

#### **Australian Institute of Criminology**

# Trends & issues in crime and criminal justice

ISSN 1836-2206 (Online) | ISBN 978 1 921185 54 0 (Online)

#### No. 579 July 2019

Abstract | Evidence-based policing (EBP) advocates the use of scientific processes in police decision-making. This paper examines results from a survey of officers in the Queensland Police Service and the Western Australia Police on the uptake of and receptiveness towards EBP research. Using a combined dataset, the paper examines a variety of factors related to the perceived value and usefulness of academic and internal research. and individual and organisational barriers to the use of EBP research. It also explores whether leadership and EBP workshops influence the adoption of evidence-based practices.

## **Evidence-based policing:** A survey of police attitudes

Adrian Cherney, Emma Antrobus, Sarah Bennett, Bevan Murphy and Mike Newman

#### Introduction

Over the last two decades, policing around the world has sought to develop more efficient and effective practices in response to having fewer financial resources and greater public scrutiny (Weisburd & Braga 2006). In tandem, many policing organisations have built partnerships with academic institutions and researchers to develop new strategies founded on research evidence. The result has given rise to evidence-based policing (EBP)—a perspective that advocates the use of scientific processes in police decision-making (Lum et al. 2012; Sherman 2015). Specifically, EBP involves police using rigorous evaluations and scientific research in a more direct and central way (Rojek, Martin & Alpert 2015). Lum and colleagues (2012) argue that research findings and data analysis should become part of the conversation about how police work to reduce crime, and should guide police decisions about tactics and strategies.

Thus, EBP requires police to become consumers of academic research and to use various scientific methodologies (eg quantitative and qualitative data collection and randomised control trials) to test and guide their responses to crime (Sherman 2015; Stanko & Dawson 2016).



Key features of EBP include an openness to experimentation and testing of both new and old tactics, partnerships between police practitioners and academic researchers. Indeed, Sherman (2015) provides 10 tips for building 'totally evidenced policing' which include encouraging officers to be involved in evidence-based policing projects, offering training in EBP, and working with academic researchers (specifically by embedding them within the police organisation).

Central to EBP is the use of research evidence to direct police decisions. However, even advocates of EBP recognise that its uptake has not been uniform or wholesale (Rojek, Martin & Alpert 2015; Stanko & Dawson 2016). No police agency has become totally evidence based and those who support it 'must swim against a tide of indifference or resistance' (Sherman 2015: 13). A number of studies outside of policing show there are a range of factors that hinder or facilitate the use of research data and research methodologies by policymakers and practitioners (eg Cherney et al. 2015). These factors include the skills and abilities of policymakers and practitioners to access and understand research studies, whether there are forums that expose staff to research evidence, and the types of relationships between academic researchers and practitioners, among other things. Compounding this is the probability that practitioners will not actively seek and use research evidence unless others such as leaders reinforce and support such behaviour (Cherney et al. 2015).

Lum et al. (2012) state that research is needed on the translation of evidence into police practice and on police officers' receptivity towards the use of research in decision-making. They argue that, without an understanding of these issues, the full potential of EBP will not be realised.

#### **Aim**

This project aimed to understand the adoption of EBP within Australian police agencies. To develop an understanding of the uptake of EBP, this research examined the receptiveness towards EBP in the Western Australia Police (WAPol) and the Queensland Police Service (QPS). Researchers from the University of Queensland's School of Social Science developed a survey in partnership with members of the WAPol Evidence-Based Policing Division and the QPS.

The states of Queensland and Western Australia present ideal cases in that both have actively and publicly progressed an EBP agenda, albeit via different strategies. Both QPS and WAPol have acknowledged the importance of EBP (QPS 2017; Western Australia Police Force 2017). For example, Western Australia became the first jurisdiction in the country to establish an evidence-based policing unit (Easton 2016) and QPS has had a long involvement in the use of randomised control trials (eg Mazerolle et al. 2012). Both agencies profess to be evidence based, and thus exploring the adoption of EBP in these agencies is of interest. This research explored some of the facilitators and barriers to EBP in police agencies where leadership support for EBP is high.

#### Method

#### Survey questions and definitions

Both the WAPol and QPS surveys included a definition of EBP to ensure that participating officers were aware what the term referred to. The definition was the same in each survey, though in the WAPol survey, at the request of the evidence-based policing unit, reference to Sherman's (2013) 'Triple T' was added to reflect the way EBP was discussed in the organisation. The definition was as follows, with the italicised words included in the WAPol survey only:

In this survey, evidence based policing refers to the process of using the best research and scientific methods to make decisions in police work, *supported by the concept of Triple T – Targeting, Testing and Tracking.* 

The survey asked questions about policing practices, EBP itself and the individual and organisational factors related to EBP. This paper focuses on the latter only. Survey questions relating to individual receptiveness to the use of research, preferred sources of information, receptiveness towards and understanding of scientific processes (eg the use of randomised control trials) and the degree of importance accorded to research-based knowledge compared to craft knowledge were also asked. Further questions examined the broader organisational context, such as whether evidence-based research is valued by colleagues, opportunities available to access research, priorities that drive operational decision-making (eg budgetary, political), incentives to adopt EBP and whether trial and error (a key scientific process) is valued and promoted by senior police. Finally, demographic questions were asked. For most questions (unless specified otherwise), participants were asked to rate the extent of their agreement with a statement on a scale from 1 ('strongly disagree') to 5 ('strongly agree').

