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# headspace
## National Youth Mental Health Foundation

**headspace** is the National Youth Mental Health Foundation, providing early intervention mental health services to 12-25 year-olds. By ensuring help is accessed in early stages of young people's lives and providing a holistic model of support, **headspace** provides a safe space where they can get their mental health and wellbeing back on track.

**headspace** services cover four core areas: mental health, physical health (including sexual health), work and study support and alcohol and other drug services. Services are confidential, youth friendly and free or low cost. Young people and their families can access services face-to-face at one of 98 **headspace** centres across which can be located Australia at www.headspace.org.au, or via **eheadspace** – a national online and telephone counselling service at www.eheadspace.org.au.

Over the past 10 years, **headspace** has proudly provided over 1.8 million services through centres, online and over the phone, helping over 310,000 young people across Australia. **headspace** wants to ensure young people aged 12-25 have access to youth friendly mental health services, no matter where they live.

Alongside **headspace** centre, online and telephone support, specialised services are provided in the following areas:

- **headspace** School Support – a suicide postvention program, which assists Australian school communities to prepare for, respond to and recover from a suicide.
- Digital Work and Study Service – a dedicated team assisting young people aged 15-24 in education and work options.
- **headspace** Youth Early Psychosis Program – a program focusing on early intervention, aiming to improve the lives of young people, and their families, who are affected by psychosis.

## HEADSPACE DONATIONS AND FUNDRAISING

There are many ways to support **headspace** and the work carried out in providing mental health and wellbeing support, information and services to young people and their families across Australia. **headspace** has helped hundreds of thousands of young people get their lives back on track and your support will assist us with our work.

Any donation generously provided to **headspace** goes towards community engagement and awareness, which can be specifically given towards a local centre or to National Office.

Donations to **headspace** National Office, ensures the promotion of the importance of seeking help, to break down stigma associated with mental health issues and to make sure every young person across Australia, as well as their friends and family, knows there is help available.

You can find out more about donations and fundraising through the 'Get Involved' page at

www.headspace.org.au

## SEEKING HELP

Getting support can help a young person to keep on track at school, study or work, as well as personal and family relationships. The sooner help is received, the sooner things can begin to improve.

**headspace** can help any young person aged 12-25 years-old, a family member or friend wanting to seek information on youth mental health.

**These are just some of the reasons someone may seek help from headspace:**

- If someone is feeling down, stressed or constantly worrying
- If someone doesn't feel like themselves anymore
- If someone isn't coping with school/uni/work or finding it difficult to concentrate
- If someone is feeling sick or worried about their health
- If someone has questions about, or wants to cut down on alcohol or other drug use
- If someone wants to talk about sexuality, gender identity or relationships
- If someone is having difficulties with family or friends
- If someone is concerned about sexual health or wants information about contraception
- If someone is being bullied, hurt or harassed
- If someone is worried about work or study or having money trouble

## DID YOU KNOW?

One in four young people have experienced a mental health issue in the past 12 months – a higher prevalence than all other age groups. Alarmingly, suicide is the leading cause of death of young people, accounting for one third of all deaths.

Adolescence and early adulthood is a critical time in a person's life, with 75 per cent of mental health disorders emerging before the age of 25.

# Contents

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# Conversations In Custody: Shining Our Values In The Darkest Places

**Authored By:** *Emma Burns*

## Introduction

New Zealand often features in the international media. Most of the time this is positive publicity for our country. However, an article by Dr Ruth Gammon on the Massey University website states that "New Zealand continues to rate among the worst countries for (intimate partner violence). The links between exposure to family harm and negative trajectories across the lifespan are well established (Jirapramukpitak et al, 2011). Many of the "high end" offending behaviours have traditionally been viewed as intractable, and the offenders themselves as "resistant" to change. It is the author's professional observation that a deficit-based mindset has a negative impact on how these individuals and families are generally viewed, which in turn adversely impacts strong engagement. Research suggests that "authenticity and genuine human relatedness" are identified by clients as the highly valued key components of therapy (Eugster & Wampold, 1996).

Research has shown that a workforce who adopts a strength-based approach experiences greater job satisfaction, perceived and evidenced practice effectiveness, and reduced burnout (Medina & Beyebach, 2014). One of the key studies linking the adoption of a strength-based (Solution Focused) mind-set and practice with a reduction in burnout was conducted with child protection workers in Tenerife (Medina & Beyebach, 2014).

It has been said that "conversation is the fundamental unit of change, if you change the conversation you change everything that surrounds it" (Jackson & Waldman 2010). However, there are many approaches to conversations, and as the physicist Thomas Kuhn correctly noted "the answers you get depend upon the questions you ask."

The Solution Focused approach is a goal-directed collaborative approach to problem resolution. It was developed by a core group of practitioners at the Brief Family Therapy Centre in Milwaukee in the 1980s (de Shazer & Dolan, 2007). The roots of the approach lie in strategic family therapy, and it is heavily influenced by other theories such as social constructionism – the belief that all meaning is socially constructed - and Wittgenstein's philosophy of language. It is an approach that utilises the process co-construction to articulate a person's preferred future, and to then map a path towards this. The approach is predicated on several key tenets, including the following:

1) The focus is on solution-building rather than problem-solving.

2) No problem happens all the time – thus there are already exceptions that can be used to co-construct future solutions.

3) Effective conversations focus on the person's preferred future, rather than on the history of problems or current difficulties.

There has been a significant amount of research into the effectiveness of the Solution Focused approach, including an extensive number of empirical studies, meta-analyses, systematic reviews, as well as combined effectiveness data from thousands of cases, and it is considered to be an evidence-based approach (Kim et al, 2019). This research clearly demonstrates the efficacy of Solution Focused approach across a wide range of personal difficulties, ranging from addictions and suicide prevention, through to high performance and criminal offending. The conclusion from scholarly work is that the Solution Focused approach is an effective approach to the treatment of a wide range of problems, with effect sizes similar to other evidenced-based approaches, but that these effects are found in fewer average sessions, and using an approach style that is more benign (Gingerich et al, 2012).

Many studies have been conducted in "real world" settings, meaning that the results are more generalisable. It should also be noted that the approach was found to be equally effective across social classes and cultures (Dierolf et al, 2020). Accordingly, Solution Focused is an evidenced-based approach which can be rapidly understood and utilized by "non-professionals" who may encounter persons experiencing difficulties.

Police are called to attend and resolve a wide range of incidents, requiring a wide repertoire of responses, and a diverse skillset. Among these skills is the ability to create effective engagement with members of the public who require assistance. Many of these incidents may be one-off conversations, others may result in repeated contact with a person or whanau. The mindset and tools that make up the Solution Focused approach are therefore a good fit for a policing context. It is the author's experience that police who have learned this approach, report improved engagement and personal satisfaction in their work.

Furthermore, the principles underpinning the approach uphold the principles of Te Tiriti o Waitangi and core concepts in Te Ao Maori. For example, the collaborative nature of Solution Focused engagement and the supportive nature of the approach is consistent with Kotahitanga, where all voices and views are heard and respected. In the Solution Focused approach, a person or whanau retains control over decisions and selects desired outcomes that are personally meaningful, which aligns with the principle of Rangatiratanga (self-determination). Additionally, the strong focus on creating the future that is desired by the person or whanau speaks of the concept of potentiality or better futures, as expressed in Nga Moemoea. The spirit of the approach is founded on respect and seeks to uplift people and uphold their personal mana. This is in harmony with the principle of Manaakitanga. In addition, the approach upholds the four principles of procedural justice – voice, fairness, respect, and trust.

These findings suggest that Solution Focused is a good "fit" for working with offending, where there is high volume coupled with a need to reduce harm and increase safety in a relatively short period of time. There is a large body of research evidencing its effectiveness in reducing offending. In addition, the core principles of the approach are an excellent fit with both the New Zealand Police core values and Our Business.

Persons detained in custody are widely known to be at increased risk of self-harm and suicide. While this may be correct, it is also true that they are maximally motivated to change at this time. It is therefore evident that engagement at this time is critical to influence subsequent positive change. Accordingly, custody represents a "missed opportunity" for engagement. While police and partner agencies provide extensive support for victims of family harm, there existed a significant gap in providing appropriate support for offenders. Given that many couples and families desire to remain in the relationship, this represented an opportunity for enhancing existing processes within the family harm space.

## Methodology

This project consisted of two phases. In the initial phase, the focus was on maintaining a presence in the custody area. This involved the author working on a Sunday and being available to speak with individuals who are detained in custody for family harm related offending. These conversations were conducted utilising the Solution Focused approach, with the goal of assisting the person to begin to develop personalised ideas about what some initial steps towards a better future might entail. A secondary goal was the gathering of feedback from persons in custody around perceived gaps in service.

Phase two focused on the provision of ongoing support following release from police custody, and the development of stronger partnerships with Hawke's Bay Regional Prison and Community Probations staff. Phase two will be described in a following section.

Approval was gained to conduct a three-week trial. In that time, conversations were offered to a total of eight persons. This represented 29% percent of total persons in custody. Demographic data is illustrated in Table 1.

**Table 1: Case Demographics**

| Variable | Week One | Week Two | Week Three | Total |
|---|---|---|---|---|
| Number offered conversation | 4 | 1 | 3 | 8 |
| Number accepting conversation | 4 | 1 | 3 | 8 |
| Female | 2 (50%) | 0 (0%) | 1 (33%) | 3 (38%) |
| Aged 18 or under | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Aged 19-29 | 2 (50%) | 0 (0%) | 2 (67%) | 4 (50%) |
| Aged 30-39 | 2 (50%) | 1 (100%) | 1 (33%) | 4 (50%) |
| Aged 40-49 | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Aged 50-59 | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Aged 60 or above | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| NZ Maori | 4 (100%) | 0 (0%) | 3 (100%) | 7 (87%) |
| NZ European | 0 (0%) | 1 (100%) | 0 (0%) | 1 (13%) |
| Pacific Island | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Other | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |

Reasons for a person not being offered a conversation included being deemed at high risk of violence, being asleep at the time an approach was to be made, or the person being released or transferred before a conversation could take place. Conversations were only offered to those in custody for family harm related offending, as per the scope of the pilot. These are outlined in Table 2.

