The McGrath Foundation makes life that little bit easier for families experiencing breast cancer, by placing specialist McGrath Breast Care Nurses wherever they’re needed in Australia.

Donate today at www.mcgrathfoundation.com.au
On behalf of the ANZ SEBP Executive Committee, we would like to welcome you to this, the winter edition of Police Science, the official journal of the Australia and New Zealand Society of Evidence. This edition is being published after our annual conference, or at least Part I of our conference, which has been interrupted by the outbreak of the Delta variant of Covid-19 in New Zealand, the societies host partner this year. We can assure you that the team responsible for producing the conference are working hard, behind the scenes, to bring Part II of the conference to you later in the year.

The ANZ SEBP committee have been overwhelmed by the positive feedback on the style, format and presentation of this year’s conference. In particular the way in which the culture and values of New Zealand and New Zealand Police flowed through each segment. We really feel that this year’s conference has demonstrated the art of what’s possible when strong partnerships are developed. On that note we’d like to thank all those who have or will contribute, including our distinguished speakers, sponsors, the conference organising committee, and partners Conference Design, Kioi and Ellis Anderson.

In his opening address of this year’s conference, President of the ANZSEBP Superintendent David Cowan reminded us of the mission of the society, to make evidence based methodology part of everyday policing. This starts with, and is really underpinned by, our professional curiosity which is nicely summed up by the phrase ‘nullus in verbo’ which is the motto of The Royal Society. In other words, we should look to verify everything using the best available evidence we have at our fingertips. This is how professions have developed over time, and our craft, the profession of policing should also be based on the evidence of what works, what doesn’t and what looks promising to reduce crime and prevent harm.

With well over 2000 registered delegates for this year’s conference, there is a really strong signal that police officers and staff across Australia, New Zealand and the Pacific Islands are up for a conversation around the everyday use of evidence, data and insights to inform key decisions. You have every rank from Constable to Commissioner represented in this number, along with every police agency, both state and federal, across Australia and New Zealand along with our long term partners the AIC, APF, and ANZPAA.

The good news is, that it’s not too late to register for our conference, if you are a serving police officer or staff member in an ANZ policing jurisdiction, please email mail@conferencedesign.com.au who will check your agencies eligibility, and then provide you with a FREE registration link. This will give you full access to day one presentations and a further two days of content yet to come. This includes all keynote and invited speakers, panel discussions and 50 short-shoot presentations, this material really helps us to think about how we might innovate within our own agencies to deliver better policing services to our communities. If you are from a policing jurisdiction, law enforcement agency or academic institution anywhere outside of the ANZ region please contact mail@conferencedesign.com.au to discuss bulk registration options.

When the ANZ SEBP Executive team last met face to face in 2019, we made the decision to seek to appoint an eminent Australian as our inaugural Patron. The decision as to who that would be was unanimous - Air Chief Marshal Sir Angus Houston. Sir Angus has had a very distinguished life and career. He retired as Chief of the Australian Defence Force in 2011 after 41 years of service. In the same year he was named the Australian Father of the Year and in 2012, the ACT Australian of the Year. In 2012 Sir Angus led the Expert Panel on Asylum Seekers. He was Chair of the Aranza Centenary Advisory Board and Chair of Air Services Australia for many years. In 2014, he was appointed as the Prime Minister’s Special Envoy to lead Australia’s efforts to help recover, identify and repatriate Australians killed in the Malaysia Airlines flight MH17 disaster. Sir Angus also led the Australian Government’s work on the search into missing Malaysia Airlines flight MH370 in 2014. Sir Angus was knighted in January 2015 for extraordinary and pre-eminent achievement and was invested in Australia. The society feel very privileged to appoint Sir Angus as the Patron of the ANZSEBP and wish him well as he supports and guides the society into the future.

For those of you who have already tuned into the conference, you will have seen that each of our speakers were gifted the New Zealand SEBP and wish him well as he supports and guides the society into the future.

This edition is being published shortly after our annual conference, or at least Part I of our conference, which has been interrupted by the outbreak of the Delta variant of Covid-19 in New Zealand, the societies host partner this year. We can assure you that the team responsible for producing the conference are working hard, behind the scenes, to bring Part II of the conference to you later in the year.

The ANZ SEBP committee have been overwhelmed by the positive feedback on the style, format and presentation of this year’s conference. In particular the way in which the culture and values of New Zealand and New Zealand Police flowed through each segment. We really feel that this year’s conference has demonstrated the art of what’s possible when strong partnerships are developed. On that note we’d like to thank all those who have or will contribute, including our distinguished speakers, sponsors, the conference organising committee, and partners Conference Design, Kioi and Ellis Anderson.

In his opening address of this year’s conference, President of the ANZSEBP Superintendent David Cowan reminded us of the mission of the society, to make evidence based methodology part of everyday policing. This starts with, and is really underpinned by, our professional curiosity which is nicely summed up by the phrase ‘nullus in verbo’ which is the motto of The Royal Society. In other words, we should look to verify everything using the best available evidence we have at our fingertips. This is how professions have developed over time, and our craft, the profession of policing should also be based on the evidence of what works, what doesn’t and what looks promising to reduce crime and prevent harm.

With well over 2000 registered delegates for this year’s conference, there is a really strong signal that police officers and staff across Australia, New Zealand and the Pacific Islands are up for a conversation around the everyday use of evidence, data and insights to inform key decisions. You have every rank from Constable to Commissioner represented in this number, along with every police agency, both state and federal, across Australia and New Zealand along with our long term partners the AIC, APF, and ANZPAA.

The good news is, that it’s not too late to register for our conference, if you are a serving police officer or staff member in an ANZ policing jurisdiction, please email mail@conferencedesign.com.au who will check your agencies eligibility, and then provide you with a FREE registration link. This will give you full access to day one presentations and a further two days of content yet to come. This includes all keynote and invited speakers, panel discussions and 50 short-shoot presentations, this material really helps us to think about how we might innovate within our own agencies to deliver better policing services to our communities. If you are from a policing jurisdiction, law enforcement agency or academic institution anywhere outside of the ANZ region please contact mail@conferencedesign.com.au to discuss bulk registration options.

Understanding Family Harm: Through the lens of the New Zealand Crime Harm Index

Authors: by Renee Locc, Priya Devendran & Simon Willams, Evidence Based Policing Centre, New Zealand Police

Introduction
New Zealand has one of the highest rates of sexual and domestic violence in the developed world, with police responding to a family violence incident every four minutes. Family violence is estimated to cost the country between NZ$4.1bn and $7bn a year [https://www.theguardian.com/world/2020/may/11/new-zealand-domestic-violence-services-to-get-200m-as-lockdown-takes-toll]. The prevalence and cost of family harm highlights the pervasive nature of this phenomenon, with implications for individuals and populations. The imperative to address family harm is clear, although more can be done to better target this phenomenon. Research can support this agenda by identifying where and to whom resources should be targeted, enabling an efficient and effective use of resources as it relates to family harm interventions.

To be sure, family harm intervention and prevention strategies have had success when they have been utilised to target the most serious victims and offenders. Yet, there are different ways to define “seriousness”, although this has been measured predominantly by observations of crime counts. While the importance of identifying serious victims and offenders based on crime counts cannot be underestimated - a crime count analysis has progressed significantly towards the production of objective evidence relating to different volumes of crime associated especially with predictable and preventable targets, such as repeat offenders, repeat victims and crime hot spots (Dudfield et al. 2017, pg. 49) – a fundamental limitation of this approach is that it assumes all crimes are equal in the harm they cause, a premise “rejected by virtually every known system of criminal sentencing” (Dudfield et al. 2017, pg. 49). Indeed, evidence relating to family harm has consistently shown that there is a disproportionality between crime counts and crime harm – most family harm victims and offenders that are prioritised on volume often cause/experience low-levels of harm (Blanham et al., 2017). There is thus not only a limitation in the fairness of how a crime count approach defines crimes, but as Sherman et al. (2016, pg. 171) assert, there is also the potential for such approach to “foster distortion of risk assessments, resource allocation, and accountability”.

There is no doubt therefore that how “seriousness” is defined has implications for how to fairly and effectively allocate resources. To this end, scholars such as Sherman et al. (2016) argue that utilising a harm-based approach i.e., measuring the severity of harm caused by crime), can overcome the limitations identified above. Appropriately targeting family harm based on this approach would thus not only be an effective use of resources, but might succeed in attaining ‘big effects’ in the prevention of family harm.

Purpose of research
This research sought to understand family harm occurrence and incident data from 2016-2020 from a harm-based perspective. Findings from this research aims to support police decision-making about responding to and reducing family harm in New Zealand. This research provides an analysis of overall family harm trends, as well as specific family harm patterns as it relates to victims, offenders, and locations.

Methodology
This study utilised police data from New Zealand Police, over a five year period from 2016-2020. To be included in the analysis, the incident in question had to meet the following criteria: (1) the occurrence had a Family Violence Flag (2) was a Family Harm Investigation (an Investigation has been entered using the 5F OnDuty app) or (3) was one of a set of specific codes which relate to family harm (such as 5F or 1545). Table 1 highlights the proportion of cases over the observed 5 year period that met the above specified inclusion criteria.

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>123,837</td>
<td>96%</td>
</tr>
<tr>
<td>2017</td>
<td>127,077</td>
<td>96%</td>
</tr>
<tr>
<td>2018</td>
<td>137,779</td>
<td>96%</td>
</tr>
<tr>
<td>2019</td>
<td>158,350</td>
<td>96%</td>
</tr>
<tr>
<td>2020</td>
<td>175,908</td>
<td>96%</td>
</tr>
</tbody>
</table>

The New Zealand Crime Harm Index (NZ CHI) was used to measure crime harm for family harm trends, as well as harm patterns relating to victims, offenders, and locations. The NZ CHI provides a weighting for each offence based on a proxy for the relative harm it causes, expressed as an estimation of the minimum number of days in prison a first-time offender would serve for the offence. The higher the value derived, the more harmful crime harm is deemed to be.
Findings: Overall trends

Family harm demand has been increasing over time. Figure one highlights that reported family harm incidences has increased by an average 11% every year since 2018. It is unclear whether this reflects an increase in actual instances of family, or an increase in recording of family harm due to the easier recording method (launch of the 5F OnDuty app).

**Figure 1: Overall family harm trends**

In 2020, harm reduced slightly. Figure two illustrates that whilst the increase in reported family harm incidences coincided with an increase in recorded harm since 2018, in 2020 harm reduced 8% from 2019 (even though volume still increased 11% that year). While the reasons for this cannot be determined without further investigation, a decrease in harm at the same time as an increase in recorded family violence incidents might suggest the following: (1) an increase in lower-harm family violence incidents or (2) victims are experiencing less harmful forms of family violence. More analysis would be needed to determine the cause of the observed data changes in the current context.

**Figure 2: Crime harm trends from 2016-2020**

Findings: People

VICTIMS

A high proportion of harm is attributed to a few victims. Figure 3 illustrates that in 2020, 1.7% of family harm victims suffered 50% of crime harm.

**Figure 3: Proportion of harm attributed to victims**

Female victims accounted for a larger proportion of harm compared to males. Figure 4 highlights that across all age breakdowns, adult female victims accounted for the largest proportion of harm in all percentile categories. Adult females made up the largest proportion of harm in the upper 25% percentile, compared to the middle and lower percentiles. Victims in the upper 25% had the largest disparity between its largest crime type by volume, and the harm experienced from it. Figure 5 illustrates that physical assaults accounted for the largest proportion of offences experienced by individuals in the top 25 and 50 percentiles of most harmed individuals. Figure 5 also demonstrates that the largest disparity between crime type by volume and harm is observed for victims in the upper 25 percentile. Whilst those in the top 25 percentile experienced the highest percentage of physical assaults, the harm experienced by these individuals from this crime type accounted for only 19% of total harm experienced. Conversely, these victims experienced the most harm from sexual assaults, even though this crime type only accounted for 16% of total crime type by volume.