Both surveys asked identical questions, with two exceptions. The first of these questions appeared in the WAPol survey but was not included in the QPS survey and queried participants on their level of trust in various information sources. This was included at the request of WAPol. The second of these questions appeared in the QPS survey but was not included in the WAPol survey. It asked participants to assess whether police agencies in Australia engage in evidence-based activities.

#### Sampling and analysis

Surveys were distributed via email to all 6,632 WAPol officers from constable to commander and to all 322 commissioned officers in the QPS. In total, the WAPol survey received 1,209 useable (not blank) responses, representing an overall response rate of 18 percent. The survey of QPS officers, ranging from inspectors to senior executives, resulted in 117 useable responses, representing an overall response rate of 41 percent.

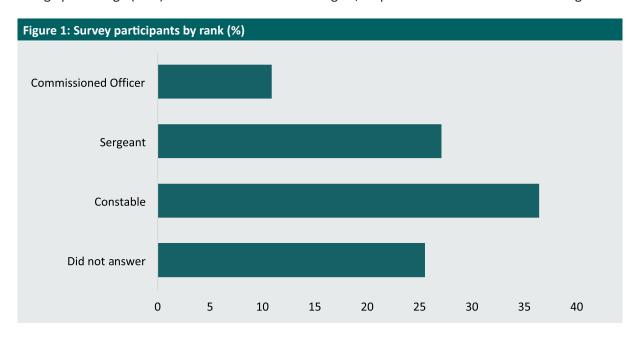
The analysis presented in this paper used a merged dataset of both the WAPol and QPS samples, resulting in a combined total of 1,326 participants. Any question or question item that could not be matched across the two agencies was not included in the final merged dataset. Data were analysed using SPSS version 24® (IBM Corp., Armonk, NY, USA). The final report from this research provides the detailed results pertaining to each jurisdiction (see Cherney et al. 2019). This paper provides a selection of key results relating specifically to the uptake of EBP in these two Australian police agencies.

A final alteration made for matching purposes was the recoding of responses to the question 'What is your owning command?' In this instance, QPS and WAPol respondents in each dataset were categorised into one of four distinct groups: Metropolitan (including the major cities in each state), Regional (including all other policing regions outside the major city-centres), Support (eg ethical standards command, legal division, organisational capability command) and Other (intelligence, counterterrorism and major events command etc).

#### Officer demographics

Of the 1,326 participants, 846 (64%) were male and 137 (10%) were female (343 participants (26%) did not provide their gender). By way of comparison, Western Australia Police's *Annual report 2016* reported a 77 percent male and 23 percent female distribution and the Queensland Police Service's (2016) *Annual statistical review 2015/16* stated 92 percent of commissioned officers were male. In the current survey, excluding those who did not give their gender, the sample was 86 percent male and 14 percent female. As can be seen in Figure 1, the rank of the participants included commissioned officers (n=144), sergeants (n=359), and constables (n=483). Again, there was a high degree of missing data on this variable, with over 25 percent of officers (n=340) declining to give their rank.

When it came to length of service, approximately 33 percent of participants had less than 10 years of service, 50 percent between 11 and 30 years of service, and 17 percent over 30 years of service. The minimum length of service was less than one year and the maximum was 43 years. The current working areas of participants spanned Metropolitan, Regional and Support areas, with Metropolitan (31%) being the most represented, followed by Regional (18%) and Support (5%) being the least represented. A large percentage (21%) listed their area as 'other'. Again, 26 percent did not note their working area.



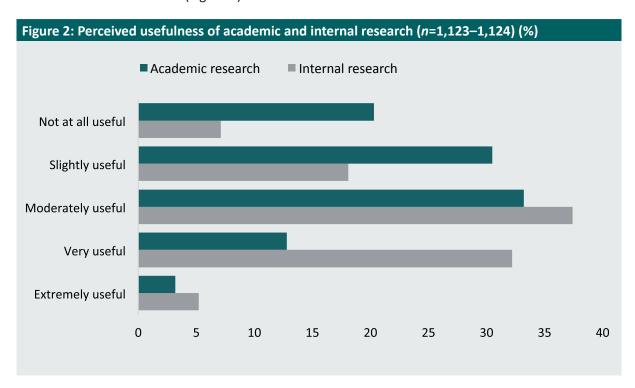
#### Results

The adoption of EBP within WAPol and QPS is examined in two parts. The first part explores participants' perceptions of the value of internal research and academic research in general and examines the frequency with which EBP research is used in officers' decision-making. These results were validated with findings relating to officers' reported willingness to test different policing tactics. The second part explores what officers reported to be barriers and facilitators to the use of EBP, at the individual and organisational levels. It then examines two key factors believed to be instrumental to EBP adoption: leadership style and the dissemination of EBP knowledge throughout the organisation through workshops.