**Table 2: Reason for Arrest**

| Variable | Week One | Week Two | Week Three | Total |
|---|---|---|---|---|
| Breach of bail | 2 (50%) | 0 (0%) | 1 (33%) | 3 (38%) |
| Contravenes protection order | 1 (25%) | 0 (0%) | 1 (33%) | 2 (25%) |
| Warrant to arrest | 1 (25%) | 0 (0%) | 1 (33%) | 2 (25%) |
| Fails to comply with PSO | 0 (0%) | 1 (25%) | 0 (0%) | 1 (12%) |

Of those who were offered a conversation, 100% were receptive to the opportunity. This is in significant contrast with the 30-40% rate of acceptance found in academic literature on brief intervention in police custody. It is likely that the higher rate of acceptance in this pilot is due to the conversational approach utilised. Brief intervention is traditionally conducted with the goal of having the person engage in a conversation around a predetermined "problem" or "issue" e.g., substance abuse. This frequently results in resistance from the person, who may not wish to focus on that issue. In this project, a Solution Focused approach was used, meaning that the subject and direction of the conversation was very much in the hands of the person, and introduced simply as "the opportunity to have a chat about what might make a difference for you when you go home."

While the hope was that there would be a rate of uptake at least comparable to published research, the response was far more positive than anticipated. Length of conversation ranged from 15 minutes to 40 minutes, with an average of 24 minutes. In all cases, there was genuine engagement, and a high degree of emotion expressed during the conversation.

These conversations were initiated by simply asking a person if they would like to "have a chat about what you would like to be different when you go home." There was no necessity for the person to speak about the incident that had led to their arrest, or their history. It was clear that this was an unexpected approach for people, and some openly stated they were surprised that the author had not made a point of reading through their (at times extensive) history of offending. They were informed simply that this was a conversation about the future, not the past, as the past cannot be changed. A further reason for not conducting an extensive review of a person's history was to ensure that the author would enter these conversations with an open mind, and not be clouded by any degree of pessimism in cases where a person may have up to 30 years of frequent and significant offending. However, as mentioned, any persons who may pose a safety risk were excluded from this pilot. These safety decisions were made by custody staff.

Despite there being no requirement for a person to "tell their story" most did share extensive detail about their life and difficulties. During these conversations, the power of the organisational values, particularly respect and empathy, was highlighted. All persons spoken to displayed significant emotion, with nearly all becoming tearful at times.

The Solution Focused approach, while giving space and time for a person to share their story of difficulty, then shifts in focus to what is wanted. In these conversations, questions were selected to elicit dialogue and rich description of the person's preferred future. During this part of the conversation many issues were identified as barriers to the desired future state, and this led to dialogue around how to best navigate these challenges. Often this led to a person sharing information they had not shared with other agencies. For example, some spoke about previously undisclosed gang association, substance use, suicidal ideation, or past trauma.

Regarding issues or challenges reported by those spoken to, there were several themes that emerged. These included homelessness, suicidal ideation, access to children, physical or mental health concerns, lack of employment, and substance misuse. Of these themes, homelessness was highlighted as the most significant stressor by 62% of those spoken to. Lack of stable accommodation creates extreme difficulty for a person to begin to address other coexisting issues.

As indicated in Table 3, half of those spoken with identified four or more significant challenges. In conversation, the issue creating the most concern and stress for males was access to children. This and homelessness, appeared to be the two key drivers for individuals breaching their bail conditions i.e., to see their children or to have somewhere to sleep.

**Table 3: Issues Identified**

| Variable | Week One | Week Two | Week Three | Total |
|---|---|---|---|---|
| Homelessness | 3 (75%) | 1 (100%) | 1 (33%) | 5 (62%) |
| Mental health | 2 (50%) | 0 (0%) | 0 (0%) | 2 (25%) |
| Suicidal ideation | 1 (25%) | 1 (100%) | 1 (33%) | 3 (38%) |
| Access to children | 1 (25%) | 1 (100%) | 2 (67%) | 4 (50%) |
| Lack of employment | 3 (75%) | 0 (0%) | 1 (33%) | 4 (50%) |
| Substance misuse | 1 (25%) | 1 (100%) | 2 (50%) | 4 (50%) |
| Physical health | 2 (50%) | 0 (0%) | 0 (0%) | 2 (25%) |
| One or less issue identified | 0 (0%) | 0 (0%) | 1 (33%) | 1 (12%) |
| Two issues identified | 0 (%) | 0 (0%) | 1 (33%) | 1 (12%) |
| Three issues identified | 1 (25%) | 0 (0%) | 1 (33%) | 2 (25%) |
| Four or more issues identified | 3 (75%) | 1 (100%) | 0 (0%) | 4 (50%) |

Current problems and stressors notwithstanding, the conversations then shifted to encouraging the person to imagine the desire future state, either in the absence of the current challenges, or with increased ability to cope with these difficulties (recognising that not all problems can be removed). This shift is a fundamental aspect of the Solution Focused approach and is underpinned by studies in neuroscience showing that various types of questions differentially impact both the brain and consequent emotional and motivational states (Neipp et al 2016; Koorankot et al 2019). It is well evidenced that questions and conversations focusing on positive content (past successes, current coping and exceptions, and future hopes) lead to more positive emotional and motivational states that those that focus on negative content (problem history, current concerns and future worries) (Grant, 2012).

Many individuals spoke about finding being detained in custody to be psychologically distressing. Several people reported trying to sleep as much as possible, a desire to "get away from my head, and gain respite from constant thinking and ruminating. It should be noted that many persons in custody have a previous trauma history, and detention in custody could represent an additional traumatic experience.

In summary, the pilot clearly demonstrated that there is a strong desire from those detained in police custody to engage in supportive and future focused conversation. It reinforced that compassion, respect, and empathy are of paramount importance. Those spoken with often stated that this was their first experience of feeling that someone cared about them, and it was not uncommon for them to be surprised that the agreed follow up had taken place as stated. Many of those who participated in the trial voiced a sense of feeling let down by agencies, and a lack of trust in the system as a whole.

Engaging with those in police custody is a significant opportunity, and results from the initial pilot indicated that the work should continue. Accordingly, the project was extended and expanded to include some additional areas of focus.

## Phase Two

At the conclusion of the pilot, further development was considered as below:

1) Continuation of the Sunday conversations with those in custody.

2) Intensive case management of those requesting follow up.

3) Increased collaboration with key stakeholders, particularly Corrections staff,

These goals were all achieved. Provision of more intensive case management led to some outstanding outcomes for those released into the community. For example, one young man was able to discontinue a significant (2g/day) methamphetamine habit, and another phoned the author to proudly announce that he had "handed in my patch" and turned away from gang membership. *Continued on next page*

The project received strong interest from case managers at HB Regional Prison who expressed a desire to work more collaboratively with police.

Training in the Solution Focused approach was delivered to case managers at Hawke's Bay Regional Prison, as well as several staff in Community Probations. This training was well-received and led to increased collaborative practice between services. For example, if a person in custody was then remanded at Hawke's Bay Prison, the author would accompany the allocated prison case manager to the initial assessment, and continue to work collaboratively with prison staff around assessment, intervention, and support upon release. This support included therapeutic intervention for whanau if desired, as well as individual support that was a blend of Solution Focused and motivational interviewing approaches to change.

A key achievement of phase two was the creation of an opportunity for Corrections and Probations staff to continue the future focused conversations that had been started while in police custody, and also to create offender plans that are person-centred and more likely to result in increased safety, reduced offending, and better futures.

## Summary

Engaging with those in police custody is a significant opportunity to begin a process towards positive change. However, for this to be successful and lead to positive change, it is critical that a suitable approach to the conversation is utilized. The Solution Focused approach has been demonstrated to result in high levels of engagement, and there is clear research evidence that a focus on approach goals is associated with increased motivation, confidence, and goal attainment (Braunstein & Grant, 2016). It is the author's view that this project would not have been as successful if a problem-focused approach had been utilised. Interventions focusing on avoidance goals have been shown to result in decreased motivation and perceived self-efficacy, poor engagement, and poorer outcomes. (Braunstein & Grant, 2016).

Moreover, this work is clearly aligned with the Prevention First operating model, and consistent with Our Values. It is the view of the author that the findings from this work could be translated into teachable skills across police and underpin a paradigm shift in how we engage with not only those in custody, but in general. This has particular relevance for the Resolutions Framework project, and the potential to lead not only to better outcomes for the community, but to increased job satisfaction and reduced burnout for police staff.

The Solution Focused approach is easily learned and applied in practice by those in helping professions, including police, who have demonstrated the ability to transfer the skills into their practice after a relatively brief educational session. Accordingly, there is considerable opportunity for this project to be scaled up across the organisation. This creates the potential not only for better outcomes for people and whanau, but for improved job satisfaction for staff, and increased trust and confidence in police from the community we serve.

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# Autism training for Australian police: A pilot study of the effectiveness of an online module to improve police officer autism awareness

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## Abstract

The purpose of this pilot study was to examine the initial effectiveness of an online module aimed at educating police officers about autism. The module was created using participatory research with both the autistic community and policing professionals. In total, 404 officers completed the module as a part of an effort to train and educate officers in an Australian state-based police agency. Measures of knowledge and self-efficacy were used at three different time points to understand the module's effectiveness, and results showed a statistically significant increase in knowledge as well as high levels of self-efficacy for working with autistic community members following completion of the module. Results of this study can be used as a basis for further funding as well as more rigorous research to understand the ongoing effectiveness of this module, or other similar training platforms.

## Introduction

Autism spectrum disorder is a lifelong neurodevelopmental condition, which affects the way individuals process the world; autistic individuals show differences in their social communication, social interactions, sensory sensitivities, along with restricted and repetitive interests and behaviours (American Psychiatric Association, 2013). The communication and social challenges experienced by autistic individuals can lead to challenging interactions and high risk situations with first responders (Cooper et al., 2022; Gibbs & Haas, 2020; Railey et al., 2020). Misunderstandings are common as police misinterpret autistic behaviour and autistic individuals equally misinterpret police behaviour.

For example, police may view common autistic behaviour such as avoidance of eye contact or delayed response to police questioning as suspicious. Likewise, autistic individuals may fail to understand the social cues in an exchange with a police officer, increasing the risk for that individual and the likelihood that escalation can occur (Salerno-Ferraro & Schuller, 2020). Further challenges can result from high stress situations where law enforcement professionals interact with community members, as autistic individuals may find emergency situations more challenging than others due to the increased sensory overload and unpredictability.