**Figure 4: Victimisation harm by gender**

**Figure 5: Victimisation crime harm versus volume**

The first month poses the highest risk for re-victimisation. Among victims who first reported to Police in 2019, 22% reported a repeat victimisation within a month of their first family harm victimisation, and 40% within a year (figure 6).

**Figure 6: Proportion of re-victimisation by month**

OFFENDERS

A high proportion of harm is attributed to a few offenders. Figure 7 illustrates that in 2020, 1.7% of family harm offenders committed 50% of crime harm.

**Figure 7: Proportion of harm attributed to offenders**

Male offenders accounted for a larger proportion of harm compared to females. Figure 8 highlights that across all age breakdowns, adult males accounted for the largest proportion of harm across all percentile categories. Adult males made up the largest proportion of harm in the upper 25% of most harmful offenders, compared to the middle and lower percentiles.

**Figure 8: Offender harm by gender**

The largest disparity between crime type by volume and crime type by harm is observed for offenders in the upper 25 percentile who committed sexual assault. Figure 9 illustrates that physical assaults accounted for the largest proportion of offences experienced by individuals in the top 25 and 50 percentiles of most harmed.
individuals, whilst property damage accounted for the largest proportion of offences for those in the lower 25 percentile. Figure 9 also demonstrates that the largest disparity between crime type by volume and harm is observed for offenders in the upper 25 percentile. In this group, sexual assault accounted for 6% of crime by volume, but accounted for 39% of total harm, the largest volume versus harm disparity across all percentile groups.

For every 1,000 additional businesses in a station boundary, volume of offences, crime harm and demand all increased 2%. In addition, for every increase of 1 in variation of deprivation within a station boundary, the volume of occurrences with a family harm offence increased by 51%, whilst the amount of harm generated increased by 35%. In addition, for every increase of 1 in variation of deprivation within a station boundary, the volume of occurrences with a family harm offence increased by almost 3 fold, and the amount of crime harm generated more than doubled.

For every increase of 1 in average deprivation across a station boundary, the volume of occurrences with a family harm offence increased by 51%, whilst the amount of harm generated increased by 35%. In addition, for every increase of 1 in variation of deprivation within a station boundary, the volume of occurrences with a family harm offence increased by almost 3 fold, and the amount of crime harm generated more than doubled.

There are some stations that experience a disproportionate amount of family harm for its population size. Figure 11 indicates that Eastern ranks highest for total crime harm and demand and for total volume of offences, per 100,000 of its population, demonstrating that it experiences a

Figure 9: Offender crime harm versus volume

The first month poses the highest risk for re-offending. Among 2019’s first-time offenders, 32% re-offended within a month of their first family

% Re-offending

<table>
<thead>
<tr>
<th>Year</th>
<th>Within 1 Month</th>
<th>Within 3 Months</th>
<th>Within 6 Months</th>
<th>Within 12 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>32%</td>
<td>37%</td>
<td>41%</td>
<td>45%</td>
</tr>
<tr>
<td>2019</td>
<td>32%</td>
<td>37%</td>
<td>41%</td>
<td>45%</td>
</tr>
<tr>
<td>2019</td>
<td>32%</td>
<td>37%</td>
<td>41%</td>
<td>45%</td>
</tr>
</tbody>
</table>

Results are cumulative, i.e. those who re-offended within 3 months are included in the group who re-offended within 6 and 12 months, etc.

Figure 10: Proportion of re-offending by month

Findings: Places

For every additional 1,000 residents with a station boundary, volume of offences, crime harm and demand all increased 2%. There are some stations that experience a disproportionate amount of family harm for its population size. Figure 11 indicates that Eastern ranks highest for total crime harm and demand and for total volume of offences, per 100,000 of its population, demonstrating that it experiences a disproportionate amount of family harm for its population size.

Figure 11 (on next page): Crime harm by stations and population size

Ambient population was also associated with family harm. For every 1,000 additional businesses in a station boundary, volume of offences increased 2%, crime harm increased 2%, and demand increased 4%. Non-crime incidents were also more likely to occur in communities with higher ambient populations.

Table: Family harm offence, volume, and demand per 100,000 residents

<table>
<thead>
<tr>
<th>Station</th>
<th>Volume</th>
<th>Harm</th>
<th>Demand</th>
<th>Volume</th>
<th>Harm</th>
<th>Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northland</td>
<td>4,879</td>
<td>3,165</td>
<td>2,267</td>
<td>4,879</td>
<td>3,165</td>
<td>2,267</td>
</tr>
<tr>
<td>Waitemata</td>
<td>20,326</td>
<td>13,716</td>
<td>8,214</td>
<td>20,326</td>
<td>13,716</td>
<td>8,214</td>
</tr>
<tr>
<td>Auckland</td>
<td>71,477</td>
<td>43,811</td>
<td>27,666</td>
<td>71,477</td>
<td>43,811</td>
<td>27,666</td>
</tr>
<tr>
<td>Counties/Motueka</td>
<td>52,973</td>
<td>127,267</td>
<td>4,520</td>
<td>52,973</td>
<td>127,267</td>
<td>4,520</td>
</tr>
<tr>
<td>Waikato</td>
<td>43,792</td>
<td>50,847</td>
<td>5,432</td>
<td>50,847</td>
<td>5,432</td>
<td>5,432</td>
</tr>
<tr>
<td>Bay of Plenty</td>
<td>49,349</td>
<td>108,684</td>
<td>17,696</td>
<td>108,684</td>
<td>17,696</td>
<td>17,696</td>
</tr>
<tr>
<td>Eastern</td>
<td>62,199</td>
<td>133,143</td>
<td>14,581</td>
<td>133,143</td>
<td>14,581</td>
<td>14,581</td>
</tr>
<tr>
<td>Central</td>
<td>47,495</td>
<td>184,773</td>
<td>21,831</td>
<td>184,773</td>
<td>21,831</td>
<td>21,831</td>
</tr>
<tr>
<td>Wellington</td>
<td>40,090</td>
<td>217,766</td>
<td>28,365</td>
<td>217,766</td>
<td>28,365</td>
<td>28,365</td>
</tr>
<tr>
<td>Taunton</td>
<td>32,904</td>
<td>65,074</td>
<td>5,244</td>
<td>65,074</td>
<td>5,244</td>
<td>5,244</td>
</tr>
<tr>
<td>Canterbury</td>
<td>30,297</td>
<td>193,829</td>
<td>26,769</td>
<td>193,829</td>
<td>26,769</td>
<td>26,769</td>
</tr>
<tr>
<td>Southern</td>
<td>28,788</td>
<td>100,666</td>
<td>17,622</td>
<td>100,666</td>
<td>17,622</td>
<td>17,622</td>
</tr>
</tbody>
</table>

Station boundaries with high deprivation, and those with higher inequality, experienced more family harm. For every increase of 1 in average deprivation across a station boundary, the volume of occurrences with a family harm offence increased by 51%, whilst the amount of harm generated increased by 35%. In addition, for every increase of 1 in variation of deprivation within a station boundary, the volume of occurrences with a family harm offence increased by almost 3 fold, and the amount of crime harm generated more than doubled.

References


Figure 7: Offender crime harm versus volume
The risk of memory blindness when interviewing witnesses: How eyewitnesses can fail to notice mistakes in their witness statements

**Abstract**

The memory of eyewitnesses is a valuable form of evidence within criminal investigations. However, both investigators and eyewitnesses are not exempt from making mistakes that may impede upon the accuracy of witness statements. One such mechanism is known as memory blindness. Memory blindness describes the process by which - unintentional or intentional - alterations to witness statements made by investigators can lead witnesses to not notice (i.e., be blind to) such changes, which can result in inaccurate memories for these altered details. Memory blindness holds serious implications for both eyewitness recall memory, and may therefore compromise the criminal investigation. The current paper will discuss recent developments in the research on memory blindness and describe the factors that have so far been identified as impacting upon memory blindness in witnesses. Recommendations as to best practices for avoiding distorted memory during interviews resulting from memory blindness are also provided in light of the current research base.

**Introduction**

Eyewitness evidence is crucial, but decades of psychological research has highlighted the fallibility of eyewitness memory (see Loftus, 2005, for a review). Issues with eyewitness memory can have a major impact on police investigations, leading to a focus on the witnesses being asked questions, so that the experimenter could easily alter the participant's answers subsequently changed in line with the alterations. Therefore, at the end of the study, participants are often given another opportunity to state whether they believed some of their responses had been altered (as "retrospective detection").

The extant research into memory blindness has demonstrated that many participants fail to detect changes made to their statements, at any time point, and that their memory can conform to the alterations that are made (e.g., Cochran et al., 2016; Stille, Norris & Skidmore, 2017). Cochran and colleagues (2016) found that approximately 93% of participants failed to notice changes made to their memory responses, and that participants' later answers tended to shift in the direction of the alterations that they had been presented with. For example, in Cochran et al.'s study participants were asked "how tall was the thief?", and they were required to answer along a scale from 5"7" to 6"2".

If the participant’s height estimate had been altered, their later estimate often became closer to the altered estimate than to their own original response. Stille and colleagues (2017) similarly found that 85% of participants failed to notice changes made to their memory responses at any time point, and that for those 85% of participants who did not notice all of the changes, 68% of the altered answers subsequently changed in line with the alterations. Therefore, witnesses who fail to detect (subtle) changes to their own responses regarding a witnessed event may: a) not notice these alterations, and b) misremember these details later.

In the above studies, memory blindness was assessed for scale-type questions, so that the experimenter could easily alter the participant’s memory response by moving their answer along the scale. Memory blindness has also been investigated for statements that better reflect the open-ended questioning that witnesses undergo during formal police interviews. Sagana and colleagues (2019) found that participants who provided a more accurate initial recall, prior to being exposed to manipulations in their statement, were more likely to detect alterations made to their statement retrospectively. However, initial memory accuracy did not influence whether participants would notice the discrepancies concurrently. Therefore, while more accurate witnesses may be less likely to experience memory blindness, future research should seek to provide clarification on when this accuracy will benefit them.

Witnesses may be less likely to experience memory blindness when they are more confident in their initial memory. However, these findings are not completely consistent. Specifically, Van Gool, Venn and Wol [2019] asked participants to rate how confident they were in their memory responses when initially providing their recall, as well as when providing their recall after the altered statements. Participants who were more confident in their initial recall were less likely to experience memory blindness retrospectively (i.e., when asked if anything was changed) compared to those with lower initial confidence.

Additionally, participants with greater initial confidence were also less likely to report the alterations in their later recall compared to participants with lower initial confidence. Therefore, while confidence may be a factor relating to memory blindness and subsequently misremembering the alterations, more research on the relationship between confidence and memory blindness is needed to ascertain this. An additional factor that has been looked at in the context of memory blindness is the way in which the witness statement is taken. Across studies within our lab (Brown & Van Gool, 2017; Van Gool et al., 2019), different recall modalities such as writing, typing, and speaking were all compared in rates of memory blindness. Brown and van Gool (2017) showed participants a video of a car accident, following which half of the participants typed up their own statement, while the other half gave their statement verbally to the experimenter.

It was found that across all participants, 58% failed to notice any changes made to their statement at any time point; noticeably there was no difference in memory blindness rates between participants who typed or verbally provided their statement. Similarly, Van Gool et al. (2019) found that participants who typed their statement written recall and also found no difference between the modalities with respect to rates of memory blindness. Memory blindness therefore may be pervasive regardless of the format under which a witness gives their statement to police.