#### Adoption of evidence-based policing

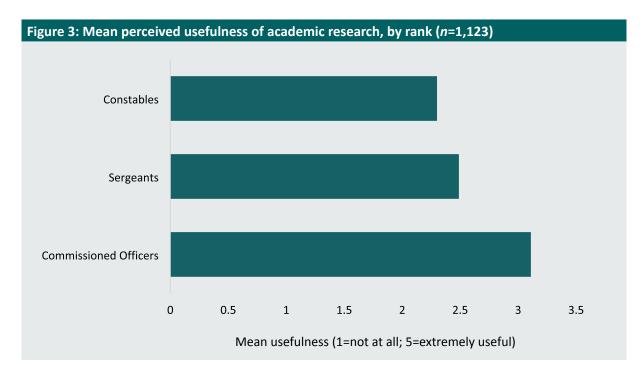
#### The use and value of academic research

Participants were asked if they judged academic research on policing to be useful. Thirty-three percent of participants indicated that they found academic research on police tactics to be 'moderately useful', 31 percent suggested it was 'slightly useful' and 20 percent indicated that it was 'not at all useful' (see Figure 2). By way of contrast, 32 percent of participants indicated that they found internal police research (ie research conducted internally by the police organisation) on tactics to be 'very useful', 37 percent suggested it was 'moderately useful', and only seven percent indicated that it was 'not at all useful' (Figure 2).

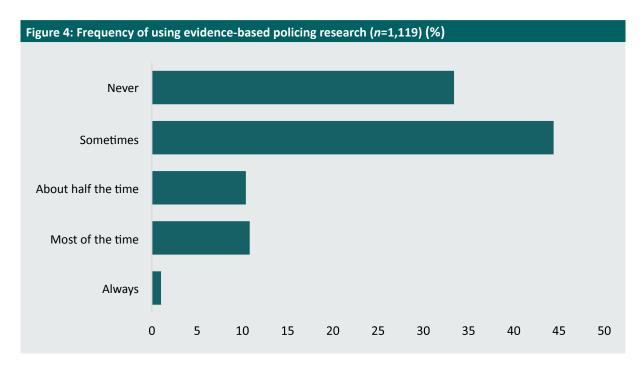


Comparing the perceived usefulness of academic versus internal research, there was a significant difference in the average ratings of usefulness for internal research (M=3.10, SD=0.99) and academic research (M=2.48, SD=1.05); t(1122)=18.51, p<0.001, such that internal police research was believed to be more useful than academic research. However, participants' attitudes to the usefulness of research conducted by academics and research conducted internally by the police were positively related (r(1,123)=0.40, p<0.001), meaning the higher that officers rated the usefulness of internal research, the higher their ratings of academic research usefulness. Thus, there appeared to be some trends in officers' beliefs about the usefulness of research in general, with officers who valued the internal research also being likely to value external research more.

A one-way analysis of variance was also performed to examine if there were significant differences between ranks with regard to the perceived usefulness of academic research (F(2,981)=34.56, p<0.001,  $\eta^2=0.07$ ). Significant differences were found between mean scores for commissioned officers and sergeants (p<0.001); between commissioned officers and constables (p<0.001); and between sergeants and constables (p=0.024). (Bonferroni adjustment was used to control for type 1 error.) As can be seen in Figure 3, commissioned officers judged academic research to be more useful than did sergeants and constables.



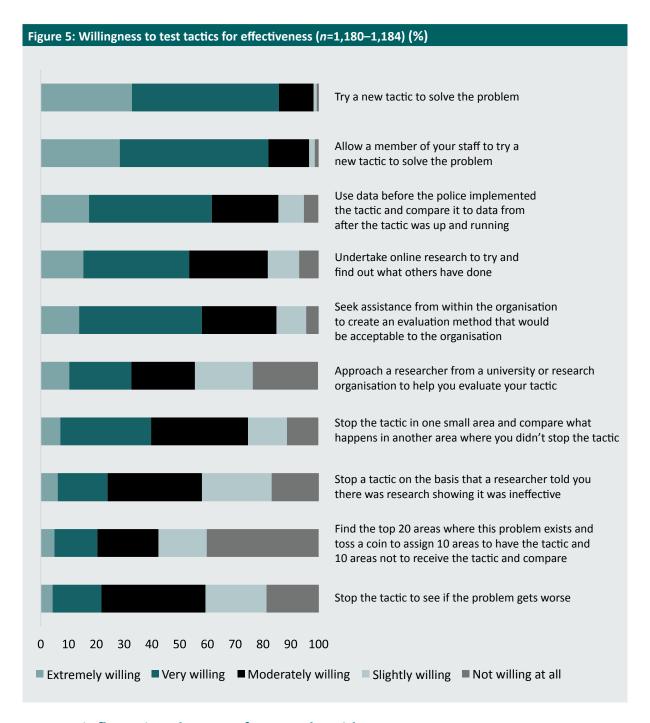
The survey also asked participants how often they had used evidence-based policing research in the previous 12 months to inform their decision-making. Scores ranged from 1 ('never') to 5 ('always'). The category of 'sometimes' was the most common response, with 44 percent of participants indicating some level of use, closely followed by 'never' (33%). Eleven percent of participants reported using evidence-based policing research 'most of the time' (see Figure 4). A one-way analysis of variance was performed to determine whether there were significant differences between ranks with regard to research use (F(2,978)=11.56, p<0.001,  $\eta^2=0.02$ ). Commissioned officers were found to use evidence-based research more frequently than both constables (p<0.001) and sergeants (p<0.001), perhaps also reflecting the value these more senior officers placed on the usefulness of research evidence.