Gibbs and colleagues (2021) interviewed a sample of autistic community members in Australia including autistic individuals and parents and carers to investigate perceptions of procedural justice during police encounters. Procedural justice is a construct that captures perceptions of police legitimacy and seeks to understand community perceptions of police (Tyler & Lind, 1992). The authors found that autistic adults were sensitive to what they perceived as abrasive or abrupt police behaviour, which could be due to challenges interpreting police behaviour, instructions, or actions.

Research in this area has steadily been increasing and when examining the most recent findings, it is clear that mistrust and misunderstanding exists between police and individuals with autism and the need for education and awareness is high (Cooper et al., 2022; Gibbs & Haas, 2020; Railey et al., 2020).

Research findings drawn from the perspective of police officers and autistic individuals and their families have established the importance of police training about autism (Copenhaver & Tewksbury, 2018; Copenhaver et al., 2020; Railey et al., 2020). In response to this growing concern from the Autistic community (e.g., Salerno-Ferraro & Schuller, 2020) along with news stories highlighting the serious consequences that can occur following interactions between autistic people and police (Treisman, 2020; Waller, 2021) and a desire from police departments to ensure their officers have autism-specific training (Railey et al., 2020) many police departments in the United States have taken a proactive approach to ensure officers are knowledgeable, including in some jurisdictions mandating autism training. In Australia, autism-specific training has only recently begun to be incorporated into professional development programmes for police.

Initial attempts at designing and evaluating training modules for police have provided some evidence of positive effects including improved knowledge of autism, improved attitudes and awareness about autism, and better self-confidence in responding to calls (Gardner & Campbell, 2020; Love et al., 2020; Teagardin et al., 2012). However, this research is in its infancy and is largely based on face-to-face training. The COVID-19 pandemic and increased training load for police officers has resulted in a rapid shift to online delivery, despite a lack of research evidence to support online training. In addition, all previous investigations have been limited by their pre-post design and future work is needed that demonstrates sustained effects of training and long-term impacts, supported by an experimental design.

In addition to evaluating the effectiveness of training for police, considerations about the way in which training, particularly for minority or disadvantaged communities is developed, has begun to garner attention. The expectation that training includes people with lived experience has become a critical design component to ensure validity and alignment with community intentions (Hollin & Pearce, 2019; Jivraj et al., 2014; Pellicano & den Houting, 2021). To the best of our knowledge, most of the established autism training programmes for police in the United States have been developed and delivered largely by content experts (e.g. researchers, clinicians) or law enforcement personnel who are also parents of autistic people (Debbaudt, 2002; Gardner & Campbell, 2020; Teagardin et al., 2012).

## Present Study

Previous educational programmes have been designed for police officers to educate them about autism, but the methods and materials, as well as the research, has varied substantially and few have included input from autistic community members. COVID-19 has led to an increased use of online modules that can effectively train first responders across a range of curriculum areas. Online education also offers a potential solution to the challenge of delivering mandatory training to a large police force, and ensures the information can be standardized.

In response to a request for professional development from an Australian police department, we designed a module to train current police officers about autism. We employed a community based participatory research (CBPR) approach which aims to equitably involve community partners in the full research process to create knowledge user-research collaborations throughout the research cycle (Minkler & Wallerstein, 2003). We engaged the users of the module (police officers) and those with whom the module is ultimately meant to benefit (autistic community members) into the design.

This paper outlines the development and initial evaluation of an online training module for police officers about autism within an Australian policing context. We evaluated the initial effectiveness of the module which was introduced to one police jurisdiction in Australia in early 2021. Initial effectiveness was measured by police officer's knowledge of autism, self-efficacy and confidence for working with autistic individuals, and satisfaction with the module. Two primary research questions guided the study: (a) Does completing an online autism module improve police officers' knowledge and confidence in dealing with incidents involving autistic individuals? and (b)What level of satisfaction do officers report after completing an online module about autism?

## Method

### Training Module

The module used in this study, the "Autism Training for Australian Police," was created in partnership with stakeholders including Autistic advocates, police officers, and researchers through a series of workgroups and expert review opportunities (see Figure 1). To create the module, a member of the research team completed a trip to the United States to meet with providers of three well-established autism training for police programs in Boston (Autism Law Enforcement Coalition) , Maine (Autism Safety Education and Training) and Philadelphia (A.J. Drexel Autism Institute). Opportunity was taken to review each program's content and observe training.

Scientific literature, including grey literature was also reviewed. Then, a working group was created where stakeholders, including autistic advocates, police officers, and academic researchers engaged in criminal justice training research, came together to design the learning outcomes, review content, and create the module. A finalized storyboard was shared with an Autistic Development Group consisting of six autistic adults who had prior experiences with police to gather additional input. Alongside this process, research was conducted to better understand the experiences of autistic individuals and families and caregivers when interacting with law enforcement in the Australian context (Gibbs & Haas, 2020; Haas & Gibbs, 2020;

Gibbs et al., 2021). In total, these steps aimed to gather evidence for validity and provide confidence that the module was going to reflect stakeholder perspectives. The final module was 30-minutes in duration and included direct teaching, video clips, and scenarios (see Table 1).

This module was unique in the attempt to not only provide knowledge and education about autism for police officers, but also to expose the officers to a range of autistic community members. The module included perspectives from six autistic individuals with diverse characteristics, who guided police through strategies that could support autistic individuals with whom they may interact during their work. The module aimed to use the voices of these autistic individuals to help educate and increase exposure for police officers who may not have had an interaction previously with someone with autism.

Table 1: Components of the "Autism Training for Australian Police" module

| Component | Duration | Description |
|---|---|---|
| Direct teaching | 5 mins | Description of autism and examples of how autism may affect interactions with police |
| Video clips | 15 mins | Autistic people describing interactions with police; police officer describing the importance of education about autism for officers |
| Interactive Components | 5 mins | Two scenarios followed by interactive Q and A |

## Procedures

To evaluate the training module's effectiveness, we administered a series of questionnaires at three data collection time points: a pre-test immediately before the module, an immediate post-test following the module, and finally a post-training follow-up survey to police officers who participated in the module (see Figure 1). The pre and post tests were embedded in the online learning platform of the police department and presented to officers immediately before and after completion of the module between February and November 2020. Demographic information was also collected (age, years as a police officer) along with information about their prior experience of autism (any personal connection to autism; any encounters with an autistic person in their role as a police officer).

Demographic information was limited due to police confidentiality and restrictions on the police interface where the module was being hosted. All questions were optional, and participants gave informed consent to participate in the research study prior to commencing. The follow-up survey (Phase 3) was housed on the Qualtrics platform (www.qualtrics.com). An email was sent to all officers (n = 629) 6 to 12 months after completion of the module which included a participant information and consent form and a link to the follow up survey. Data from the follow up survey was not able to be linked to the pre and post data to protect confidentiality of officers. Ethical approval was obtained from the University of New South Wales (HC200860).

Figure 1. Data collection timepoints.

### Participants

In total, 404 police officers completed the module and agreed to have their data included in this study. The pre and post evaluation was a standard evaluation that was designed by the police department; therefore, demographic information was limited. When examining the size of the department and the officers that were offered the module, this represents a 59% participation rate from those actively serving. The average age of officers was 39.6 years (SD = 10.59; range 20 – 66) and the average number of years of policing was 10.84 years (SD = 9.83; range = less than 12 months to 41 years). The majority of officers reported that they knew someone with autism in their personal life (e.g., a family member, friend, child, or family friend) (68.0%) and that they had had encountered an autistic person in their professional role as a police officer (65.3%). Of these 404 police officers, 385 participants (95.3%) answered the post-test questions, and 70 (17.3%) answered the follow-up questions.

### Measures

**Autism knowledge.** To measure autism knowledge, a scale was developed based on the information included in the module (see Table 2). The autism knowledge scale included 18 items that were assessed at pre, post and follow up. Participants answered "true, "false," or "I don't know" and an example of an item was, "Sensory stimuli like noises and lights may adversely affect people on the autism spectrum."

**Perceived confidence.** To assess officer's perceived confidence in interacting with autistic individuals in a professional capacity, participants answered 3 items using a 4-point Likert-type response scale ranging from "strongly agree" to "strongly disagree." An example of one of the items was, "As a result of completing this module, I now feel more confident in my capacity as a police officer to communicate effectively with a person on the autism spectrum."

**Satisfaction.** Police officers answered open-response questions about their satisfaction with the module and also indicated with a dichotomous response ("yes" or "no") whether they required further training or support in relation to autism before and after the module.

**Police officer self-efficacy.** Police officer self-efficacy is a construct that helps to examine police confidence, or perceptions of their own abilities to support individuals on the autism spectrum. In the follow up survey only, the Police Self-efficacy for Autism (PSEA; Love et al., 2020) instrument was used to measure police officer self-efficacy for supporting individuals with autism. The measure has 14 items and participants responded using a five-point Likert-type response format ranging from 1 (not at all confident) to 4 (very confident). The stem for each item was "When working as a police officer," and an example item was "I can identify some signs of autism when I observe them." Previous psychometric evaluation (Love et al., 2020) reported internal consistency for the scale, $\omega$ = 0.89 bootstrap corrected [BC] 95% CI [0.86, 0.91].

### Table 2: Knowledge Questionnaire

**Item 1** How common is autism?

**Item 2** Autism only affects children

**Item 3** Most people on the autism spectrum never learn to speak

**Item 4** People on the autism spectrum may engage in repetitive body movements such as hand flapping and rocking back and forth

**Item 5** People on the autism spectrum people can't tell the difference between truth and lies

**Item 6** Almost all autistic people have poor eye contact

**Item 7** When interacting with a person on the autism spectrum, it is best to keep the mood light by making a few jokes

**Item 8** When responding to a call involving a person on the autism spectrum, use lights and sirens where possible to indicate your presence

**Item 9** When asking a person on the autism spectrum a question, if you don't get an answer immediately, keep repeating the question until you do

**Item 10** When a person on the autism spectrum is screaming or yelling, use restraint as a first line intervention to gain control

**Item 11** When interacting with a person on the autism spectrum, use direct speech, avoid using sarcasm or figures of speech (e.g. are you for real?)