It may, however, be that it is not the format under which a witness provides their account that affects memory blindness, but rather the social context. When comparing across the studies conducted within our lab, memory blindness rates were higher when the study was conducted in the presence of an experimenter (58%; Brown & Van Gool, 2017) compared to when the study was conducted entirely online (Brown & Van Gool, 2017). However, in Brown and van Gool (2017), five participants who reported that their statement had been altered when they were reading the altered version later retracted this belief retrospectively. This may have been caused by the reassurance that the experimenter provided to the participant that the statement was indeed their own. Therefore, the mere presence of an interviewer, or an interviewer providing reassurance to a witness about their statement, may contribute to memory blindness and subsequently misremembering the alterations.

In conclusion, more research is needed to explore the role of the experimenter. Our lab's findings to date do not support the idea that the experimenter's presence necessarily affects memory blindness. However, it is possible that the experimenter never controlled for or directly manipulated within these studies, it is important that future research compare rates of...
memory blindness with the presence and absence of an “Interviewer”, to tease apart any effects of social demands on memory blindness. Recommendations for interviewers

Memory blindness among witnesses is a real concern for investigators. While safeguards have been put in place - for example, getting witnesses to read over their statement and sign to confirm that it is correct (Cochran et al., 2016; NSW Code of Practice for CRIME, 2015) - such safeguards may not necessarily be effective in eradicating memory blindness. Officers should therefore take additional precautions when taking witness statements in order to reduce the occurrence of memory blindness.

Firstly, time delays between when the witness initially provides their statement and when they are asked to confirm that their statement is correct should be minimised. While administrative delays are common within criminal investigations (Gabbott, Hope & Fisher, 2008), police officers should aim to have the witness read through their statement and sign to confirm it as soon as possible after providing their initial recall, to ensure that if any unintentional changes have been made to the witness’s statement, they have the best opportunity possible to detect them.

Further, investigators should take as much care with witness statements as they would with suspect statements. Specifically, a witness’s statement should be taken down verbatim, to avoid the possibility for alterations to be made as a consequence of shorthand techniques. While errors may still be made even through verbatim statement taking, witness interviews should be audio recorded to ensure that the initial and undistorted account of the witness is captured and can be accessible (Tudor-Owen & Scott, 2016).

Given that interviews are conducted in face-to-face environments (Dcio-Vila et al., 2016), interviewers should minimise the social pressure placed on the witness as much as possible. For example, if a witness stated that they believed a detail in their statement was incorrect, such a claim should be taken seriously. Reassuring a witness that the statement is wholly theirs may have the unintended effect of allowing an unintentional alteration to be later misrepresented by the witness. When a witness makes such a claim, audio recordings of the interview should be drawn upon to confirm whether an error was made, and if so, rectify it.

Ultimately, interviewers should always aim to conduct a high-quality, evidence-based interview in line with existing procedures. This serves the wider benefit of ensuring that the information provided by the witness is as accurate as possible. Additionally, given that high quality interviewing techniques are associated with eliciting more accurate witness statements, they have the best opportunity possible to protect witnesses from experiencing memory blindness. Conclusion

When witnesses provide police statements, it is possible that unintentional changes may be made to key details within their statement. The above research shows that there is a high likelihood that witnesses may fail to notice these changes, which may subsequently distort the witness’s memory for those details. Several factors may influence memory blindness, such as time delay, detail similarity, memory strength, and confidence. Future research is needed to reaffirm these findings and to identify further factors that may influence memory blindness in eyewitnesses. However, given these preliminary findings in combination with the serious consequences of memory blindness, investigators should take necessary precautions to enhance the quality of the witness’s statement and reduce the possibility for memory blindness to occur.

References

Maughan (Bernard). Wood Green Crown Court Indictment No. T98 0660
https://doi.org/10.1177/002580249903900207
Police self-legitimacy: A qualitative study of student officers in the United Kingdom

Objective

This study seeks to examine how student officers (recruits) develop self-legitimacy. Self-legitimacy can be understood as the belief that one’s position of power is rightful; that is, morally justified within a normative framework of belief. This study of self-legitimacy explores how power-holders (e.g., the police) justify their authority to themselves and their audiences (e.g., the public). To date, research on self-legitimacy tends to find positive correlations between higher police self-legitimacy and, for example, greater support for suspect rights (Bradford and Quinton, 2014).

This author would like to thank Chief Inspector Roger Pegram for facilitating access to Greater Manchester Police, Greater Manchester Police (GMP) for partnering in this study, and Dr Justice Tankebe for supervising and guiding this research.

Background

The murder of George Floyd by Minneapolis police officer Derek Chauvin prompted global protests, movements to “defund the police”, and calls for less punitive crime control (for example, see JohnJayREC, 2020). This crisis of legitimacy again raised the issue of racist police practices and the overuse of force. These high profile cases combined with widespread public condemnation of the police may undermine police officer’s own views about the legitimacy of their authority and reduce their willingness to cooperate with the public (Wolfe and Nix, 2016). In addition, the role of the police has been significantly expanded to include policing public health mandates, such as compliance with COVID-19 restrictions (Kyprianides et al., 2021).

Bottoms and Tankebe (2012) have convincingly argued that legitimacy (Beetham, 2013). Yet, paradoxically, excessive officer self-legitimacy may lead to range of positive behaviours, including respect for suspect rights and procedures as necessary for protecting themselves and others.

Expanding on studies about the public’s perceptions of police legitimacy (Mazerolle et al., 2013), researchers have begun to explore how police self-legitimacy is cultivated and the influence it has on attitudes and reported behaviours (Tankebe, 2019). For example, higher police self-legitimacy has been linked to greater support for procedural justice (Bradford and Quinton, 2014), in another study, negative media publicity was found to reduce the police’s willingness to engage with communities, and to adopt more community-oriented and higher police self-legitimacy appears to counter it (Wolfe & Nix, 2016). More recently, police fears of appearing racist have been linked to lower self-legitimacy and greater support for coercive policing (McCarty et al., 2021). Conversely, a recent study on policing COVID-19 found that higher self-legitimacy was associated with increased support for police use of force and lower officer well-being (Kyprianides et al., 2021). The authors speculate that officer’s with “excessive confidence” may not be able to change rapidly enough to shifts in the external environment (e.g., a global pandemic).

In short, police self-legitimacy may help promote procedurally just policing, lower support for use of force, and insulate officers from negative media publicity.

Method

This study took place between 2018 and 2019 with Greater Manchester Police at the Sedgeley Park Training Centre. While this study uses a mixed methodology (inc. longitudinal surveys), only the qualitative data is to be reported here. The semi-structured interviews were conducted in private with 26 student officers out of a class cohort of less than 100. The interviews included questions about the role of the police, the rightfulness of police authority, the role of the police in policing, the use of force, and the causes of crime. A/the interviews were transcribed verbatim and a thematic analysis was conducted using NVivo, which is a qualitative data analysis program.

Selected findings

A thematic analysis of the interview data revealed a number of interesting findings; this paper will detail five. First, in terms of justifying their power, the student officers viewed their authority as necessary for well-functioning society (n=11) and to protect people (n=19). Additionally, they felt that their authority is morally justified because it is constrained by the law, accountable, and carried out in the consent of the people (n=19). In fact, the interviewees suggested that abuses of power could undermine their belief in the rightfulness of police power (n=12). As one explained, “corruption in police and corrupt constables can make you doubt whether there should be law enforcement in society that have those powers over other people” (Interviewee 10).

Next, the students hoped to become ethical (n=19) and effective (n=18) officers. By ethical, they imagined themselves developing into approachable (n=6) power-holders that were fair (n=7), trustworthy (n=5), and empathetic (n=4). For the participants, being effective meant being competent (n=11), solving crime (n=11), and helping people (n=8). They saw themselves more as problem solvers, than crime fighters.

Third, the respondents felt that the ability to use force was a necessary, but unfortunate, component of policing. It was necessary to carry out one’s duties (n=18), to protect oneself (n=11), and to protect others (n=9). They felt that any use of force needed to be justified (n=9), proportionate (n=9), and that it should be escalated upwards (n=7). A smaller number expressed greater discomfort with the use of force, but still acknowledged its necessity (n=5). As one detailed, “it’s constantly drilled into you through all your training, and especially from what you learn on the job, that your communication is always your first weapon against people” (Interviewee 23).

Fourth, the future officers shared a strong commitment to the requirements of their role. They overwhelmingly reported that their duty would take priority over their personal morality (n=20).

Finally, the analysis revealed that the participants largely viewed crime as the result of tragic circumstances. This included issues related to poverty (n=17), upbringing (n=13), and substance misuse (n=8). For example, one said, “some people who have such a bad start in life that [crime] was almost inevitable” (Interviewee 17).

Discussion and future research

This study sought to use qualitative data to better understand how police view the nature and legitimacy of their role in modern-day policing. The findings indicate that the student officers draw a sense of legitimacy from a belief that they fulfill a crucial function in society, they protect people, and they wield “bounded authority” (Trinkner et al., 2018). That is, it was important for them that their authority is limited by the constraints of law and the consent of public. They wished to become ethical and effective officers that wield constrained power. For them, it was important that their authority was obtained and exercised with references to shared social values (Beetham, 2013).

Critique to the issue of power-holder legitimacy, Murr (1977, pp. 3–4) argued that “good” police officers require two viruses: first, to develop a “tragic perspective” by being able to “grasp the nature of human suffering”; and second, to be able to “resolve the contradiction of achieving just ends with coercive means.” Officers who fail to integrate the use of force and a tragic view into their moral framework may develop strategies of avoidance, concealment, or coercion. Thus, police officers viewed crime as largely a product of tragic circumstances that meant that people required help, rather than punishment. In addition, to fulfill their duties, they viewed the use of forces as necessary for protecting themselves and others.

Until recently, research on police self-legitimacy has been ignored in favour of studying public perceptions of the police. While this study is small in nature, it acts as a starting point for future studies that seek to better understand how officers view their authority and the potential steps that a police organisation might take towards cultivating officer self-legitimacy. Self-legitimacy has been tied to a range of positive behaviours, including respect for suspect rights and a preference for non-coercive interventions (Bradford and Quinton, 2014). Yet, paradoxically, excessive officer self-legitimacy may lead to rigidity and an increased willingness to use force to fulfill their duties (Kyprianides et al., 2021).

Thus, further research is necessary to better understand how officers develop self-legitimacy and to examine the causal relationships between self-legitimacy and police behaviour. To date, self-legitimacy research is predominantly survey-based and would benefit from longitudinal research, field observations, and triangulation with staff records (see Murr, 1977). In turn, this research could be used to design training, which the practices that improve relationships between the public and the police through a dialogic understanding of police legitimacy. Without legitimacy, ‘policing can very easily become part of the problem of order, not part of the solution’ (Bottoms & Tankebe, 2017, p. 63).

Limitations

There are several limitations that need to be acknowledged. First, the findings are limited to a single cohort of student officers from Greater Manchester Police and therefore the generalisability of the findings are limited. Second, the participants were not randomly selected and therefore not be reflective of the wider cohort. Third, while methods were made to reassure participants that their data would be anonymised and that their participation would not have any institutional repercussions, these may have given socially desirable responses.

References


In May 2020 we began a 12-month prevention initiative targeting volume crime offenders* in Waitemata East, New Zealand. While responding to volume crime is a role of the police, I grew frustrated by the excessive calls to action created by a minority ‘power few’ (Polans et al, 2018). As part of the Tactical Crime Team (TCT), a dedicated volume crime response team, we had a ‘street’ understanding of those few offenders who continued to hurt our community.