#### Willingness to test tactics

Non-experimental methods continue to be common practice in policing evaluations. As experimentation is an important feature of EBP, officers must be willing to try new tactics. When asked how willing they would be to take a variety of actions to test whether a current police tactic was effective, scores ranged from 1 ('not willing at all') to 5 ('extremely willing'). Figure 5 shows that 86 percent of participants were either 'very willing' or 'extremely willing' to try a new tactic to solve a current problem. Eighty-two percent were either 'very willing' or 'extremely willing' to allow a member of their staff to try a new tactic to solve a policing problem. Sixty-two percent were either 'very willing' or 'extremely willing' to use data from before the police implemented the tactic and compare it to data from after the tactic was up and running. For most other scenarios, participants most commonly reported being 'moderately willing' to test whether the tactic was effective (means ranged from 2.27 to 3.52).

The scenario that respondents were least willing to try was finding the top 20 areas where a problem existed, using the toss of a coin to select 10 areas where a new tactic would be implemented and 10 areas where it would not, and comparing the outcomes—that is, the use of randomised control trials. Fifty-eight percent of officers were either 'slightly willing' or 'not willing at all' to try this experimental method. It appeared that some participants were quite averse to approaching a researcher from a university or research organisation to help them evaluate their tactic (24% of participants reported that they were 'not willing at all' to undertake this option). Nineteen percent of participants were also 'not willing at all' to stop a tactic based on a researcher highlighting that the tactic was ineffective.

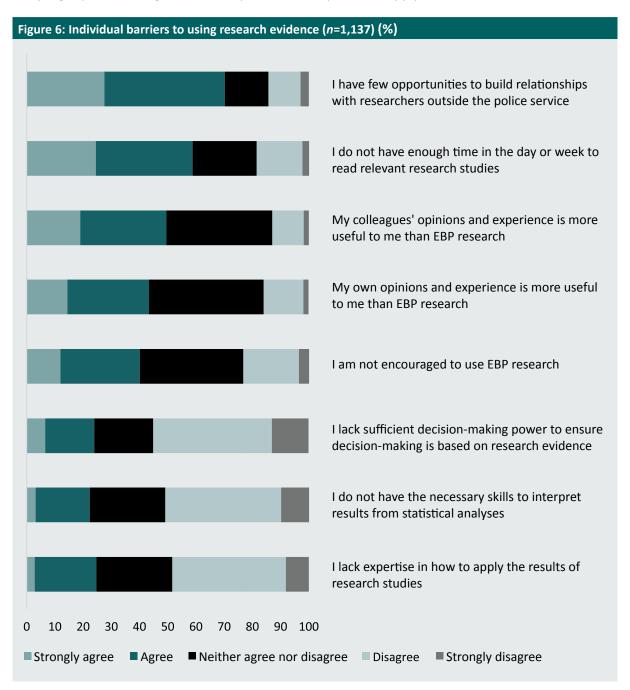


#### Factors influencing the use of research evidence

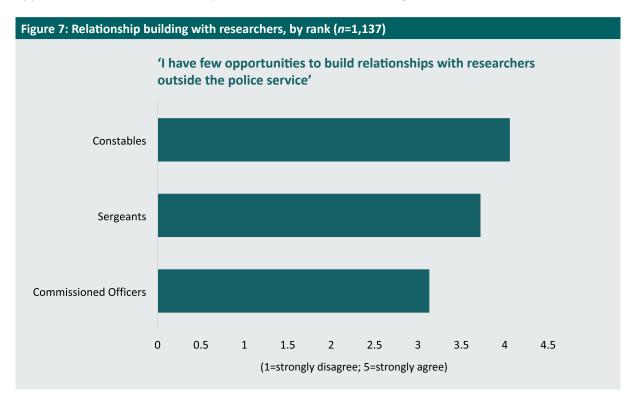
#### **Individual factors**

Understanding the barriers that inhibit police from accessing and using EBP research is important to knowing how best to encourage its uptake. Hence all participants were asked about barriers that inhibited them from accessing and using EBP research in their day-to-day operational decision-making. They were asked to rate the extent of their agreement with a variety of statements. Figure 6 presents their reported agreement with the statements examined.