**Item 12** To aid communication with a person on the autism spectrum, use a loud, firm voice

**Item 13** When trying to communicate with a person on the autism spectrum, consider using alternative communication methods such as photos, text, drawings or digital devices

**Item 14** People on the autism spectrum have difficulties in social situations

**Item 15** Sensory stimuli like noises and lights may adversely affect people on the autism spectrum

**Item 16** People on the spectrum may have difficulty understanding jokes, sarcasm and figures of speech

**Item 17** Changes in routine or environment may be stressful for a person on the autism spectrum

**Item 18** When stressed, some people on the autism spectrum may go silent and find it very difficult to respond to questions

*Note. Respondents replied with "I don't Know," "Yes," or "No."*

## Results

Results indicated a statistically significant increase in autism knowledge for the 385 officers who answered both pre and post questions when comparing knowledge scores from the pre-test (M = 13.99, SD = 2.83) and post-test (M = 15.28, SD = 1.67); t(384) = 9.891, p <.001. The mean pre-test score of 13.99 reflected a mean score of 14 items out of a total 18 items. The post test score was a mean score of 15.28 out of 18 items.  Officers reported increased knowledge (90.2%), increased confidence to de-escalate a situation involving someone with autism (93.9%), increased confidence to communicate with autistic individuals (91.0%), and confidence to use the information in the module in future encounters with autistic people (92.7%) as a result of completing the module.

Additionally, police officers reported moderate levels of police officer self-efficacy for working with individuals on the autism spectrum 6 to 12 months after completing the module (M = 24, SD = 5.51; Range = 13-38).

The second research question related to the level of satisfaction that police officers had with the module. Following the module, 80.7% of the officers reported they had no further training needs following the module. Officers were asked an open-response question about further training needs, and 95 participants responded. From these responses, two primary themes were identified i.e. a need for ongoing training and a desire for face-to-face exposure. Responses that fit into the need for ongoing training included participants who were satisfied with the module but felt refresher courses and ongoing training was critical. For example, one officer said, "Police always need further training in all manner of dealing with the public. Unfortunately, due to time and resourcing it always seems to be a one-off training program, then nothing." The second theme related to the importance of receiving additional on-the-job training, or the need for more "face-to-face interactions and advice directly from caregivers."

At the Phase 3 follow-up data collection (n = 70), 73% of officers reported that they had no further training needs in relation to autism. An open-response question was again included to further address officer satisfaction and ask for additional module feedback. However, not enough responses were included to analyse.

## Discussion

In response to proactive requests for autism education and professional development by an Australian police department, a module was created that delivered online education for community police officers. This research measured initial effectiveness of the module, and the results demonstrated the feasibility and promise of the training, as well as the satisfaction by officers who participated in the training. Based on the increase in knowledge and positive perceptions of the module, future research is warranted into measuring and improving the ongoing and real-life impact of the module.

One interesting finding of this research was that officers in our study reported high knowledge scores before the training, and although there was an increase after the module, it was small due to this initially high score. This is a finding that is consistent with Crane et al., (2016) who also noted the high knowledge scores for the participants in their study as well as Gardner and Campbell (2020) who found officers reported high pre-training knowledge. Having replicated these findings, it is clear that while police officers may be able to perform well on a knowledge exam or questionnaire, this may or may not be translating to practice. This is supported by findings in prior research that has highlighted the problematic interactions of autistic individuals who also call for more police training in autism (Crane et al., 2016; Gibbs & Haas, 2020). Therefore, it will be critical for future research to move beyond knowledge to measure the impact of training about autism. Advice should be sought from the autistic and law enforcement communities for ways in which researchers can measure possible changes in behaviour or communication during real world interactions subsequent to training. Partnerships with police departments will be critical for future studies to effectively undertake impact measurement.

Self-efficacy scores were reported as moderate by officers who had completed the module, (M = 24, SD = 5.51; Range = 13-38), which means that officers reported some confidence to work with individuals with autism but also reported some ongoing challenges. Self-efficacy is a construct that relies on Bandura's (1986) social cognitive theory. The theory and large research body around self-efficacy names four sources of self-efficacy: mastery experiences, vicarious experiences, verbal persuasion, and physiological responses (Bandura, 1997). In trying to increase an individual's self-efficacy in future studies, each of these four sources need to be addressed. Designing a future study that collects baseline self-efficacy scores would also lead to more understanding of the direct effects of training on officer self-efficacy which was not able to be established in the present research.

The results of this study were shared with the police department that requested the module, with recommendations for ways to better measure the impact and see additional improvements in autism knowledge and awareness amongst police officers. The module has also been extended to other Australian police departments. It is recommended that this module be used with a clear ongoing training and refresher course agenda in order to maximize the impact. Finally, these findings were shared as initial evidence of the success of the module, and a more rigorous evaluation to gather information on police officer behaviour changes following completion of the module is recommended. If future work continues to demonstrate high knowledge scores but increased problematic interactions between autistic people and police, it may be necessary to determine what else, in addition to addressing factual knowledge about autism, can be used to shift culture, attitudes, and behaviour of the police and autistic individuals.

## Limitations

This study was limited due to the nature of the data and limited demographics of participants, which restricted our ability to compare the results of this study and generalize the findings. It is unknown how representative the participants in this study were compared to Australian and other international samples. Additionally, the knowledge questionnaire was not standardized or psychometrically tested, as it was created for this study and based on the content contained in the training module. Without linked, rigorous, longitudinal data that includes behavioural measures and tools that gauge the impact on police interactions with autistic people, it is difficult to state the true impact of the training module. However, this study does show that police officers do gain knowledge from an online module, find these modules acceptable and useful, and believe that they meet their training needs. More rigorous further study is needed to understand the true impact of online learning modules of this kind. Further research is also needed to understand the nature of any additional initiatives which can improve interactions between police and the autistic community beyond online or in person training.

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# Creating Resilient Policing Agencies and Frontline Responders: Police Recruit Gradual Exposure to Deceased Persons Program

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*Foreword:* *Commander Paula Hudson – Australian Federal Police Forensic Operations*

I am pleased to share this article with you on the implementation of an important resilience program in the Australian Federal Police (AFP) designed for our Police and Forensic officers.  The program – Police Recruit Gradual Exposure to Deceased Persons - has been led, researched and developed in-house by our Forensics crimes scenes unit, over a number of years as a means to looking after our most important asset; our people.

Acknowledging the type of work our people are exposed to for the vast majority of their working days and hours, be they responding to, investigating, collecting and examining critical forensic evidence from major crimes scenes carries an inherent risk of psychological trauma is crucial to building resilient policing organisations.

Recognising a key component of building organisational resilience begins with our people, the AFP through specific programs such as this, are using unique training methods to build resilience in our frontline responders to ensure they have the right tools to be able to deal with the emotional and traumatic situations that we know they will be exposed to.  The program employs proactive and preventative techniques and is designed to inculcate a bottom up culture of acceptance and understanding of the natural vulnerabilities of our members through targeting recruit entry delivery in both police and forensics staff.

It is important that we continue to openly talk about mental health and well-being and in doing so inspire innovation and development in this area.  Early intervention and prevention is the key emphasis in the AFP's health and wellbeing strategy and this specific program embodies that narrative.

As a credit to the founding members, the AFP recently presented this program on request in Sweden at the 2022 European Academy of Forensic Science Conference.  If you or your agency wish to learn more or are interested in this program, I invite you to contact AFP Forensics co-founder of this program Amy.VanBilsen@afp.gov.au.  Amy and her team have a wealth of knowledge and are very passionate about this program, so I am sure they look forward to discussing it with you.

## Police Recruit Gradual Exposure to Deceased Persons program

Police officers investigate death and traumatic scenes, as well as engage with members of the community who have experienced loss, damage, injury or the death of a loved one. Age, preparation and life experience results in individual responses to these stressors. Any crime scene is capable of triggering negative emotions or trauma.

Mental health injuries can develop when an individual fails to process the traumatic or grief memory –because of avoidance or their inability to deal with the memory.

Police go from scene to scene, and seldom have time to recognise issues or process grief before they attend the next job. The dynamic nature of police work means that members may not get the opportunity or have the skills to work through emotions. Unsupported exposure contributes to absenteeism, reduced mental health and in extreme circumstances, self-harm. 2019 data from the National Coronial Information System reported that from 2001-2016, almost 60% of intentional self-harm deaths of emergency personnel (Australia and New Zealand) were police.

Prior to 2020, death awareness training existed for Australian Federal Police (AFP) police recruits however the focus of the training was more on administrative requirements of death investigations, rather than psychological preparation. There was little connection between managing reactions in relation to traumatic jobs and building resilience.

Training did not prepare police for how to deal with the onslaught of emotions that traumatic scenes provided, to recognise vulnerability in themselves or others, or teach them to be comfortable in uncomfortable situations. Often, the police culture of 'getting on with the job' prevented many from seeking help.

In 2018, the Australian Capital Territory based Crime Scene unit introduced the Gradual Exposure to Deceased Persons program to incoming major crime trainees: teaching new members about grief and loss, stepping through death phases, understanding post mortem indicators and decomposition, being task oriented and focused at crime scenes, creating a culture of normalising not being okay, and seeking help when you need it.

A grief counsellor, SHIELD mental health nurse, social worker and psychologist led each of the following sessions:

- Baseline screening
- Grief, loss and attachment theory
- Mental health awareness
- Culture and PTSD.