Unfortunately, our response model did nothing to address the ‘Drivers of Demand’ or put simply, the underlying reasons why people offend. If volume crime is the water in a barrel, we simply plugged holes and watched as the water mark rose. We needed to start turning off the tap. Luckily, the revised ‘Our Business’ model and the intent of our Area Leadership Team (ALT) aligned with my own vision for change. In an era of increased police scrutiny, it was time to evolve from the siloed law enforcement lens (Docobo, 2005).

Policing by consent is a Peelian principle that is needed more today than ever before. The Crossroads Project was designed to direct our resources at the ‘power few’ while focusing on a restorative approach. This enabled us to understand the needs, values and concerns of our local offenders. Comprehensive knowledge gave us the tools to manage risk and transition the offender back to the person (Jerome, 2020).

Accordingly, we developed a ‘Risk of Reoffending’ score that was updated for every physical meeting. Whether we liked it or not, these people were part of our community. We had the choice to continue enforcing our laws on those who are broken, misguided and desperate to or be part of the solution. The following article outlines the support provided by the Evidence-Based Policing Centre (EBPC), the system design, and outcomes associated with the Crossroads Project.

The ALT were confident in supporting a 12-month trial, however, they wanted to ensure it was measured effectively. The EBPC were fundamental in removing bias and clearly understanding the causes and effects. The cohorts of offenders were prioritised through the New Zealand Crime Harm Index (NSCHI). A targeted approach ensured we got the biggest bang for our buck. A randomised treatment group were mirrored off with a control group. The treatment group were given the Crossroads service while the control group were given the Crossroads service while the control group ensured we got the biggest bang for our buck. A randomised control group were given the Crossroads service while the control group were given the Crossroads service while the control group.

Unfortunately, our response model did nothing to address the ‘Drivers of Demand’ or put simply, the underlying reasons why people offend. If volume crime is the water in a barrel, we simply plugged holes and watched as the water mark rose. We needed to start turning off the tap. Luckily, the revised ‘Our Business’ model and the intent of our Area Leadership Team (ALT) aligned with my own vision for change. In an era of increased police scrutiny, it was time to evolve from the siloed law enforcement lens (Docobo, 2005).

Policing by consent is a Peelian principle that is needed more today than ever before. The Crossroads Project was designed to direct our resources at the ‘power few’ while focusing on a restorative approach. This enabled us to understand the needs, values and concerns of our local offenders. Comprehensive knowledge gave us the tools to manage risk and transition the offender back to the person (Jerome, 2020).

Accordingly, we developed a ‘Risk of Reoffending’ score that was updated for every physical meeting. Whether we liked it or not, these people were part of our community. We had the choice to continue enforcing our laws on those who are broken, misguided and desperate to or be part of the solution. The following article outlines the support provided by the Evidence-Based Policing Centre (EBPC), the system design, and outcomes associated with the Crossroads Project.

The ALT were confident in supporting a 12-month trial, however, they wanted to ensure it was measured effectively. The EBPC were fundamental in removing bias and clearly understanding the causes and effects. The cohorts of offenders were prioritised through the New Zealand Crime Harm Index (NSCHI). A targeted approach ensured we got the biggest bang for our buck. A randomised treatment group were mirrored off with a control group. The treatment group were given the Crossroads service while the control group were given the Crossroads service while the control group ensured we got the biggest bang for our buck. A randomised control group were given the Crossroads service while the control group were given the Crossroads service while the control group.

Unfortunately, our response model did nothing to address the ‘Drivers of Demand’ or put simply, the underlying reasons why people offend. If volume crime is the water in a barrel, we simply plugged holes and watched as the water mark rose. We needed to start turning off the tap. Luckily, the revised ‘Our Business’ model and the intent of our Area Leadership Team (ALT) aligned with my own vision for change. In an era of increased police scrutiny, it was time to evolve from the siloed law enforcement lens (Docobo, 2005).

Policing by consent is a Peelian principle that is needed more today than ever before. The Crossroads Project was designed to direct our resources at the ‘power few’ while focusing on a restorative approach. This enabled us to understand the needs, values and concerns of our local offenders. Comprehensive knowledge gave us the tools to manage risk and transition the offender back to the person (Jerome, 2020).

Accordingly, we developed a ‘Risk of Reoffending’ score that was updated for every physical meeting. Whether we liked it or not, these people were part of our community. We had the choice to continue enforcing our laws on those who are broken, misguided and desperate to or be part of the solution. The following article outlines the support provided by the Evidence-Based Policing Centre (EBPC), the system design, and outcomes associated with the Crossroads Project.

The ALT were confident in supporting a 12-month trial, however, they wanted to ensure it was measured effectively. The EBPC were fundamental in removing bias and clearly understanding the causes and effects. The cohorts of offenders were prioritised through the New Zealand Crime Harm Index (NSCHI). A targeted approach ensured we got the biggest bang for our buck. A randomised treatment group were mirrored off with a control group. The treatment group were given the Crossroads service while the control group were given the Crossroads service while the control group ensured we got the biggest bang for our buck. A randomised control group were given the Crossroads service while the control group were given the Crossroads service while the control group.

Unfortunately, our response model did nothing to address the ‘Drivers of Demand’ or put simply, the underlying reasons why people offend. If volume crime is the water in a barrel, we simply plugged holes and watched as the water mark rose. We needed to start turning off the tap. Luckily, the revised ‘Our Business’ model and the intent of our Area Leadership Team (ALT) aligned with my own vision for change. In an era of increased police scrutiny, it was time to evolve from the siloed law enforcement lens (Docobo, 2005).

Policing by consent is a Peelian principle that is needed more today than ever before. The Crossroads Project was designed to direct our resources at the ‘power few’ while focusing on a restorative approach. This enabled us to understand the needs, values and concerns of our local offenders. Comprehensive knowledge gave us the tools to manage risk and transition the offender back to the person (Jerome, 2020).

Accordingly, we developed a ‘Risk of Reoffending’ score that was updated for every physical meeting. Whether we liked it or not, these people were part of our community. We had the choice to continue enforcing our laws on those who are broken, misguided and desperate to or be part of the solution. The following article outlines the support provided by the Evidence-Based Policing Centre (EBPC), the system design, and outcomes associated with the Crossroads Project.

The ALT were confident in supporting a 12-month trial, however, they wanted to ensure it was measured effectively. The EBPC were fundamental in removing bias and clearly understanding the causes and effects. The cohorts of offenders were prioritised through the New Zealand Crime Harm Index (NSCHI). A targeted approach ensured we got the biggest bang for our buck. A randomised treatment group were mirrored off with a control group. The treatment group were given the Crossroads service while the control group were given the Crossroads service while the control group ensured we got the biggest bang for our buck. A randomised control group were given the Crossroads service while the control group were given the Crossroads service while the control group.

Unfortunately, our response model did nothing to address the ‘Drivers of Demand’ or put simply, the underlying reasons why people offend. If volume crime is the water in a barrel, we simply plugged holes and watched as the water mark rose. We needed to start turning off the tap. Luckily, the revised ‘Our Business’ model and the intent of our Area Leadership Team (ALT) aligned with my own vision for change. In an era of increased police scrutiny, it was time to evolve from the siloed law enforcement lens (Docobo, 2005).

Policing by consent is a Peelian principle that is needed more today than ever before. The Crossroads Project was designed to direct our resources at the ‘power few’ while focusing on a restorative approach. This enabled us to understand the needs, values and concerns of our local offenders. Comprehensive knowledge gave us the tools to manage risk and transition the offender back to the person (Jerome, 2020).

Accordingly, we developed a ‘Risk of Reoffending’ score that was updated for every physical meeting. Whether we liked it or not, these people were part of our community. We had the choice to continue enforcing our laws on those who are broken, misguided and desperate to or be part of the solution. The following article outlines the support provided by the Evidence-Based Policing Centre (EBPC), the system design, and outcomes associated with the Crossroads Project.

The ALT were confident in supporting a 12-month trial, however, they wanted to ensure it was measured effectively. The EBPC were fundamental in removing bias and clearly understanding the causes and effects. The cohorts of offenders were prioritised through the New Zealand Crime Harm Index (NSCHI). A targeted approach ensured we got the biggest bang for our buck. A randomised treatment group were mirrored off with a control group. The treatment group were given the Crossroads service while the control group were given the Crossroads service while the control group ensured we got the biggest bang for our buck. A randomised control group were given the Crossroads service while the control group were given the Crossroads service while the control group.

Unfortunately, our response model did nothing to address the ‘Drivers of Demand’ or put simply, the underlying reasons why people offend. If volume crime is the water in a barrel, we simply plugged holes and watched as the water mark rose. We needed to start turning off the tap. Luckily, the revised ‘Our Business’ model and the intent of our Area Leadership Team (ALT) aligned with my own vision for change. In an era of increased police scrutiny, it was time to evolve from the siloed law enforcement lens (Docobo, 2005).

Policing by consent is a Peelian principle that is needed more today than ever before. The Crossroads Project was designed to direct our resources at the ‘power few’ while focusing on a restorative approach. This enabled us to understand the needs, values and concerns of our local offenders. Comprehensive knowledge gave us the tools to manage risk and transition the offender back to the person (Jerome, 2020).

Accordingly, we developed a ‘Risk of Reoffending’ score that was updated for every physical meeting. Whether we liked it or not, these people were part of our community. We had the choice to continue enforcing our laws on those who are broken, misguided and desperate to or be part of the solution. The following article outlines the support provided by the Evidence-Based Policing Centre (EBPC), the system design, and outcomes associated with the Crossroads Project.

The ALT were confident in supporting a 12-month trial, however, they wanted to ensure it was measured effectively. The EBPC were fundamental in removing bias and clearly understanding the causes and effects. The cohorts of offenders were prioritised through the New Zealand Crime Harm Index (NSCHI). A targeted approach ensured we got the biggest bang for our buck. A randomised treatment group were mirrored off with a control group. The treatment group were given the Crossroads service while the control group were given the Crossroads service while the control group ensured we got the biggest bang for our buck. A randomised control group were given the Crossroads service while the control group were given the Crossroads service while the control group.
An action research project designed to support the leadership development and wellbeing of police leaders, their staff and the communities they serve.

Introduction

World events in the past 18 months have shown us that we are indeed “all in this together” - whether that idea appeals to us or not. These world events have contributed to a policing environment has become more volatile, uncertain, complex and ambiguous (VUCA) than ever before. There is a growing awareness that police are to contribute to the justice reform and community safety levels that they and their communities desire, then police staff need to be supported in ways that will allow them to contribute meaningfully to those changes.

He Waka Eke Noa is an Aotearoa New Zealand Police appreciative action research project. The project is embedded within an Area Leadership Development programme entitled Tu Tika Tu Pono. Tu Tika Tu Pono supports the leadership development of an Area Leadership team consisting of the Area Commander, Senior Sergeants and Sergeants. He Waka Eke Noa explores both a Te Ao Maori (the Maori world view) and Collective Leadership as vehicles for learning and development. These approaches seek to encourages the development of policing practices which support the NZ Police strategic Plan – Our Business, specifically in relation how we support Our People, Our Leaders, Our Culture and Our Partners.

The vision of the project is “Thriving Police staff supporting thriving communities”. The principle is a little more complex to understand. The key is in the notion that when police staff are supported to connect with their values in meaningful ways, then those values will impact positively on the individual and collective contributions to policing. This values-based approach opens the door to connecting more meaningfully with the communities they serve. An appreciative approach has been taken because the nature of policing means that very often the focus is on what’s going wrong. This deficit lens makes us potentially blind to the possibilities of what is, or could be going right. When an appreciative approach is considered the potential for innovation increases.

The development programme therefore takes a blended approach of a Te Ao Maori leadership framework and a modern Collective Leadership/systems-based approach. Both these approaches have individual and collective wellbeing or hauora at their core.