Participants reported that they had limited opportunities to build relationships with researchers outside the police service (70% either 'agreed' or 'strongly agreed' with the statement). Participants also reported not having enough time in the day or week to read relevant research studies (59% either 'agreed' or 'strongly agreed' with the statement). A belief that colleagues' opinions and experience were more useful than EBP research was also evident (50% either 'agreed' or 'strongly agreed' with the statement). Fifty-five percent of participants disagreed that they lacked the decision-making power to ensure decision-making was based on research evidence. Fifty-one percent disagreed that they did not have the necessary skills to interpret results from statistical analyses. Forty-eight percent disagreed that they lacked the expertise to apply the results of research studies.



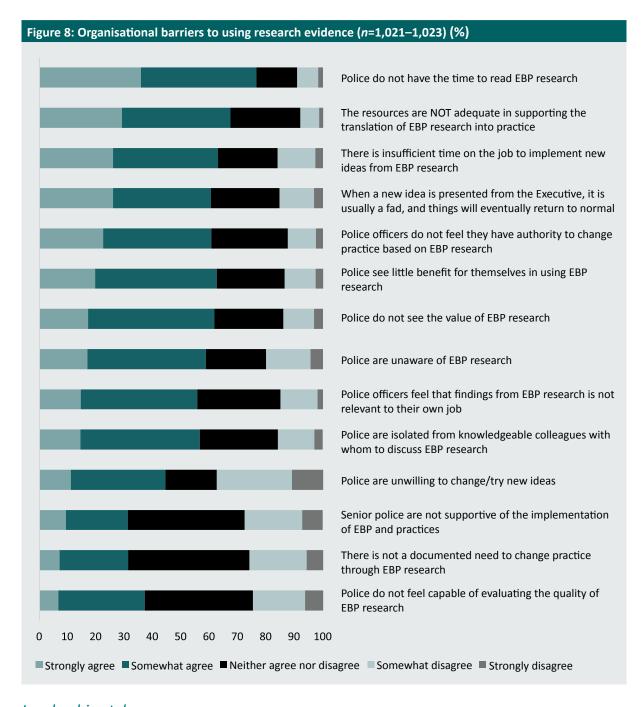
Building partnerships with academic researchers is an important part of evidence-based policing. These partnerships assist the uptake of evidence in police decision-making (Stanko & Dawson 2016). Given a number of participants reported they lacked opportunities to build relationships with academics, a one-way analysis of variance was performed to examine whether there were significant differences between ranks. This analysis found significant differences between ranks for opportunities to build relationships with researchers. Significant differences were found between mean scores for commissioned officers and sergeants (p<0.001); between commissioned officers and constables (p<0.001); and between sergeants and constables (p<0.001). (Bonferroni adjustment was used to control for type 1 error.) As can be seen in Figure 7, commissioned officers reported having greater opportunities to build relationships with researchers than did sergeants and constables.



#### **Organisational factors**

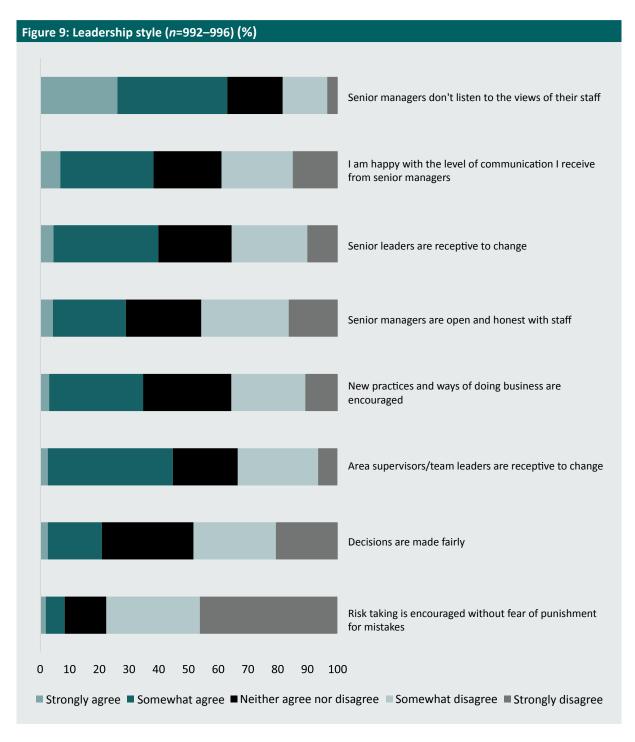
Participants were also presented with several statements referring to organisational barriers to the more widespread use of EBP research. They were then asked to think about their police force and rate the extent of their agreement with the statements. Figure 8 presents their reported agreement with the statements examined.

