling evidence that there exists an institutional bias against male victims at police level. The issue is further exacerbated by the fact that the ManKind Initiative operates solely by virtue of individual donations, monies left in trust and some funding via private sector donations; a shoestring budget that has seen scant relief in the years since the barely avoided closure of 2008 (House of Commons Home Affairs Committee, 2008).

As seen elsewhere regarding provisions for male victims of various crimes, the current state of affairs has its roots in feminism (Addams, 2010). Specifically, men are widely described as the "violent sex" by feminists, who have also spread many myths about men and their treatment of women. Among the more well-known myths are:

- Around 6 million wives suffer abuse at their husbands' hands each year.
- 1 in 2 women will experience domestic violence during their lifetime.
- 4 million women are beaten to death by men each year.
- At the very least, 37% of wives suffer domestic psychological abuse.
- Man-on-woman battering is the leading cause of death and injuries to women.
- Male assault on women is the main cause of injuries and death to women.
- Birth defects are primarily caused by domestic battery.
- A women is raped every 2 minutes in certain parts of the world, such as America (Addams, 2010).

The evidence paints a different picture. Only 1% of women in the US are injured by men, and less than 4000 female deaths may be traced to male assault annually. More relevant to this paper, in the UK assault (as a whole) rank as being the 54th among all other causes of death, moreover, this low rank is reached although among the causes of death only accidents and external causes are considered.. Only 108 women in every 100,000 died due to assault in 2010, a number actually lower than the figure of 211 registered for men (Rogers, 2011). Furthermore, only around 7 women die monthly owing to domestic violence in England and Wales, resulting in approximately 84 each year (Morrison, 2014). The same sources estimate that around 24 men die each year as a result of domestic abuse, a far from negligible number. In both cases, the feminist depiction of domestic abuse is proven to carry no weight, whilst only making the discrepancy in provisions and refuge more problematic (Addams, 2010).

Figure 2: Domestic abuse by type and gender in England and Wales for adults aged 16 to 59 who experienced intimate violence since the age of 16, by sex and headline category, year ending March 2015 (ONS, 2016)



As the chart clearly shows, men suffer from all of the types of abuse that women are subjected to, including non-sexual family abuse, partner abuse, stalking and, indeed, even sexual abuse at the hands of their partners. Given that the differences between frequencies is even less than half in some places, the previously observed disparity in support structures for women and for men becomes particularly untenable (Addams, 2010; ManKind Initiative, 2016).

Police institutional bias

An important note to make about the above statistics is that they were established almost entirely on data provided by the Crime Survey for England and Wales (ONS, 2016). The police are just one of several "additional" sources of information consulted on the matter. The first reason for this, according to the ONS, is that intimate violence offences are practically defined by under-reporting. Victims are often unwilling to disclose incidents, especially in face-to-face interviews. The police did record 943,638 incidents of domestic abuse in the year ending March, 2015, but this is unlikely to represent the true number of offences. Moreover, police forces were found to exhibit serious regional and jurisdictional discrepancies in how domestic abuse incidents are recorded and handled (ONS, 2016).

Nominally, the police record domestic abuse incidents according to the National Standard for Incident Recording (NSIR) (ONS, 2016). However, even though reports recorded by the police have been increasing in recent years, the numbers of prosecutions for domestic violence has been on the wane, with a drop of 13 percent recorded in 2014 (Casciani, 2014). Males make up the only cases of reported incidents to have received no help even when their lives were at risk, owing to police procedural double standards (Danby, 2016). Male victims have been known to receive little beyond polite dismissal from the authorities, even after reporting the abuse they were suffering to at least one doctor and one nurse on an A&E visit, as well as referral to a domestic violence unit (Danby, 2016).

What perhaps amounts to the most damning evidence that male victims are subject to institutional bias from the police is the NPIA's Guidance on Investigating Domestic Abuse (NPIA, 2008). While the majority of the document remains neutral regarding the gender of victims, the section entitled "Established risk factors" clearly states that police policy "is focused on male abusers and female victims in a current or previous intimate relationship" (NPIA, 2008:36). Moreover, the section on refuge/outreach services is, once again, specifically written to refer to female victims (NPIA, 2008:117-118). By contrast, no specific allowances are mentioned for male victims at all. The only instance where this trend is in any way eschewed is in the section regarding forced marriage, and even there it is only acknowledged that other female family members may be complicit in the abuse, with the victim being the woman forced into marriage (NPIA, 2008:13).