Grief, loss and attachment → Resilience and mental health awareness → Culture, PTSD and vicarious trauma

*Followed by five phases conducted by AFP SHIELD and Crime Scene staff:*
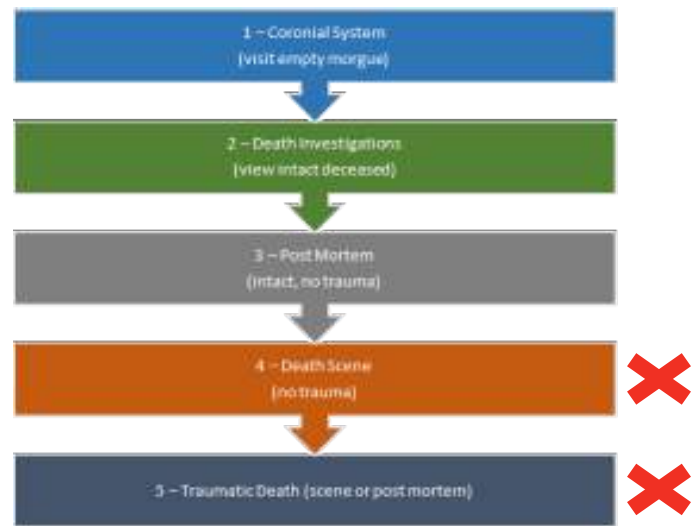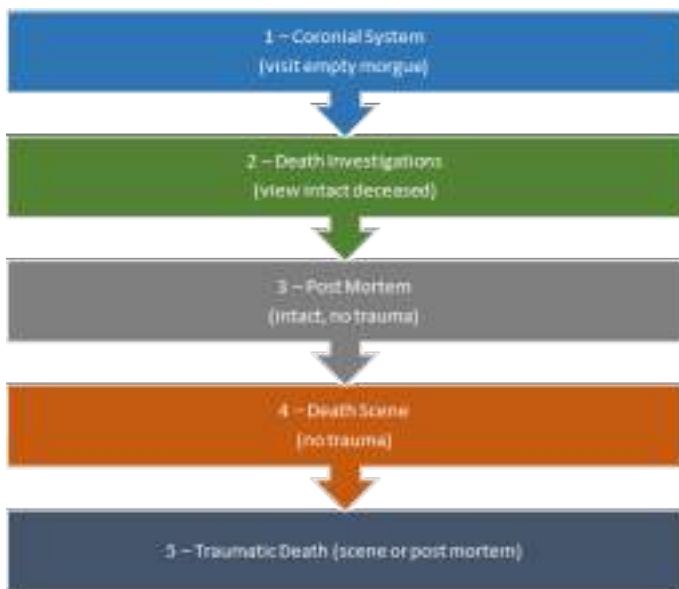


*Program outcomes included:*

1. Harm Minimisation: early detection mechanism to determine if a member is suitable for a specific role or sensitive to specific scenes.

2. Coping strategies: recognising stress, the knowledge that colleagues feel the same, resilience building, de-stress techniques, understanding mental health triggers, understanding loss and how it manifests in others, and how vicarious trauma effects people.

3. Understanding post mortem changes: understand what you see, knowing what it means and how it affects your investigation. When people understand what they see, they can process it.

4. Crime scene case studies: realistic expectations, sharing of experience, emphasis on task orientation and focus on your role, understanding the role of others, recognising triggers at scenes.

5. Aim for members to have a long, healthy and satisfying career; to maintain a work life balance and to put themselves and their families first.

In 2020, the Australian Capital Territory Crime Scenes gradual exposure model was modified, and a police recruit trial commenced – a shorter version to enable program objectives to be met.  The modified program introduces recruits to death scenes, prepares them for trauma and how it may affect them, and assists with creating a culture of asking for help and being comfortable with their own vulnerability. Three phases spread over recruit training schedule, with death scene and traumatic scene attendance were removed.



The modified program also focused on crime scene case studies from a policing perspective, teaching post mortem indicators and change, to assist their investigative process and actions at the scene.

AFP SHIELD (formerly Organisational Health) plays a crucial role in the success of this program and provides members with the understanding that traumatic scenes can and do affect members, regardless of years of experience, whilst highlighting the importance of awareness.  Each phase of the program is supported by SHIELD, encouraging and normalising individual reactions and reflections. Experienced police officers share their experiences and exposures to trauma to provide lived experience to members.

The police recruit gradual exposure program is now part of AFP recruit training: preventative, proactive mental health training, akin to defensive skills, to prepare for traumatic scenes. The ability to cope and respond effectively reduces stress on the member, their family and friends, their team and the organisation as a whole.

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**Reference**

National Coronial Information System www.ncis.org.au

# Licensed premises lighting:
# Creating ambience or violence

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## Objective

This study is the first to objectively quantify the relationship between lighting levels on licensed premises and violence.  The overarching goal was to identify whether there is a lighting level which would reduce the likelihood of violence occurring on licensed premises.

## Introduction

The Night-Time Economy (NTE) is a substantial contributor to both local and national economies. In the 2016-2017 financial year, Australia's night-time economy contributed $715 billion in turnover, employing three million people (License & Edwards, 2018). Queensland's NTE has grown at a faster rate than the national average, driven by growth in licensed food establishments, with less reliance on drinking-only establishments than other states and territories.

However, NTEs are frequently characterised by a range of social costs that have been established in the extant literature. These include harms identified as alcohol-related such as drink-driving (including incidents of road crashes, Chikritzh et al, 2007), maxillo-facial injury (Liu et al, 2016), assault (Briscoe & Donnelly, 2003), and homicide (Tomsen & Payne, 2016) or other alcohol-related acute cause of death such as accident (Chikritzh et al, 2007). In addition, harms caused by the gendered violence within NTEs, ranging from unwanted sexual attention through to rape, have been normalised in Western culture (Fileborn, 2012; Graham et al, 2014).

The confluence of night-time socialisation and crime may potentially reduce the economic benefits provided by the NTE through the cost of associated harms, with sector growth and success also affected by increased perceptions of crime victimisation. Samples of both Australians and New Zealanders indicate that the majority perceive alcohol-related violent crime to be a problem in their community (see Tindall et al 2016, and Connor & Caswell 2012).  Unsurprisingly then, there is some evidence that people perceive night-time entertainment precincts as generally risky environments (see Miller et al, 2012).

However, that perception varies between patrons, residents in the NTE area and residents of the broader geographic community. McIlwain & Homel (2009), for example, found that local residents were more concerned for their safety than patrons who visited a night-time entertainment precinct. Miller et al. (2012) found that perceptions of safety varied between patrons and broader community residents depending upon the situation (e.g. walking alone or waiting for public transport). The potential economic growth in night-time economies may therefore be constrained by perceptions of crime risk, and in turning willingness to visit those localities.  However, within the research the potential magnitude of that economic loss is unclear.

What is clear is that some NTE venues contribute more than others to the crime problem (Graham & Homel, 2008; Madensen & Eck, 2008). The implications of this are twofold.  First, characteristics of the venue environment play a significant role in the occurrence of bar violence and crime. Second, campaigns and policies targeting patrons within the NTE can only achieve so much in the prevention of crime; they are generalised campaigns and not specifically targeted to specific higher risk venues (Liu et al, 2016; Homel et al, 1992; Taylor et al, 2019).

That is, within a night time entertainment precinct there are some venues which are the primary generators of crime, the cause of which may be physical characteristics of the venue, characteristics of the patrons attracted to the venue, or the interaction between the two (Madensen & Eck, 2008).  Focusing on the physical environment, the extent to which  lighting levels inside licensed premises may be a feature of problematic venues is under-examined  yet a factor potentially easily addressed through regulation. Similarly, in determining licensing appeals the Victorian Civil and Administrative Tribunal  has considered low venue lighting levels to be a contributing factor to the harmful effects of alcohol.

There is considerable literature associating lighting with reduced crime in a wide variety of contexts.  Improving lighting is a common situational crime prevention technique most often employed in public places (see Pease, 1999 for a discussion). In line with evidence linking improved lighting to reductions in crime, for example Farrington and Welsh's (2002) meta-analysis, improved lighting has been utilised outside of licensed premises with the goal of preventing violence and aggression (e.g. in the Operation Link: Be Safe Late intervention in Ballarat, cited in Palk et al, 2010).

Miller, Holder and Voas (2009) suggest that increasing lighting levels outside of such venues can be utilised as an intervention strategy against drug use and associated problems. However, there is a paucity of research evidence of the efficacy of lighting in that context. The little research which has been conducted, such as that by Townsley and Grimshaw (2013), typically examines observational measures of lighting levels outside of licensed premises.

When it comes to the internal characteristics of licensed premises, research has identified a range of situational factors, including lighting, being associated with increased intoxication and violence (for example, Green & Plant, 2007; Livingston, 2008; Donnelly et al, 2014; Homel et al 2004; Hughes et al, 2012; Hughes et al, 2013). In their synthesis of observational studies undertaken within licensed premises, Graham and Homel (2008) identified three where a low level of lighting was associated with aggression (in Sydney, North Queensland, and Buffalo), while a non-significant relationship was found in Vancouver and Hoboken.

Hughes et al (2012) undertook observational studies across four European countries, aiming to identify the situational characteristics associated with patron intoxication (rather than aggression or violence). They found that all features of the physical environment of the night-time venue that were measured including lighting were individually significantly related to intoxication levels at the venue.

While these and other studies mention low lighting as a factor in both intoxication and aggression, few studies actually measure light levels, and where they do it is by subjective assessment. For example, Hughes et al (2013) had observers rate lighting on a scale of 0 (bright/can clearly see) to 9 (very dark/can hardly see). Overall, the research would tend to indicate that appropriate lighting is likely to reduce incidents of intoxication and violence within licensed premises. However, the veracity of that finding is limited by the subjective measurement of lighting levels.

While brighter lighting may reduce problems within licensed premises, it may be overly simplistic to suggest that the brightest lit premises will have less violence. Through a collaboration between the National Centre for Education and Training on Addiction, Queensland Police, and South Australia Police, Doherty and Roche (2003) examined best practices to reduce alcohol-related harms in and around licensed premises. From the international literature they identified that lighting should be balanced so that bright light does not act as an irritant to patrons, and low light does not encourage offending.

This is in line with Pease's (1999) assessment that lighting research should focus on context-specific, targeted applications in order to identify how and in which circumstances lighting could prevent crime. While Doherty and Roche (2003) noted the benefits of good lighting inside licensed premises – including facilitating surveillance and deterring loitering – measures of 'good' and 'poor' lighting were not specified.

The absence of research evidence on what constitutes 'good' or sufficient lighting for reducing antisocial behaviour has led to Australian and New Zealand regulators and others providing opaque guidance on the issue of lighting in licensed premises. For example, the Victorian Department of Justice produced two editions of their 'Design Guidelines for Licensed Venues' (2009; 2017), emphasising how dark spaces could "facilitate antisocial behaviour and increase feelings of intoxication" (2017, p.23) as well as reduce passive surveillance.

The Department also noted that lighting "should be appropriate for the time of night and intended use of the space" (2017, p.23) without specifying what those levels should be. The Alcohol Advisory Council of New Zealand's 'Guidelines for CPTED Crime Prevention through Environmental Design for Licensed Premises' (2015) cites research linking poor or dim lighting to aggression and recommends avoiding extremes of lighting to avoid both irritation and inability of staff to monitor customers. Their CPTED checklist includes that "internal lighting is suitable" and "no areas are too dark inside the premises" (p.33), but does not specify levels.