Time was a significant barrier. It was clear that a large percentage of participants believed that they did not have enough time to read EBP research (77% selected either 'strongly agree' or 'somewhat agree'). Nor do they have the time to implement EBP ideas (63% selected either 'strongly agree' or 'somewhat agree'). Also, there was a belief that resources were not adequate to support the translation of EBP research into practice (67% selected either 'strongly agree' or 'somewhat agree'). Twenty-six percent 'strongly agreed' and 35 percent 'somewhat agreed' that new ideas from the executive were often fads and practice would return to normal in due course. Despite this finding, many participants responded that they were not averse to new ideas or change, with 38 percent disagreeing that police were unwilling to change or try new ideas. Twenty-five percent also disagreed with the statement 'Police do not feel capable of evaluating the quality of EBP research'.



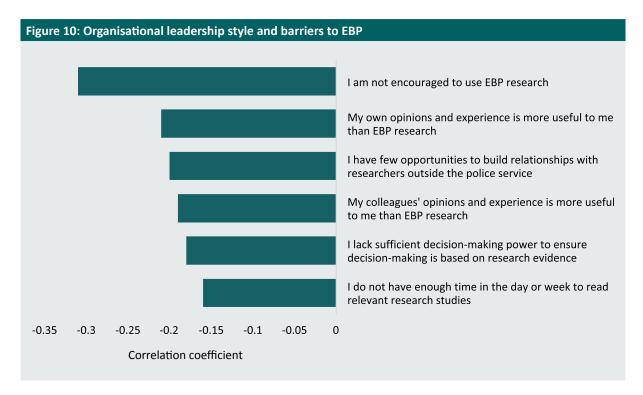
#### Leadership style

In both the WAPol and QPS surveys participants were asked about their perceptions of organisational leadership within their particular police service. Leadership style can be an important factor in the adoption of EBP, as it influences the extent to which police feel their leaders are open to new approaches. Hence all participants were presented with several statements about police leadership and asked to rate the extent of their agreement with these statements. As can be seen in Figure 9, 26 percent of participants 'strongly agreed' that senior managers did not listen to the views of their staff. A further 37 percent indicated that they 'somewhat agreed' with this statement. Only three percent of participants 'strongly agreed' that supervisors/team leaders were receptive to change. However, the category of 'somewhat agreed' was selected substantially more, at 42 percent. When asked whether risk taking was encouraged without fear of punishment for mistakes, 46 percent indicated that they 'strongly disagreed', and a further 32 percent 'somewhat disagreed' with this statement.



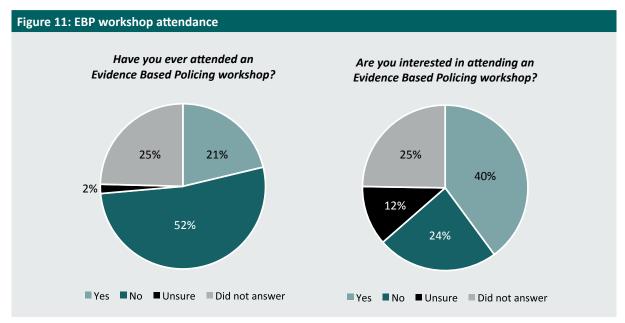
To examine the relationship between leadership style and barriers to research use, an overall 'organisational leadership' scale was developed by averaging responses to the eight leadership statements presented in Figure 9. (The item 'Senior managers in WAPol don't listen to the views of their staff' was reverse coded before scale creation. Cronbach's alpha=0.86. Removal of any one item from the scale would not increase alpha by any more than 0.007.)

This organisational leadership scale was then used to determine whether there was a relationship between leadership style and the individual factors inhibiting EBP presented earlier. A significant (though somewhat modest) negative correlation was found between the organisational leadership scale and particular barriers to the use of EBP (see Figure 10). The less favourably the organisational context was rated, the greater the barriers to EBP were perceived to be. For instance, those who viewed their agency's leadership style more favourably tended not to agree with the statement 'I do not have enough time in the day or week to read relevant research studies'. In other words, the more satisfied participants were with the leadership style, the more likely they were to feel that they could use EBP research.



#### Evidence-based policing workshops

Both WAPol and QPS have invested in strategies to enhance officer understanding and uptake of EBP approaches. One such strategy has been the delivery of EBP workshops, some of which were facilitated by the authors of this paper. An important question, though, is whether these workshops make a difference. As can be seen in Figure 11, 21 percent of participants reported that they had attended an EBP workshop. A further 40 percent said that they were interested in attending an EBP workshop. A relatively large percentage of participants reported that they had not attended an EBP workshop (52%), and 24 percent indicated that they were not interested in attending an EBP workshop.