Te Ao Maori Approach

A Te Ao Maori approach connects people to people, people to place and people to the environment - both physically and metaphysically. The connection to place is the starting point. This is very different from traditional leadership development programmes which are largely individual based and individually focused.

A Maori framework based on understanding connection beyond just people, commits us to develop genuine relationships with our community. Relationships that are about connecting more than just people together. Where “we become the place” and the communities that we police.

It is clear that from a Maori perspective that Place comes first, the Wairua or spirit feelings of connection people have to place second, and then People. The police leaders in this project have begun to explore what that perspective looks like in policing leadership practice.

Collective Leadership Approach

In contrast to Te Ao Maori, but very connected at a values level is the collective leadership approach. Collective leadership has emerged broadly from systems theory with contributions from neuroscience and quantum physics. The three principles of collective leadership below, align strongly with the New Zealand Police Commissioner’s three priorities.

Firstly; Leader being before doing. This is an invitation to bring the authentic self into the workplace – something that both requires and creates a high trust environment. A very big aspiration in a demanding policing environment.

Secondly; Leading from the “whole” rather than the “rock.” This principle recognises that truly powerful leaders lead from a space of equality not solely from having positional power or rank.

Thirdly; Being equipped to lead from the emerging future. This final principle is a little more complex to understand. The key is in the words “being equipped.”

We indicated in the introduction that the policing environment – indeed the social, political and environmental environments are VUCA (volatile, uncertain, complex and ambiguous). Therefore, expecting to be able to plan and execute in totally predictable ways can no longer be the norm. “Being equipped” then, means learning to be comfortable with uncertainty. It means...
managing not knowing, making space to ask “big hairy” questions such as why are we here or why have we done things in the past? how do we find comfort in not knowing? and how do we transform our capacity to achieve a safer New Zealand? Being equipped also means being prepared to make mistakes and to forgive ourselves and others for those mistakes. It means extending trust to some people (who we’ve not trusted before) within and outside police. Finally, it means knowing when to act fast and when to act slow, to take the time to sense and respond to the future as it emerges.

Method

Action research

Put simply action research is a “done with,” not a “done to” approach. Unlike traditional research, action research invites people to become researchers of their own practice and to gather evidence as they work towards making improvements. The research team therefore consists of members of an Area Governance Group of Senior Sergeants, their Area Commander, local kuia and kaumatua and the authors.

We want to understand “What are the most effective learning and development strategies to support policing area leadership teams to lead in collaborative and innovative ways?”

Two theoretical approaches are used to guide the research process.

They are the Learning Transfer Systems Inventory (LTSI) of Holton and Baldwin and Bronfenbrenner’s Ecological Systems theory. The LTSI identifies that transfer of learning into workplace practice is impacted upon in various ways.

Bronfenbrenner reminds us that nothing happens in isolation and that the risky part has involved people being courageous enough to begin to think and behave in ways that are counter to deeply embedded police cultural norms. Currently the Governance Group is committed to breathing life into the Area SPT (strategic planning template) through exploration and application of concepts that are meaningful to them such as Kaupapa Mātaurua, Tā Ika Tu Pono and Manaakitanga.

Participant comments

Some recent comments from participants include:

“...I have a greater awareness of my impact on my group and how I can direct that [impact]. My knowledge of Maori culture and beliefs has increased. This has no doubt improved my empathy.”

“...Respect within the Governance group has increased. It’s not always apparent (you know what I mean) but it has. We are not there yet but are further down the road. We know more about why things go wrong or right.”

“We are starting to bind together in the same way as happens in kapahaua. Each person “has” or “energy”. The magic happens when each person’s ihi connects with each other’s ihi and this is a 2 way process. It requires trust, communication, focus on common good for all “this to happen, then comes the magic or awe (the wair)”.

And from the Area Commander, “We are at a crossroads right now. Our thinking has grown and expanded, both as individuals and as a collective. At the same time we recognise that we know sod-all. We’ve been introduced to an expanded world view both in a te Ao Māori and Collective Leadership context and we aspire to operate in this new space. We recognise the need to build a depth of understanding to truly realise our potential and be the difference our community deserves.”

Broad strategy insights and highlights

• Take a long game approach – there is no McDonald’s version. A space needs to be created over time for relationships to deepen so that trust develops and then true collaboration and innovation can occur.

• Work with intact teams. The opportunity to learn and develop alongside peers pushes boundaries for everyone no matter what their developmental needs.

• Use skilled facilitators who understand or are prepared to learn about a policing context. Support the development of facilitation skills within the group.

• Pay attention to wellbeing – not as a passing topic but as a core theme throughout the programme. There is a sense amongst the researchers that deliberate attention to wellbeing in leadership development it is the key to being able to deliver on strategic goals.

• With skilled facilitation, a te Ao Māori approach to leadership has the potential to promote wellbeing and more critical and innovative approaches to both internal (police) and external (community) interactions.

• A highlight for some was the river trip and noho marae where interactions with local Maori including elders and ex Gang members provided an opportunity for everyone present to look at old hurts through new lenses.

• The Body Mind Intelligence Assessment at the 2020 retreat revealed leadership strengths in individuals and the team. This was done through a physical mind/body energy assessment – very different from the usual psychological assessments found in most leadership development programmes. This unique approach immediately revealed the collective strengths of the group and provides a framework for ongoing deepening understanding of individual contributions and increased capacity to tap into those collective strengths.

Researcher reflections

Researcher reflection is a key skill in action research.

Know, believe and acknowledge that the group has great wisdom and potential to innovate and create new solutions to old and new problems.

Know, believe and acknowledge that the wisdom and innovation will evolve as the collective evolves.

Make everything relevant to the group and if they can’t see the potential to promote wellbeing and more critical and innovative changes and increased capacity to tap into those collective strengths.

Know, believe and acknowledge that the group has great wisdom and potential to innovate and create new solutions to old and new problems.

Know, believe and acknowledge that the wisdom and innovation will evolve as the collective evolves.

Seek feedback and listen to it….. model vulnerability…be a learner yourself.

Seek and promote opportunities to step back as others in the group step forward

Be flexible and have fun….. but not at anyone’s expense

Experiment with practical tools such as Liberating Structures that give highly practical ways for participants to address workplace challenges such as the need to improve meeting processes, behaviours and outcomes.

Final thoughts

There has been a limited research on leadership development in NZ Police in recent years. Little is known about the process or impact of applying an action research/collective systems-based approach to policing leadership development. The work is ongoing and has been equally challenging, and exciting.

The action research cycle of reflection and action and adjustment has meant some very honest, revealing and challenging conversations during the project to date. We have all butted up against old unfelt ways of being and doing in ourselves and in others. Learning to lead using whole body intelligence (head, heart and gut) is a crucial step to building the high trust or “just” culture that is the aspiration of New Zealand Police.

Every single person involved in this project has demonstrated courage to explore new ways of being and doing because they know we can do better for ourselves and our communities. The approach taken in this research project identifies that it is a want a different policing future then we must individually and collectively let go of the trapeze we have been swinging on – go into the unknown space… feel the discomfort, and trust ourselves to grab on to the new opportunities that we can and will create together.

Bibliography

 Campbell, I., & Kocic, J. (2011). What makes great police leadership? What research can tell us about the effectiveness of different leadership styles. competencies and behaviours. A Final Evidence Review National Police Improvement Agency.
 Te Huruma T-e Tai (2016) NZ Police
Implementation science is the study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine operations (Bauer, Damschroder, Smith, & Killebrew, 2015). In other words, implementation science is the study of how to close the evidence-practice gap. The merit in using research evidence to address operational policing challenges is insatiable to anyone involved in the endeavour of evidence-based policing.

We strive to use data-driven insights, synthesise the evidence and design meaningful interventions that represent an improvement on previous practice. In the context of increasing scrutiny, shrinking budgets and stretched resources, it is more important than ever to ensure that evidence-based practice (EBP) remains in place with reasonable fidelity after we walk away. How do we ensure that this happens?

During my decade driving evidence-based practice in a policing context, I worked tirelessly to generate research evidence, train police and develop novel evidence-based solutions for operational policing problems. But only now, after learning about implementation science, do I develop a greater understanding of implementation activities, which can be applied immediately to embed EBPs in policing organisations.

A large number of implementation frameworks available in the implementation science literature outline the processes and practical strategies that have the potential to support the work of capability uplift within policing services. By making explicit the phases involved in successful implementation, these frameworks enable EBPs not only to be appropriately introduced but also ultimately sustained. An effective evidence-based practice is necessary, but not sufficient, and implementation science brings the missing piece. In order to get to outcomes, and sustain them, it is not sufficient to just focus on the ‘what’ the EBP will be used to achieve the ‘how’ (implementation process).

An established example of a useful implementation framework outlines four implementation phases, namely Exploration, Preparation, Implementation, and Sustainment (Aarons, Et Al., 2007). It also identifies factors most likely to have an influence on the implementation of EBPs in publicly funded settings (Figure 1). Figure 1. The EPIS (Exploration, Preparation, Implementation, Sustainment) implementation framework adapted from Aarons et al. (2011).
Understanding the Basics of Information and Evidence: Valid Qualitative Data, Valid Quantitative Data, and the Three ‘C’s


Acknowledgements: The author would like to thank Dr Richard Wang, Director of the MIT Chief Data Officer and Information Quality (CDOIQ) Program for graciously (and rapidly) providing permission to quote his unpublished work, as well as AIP’s Chief Data Officer, Chief Forensic Scientist and Criminal Intelligence Analyst for reviewing the drafts of this paper.

Introduction
The Strategy, Design and Evaluation Team within the Australian Federal Police’s (AFP) International Command often engages with social scientists. Some social science techniques gather data of a standard that may challenge concepts of evidence based policing.

In response to this issue, the AFP is in the process of developing a Data Quality Assessment Framework (DQAF) to be potentially incorporated in a Strategy, Design and Evaluation ‘Better Practice Guide’, which may be shared with contractors to avoid misunderstandings about acceptable standards for data quality.

This paper reviews selected aspects of the theory used to construct the Strategy, Design and Evaluation Team’s DQAF. It examines the fundamental processes needed to create the qualitative and quantitative information police and others rely on to do their work. While academic in nature, these processes are something everyone intuitively uses every day. A more explicit understanding of these processes enables them to be used as a simple ‘test’, to assist in the identification of low quality or invalid data.

How we know anything
You know things. But how is this?

It is important to understand that this paper is aimed at applying consistent terminology to what people already do without realising it.

Thought processes that are intuitive or instinctive are often difficult to explain in everyday language. The value of a consistent terminology is it can be used to reveal mistakes in logic that would otherwise be difficult to identify.

Why are these basics important to Police Science? Among its many uses, Police Science is important in prosecutions and court proceedings, as judges must have sound reasons to believe findings presented to them. Prosecutors and police should therefore be ‘informed consumers’ of information, especially that provided by potential expert witnesses. If testimony of an expert witness is revealed as not being defensible (perhaps by other expert witnesses), perceived legitimacy of other casework may also be tainted.

Probably the most correctly worded direction on the position of judges in this context comes from the United States. The US Supreme Court defined the judge’s ‘gatekeeper role’ as entailing:

“What constitutes valid qualitative data? (What is a quality?)

These may look like trivial questions, but the very serious and ongoing Replicability Crisis currently faced by social scientists (Fidler & Wilcox, 2018), demonstrates that many, even very highly qualified academics and other experts are not always able to answer them correctly. In their defence, this may be because (peer reviewed) literature that directly addresses this particular aspect of data quality is scarce, even though consideration of such matters has a long history (Croisy, 1996).