In Queensland, the Department of Justice and Attorney-General has developed a suite of documents including a legislative compliance checklist for liquor licensees (2021), information on providing for patron and staff safety (2020), a downloadable safety audit model (2012a), and a guide outlining risk management practices and procedures (2012b). While all documents reference lighting levels and focus licensees' attention on whether lighting in their premises is adequate for patron safety, effectively monitoring and engaging with patrons, and discouraging criminal behaviour, the documents stop short of identifying specific lighting lux levels required to achieve those outcomes. However, general guidance may be found through reference to general workplace regulatory requirements on lighting.

Across Australia and New Zealand guidance on minimum lighting levels for interiors and workplaces is provided in Standard AS/NZS 1680.1:2006: Interior and Workplace Lighting. While compliance with the Standard is not a regulatory requirement for licensees, workplace health and safety regulators may be guided by it in enforcing legislative requirements within their jurisdiction. In Queensland for example, the Work Health and Safety Regulation 2011 (s.40) requires that:

> ## "A person conducting a business or undertaking at a workplace must ensure, so far as is reasonably practicable, the following—

*(d) lighting enables—*

*(i) each worker to carry out work without risk to health and safety; and*

*(ii) persons to move within the workplace without risk to health and safety; and*

*(iii) safe evacuation in an emergency;"*

The Standard does not specifically recommend lighting lux levels for licensed premises. However, minimum lux levels for workplace areas similar to those commonly found in licensed premises (such as corridors, walkways and spaces where occasional reading occurs) range from 40 lux to 160 lux. While the functionality of these lighting levels to night-time economy venues would need to be assessed, the Standard demonstrates the possibility of specifying safe, measurable levels of lighting for licensed premises.

The ability to move from subjective assessments and recommendations for 'suitable' licensed premises lighting levels, to a more objective measure relevant to the licensed premises context, provides promise for increasing patron safety in night-time entertainment precincts.

## The Current Study

The current study is the first to examine the relationship between objectively measured lighting levels in licensed premises and violence. The research sought to address two primary research questions:

1. Do lighting levels in Queensland licensed premises predict violence and crime in the premises?

2. Is there an optimal range of lighting levels that could decrease the likelihood of violence and crime in licensed premises?

In addressing these questions, the goal was two-fold. First, to ascertain whether the relationship between licensed premises lighting levels and crime continues to be supported when lighting is objectively measured.

Second, to provide licensees and regulators with information on whether there is a specific lighting level that would serve to reduce violence in licensed premises as much as possible. This in turn would assist in the development of regulatory standards and ultimately safer night-time entertainment precincts.

The research consisted of two studies outlined below. All calculations were performed using Stata v.13.1.

## Study 1

This study was a cross-sectional exploratory study utilising a purposive sample of licensed premises from across Queensland. The study involved obtaining objectively measured lighting levels from licensed premises using a commercially available digital lux meter, and examining the relationship between those levels and police recorded violent crime incidents occurring on the premises.

### Sample

The sample consisted of 60 licensed premises from across Queensland. A purposive sampling strategy was employed, with three groups of licensed premises being included in the sample.

First, the Top 20 high risk licensed premises in the State for the period 2016/2017 were included. Risk level was ascertained using the BiPortal information system which draws upon information collected by both the Queensland Police Service and Office of Liquor and Gaming Regulation (OLGR). Risk levels are ascribed by accounting for the total incidents occurring on a premises, total violent incidents occurring on a premises, and total non-violent incidents which occur in each area of the licensed premises.

Second, 22 matched comparison premises were included. Comparison premises were identified by local police and OLGR members with the same locality as a Top 20 high risk premises. Premises were matched on similarity of venue size, patrons and trading hours, and importantly a subjective judgement of a higher level of in premises lighting.

Finally, 18 randomly selected supplementary premises were added to the sample to overcome sampling limitations and improve generalisability of findings. Premises in this set were hotels or nightclubs in either Brisbane City or Fortitude Valley.

In order to be included in the sample, premises had to meet four eligibility criteria:

• Held a commercial hotel or nightclub liquor licence issued by the Queensland Office of Liquor and Gaming Regulation;

• Principal activity of the premises was not accommodation or dining;

• Venue comprised one site rather than multiple sites;

• The premises was currently trading.

Of the 60 venues sampled, 32 were in Brisbane, with the remaining 28 spread across Gold Coast, Toowoomba, Ipswich, Bundaberg, Mackay, Rockhampton, Townsville, and Cairns. Eighty-seven percent of the sample held a Commercial Hotel licence, as opposed to a nightclub license. Venues varied in terms of their configuration, size, and capacity. Each venue had between three and 13 distinct bars and common areas (sub-sites). The maximum number of patrons ever at the premises ranged from 150 to 2,400 people, with between zero and 20 security officers on duty. However, on the Friday and Saturday nights when the premises were visited for taking light readings, estimated patron numbers ranged from 60 to 1,500 people.

## Method

The first author visited each premises once on a Friday or Saturday night between 3 November 2017 and 14 January 2018 during the hours of 8.30pm to 3.00am. Light levels were taken at each premises using the same digital lux meter. To ensure instrument accuracy, readings were compared to those taken by accompanying local Workplace Health and Safety Queensland inspectors using their official lux meters.

Light levels were taken at multiple points in every sub-site within each venue. Readings in bar areas captured minimum and maximum lighting levels at a standard distance of 500mm from each bar across its length. The goal was to capture lighting levels in the area where the first and second person being served should be illuminated, as this represents the most common area where bar staff in busy venues have the opportunity to monitor patron intoxication prior to service. Minimum and maximum lighting levels in all other common areas were obtained based on the observed brightest and darkest zone within that area.

In order to judge the overall level of lighting within each venue, the median or middle value of lux readings across the venue was calculated. The median lighting level was utilised in the analysis as some venues had one very well-lit area (almost always a standalone dining area), which caused the average value of lighting to be artificially inflated. This effect was stronger in venues with smaller numbers of sub-sites as opposed to those with more sub-sites.

The dependent variable of violent crime was measured by the officially recorded violent offences occurring in each licensed premises. The Queensland Police Service extracted from its QPRIME system offence reports associated with each licensed premises that occurred between 1 July 2016 and 30 June 2017 between the hours of 10pm and 5am. These hours were selected as they encompass both peak NTE trading times and the period during which most offending occurs in NTEs; peak counts of alcohol related crime occur late at night or early in the morning (see for example Briscoe & Donnelly, 2003; Chikritzhs, Stockwell & Masters, 1997).

To measure violence at venues, we counted all reported offences that met the following criteria: (1) classified an offence against the person, (2) was not a public nuisance offence which contained an element of violence, and (3) had a victim other than a police officer. We excluded offences such as 'Assault Police (PPRA)' and 'Public nuisance – Violent' as the context of those offences is qualitatively different. Removing 'Assault Police (PPRA)' offences also served to adjust for policing activities which may disproportionately see police visit some premises more than others, and in turn increase the likelihood of assaults upon police.

Violent crime was then measured as the sum of the following offences occurring at the premises during the 2016/17 year:

• Assault occasioning bodily harm
• Assault with intent to commit rape
• Assault, Common
• Assault, minor (not elsewhere classified)
• Grievous Bodily Harm
• Indecent assaults on adults
• Rape
• Rape - Attempted
• Sexual Assault (Other)
• Wounding
• Robbery, armed and unarmed (in company).

The number of violent offences and maximum number of patrons ever on site were utilised to calculate the rate of violent incidents per 500 patrons.  As the number of incidents occurring in any specific venue is likely to depend upon the size of the venue, the rate per 500 adjusts for variation in venue size.  The maximum number of patrons ever at the premises is a more valid measure of patronage than the official venue occupancy capacity as some venues may never reach capacity.  Additionally, using the maximum number of patrons on site is logical because most incidents take place on Friday and Saturday nights (78% of police reports; see also Briscoe & Donnelly, 2003), when most venues are at peak trading.

Prior to analyses data were screened for normality and outliers. Because the relationship between incidents and lighting was not a straight line, the log transformation of the median lux was used. Two venues, both in the same city, were extreme outliers for violence for the time period sampled.  Due to the presence of these outliers a robust regression using the user-written Stata program MMREGRESS was used to estimate the relationship (Verardi & Croux, 2009). This method has high resistance to outliers and retains high efficiency for estimators (Verardi & Croux, 2007). It is designed to give less weight in the estimation to the outlying cases.

Predicted levels of violent offences at given levels of median lux while controlling for the ratio of security personnel to the maximum number of patrons were calculated using Stata's MARGINS command, and visualised through the use of an extension to that command called MARGINSCONTPLOT (Royston, 2017). The control variable was included because it clearly improved the fit of the model, suggesting that something about the number of security personnel present at each venue is important to the outcome of violence.

## Key Findings

The median lighting level at each premises ranged from a minimum of 1 lux to a maximum of 53 lux, with an average of 11.61 lux (SD=12.79).

Excluding the two outlying venues, the average rate of violent incidents per 500 patrons was 4.81 (SD=4.54), ranging from 0 to 16.67. With the two outlier premises included, the average rose to 6.06 incidents (SD=8.16) and ranged up to 44.44.

Figure 1 depicts the predicted level of violent offences per 500 patrons at each possible median lux level at the venue, surrounded by the 95% confidence level for the prediction. The figure clearly depicts that as lighting increases, violent incidents decrease, and are

predicted to reach almost zero at a median lux level of 34 lux. The 95% confidence interval predicts that violence levels could reach zero with a lux level of 25.
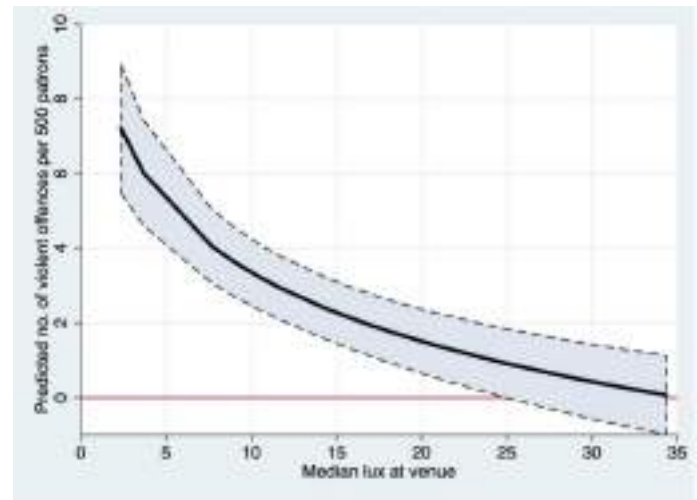


*Figure 1. Predicted level of violent offences per 500 patrons by lux*

Analyses were undertaken to ascertain how well the prediction modelled above fits each premises.  Three premises, including the two outliers, were not well predicted by the model.  However, they have not been weighted heavily when making predictions.