Note: Percentages may not total 100 due to rounding

Further analysis was conducted on those participants indicating interest or otherwise in attending an EBP workshop in the future. Independent samples *t*-tests were used to compare 'interested' and 'not interested' participants' beliefs about the importance of different research methods for informing police practices (see Table 1). These results demonstrate that participants who were not interested in attending an EBP workshop were significantly less likely to believe that any of the research methods were important in informing a specific practice or decision. The difference was most pronounced for the methods most associated with EBP (ie randomised control trials and meta-analyses).

Table 1: Perceived importance of research methods and interest in attending an EBP workshop				
Importance of research methods <sup>a</sup>	Interested Mean ( <i>SD</i> ) ( <i>n</i> =529)	Not interested Mean ( <i>SD</i> ) ( <i>n</i> =314)	t (df)	d
Randomised control trials	3.82 (0.81)	3.12 (1.06)	10.01 (735)***	0.77
Meta-analysis	3.69 (0.75)	2.94 (1.02)	9.75 (544)***	0.88
Case studies	3.97 (0.73)	3.54 (0.98)	7.19 (813)***	0.52
Surveys	3.46 (0.85)	3.12 (1.03)	5.12 (810)***	0.37
Non-experimental studies	3.05 (0.86)	2.65 (1.00)	5.75 (729)***	0.44
Quasi-experimental studies	3.19 (0.84)	2.69 (0.92)	6.82 (598)***	0.59
Interviews	3.66 (0.83)	3.32 (0.98)	5.27 (802)***	0.39
Ethnography	3.48 (0.81)	2.82 (0.96)	8.18 (511)***	0.76

<sup>\*\*\*</sup>statistically significant at p<0.001

a: Importance categories: 1=very unimportant to 5=very important

Further independent samples t-tests were conducted to compare the perceived usefulness of academic and internal research among participants who had or had not attended an EBP workshop. It was found that participants who had attended an EBP workshop were significantly more likely to judge academic research to be useful than those who had not attended a workshop (t(971)=6.48, p<0.001, d=0.46). There was no significant difference found between participants who had attended an EBP workshop and those who had not with regard to the perceived usefulness of internal research conducted by police.

#### Limitations

There are some limitations to this study's research design and sample. Of course, as an exploratory survey, the results do not demonstrate causation for any of the concepts discussed. The relatively large degree of missing data on some variables (particularly demographic variables) also limits the ability to make strong conclusions. The difference between the WAPol and QPS samples may be considered a key limitation. The QPS survey included only commissioned officers, to ensure a good response rate and to capture officers with decision-making powers. In contrast, the WAPol sample was broader, as that agency had requested a snapshot of the entire organisation.

It is not possible to tease apart whether different effects were due to differences in organisational context or differences in samples. To account for this, analyses were performed using the merged dataset excluding the lower ranked participants, and these analyses found similar results across commissioned officers in both agencies (notwithstanding the comparisons regarding rank). Thus, despite the potential limitations, it is reasonable to assert that the merged dataset did not skew the results.

Questions can also be raised about whether the merged sample is representative of the broader Australian policing community. The inclusion of only two policing agencies may limit the generalisability of these findings. Moreover, these agencies arguably being among the most strategically aligned to EBP is both a strength and limitation of this study. Although it limits the ability to draw conclusions regarding the state of EBP uptake across Australian policing more generally, it provides some important insights into what factors may facilitate and obstruct police agencies as they contemplate the importance of EBP in their organisation.

It should be noted that this paper reports only a sample of results from the survey. A variety of other results from the survey are analysed in the final report (see Cherney et al. 2019).

### **Discussion and conclusions**

While some police agencies may profess to be 'evidence-based', the real proof of this is the foundation upon which decisions are made about how to respond to particular problems (ie experimentation and new tactics) and the types of strategies that result. Hence, when participants were asked about their approach when deciding how to respond to a particular policing problem, many stated they would use tactics that have worked for them in the past. Although participants were willing to try new tactics to solve policing problems, there was a general unwillingness to use randomised control trials. Also, a large percentage were unwilling to approach external researchers to help them evaluate their tactic or to stop using a tactic based on a researcher indicating it was ineffective. This raises questions about whether the rhetoric of EBP is practised in reality.

A key finding was the relatively low levels of importance placed on information coming from university researchers. This may be related to the limited opportunities most participants had for building relationships with researchers outside the police service (although commissioned officers reported having greater opportunities to build relationships with researchers than did sergeants and constables). Many officers also noted that they had limited time to read research studies. Efforts to create such opportunities are clearly relevant to promoting EBP.

An important and consistent barrier to the adoption of EBP research was the perception that accessing EBP research is time consuming. Specifically, in the operationally demanding environment of policing, officers reported that they felt they had little time to read and implement EBP ideas. Furthermore, participants reported they had inadequate resources to support the translation of EBP research into practice. This requires some level of organisational change.

This organisational change may be linked to leadership. One stark result from the survey is that the more favourably the organisational leadership style was rated, the fewer barriers to the use of EBP research respondents judged there to be. This result provides an important lesson in how leadership style is correlated to the use of EBP within police organisations.