What is valid qualitative data?
The First ‘C’ - CONVENTION

Qualities are created ‘by Convention’. A convention needs two parts:

A strong agreement between all relevant users to adhere to the definition

As an example, this is exactly how you know that something possesses ‘the quality of being red’. Red things do not exist in any absolute sense. We all just agree that when light of a certain wavelength hits our eyes, we have a convention of calling it ‘red’ (regardless of differences in how we may perceive it). Qualities are not insubstantial things, they are the starting point for all applied sciences, including forensic science. To put it this way, in perspective, this is exactly how we use conventions to verify that something has ‘the quality of being one meter in length’ or ‘the quality of weighing one kilogram’.

What is valid quantitative data?
Valid quantitative data is correctly processed qualitative data. To process valid qualitative data into valid quantitative data takes two further steps.

The Second ‘C’ - CLASSIFICATION

Classification is a structured process of differentiating things, either by breaking them into different categories or identifying unique instances of the same thing. Use of classification categorisation is one of our most fundamental means of understanding the world. To continue with the example of things possessing ‘the quality of being red’, before you can use this ‘redness’ in a more structured way, you need to classify the world into two categories: things that are red and things that are not red. Alternately, for the example of the metric system of distance measurement, you need to classify any distance into set of unique and non-overlapping examples of lengths possessing the quality of being one meter.

The Third ‘C’ - COUNT

The last step is simple. It is Count. If two people share a strong convention on what a red thing is, and can therefore consistently classify the world into red things/not red things, they can now independently count the quantity of red things they see and reliably produce the same answer. This makes the result verifiable and replicable; which demonstrates a degree of fixed meaning of a result.
To recap, in the ‘process of quantification’, it is the first ‘C’ (Convention) that enables the second ‘C’ (Classification), which then enables the third ‘C’ (Count). There is no other way to create valid ‘quantities’. If you want to claim something is a valid quantity, it must have been processed through all three ‘C’s.

### How does knowing these basics help in practice?

One insight an understanding of these basics provides is that often, the key differences between data quality standards applied by physical sciences and social sciences is the strength of the conventions initially applied when creating qualities, and thereby deriving quantities. The less strong the conventions applied to generate initial qualities, the more likely junk science is being conducted.

Another use of the Three ‘C’s is in the derivation and application of ‘units of measure’. ‘Quantities’ that are expressed without robustly defined units are unlikely to be valid quantities. In fact, “Units of measure are how we express measurements of quantities” (USNRC, 2021).

In more practical terms, the three ‘C’s can help spot problems with existing research, such as when a survey or some other instrument is unlikely to collect valid qualitative or quantitative information.

#### Example 1

Consider two possible survey questions for residents of a particular street:

1. How many criminal activities have you witnessed in your street, in the past week?
2. How many times have you seen someone subjected to physical violence by one or more other people in your street, in the past week?

We might all be able to use our common sense and say that the second question is better because it is more specific, but why is this better?

In the Three ‘C’s terminology, we would say that no strong convention is likely to exist that carries a shared definition between the researcher and all residents as to what things possess the quality of being a ‘criminal activity’. Laypeople may not be aware of the difference between criminal and civil offenses, and therefore may consider youths fighting in the street as ‘just a bit of fun’, and not include such incidents. “Criminal activities” is a broad term, of which laypeople have varied understandings. If you ask a question this way, you will get quantitative responses, but you won’t know what respondents are classifying and counting.

In contrast, the quality of being a case of someone ‘subjected to physical violence’ is something for which researchers and residents are likely to already share a reasonably strong convention. Physical violence is something we can all more reliably recognise. This example may seem obvious, but cases of weak conventions in questioning are very common, especially when translations and cultural assumptions come into play.

#### Example 2

Consider the following, very common, type of survey question:

1. Please provide a score, on a scale of 1 to 5, for how severe the impact of acts of physical violence has been on residents of your street in the past week.

If someone responds with a ‘2’, what does this data point mean in terms of capturing verifiable evidence? The answer is ‘probably not what you hope’, because this question is not measuring anything rigorously definable. To start with, there is no shared convention on what ‘severity’ means. A person who has lost their only son to gang violence would likely return a very different point on this scale to someone who was delayed by traffic as the ambulance took away the body. The same ‘real world’ event occurred, but the subjectivity of respondents has never been processed into something objectively verifiable. So, with no strong convention set, ‘severity’ is not a valid quality in this context. Without an initial valid quality, there is no hope of deriving any valid quantities.

Some researchers try to overcome this by creating their own definition of ‘severity’, but this is pointless unless all respondents share and understand this definition. As a tip for the unwary, please note that trying to create a new convention about anything but the simplest concept across language, education level or cultural barriers is not a trivial endeavour (Drake & Wilson, 2008). A few cursory instructions in a survey will not usually achieve this.

So what is this ‘2’ that sits along this response format? It is simply a label to one pre-specified, response option. The fact that it uses a numeral to identify this response option carries no particular significance, it could have as easily been a letter of the alphabet, some words, or even a picture of a cute little fluffy dog named George.

Using a numeral as a response category label does not magically render the responses a number or quantity. Which also means you can’t use mathematical operations like addition, subtraction, multiplication or division in their analysis. Police science practitioners are all applied scientists. Mathematicians may be able to work with pure numbers, but applied scientists must deal with ‘numbers of somethings’, which, by definition, implies ‘quantities’ (Oxford Dictionaries, 2021). By proposing the response format shown above, the researcher has not established a convention, they have failed to classify anything in relation to a convention, and nor have they counted anything by applying a classification. The numerical labels are therefore not valid ‘quantities’ of anything, which begs the question why do so many researchers persist in using them, especially when they could alternately use much nicer pictures of little fluffy animals?

One counter-argument often raised is that the researcher does not intend these symbols to be interpreted as ‘full quantities’, but rather as ‘ordinal quantities’ (e.g. rankings of things).

Ordinal quantities are a real and useful thing. The term ‘ordinal’ means you may only know that one quantity is bigger than another, but you don’t know how much bigger. Aside from the fact that those who try to claim this ‘ordinal loophole’ usually use every spaced, consecutive
Some researchers try to stretch their assumptions even further and claim that their subjective response constructs represent ‘interval scales’, which would mean they think they know not just the order of the points but the absolute distance between them. While the same counter-arguments remain applicable in regard to such claims, a lot of ‘analytical convenience’ rides on whether data is ordinal or interval in nature. The literature is full of unresolved arguments over this distinction in relation to subjectively scaled response formats, because it defines whether researchers can use (convenient) parametric or (less-convenient) non-parametric statistical methods in analyses (Bishop & Heron, 2015; Kero & Lee, 2016; Mirockiu & Atkinson, 2017).

In truth, the arguments should never get this far, because no valid process of quantification of any type has ever taken place, so whatever the analysis involves, if it uses such labels as raw qualitative data, it will fail to gel with GIGO. 

Questionable use of numerical labels can be termed ‘subjective quantification’. If quantification is intended to refer to some verifiable and replicable form of objective measurement, ‘subjective quantification’ will always be an oxymoron.

Regardless of anything else, these response constructs generate unprocessed subjective data. In technical jargon, this unprocessed subjective data is known as psychometric data. Psychometric data may be useful for psychometric research about people’s states of mind, but it has the lowest data quality possible for researching objectively verifiable realities. This is because it is unconstrained by anything but the subjects’ imagination. Researchers and peer reviewers should regard this type of response format as method of last resort for research about objective realities.

In practice, confusion between the terms ‘subjective’ and ‘qualitative’ often leads to people trying to claim they have measured a verifiable quality without ever measuring any verifiable qualitative aspects of the course. Use of purely psychometric data from participants as a proxy (e.g. from a satisfaction scale), is a very low quality basis for such findings; not least because such psychometric data will also be ‘mood dependent’.

Despite these problems, many researchers still collect very low quality data, such as the products of subjective quantification. Why do such low data quality options gain traction among researchers? First, they provide researchers with a convenient means of avoiding thinking about what they really need to know. Asking ‘vague’ questions is effectively a way to let respondents decide what the research is trying to find out. This is not a wise research plan.

Second, they are analytically convenient, because they avoid more rigorous qualitative research approaches to analysis that require:

- collecting verifiable qualitative data
- reading it all
- defining consistent codes to apply to the data (i.e. a coding convention)
- classifying it according to these codes
- developing quantitative statistics from frequencies (i.e. counts) of these codes.

Third, they are also convenient in that they allow a ‘magical’ approach to creating data that can then be fed directly into numerical or statistical analyses. Unfortunately, ‘convenience considerations’ have never been, nor should ever be, a key driving force of rigorous scientific methods.

Similarly, ‘wishful thinking’ is not a valid research tool, so simply hoping questions or response formulations will capture the information we desire has no bearing on whether they actually do or not. The real world is not obliged to conform to our aspirations, so the onus remains on the researcher to rigorously demonstrate that they are collecting the targeted information they claim to be.

It is also recognised that many researchers are heavily invested in these types of approaches to survey questions, and see a huge number of precedents for this type of work in the literature. Even under the weight of such precedents, and putting all this paper’s own points aside, common sense can still provide some insights here. Consider the following thought experiment:

You are a staunch supporter of using psychometrically scaled responses in research about real world factors. You are sitting at the front of a smallish plane. It is an open-cockpit design and you are facing the radio traffic. Your ears suddenly prick up when you hear the pilot say: “Towers, this is Flight 702, we are low on fuel and will not be able to reach our original destination. Can you advise which airport we should divert to?”

There is a pause, and then you hear the control tower reply: “No problem Flight 702, we have enacted our emergency protocols for dealing with your situation, but we need more information to provide the correct advice on which airport you can make it to. So, can you tell us exactly how low on fuel you are, using the following five point scale: ‘exceptionally low’, ‘very low’, ‘a bit low’, ‘slightly low’?”

You or course are likely to get a truthful answer. Asking questions that are vague is an effective way to let respondents decide what the research is trying to find out. This is not a wise research plan.

In practice, confusion between the terms ‘subjective’ and ‘qualitative’ often leads to people trying to claim they have measured a verifiable quality without ever measuring any verifiable qualitative aspects of the course. Use of purely psychometric data from participants as a proxy (e.g. from a satisfaction scale), is a very low quality basis for such findings; not least because such psychometric data will also be ‘mood dependent’.

The mathematic restrictions on analyses applied to ‘ordinal numbers of things’ are actually far greater than on ‘full’ numbers. They also require a process very similar to the Three ‘C’s to render them valid.

The only real difference is that final step (the counting process), is less complete and simply uses a comparative approach (e.g. “I haven’t counted them, but just by standing the two groups back to back, I can tell you there are more red haired people in room A than in room B”). Even this more limited process has never been carried out for the response format in example 2, so the numerals are not ‘ordinal quantities’ either.

Replacing numerals with words does not necessarily solve this issue, because trying to convey ordinality by placing words along a scale or in a set sequence does not necessarily override respondents’ own semantic interpretations, and even variations in presentations of semantic scales can create biases (Chezy, Reddy & Beech, 1987).

In summary, the key message from this discussion is that:
1. It is extremely easy to generate data.
2. It is much harder to generate data that captures valid information about the real world.
3. It is much harder still to capture valid information that has the meaning researchers wish to assume it does.

Unless researchers put in enough thought into their data collection to ensure they reach point 3, most subsequent analyses will deliver results that are wrong.

Again, just collecting ‘convenient data’ and hoping that it has the meaning we want is not a valid option for serious research.

In these times of ‘Big Data’ and technology-based collection tools, it has never been easier to simply generate data. However convenient these tools may be, it always remains the researchers’ responsibility not to ask ‘stupid questions’, because the world has no problem giving back ‘stupid answers’. Or, as Dr Richard Wang, Director of the MIT Chief Data Officer and Information Quality (CDOxQ) Program puts it, “Your data may be BIG, but is it any GOOD?” (Wang, 2013).

What do we do instead?