### Study 2

To assess the reliability and generalisability of the Study 1 findings, a second study was undertaken with a random sample of licensed premises.   Noting that many of the licensed premises included in Study 1 were within designated Safe Night Precincts (SNP) , a secondary goal of the research was to control for location within a SNP.  This may have important implications for the findings as research has established a relationship between clusters of violence and clusters of alcohol outlets (see for example Grubesic & Pridemore, 2011; Kumar & Waylor, 2003). Additionally, venues in SNPs may be subject to different operating conditions by legislation or due to their membership of a local liquor accord.  Controlling for location within a SNP therefore controls for those different operating conditions.

### Sample

A cross-sectional random stratified sample of 90 licensed premises across Queensland was utilised.  The sample consisted of hotels and nightclubs which were randomly selected from across nine locations across the State: Gold Coast, Toowoomba, Sunshine Coast, Bundaberg, Mackay, Rockhampton, Townsville, and Cairns. Premises qualified for the sampling frame if they met the eligibility criteria adopted in Stage 1; this resulted in some premises being sampled in both Study 1 and Study 2.

## Method

Similar to Study 1, each premises was visited by the first author between 2 November 2018 and 5 May 2019, with light readings taken between 8.00pm and 1.45am. The lux meter and procedure for taking readings was identical to Study 1.

For Stage 2, QPRIME data were provided for recorded offences which occurred between 1 July 2017 to 30 June 2018, again during the period between 10pm and 5am. The offences included within the violent crime measure were the same as those for Study 1.

The increased breadth (and representativeness of the population of licensed premises in Queensland) of the sample in Stage 2 meant that a measure of whether a premises had any violent incidents at all became key to analysis of results. An independent measures t-test with effect size calculated using R squared was used to determine differences in the median lux level of venues that had recorded violent incidents compared with those that did not. In addition, the relationship between the median lux level of a venue and whether or not a venue recorded any violent incidents was modelled using logistic regression (because the dependent variable takes one of two values) with heteroscedasticity-robust standard errors and control variables for the maximum number of patrons ever attending the venue and the location of the venue in an SNP area. The intention was to predict whether a venue recorded a violent incident or not using the median lux level.

The relationship between the number of violent incidents and the median lux of a venue was also modelled using a Cragg hurdle model, which involves first determining the influence of lighting on whether there was any violence (using the same methodology described earlier), and then modelling the influence of lighting on how many violent incidents there were. This is an appropriate choice of model when different processes are theorised to be responsible for the zero/one outcome (whether or not a venue records a violent incident within the time frame) and the count outcome (how many violent incidents are recorded during the time frame) (Cameron & Trivedi, 2013; Pohlmeier & Ulrich, 1995). The hurdle model is used to predict the number of violent incidents per venue using the median lux level, again accounting for the two control variables, and most importantly, to improve the specification of the model given the nature of the dependent variable.

All models were selected according to Akaike's information criterion and the Bayesian information criterion for goodness of fit (Long & Freese, 2014).

## Key Findings

Premises recorded a minimum level of the median lighting level of 1 lux, and a maximum of 36.5 lux. The average median lux in the sample was 15.33 (SD=7.65).

The average number of violent incidents per venue was 1.51 (SD=2.90), with a minimum of zero and a maximum of 16 incidents. The majority (61%) of premises had no recorded violent incidents. Due to this, we generated two outcome measures for violence levels

at a venue: (1) a dichotomous variable indicating whether a venue had any violent incidents at all, and (2) a count variable of the number of violent incidents per venue.

Because the outcome variable in Stage 2 was more appropriately modelled as a count than the rate used in Stage 1, but the connection between size of venue and number of violent incidents remained, a control variable measuring the maximum number of patrons ever on site at the venue was included (M=311.89, SD=177.7). The model also controlled for whether a venue was in a Safe Night precinct to account for venue clustering and operating differences (73% of venues sampled were in an SNP).

The average median lux both with and without any observed violence is depicted in Table 1. The results of an independent measures t-test and computation of the effect size indicate that the difference between means is both large and statistically significant, and the co-variation in the median lux level of a venue and the presence of any violent incidents is striking at 54%.

| | Average median lux level with | Average median lux level without | Difference (p-value) | Effect size |
|---|---|---|---|---|
| Violence | 8.33 | 19.78 | 11.45 (p<.001) | 54% |

*Table 1. Average lighting levels in venues which recorded at least one violent incident compared with venues with zero violent incidents.*

The relationship between the median lux of a venue and the predicted probability of recording any violence while controlling for maximum number of patrons and SNP area is depicted in Figure 2 using the user-written Stata command MARGINSCONTPLOT (Royston, 2017), with the predicted probability surrounded by the 95% confidence level for the prediction. The median lux of a venue ranges from a minimum of 1 to a maximum of 36.5 in the sample. As such, we have modelled relationships with the median lux between 1 and 36, so as not to exceed the parameters of the real world in our sample.

*Figure 2. Predicted probability of recording any violent incidents per median lux level of the venue, controlling for maximum number of patrons and placement in a SNP area*
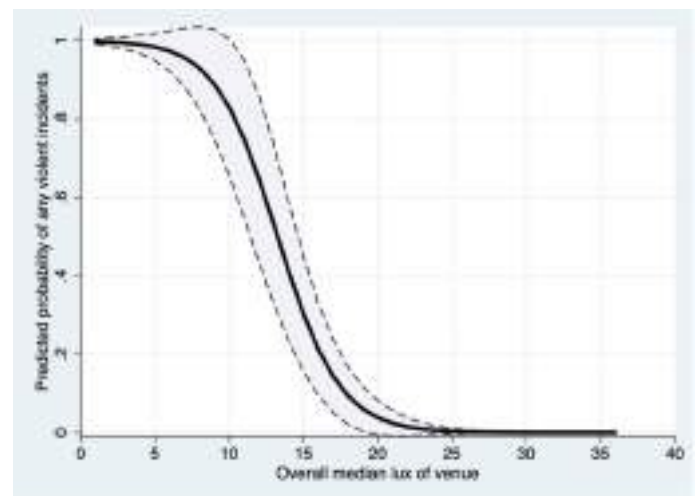
The overall probability of violence in a venue under this model was 0.39. On average, an increase in the median lux of a venue by 5 lux was related to a decrease in the probability of violence in that venue by 0.17 (while holding the maximum number of patrons and SNP location constant). However, the relationship should not be interpreted on average. While the median lux level in venues in our sample is under 10 lux, the probability of violence in that venue is almost equal to 1.  That is,  there is almost 100% chance that a violent incident will be recorded on that premises.

When the median lux level increases to above 20 lux, the probability of a violent incident drops to almost zero, and remains there for all venues with median lighting above 20 lux. The number of patrons and situation in an SNP area appear to contribute little to whether a venue records a violent incident or not.

The Cragg hurdle model is used to improve the specification of the model. The first step in the hurdle model repeats the analysis already described. What the hurdle model adds is the prediction of how many violent incidents are expected at each level of lighting. In addition, this model indicates that while the number of patrons and SNP location did not appear to affect whether a venue recorded a violent incident in combination with lighting levels, both influenced how many violent incidents were recorded per venue, supporting our theory that different processes determine these phenomena.

The model predicts that an increase in around 300 patrons at the maximum in a venue corresponds to around 1 extra violent incident over a year, holding lighting and SNP situation constant. Venues not in SNP areas are predicted to record less than one violent incident per year (0.87 incidents, 95% CI [0.51, 1.24]), while those in SNP areas are predicted to record over 1.5 incidents (1.57 incidents, 95% CI [1.23, 1.90]).

Regarding the variable of most interest, the lighting level of the premises, the hurdle model predicts a possibility of zero incidents at around 16 lux at the median, and a prediction of zero incidents at 20 lux and above (Figure 3). In addition, the model predicts that once the median lighting of a premises falls below 20 lux, violent incidents are possible; and with every further fall of 10 lux, there will be two additional violent incidents recorded at that premises.
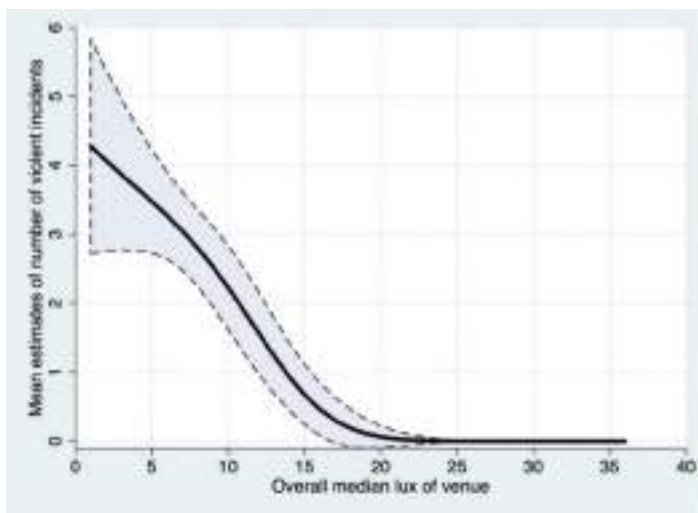


Figure 3. Predicted count of violent incidents per median lux level of the venue, controlling for maximum number of patrons and placement in a SNP area.

Given the significant contribution of situation within a SNP to the model, comparisons were undertaken between SNP and non-SNP venues (Figure 4).  Consistent with previous research, venues within a SNP area had greater levels of violence than non-SNP venues. However, the median lux level at which the number of violent incidents would probably reduce to zero is the same as non-SNP venues. Therefore, increasing lighting levels across licensed venues would be likely to see greater reductions in violence in SNP areas than non-SNP areas.