A key facilitator to the uptake of EBP is education. Both agencies surveyed had previously attempted to encourage the use of EBP throughout the organisation by running EBP workshops. The results show that these workshops appear to be an effective facilitator for EBP. Specifically, participants who had attended an EBP workshop were more likely to view academic research as being useful. Additional analysis, not reported here, indicates that they were also more likely to use and apply evidence-based approaches than those who had not attended a workshop (see Cherney et al. 2019). Hence, EBP workshop attendance and participation appears to make a difference.

The field of EBP has grown extensively in recent years, with numerous societies for EBP emerging around the western world. A study of police officers' understanding of and receptivity to this approach is therefore timely. The results provide insights into the individual and organisational factors that inhibit and facilitate the adoption of EBP, thus highlighting actions police agencies can take to influence its practical application.

#### References

Cherney A, Antrobus E, Bennett S, Murphy B & Newman M 2019. *Evidence-based policing: A survey of attitudes in two Australian police agencies*. Report to the Criminology Research Advisory Council. Canberra: Australian Institute of Criminology

Cherney A, Head B, Povey J, Ferguson M & Boreham P 2015. Use of academic social research by public officials: Exploring preferences and constraints that impact on research use. *Evidence & Policy: A Journal of Research, Debate and Practice* 11(2): 169–188

Easton S 2016. Inside Perth's evidence-based policing unit. *The Mandarin*, 29 Sep. https://www.themandarin.com.au/70866-targeting-scarce-resources-inside-perths-evidence-based-policing-unit/

Lum C, Telep CW, Koper CS & Grieco J 2012. Receptivity to research in policing. *Justice Research and Policy* 14(1): 61–95

Mazerolle L, Bennett S, Antrobus E & Eggins E 2012. Procedural justice, routine encounters and citizen perceptions of police: Main findings from the Queensland Community Engagement Trial (QCET). *Journal of Experimental Criminology* 8(4): 343–367

Queensland Police Service (QPS) 2017. *Queensland Police Service strategic plan 2018–2022*. Brisbane: QPS. https://www.police.qld.gov.au/corporatedocs/reportsPublications/strategicPlan/

Queensland Police Service 2016. *Annual statistical review 2015/16*. Brisbane: QPS. https://www.police.qld.gov.au/corporatedocs/reportsPublications/statisticalReview/

Rojek J, Martin P & Alpert GP 2015. *Developing and maintaining police-researcher partnerships to facilitate research use: A comparative analysis*. New York: Springer. DOI: 10.1007/978-1-4939-2056-3

Sherman LW 2015. A tipping point for "totally evidenced policing": Ten ideas for building an evidence-based police agency. *International Criminal Justice Review* 25(1): 11–29

Sherman LW 2013. The rise of evidence-based policing: Targeting, testing, and tracking. *Crime and Justice* 42(1): 377–451

Stanko E & Dawson P 2016. *Police use of research evidence: Recommendations for improvement*. Springer International Publishing. DOI: 10.1007/978-3-319-20648-6

Weisburd D & Braga AA 2006. Introduction: Understanding police innovation, in D Weisburd and AA Braga (eds), *Police innovation: Contrasting perspectives*. New York: Cambridge University Press: 1–23

Western Australia Police 2016. *Annual report 2016*. Perth: Western Australia Police. https://www.police.wa.gov.au/About-Us/Our-Agency/Annual-report

Western Australia Police Force 2017. *Frontline 2020: Reform program for WA police*. Perth: Western Australia Police Force. Accessed 9 April 2018: https://www.police.wa.gov.au/About-Us/Our-vision/Frontline-2020

#### **Funding**

The research was funded through a Criminology Research Grant (CRG 07/16–17) and a University of Queensland Collaboration and Industry Engagement Fund—FirstLink.

Dr Adrian Cherney is an Associate Professor at the University of Queensland.

Dr Emma Antrobus is a Lecturer in Criminology at the University of Queensland.

Dr Sarah Bennett is a Senior Lecturer in Criminology at the University of Queensland.

Bevan Murphy is a former Research Assistant at the University of Queensland.

Mike Newman is a Detective Inspector in the Queensland Police Service.

General editor, *Trends & issues in crime and criminal justice* series: Dr Rick Brown, Deputy Director, Australian Institute of Criminology. Note: *Trends & issues in crime and criminal justice* papers are peer reviewed. For a complete list and the full text of the papers in the *Trends & issues in crime and criminal justice* series, visit the AIC website at: aic.gov.au

ISSN 1836-2206 (Online) ISBN 978 1 921185 54 0 (Online)

©Australian Institute of Criminology 2019

GPO Box 1936

Canberra ACT 2601, Australia

Tel: 02 6268 7166

Disclaimer: This research paper does not necessarily reflect the policy position of the Australian Government

aic.gov.au