The short answer to this question should be ‘there is no instead’! Invalid research methods should never be considered as an option. The longer answer is that by using the ‘Three ‘C’s as a standard criterion for non-psychometric research, a vast range ofounder, and often simpler, methodologies become apparent. Many of these methodologies have existed for centuries. The ‘Questionable Research Practices’ or ‘QRP’s’ (Armari & Latamos, 2018), outlined above have all crept in as poorly conceived ‘shortcuts’ to these original methodologies. A discussion of such valid methodologies is not something that can be addressed in this brief paper. In lieu of this, a simple checklist that may be used to identify issues in data quality, including these validity and replicability issues, is provided in Table 1.

Table 1. Data Quality Checklist

<table>
<thead>
<tr>
<th>Data Quality Criteria</th>
<th>Yes/No</th>
<th>Data Gathering (M&amp;E) Applicability</th>
<th>IT systems (Database) Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. VALIDITY/REPLICABILITY</td>
<td>1. Do data points represent a valid measure of anything?</td>
<td>Is the data valid/quantitative? (There are no other options! Has the Three ‘C’s test been applied?)</td>
<td>Is the quality of the data founded on a system of shared conventions and classifications that is rigorous enough to be defensible?</td>
</tr>
<tr>
<td>2. POWER</td>
<td>2.1 Are we gathering the most powerful raw data feasibly available?</td>
<td>Are we collecting basic data that can be used to analyse a wide range of complex phenomena, or are we gathering existing constructs that cannot be disaggregated to identity unique and meaningful, real world contributing factors?</td>
<td>Can each data point be mapped to a unique real world state, or are data points opaque constructs that cannot be directly identified in the real world?</td>
</tr>
<tr>
<td>3. UNIQUENESS</td>
<td>3.1 Can differing or unique data be reliably identified after collection?</td>
<td>Are we collecting basic data that can be used to analyse a wide range of complex phenomena, or are we gathering existing constructs that cannot be disaggregated to identity unique and meaningful, real world contributing factors?</td>
<td>Can differing or unique entries be reliably identified and accessed?</td>
</tr>
<tr>
<td>3.2 Is there inappropriate repetition of data?</td>
<td>Are we inappropriately double counting?</td>
<td>Have we tested our collection methods to ensure they are reliable? Do information gathering methods introduce varying biases/errors into data?</td>
<td>Are any entries inappropriately repeated in a dataset?</td>
</tr>
</tbody>
</table>

Australia & New Zealand Society of Evidence Based Policing  Page 27
Table 1. Data Quality Checklist continued.

<table>
<thead>
<tr>
<th>Data Quality Criteria</th>
<th>Yes/No</th>
<th>Data Gathering (M&amp;E) Applicability</th>
<th>IT systems (Database) Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. COMPLETENESS/REPRESENTATIVENESS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1 Does the sample/dataset include all necessary attributes of a factor under investigation (including time periods)?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.2 Does the sample/dataset sufficiently reflect the ideal (fullest possible) dataset?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.3 Does the sample/dataset contain all relevant factors?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.4 Does the sample/dataset include all attributes measured?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. PRECISION/ACCURACY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1 Is the margin of error for the sample larger than the expected margin of error?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.2 Does the sample/dataset include all relevant factors?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. SECURITY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.1 Are mechanisms in place to prevent unauthorized creation/access/change to data?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.2 Can data be created, changed, accessed or manipulated inaccurately (including in relation to data falsification and confidentiality/privacy issues)? Can this be detected?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.3 Can data be inappropriately created, accessed, changed or manipulated (including in relation to data falsification issues and confidentiality/privacy issues)? Can this be detected?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

References:

- Santtila et al., 2008; Tonkin et al., 2012; Ellingwood et al., 2013; Sahtila et al., 2008; Tonkin et al., 2016; Woodhams et al., 2019.
- Woodhams et al., 2019. The research cited above has demonstrated that officers display enough consistency and distinctiveness in their MO to support reliable and accurate series linking with a range of crime types, including burglary, robbery, car theft, arson, sexual assault/rape and homicide. Moreover, this research has demonstrated that it is possible to develop statistical approaches to series linking that can distinguish between linked and unlinked crimes to a high degree of accuracy. Despite this growing body of research, there remain significant gaps in our understanding of series linking. This includes: 1) a lack of understanding regarding how series linking is conducted by police analysts (e.g. how they make decisions and what barriers they face); 2) a lack of linking research in some countries (including New Zealand); and 3) a lack of understanding of how computerised decision-support tools might assist series linking practice.

Abstract

Series linking identifies offenses likely to be committed by the same offender/s on an analysis of where, when and how crimes are committed. This can significantly enhance the detection and apprehension of serial offenders and help the police to work in a more cost-effective way. A growing body of research supports the use of series linking with a range of crime types, but important gaps remain that limit the practical value of this work. This article describes ongoing collaborative research that seeks to build greater understanding of series linking and to enhance police decision-making when linking series of residential burglaries in New Zealand.

Serious and Serial Residential Burglary

There is considerable evidence demonstrating that the majority of crime is committed by a minority of offenders (e.g. Clarke & Eck, 2003; Tiley & Laycock, 2002). These serial offenders impose significant financial and human costs on society; for example, the estimated annual cost of serial offenders in the UK alone is £18.1 billion (Newton et al., 2019).

Burglary is no exception to this trend, with theft and acquisitive crimes often shown to have the highest rates of re offending (Brunton-Smith & Hopkins, 2013). Ministry of Justice, (2021). Indeed, burglary costs society billions every year (Michalakakela et al., 2015) and impacts significantly on the psychological well-being of victims, leading to fear, anxiety, anger and depression (Beaton et al., 2000; Chon & Wilson, 2016). It is, therefore, unsurprising that tackling burglary is a priority for law enforcement around the world. This includes New Zealand Police, whose core Business Objectives outline the commitment to create “safe homes” that are “free from crime and victimisation”.

Series Linking

One method available to law enforcement for tackling serial offenders (including serial burglars) is series linking. Series linking identifies offenses likely to be committed by the same offender/s on an analysis of where, when and how crimes are committed (i.e. modus operandi, MO).

Linking in this way can bring significant benefits to law enforcement because it allows the collection of evidence from multiple investigations, which often enhances the quality and quantity of evidence available with which to detect and prosecute offenders (Grubin et al., 2001). Furthermore, combining multiple investigations and investigative teams leads to a more cost-effective and efficient use of police resources because there is less duplication of work, roles and responsibilities (Woodhams et al., 2007).

Given the potential investigative benefits, it is unsurprising that series linking is practised by law enforcement agencies across Europe, North America, Asia, Africa and Australia (including New Zealand), with linking used to assist investigations into a range of crimes, including acquisitive (e.g. burglary, robbery and car theft) and person-oriented crimes (e.g. rape and murder).

There is also a well-established body of research evidence that supports the use of series linking (e.g. Bennell & Jones, 2005; Burrell et al., 2012; Ellingwood et al., 2013; Sahtila et al., 2008; Tonkin et al., 2019; Woodhams et al., 2019). This research has predominately focused on testing whether offenders repeat (at least some of) their MO from one crime to the next (referred to as behavioural consistency) and whether it is possible to distinguish the MO of one offender from that of another offender (referred to as behavioural distinctiveness). Series linking is to work reliably and accurately during real-world police investigations, offenders need to behave in both a consistent and distinctive way (Woodhams et al., 2007). The research cited above has demonstrated that officers display enough consistency and distinctiveness in their MO to support reliable and accurate series linking with a range of crime types, including burglary, robbery, car theft, arson, sexual assault/rape and homicide. Moreover, this research has demonstrated that it is possible to develop statistical approaches to series linking that can distinguish between linked and unlinked crimes to a high degree of accuracy. Despite this growing body of research, there remain significant gaps in our understanding of series linking. This includes: 1) a lack of understanding regarding how series linking is conducted by police analysts (e.g. how they make decisions and what barriers they face); 2) a lack of linking research in some countries (including New Zealand); and 3) a lack of understanding of how computerised decision-support tools might assist series linking practice.

Ongoing Series Linking Research in New Zealand

This article describes ongoing research to address the three gaps identified above. This project is funded by the British Academy , which is providing 3 phases of research that seek to build greater understanding of series linking and enhance police decision-making when linking series of residential burglaries in New Zealand.

Phase 1: Understanding series linking with residential burglaries in New Zealand

Objective: Phase 1 of the research aimed to understand: 1) how series linking is currently performed with residential burglaries in New Zealand; 2) the factors that promote/finder accurate series linking; and 3) whether computerised decision-support tools might assist series linking practice.
Using Series Linking to Tackle Residential Burglary: Understanding and Enhancing Police Decision-Making

Methods: Thirty-nine New Zealand Police staff completed a questionnaire/interview/focus group related to the process of linking burglary, challenges, products and uses of crime linking with residential burglary in New Zealand. These data (alongside four redacted crime linkage reports) were subjected to thematic analysis.

Main Findings: Many examples of innovative series linking practice were identified within New Zealand Police, including cases where series linking made an important contribution to the investigation and prosecution of serial offenders. This demonstrates that series linking has the potential to be a valuable tool for tackling serial offending.

There were, however, several challenges and barriers highlighted that impact on the current effectiveness of series linking. There are challenges relating to data quality, data systems and processes, a lack of training in and limited understanding of series linking, and room for improvement in the way that different work groups communicate and share information for the purposes of linking.

There is also wide variation in: (i) how series linking is used during an investigation; (ii) how it is conducted; (iii) what data and systems are used; and (iv) how the findings are disseminated. This variation not only exists when comparing analysts from different districts, but also when comparing analysts within the same district and even when comparing analysts within the same local team.

Recommendations:

1) When a burglary suspect is arrested, series linking should be used as a standard practice to identify other offences that might be linked to that individual, thereby maximising opportunities to clear unsolved offences.

2) New Zealand Police should raise awareness of series linking amongst all its work groups, ensuring that opportunities to clear crime and generate additional leads are not missed and that the potential benefits of series linking are fully realised.

3) Series linking training should be developed and offered as standard to all new crime/intelligence analysts and existing analysts, thereby ensuring that good practice is shared across the organisation and that series linking practice is based on the best-available research evidence.

4) All series linking products (regardless of how formal/informal they are) should be written in a way that maximises their value for the user/client (e.g. by clearly outlining investigative leads/action points).

5) New Zealand Police should begin exploring whether computerised series linking support tools can be developed, so that tools have the potential to address many of the challenges identified by participants in this research.

Phase 2: Developing and testing statistical series linking for residential burglaries

Objective: Phase 2 aimed to: 1) develop statistical approaches that use geospatial, temporal and MO information to link residential burglaries in New Zealand; and 2) test the accuracy of these statistical approaches when conducting series linking.

Methods: Geospatial, temporal and MO information relating to 500 solved burglary cases were obtained from across New Zealand and extracted from New Zealand Police databases. Statistical methods for generating series linking predictions were developed and their accuracy tested. The statistical approaches were used to generate ranked lists of crime pairs based on how similar the two crimes in each pair were in their geospatial, temporal and MO information. Those crimes predicted by the statistical approaches as most likely to be linked were placed at the top of the list and those predicted as least likely to be linked were placed at the bottom. Given that the 500 crimes were already solved, we were able to determine the accuracy of the statistical approaches by comparing the predictions produced by the statistics with reality (i.e., which crime pairs were genuinely committed by the same/different people).

Main Findings: Our findings clearly demonstrated that the statistical methods were successful in successfully prioritise linked unlinked crimes. That is, the genuine linked crime pairs (containing two crimes committed by the same person) were clustered at the top of the list and the unlinked crime pairs (containing two crimes by different offenders) were clustered lower down the list. For example, the top 20 crime pairs in the prioritised list were all linked and there were only nine unlinked pairs in the top 59 pairs in the list. 70% of the linked pairs were within the top 12% of the prioritised list and 80% within the top 21% of the prioritised list.