Figure 4. Predicted count of violent incidents per median lux level of the venue per situation in a Safe Night Precinct, controlling for maximum number of patrons.
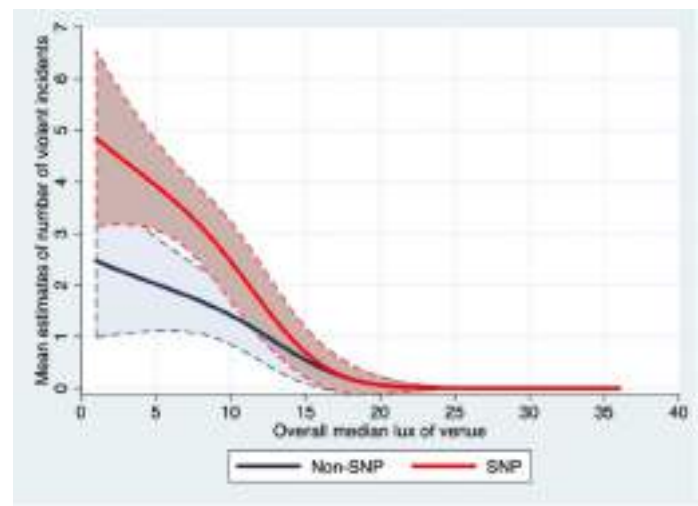


## Key insights

In summary, the results of this research objectively confirm the relationship between lighting and violence in licensed venues. Importantly, the findings quantitatively indicate the potential for violence to be significantly reduced if in-premises lighting levels are specific lux levels.

This research also draws attention to the presence of existing regulatory tools and resources that can be leveraged to increase lighting in Australian licensed premises and in turn reduce violence. Standard AS/NZS 1680.1:2006: Interior and Workplace Lighting, coupled with State and Territory legislative requirements for maintaining a safe work environment, provide fertile ground for exploring how increases in lighting levels could be achieved without the need for creating new regulatory obligations. However, given the findings of this study, there may be scope to create within the Standard a safe minimum lux level to be applied to late night licensed premises.

The findings of this research are clear on what that lux level should be as it relates to creating an environment with a reduced likelihood of violence.  The ability to use those regulatory tools is contingent upon the ability and willingness of workplace health and safety regulators to become more involved in regulating licensed premises. However, as this research shows, the principles that police use for accessing the regulatory levers available to other agencies can also be applied to garner support from workplace health and safety regulators.

It is important to remember that lighting is likely one of a constellation of environmental and situational factors that render some licensed premises more susceptible to violence.  Previous research has identified a range of licensed premises characteristics that are linked to, and likely interact, to produce violent environments.  Similar to previous studies on lighting, research on those factors often lacks objective, quantitative measurement.  Having established through this research the ability to objectively and quantitatively measure the relationship between lighting and violence, the challenge for future research is to quantitatively identify the cluster of licensed premises characteristics that are associated with violence.

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# Policing approaches prior to the point of arrest, charge, or prosecution: A rapid review of the evaluation literature

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## Introduction

The New Zealand Police Reframe Te Tarai Hou Strategy is underpinned by NZ's goal to be the safest country in the world, striving for fewer victimisations, less harm, and fewer people in the courts and prison system. Reframe Te Tarai Hou aims to improve frontline police practice and decision-making and the end-to-end case management process for better resolution outcomes and a safer NZ. During 2021, the NZ Police and NZ Evidence-Based Policing Centre worked with the University of Queensland Global Policing Database team to conduct a rapid evidence review of policing interventions to inform the development of a strategic resolutions policy framework and decision-making model for frontline police as part of Reframe Te Tarai Hou. The rapid review reporting in this article sought to provide policymakers and police practitioners with a rapid and systematic synthesis of policing interventions that could be used to inform the development of the Reframe Te Tarai Hou Strategy.

## Method

The full methods are described in the introductory article to our suite of rapid reviews published in this issue of Police Science (Eggins, Hine & Mazerolle, 2022). The rapid review presented in this paper sought to answer the following question:

*What evidence is there for the effectiveness of interventions involving police activities prior to the point of arrest, charge, or prosecution that are a direct response to a clearly defined social problem, suspicion of an offence, or an actual offence with regard to the following outcomes: offending and crime; victimisation; victim experience or satisfaction with the encounter; perceptions of safety and perceptions of police; and quality of police decision-making?*

The PRISMA flowchart in Figure 1 (Moher et al., 2009) displays the attrition of identified records for the Global Policing Database (GPD) processing and screening specifically for this review. The search within the GPD identified 481 studies that were assessed for eligibility for this review. In addition to the standard coding fields described in Eggins et al. (2022), we coded each study for legislative or policy contexts underpinning the intervention and implementation challenges or process evaluations around internal police information dissemination and/or management of the intervention.

### Figure 1: PRISMA flow diagram
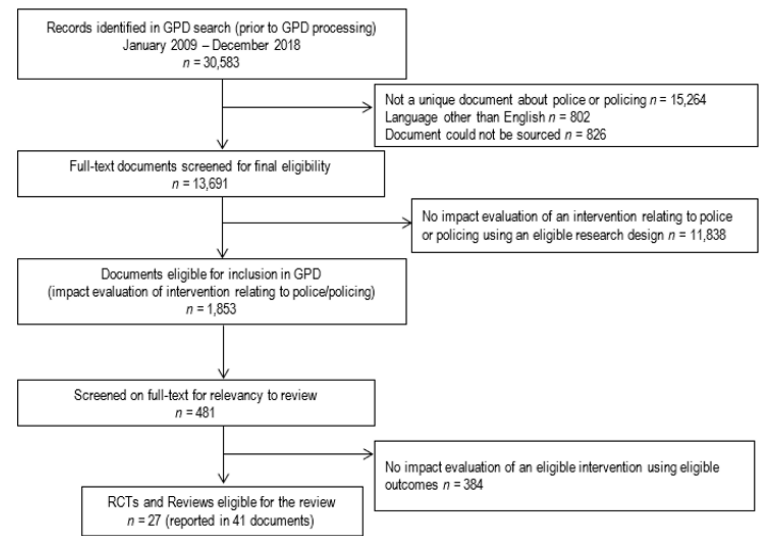


## Results

We identified 27 studies eligible for this review (randomised control trials (RCTs) = 22, and reviews = 5). Interventions were categorised into six groupings.

### Proactive procedural justice encounters

We identified seven RCTs of proactive procedural justice (PJ) interventions. The studies focused on the impact of proactive use of PJ in traffic encounters on outcomes relating to perceptions of the police, with a dearth of evidence regarding other outcomes such as crime and victimisation. Results suggested that police use of PJ prior to arrest, charge, or prosecution shows promising results for improving perceptions of police during proactive police-citizen encounters, although evidence centres largely on traffic stops (Mazerolle et al., 2012; MacQueen & Bradford, 2015; Sahin et al., 2017; McLean, 2018; Maguire et al., 2016; Lowrey et al., 2016; Lowrey-Kinberg, 2017).

### Strategies targeting social groups

This review located ten reviews and RCTs falling broadly within police diversion strategies targeting the following social groups: youth offenders, domestic and family violence offenders, and people experiencing mental illness.

A 2018 Campbell Collaboration systematic review found that police use of diversion provides some promising results, particularly for diverting youth, which can lead to less future offending (Wilson, Brennan, & Olaghere, 2018).

The included studies showed mixed evidence regarding policing interventions pertaining to domestic and family violence (Brame et al., 2015; Clodfelter, 2015). Proactive enforcement of orders appears to improve victims' perceptions of police but may not reduce recidivism

and different types of sanctions (e.g., arrest, citation, or police advice) seem to vary in their impact on arrests.

We found some promising evidence for police using mental health diversion approaches or training, which tend to reduce arrests (Taheri, 2016; Bonkiewicz et al., 2014; Compton et al., 2014), improve officer de-escalation skills (Duckett, 2017; Hacker, 2017), and improve referrals to mental health services (Compton et al., 2014; Watson et al., 2010; Dewa et al., 2018).

### Training for police decision-making

Five RCTs were identified as evaluations of police training in relation to decision-making. The contents and goals of the training programs were diverse, covering critical incident proficiency and skills in investigation, communication, procedural justice, and de-escalation. Overall, the included studies have positive effects for decision-making and crisis management skill (Rosenbaum & Lawrence, 2017; Duckett, 2017; Hacker, 2017; Andersen & Gustafsberg, 2016), however none provided evidence of effectiveness on arrest rates, crime rates, or victim safety.

### Police discretionary activity during patrols

Our findings favour discretionary police activity that use 'soft' policing approaches (e.g., being unarmed) at crime hot spots (Rosenfeld et al., 2014; Gill et al, 2018; Ariel et al., 2016). However, the studies only addressed crime and none of the other eligible outcomes (e.g., perceptions of police).

### Dissemination of information and resources by police

Information dissemination tactics (to the public) had mixed evidence for effectiveness. Information dissemination through labelling illegally disposed garbage to inform citizens of correct disposal had no effect on disposal rates (Dur & Vollaard, 2017). Yet, crime prevention advice distributed by police via newsletters, leaflets, and resource packages seems to offer some promise for reducing motor vehicle theft and burglaries, and improving perceptions of police (Roach et al., 2017; Wunsch & Hohl, 2009; Johnson et al., 2017).

### Curfew checks with a diversion component

We found little evidence regarding curfew checks. The results of the single eligible study suggested that hotspots assigned to receive a prevention-focused curfew intervention with diversion did not show a statistically detectable difference in property crime rates compared to hotspots that did not receive the intervention (Santos & Santos, 2016).

## Summary

Our review identified no evaluation of an overarching decision-making policy framework and there was a general lack of insight provided around the context for strategic decision making. This is a significant limitation in the reporting of policing evaluations and has implications for portability of strategic frameworks across different jurisdictions and legislative systems. Additionally, the included studies reported very little information about how interventions were implemented within organisations (e.g., techniques for internal dissemination or implementation barriers/facilitators). Nevertheless, some themes could be extracted from the extant literature. First, we identified the importance of gaining and maintaining buy-in across the organisation, from senior management as well as officers 'on the ground.' Second, the role of building organisational understanding of the intervention by disseminating information in multiple formats (e.g., verbal briefings, training, written summaries) is critical for success. Third, ensuring treatment fidelity through monitoring officer compliance with specified intervention protocols help to keep strategic approaches on track. Overall, the review provided general guidance as to what might be useful in helping to guide decision-making prior to the point of arrest, charge, or prosecution yet fell short in providing evidence for best practice in formulating strategic policy making frameworks.

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