Arguably the most significant authority in the UK with regard to equal rights for men and women is PARITY, the organisation first formed in 1986 as the Campaign for Equal State Pension Ages (PARITY, 2007). Though its mandate was rooted in feminist principles of equality, the organisation has paid increasing attention to discrimination against men, especially since it was granted charitable status in 2005 (PARITY, 2007). Men assaulted by their partners are explicitly noted to often be ignored by the police (Campbell, 2010), treated as "second-class" victims, and not taken seriously: "Male victims are almost invisible to the authorities such as the police, who rarely can be prevailed upon to take the man's side," said John Mays of Parity. "Their plight is largely overlooked by the media, in official reports and in government policy, for example in the provision of refuge places – 7,500 for females in England and Wales but only 60 for men" (Campbell, 2010).

And so the situation has come full circle, leading back to the unfortunate reality of the severe imbalance in general and procedural perspective regarding frequency of domestic abuse and the gender of the abusers and victims alike.

Unfortunately, the foregoing effectively encompasses the full extent of relevant contemporary research. There is a severe dearth of research

about male victims and the procedures and support structures in place to support them (Home Office, 2008; Straus, 2010; Veenstra and Ivonne, 2013); all owing to the lack of awareness that male victims existed to begin with, let alone in significant numbers (Danby, 2016). This is an issue that has only recently started to be remedied, as outlined below. Thus, all that can be accomplished at present is raising awareness of gender symmetry in cases of domestic abuse.

Study weaknesses

Unfortunately, circumstantial and inferential evidence is all that could be gleaned from this mixed method examination of statistics, regulations, reports and other official documents. Such a focus ultimately proved to be the greatest weakness of this project, as ultimately very little proof and few testimonies were found pointing towards this sort of bias existing, and all from secondary data sources. To enable true confirmation, let alone an exploration of the severity of the issue and an issuing of recommendations for its alleviation, an in-depth study based on first-hand investigations and primary data (acquired via questionnaires, interviews and other means) would need to be carried out, involving police representatives from throughout the United Kingdom.

Conclusion

The research identified strong evidence that there may, indeed, be institutional bias towards male victims of domestic violence by both police forces and partner agencies and organisations. Information on partner agencies and organisations was particularly blatant in demonstrating how women are treated more favourably than men, with 7,500 refuges for the former whilst the latter only have 60 to call on throughout the entirety of England and Wales. This situation has caused more than a few men to stay in abusive relationships owing to the fact that calling on the services of such agencies would mean completely uprooting their lives (ManKind Initiative, 2016).

This study unfortunately failed to find hard, first-hand evidence of institutional bias at police level, save for a few scattered accounts and opinions by officials. This may be because there has not been any research specifically carried out in this area, at least not in the UK. A thorough and specific study of gender-based treatment of domestic abuse victims is necessary, especially since domestic violence cases are, by nature, unique among violence offences (Bagshaw et al., 2000; Carlson, 2005; Campbell, 2010), as the victims always know each other and often have a very deep awareness of financial obligations and other facts that rarely emerge in other violence crimes. Factoring in the statistical, circumstantial and inferential evidence explored previously, it is quite clear that the male party is placed under a burden of guilt from the very start of investigation.

Therefore, it is the recommendation of the researcher that an in-depth investigation be carried out to reveal the exact procedures used by the police departments of England and Wales when receiving reports of domestic abuse inflicted on male victims. The few studies undertaken on this in the United States show that police bias begins at initial attendance of a domestic related incident (provided it is taken seriously at all), and continues when officers separate those involved and take accounts from both parties. The majority of the time, accounts are taken only from the female party, while accounts from males are taken only after arrest (Cook, 2009). A study conducted for UK police authorities would need to investigate how police officers deal with these situations, whether they complete the DASH risk assessment with both parties or only with female parties, and whether men have to wait until an arrest is made before being heard.

Depending on the findings of such a study, an additional Domestic Abuse, Safeguarding and Harm (DASH) assessment may have to be created, one aimed specifically at male victims and including situational and gender-specific questions.

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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.



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