Main Findings:

1) New Zealand Police should explore the use of computerised decision-support tools to facilitate the linking of residential burglaries. Such tools would help human analysts to manage the huge volume of burglary offences that face, allowing them to more quickly identify and prioritise linked crimes for further investigation. This has the potential to significantly enhance the detection and prosecution of prolific burglars in New Zealand.

2) New Zealand Police should seek to enhance the quality of crime information stored on their databases (NIA). This includes: (i) clearer, more explicit guidelines regarding the basic information that should be recorded for residential burglary crimes and how/where that information should be stored in NIA. This should include guidance on the key questions call handlers/investigating officers should ask when speaking to victims and guidance for SOCOs and other officers who attend crime scenes regarding what key information to record in their reports; (ii) Amendments to NIA that remove the opportunity for duplication of identical information; (iii) Amendments to NIA that provide a single place within the crime record where the most current and up-to-date record of offender MO can be recorded.

Next Steps: Phase 3 - Exploring the contribution of statistical algorithms to human decision-making

Phase 3 (currently ongoing) will examine whether the statistical approaches developed in Phase 2 are able to enhance the decision-making of New Zealand Police analysts when conducting series linking with residential burglary offences. More specifically, it will compare the decision-making of analysts who are linking using ‘business as usual’ methods to the decision-making of analysts who are given output from the statistical approaches that is designed to help them identify linked series more quickly and accurately.

To maximise the value of the project to New Zealand Police, we are actively working to engage the participating forces as possible. If you or colleagues would like to contribute to this ongoing research, please contact Matt Tonkin (mjt46@leicester.ac.uk).

Conclusion

Series linking has the potential to significantly enhance the detection and prosecution of those prolific offenders who impose the most harm on society. It is a versatile technique that can be used to address a wide range of offending behaviour, with a strong body of evidence underpinning its use. Indeed, this research has identified numerous examples where series linking has contributed to the detection/prosecution of serious offenders across New Zealand. There are, however, several challenges facing analysts involved in series linking. These challenges are not insurmountable, though, and our research demonstrates how in which collaborating between law enforcement agencies and researchers can begin to address these challenges. Such collaboration has the potential to produce new methods of series linking that will save the Police time and money, whilst also enhancing investigative outcomes.

References


may also be too narrowly focused that it is a challenge to make the intervention period long enough, or the treatment group large enough, to detect treatment effects. In light of these practical concerns, there is increasing evidence that targeting street segments may be an optimal strategy for a number of reasons that benefit the police.

From a police operations standpoint, street segments are small beneficial settings that allow to police to disrupt criminal networks and strengthen guardianship near vulnerable targets. Street segments also help to discrete physical boundaries which create defensible spaces (Newman, 1976) and a sense of ownership among those who reside in those areas.

Finally, street segments are small enough to enable officers to apply sufficient dosage and treatment integrity during operations, optimizing the residual deterrence effect of police after they have departed from the treatment area.

Research has also shown that unique trends in anti-social behaviour occur on street segments. These trends vary greatly from larger communities. As a result, crime-ridden communities often contain street segments that experience little to no crime, and safe communities often include street segments with high crime concentrations. Research conducted in Seattle and Baltimore found that half of all CAD incidents (i.e., calls for service) for indictable crimes were found on just 5 percent of street segments in the city. Some Australian scholars have speculated that crime does not concentrate to the same extent in Australian cities.

To date, there is little published work on the degree to which crimes concentrate on street segments in Australia, or the impact of targeting crime intelligence resources to micro-locations in Queensland. Therefore, we set out to ask two questions: Can the research findings about crime clustering on street segments be generalized to Australian cities, and to the Logan District specifically? And, if so, could a street-level analysis provide a location-based tasking framework for the deployment of unassigned frontline units to micro-locations in Queensland?

Methods

The first stage in planning the operation was to examine QPRIME data from the Logan District and LEAP data from the South Metro Region to determine the extent to which crime concentrates at street segments in Australia. Analysing data from two jurisdictions provided a reliability check on QPS data and improved our ability to generalize the research findings to other jurisdictions. For the purpose of this study, we defined a street segment as a length of street between two consecutive street intersections, including both sides of the street (i.e., block faces).

Our analysis focused on three crime categories which included violent/person-on-person, public order, and vehicle-related crimes. These categories were selected because they are consistent with the strategic priorities and operational focus of the TCS. We did not include other streets because the focus was placed on crimes occurring in public spaces.

Crimes occurring over a two-year period were geo-coded and aggregated to street segments in the two jurisdictions. We examined one year of data before the COVID-19 pandemic and one year after to control for potential period effects. The findings on spatial clustering were noteworthy. Fewer than 1 percent (0.7%) of street segments produced 22 percent of all crimes in both jurisdictions, and fewer than 5% of street segments accounted for 50% of all crimes. Remarkably, 63 percent of street segments did not produce one serious crime over the study period.

The second stage of planning was to develop criteria for identifying street segments as crime hot spots. These criteria included: 1) 20 or more QPRIME incidents occurring on the street segment within a one-year period; 2) 20 or more calls for service (QCAD) occurring on the street segment within a one-year period; 3) crime and QCAD incidents must occur on the street segment in half of all fortnights of the year to show that crime is stable; and 4) street segments containing a facility or public service that artificially inflates the crime count (e.g., hospital or police facility) must be removed from the analysis (these places may be used as a default location for geo-coded data).

Based on the criteria, we identified a total of 41 street segments in the Logan District that satisfied the hot spot requirements, and 247 street segments qualified in South Metro Region, Victoria. The proportion of street segments that qualified as hot spots across the two police jurisdictions was notably similar (0.7%), especially when you consider the population of the two areas (335,000 and 1,200,000, respectively). Hot spot street segments in both jurisdictions produced about 22% of all crimes.

The last stage of planning was to randomly assign the 41 street segments that qualified as hot spots to the Logan District to treatment and control conditions. Random assignment to treatment and control groups served two purposes. First, it enabled the Tactical Crime Squad and intelligence resources to be focused on only half of the areas, increasing police presence and intelligence capabilities (i.e., dosage) on the street segments where the operation would take place. It also allowed us to generate an “equivalent” control group which would serve as a baseline for comparison purposes.

As a result, the evaluation of Operation Revetolste was designed as a randomized controlled trial (RCT) which is considered the gold standard in evaluation research (Sampson, 2010).

Because the number of street segments that qualified as crime hot spots in the Logan District was relatively small (n=41), we used a block randomization procedure to ensure that random assignment produced the two equivalent groups of street segments. Specifically, we matched each street segment that qualified as a hot spot with another one that was identical in terms of crime volume, physical disorder, design/layout, and population density. Crime volume was measured based on QPRIME data; the other pieces of information were obtained from systematic observations conducted in each of the hot spots.

The research team spent 30 minutes carefully documenting the features of each street segment by walking to multiple viewing areas and coding specific items on the systematic observation survey. The items included indicators of urban blight; signs of disorder (e.g., boarded-up buildings, litter, graffiti, broken windows, drug paraphernalia and abandoned vehicles; structures that attract anti-social behaviour (e.g., bars and bus stops); and the number of residential and non-residential (i.e., commercial) buildings.

Continued on next page
The Operation: Bringing Intelligence-Led Policing to Crime Hot Spots

On a strategic level, Operation Revelstoke: 1) identified ‘hot spot’ street segments in the Logan District that had serious and persistent crime problems; 2) provided ongoing intelligence support to the Tactical Crime Squad (i.e., weekly intelligence briefs) for each hot spot; and 3) deployed the TCS to these locations based on new and updated intelligence.

The analysis focuses on the QPRIME categories that were specifically targeted by the operation, including violent, public order and vehicle-related crimes. The findings show a 23.2 percent reduction in crime incidents occurring in the treatment areas compared to a 50.0 percent increase in crime incidents occurring in the control areas and a 36.6 percent increase in crime across the entire district.

The delayed effect may be explained by the uptake time required for service in the treatment areas compared to a relatively static volume of calls in the control and district-wide areas (-5.6 percent and +3.3 percent, respectively). This increase in calls to the police in the implementation of Operation Revelstoke may be reasonably expected by product of greater police presence and, perhaps, confidence in the police in the treatment areas.

Findings

Figure 4 examines crime incidents occurring during and after the implementation of Operation Revelstoke. Specifically, the analysis compares street segments in the treatment group to those in the control group, as well as all other street segments in the Logan District. The last set of findings are displayed in Figure 6. This two-way Analysis of Variance (ANOVA) provides a significance test that examines the effects of the intervention independent from any period effects. The treatment effects observed in the ANOVA table suggest that it is highly unlikely (<.0001) that the findings can be explained by random chance or sampling bias. In other words, the effects of Operation Revelstoke are statistically significant after controlling for district-level fluctuations.

References


Tasking and Coordination Centre (DTACC) as a promising platform for sharing location-specific intelligence with front line units and creating a sharing platform that delivers real-time information to these units and makes optimal use of their discretionary time.

Finally, our third recommendation is for the QPS to consider further analysis of street segment level data to better understand crime concentration at micro-locations. This may contribute to better situational awareness for frontline units and could also serve as a starting point for developing a mobile application that can better empower officers to prevent crime in micro-locations during their discretionary time.

Proposed Recommendations

We propose several recommendations that follow from this executive summary. First, there is ample capacity to upscale intelligence-led policing at micro-locations through the replication of Operation Revelstoke in other police jurisdictions. Relatedly, our second recommendation is for QPS leadership to consider the District Tasking and Coordination Centre (DTACC) as a promising platform for sharing location-specific intelligence with front line units and creating a sharing platform that delivers real-time information to these units and makes optimal use of their discretionary time.

Finally, our third recommendation is for the QPS to consider further analysis of street segment level data to better understand crime concentration at micro-locations. This may contribute to better situational awareness for frontline units and could also serve as a starting point for developing a mobile application that can better empower officers to prevent crime in micro-locations during their discretionary time.

Proposed Recommendations

We propose several recommendations that follow from this executive summary. First, there is ample capacity to upscale intelligence-led policing at micro-locations through the replication of Operation Revelstoke in other police jurisdictions. Relatedly, our second recommendation is for QPS leadership to consider the District Tasking and Coordination Centre (DTACC) as a promising platform for sharing location-specific intelligence with front line units and creating a sharing platform that delivers real-time information to these units and makes optimal use of their discretionary time.

Finally, our third recommendation is for the QPS to consider further analysis of street segment level data to better understand crime concentration at micro-locations. This may contribute to better situational awareness for frontline units and could also serve as a starting point for developing a mobile application that can better empower officers to prevent crime in micro-locations during their discretionary time.

Proposed Recommendations

We propose several recommendations that follow from this executive summary. First, there is ample capacity to upscale intelligence-led policing at micro-locations through the replication of Operation Revelstoke in other police jurisdictions. Relatedly, our second recommendation is for QPS leadership to consider the District Tasking and Coordination Centre (DTACC) as a promising platform for sharing location-specific intelligence with front line units and creating a sharing platform that delivers real-time information to these units and makes optimal use of their discretionary time.

Finally, our third recommendation is for the QPS to consider further analysis of street segment level data to better understand crime concentration at micro-locations. This may contribute to better situational awareness for frontline units and could also serve as a starting point for developing a mobile application that can better empower officers to prevent crime in micro-locations during their discretionary time.
from $990

Web Design
Google Ads
SEO

Contact us today on management@4tcmedia.com.au or visit www.4tcmedia.com.au to take advantage of this offer.

AIS ORGANISATION
HELP KEEP YOUR FAMILY AND COMMUNITY SAFE
DONATE ONLINE