The intersection between driver licensing, employment, and health for Aboriginal and Torres Strait Islander Australians

by Bobby Porykali

Thesis submitted in fulfilment of the requirements for the degree of

Doctor of Philosophy

under the supervision of Associate Professor Melissa Kang, Professor Rebecca Ivers, Doctor Kate Hunter, Professor Nareen Young and Doctor Patricia Cullen.

CERTIFICATE OF ORIGINAL AUTHORSHIP

I, Bobby Porykali declare that this thesis, is submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the School of Public Health/Faculty of Health at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

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Collaborative doctoral research degree statement

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Acknowledgement

The journey to get here has been one from humble beginnings and to reach the pinnacle of academic qualifications is something that I had never anticipated. First and foremost, I give thanks and glory to my Heavenly Father, without Jesus in my life I have no doubt the direction I would have taken in life would be extremely different. None of this would be possible without my Lord and saviour.

Romans 8:28 '*And we know that all things work together for good to them that love God, to them who are the called according to his purpose*'

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Format of thesis

This is a thesis by compilation of published (Chapters Two, Four, Five and Six) and unpublished (Chapters One, Three and Seven) research.

List of publications arising from this research

Paper #1	
Title:	The effectiveness and impact of driver licensing programs on licensing and employment rates for Aboriginal and Torres Strait Islander peoples of Australia: A systematic review.
Authors:	**Bobby Porykali**, Kate Hunter, Alyse Davies, Nareen Young, Elizabeth Sullivan, Rebecca Ivers.
Journal:	Journal of Transport and Health.
Status of publication:	Accepted (27 April 2021).
Unique contribution to knowledge	This is a systematic review presented in Chapter Two of the thesis. It identifies and describes all Aboriginal and Torres Strait Islander driver licensing support programs being delivered throughout Australia. Further, it evaluates the effectiveness and impact of these programs on licensing attainment and employment rates for Aboriginal and Torres Strait Islander peoples.
Paper # 2	
Title:	Process evaluation of an Aboriginal driver licensing pilot program in the Australian Capital Territory.
Authors:	**Bobby Porykali**, Patricia Cullen, Kate Hunter, Kate Patten, Nareen Young, Rebecca Ivers.
Journal:	Health Promotion International.
Status of publication:	Under review.
Unique contribution to knowledge	This is a process evaluation of an Aboriginal and Torres Strait Islander driver licensing pilot program in the Australian Capital Territory, which is presented in Chapter Four. It evaluates program

	outcomes, examines whether the program was delivered as intended according to the key service areas and in a culturally relevant format.
Paper # 3	
Title:	The road beyond licensing: the impact of a driver licensing support program on employment outcomes for Aboriginal and Torres Strait Islander Australians.
Authors:	**Bobby Porykali,** Patricia Cullen, Kate Hunter, Kris Rogers, Melissa Kang, Nareen Young, Teresa Senserrick, Kathleen Clapham, Rebecca Ivers.
Journal:	BMC Public Health.
Status of publication:	Accepted (11 November 2021).
Unique contribution to knowledge	This is a quantitative paper examining the impact that a driver licensing support program directly has on employment outcomes of program clients, which is presented in Chapter Five.
Paper # 4	
Title:	How does a driver licensing program influence transitions into employment for Aboriginal and Torres Strait Islander people? Using the Self-Determination Theory to explore client experiences of a driver licensing pilot program in the Australian Capital Territory.
Authors:	**Bobby Porykali,** Kate Hunter, Melissa Kang, Patricia Cullen, Nareen Young, Rebecca Ivers.
Journal:	BMC Public Health.
Status of publication:	Under review.

Unique contribution to knowledge	This is a qualitative paper exploring client experiences on the influence driver licensing programs have towards facilitating positive transitions into employment. This is presented in Chapter Six.
Other comments:	A report of the Australian Capital Territory Aboriginal and Torres Strait Islander driver licensing pilot program was also prepared whilst undergoing this thesis. The report is included in Appendix 3.

Note on author attribution

Chapter One	
Reference	This is an unpublished Chapter in the thesis.
Contribution	I, Bobby Porykali conceptualised this chapter with supervisors Melissa Kang, Kate Hunter, Nareen Young, Patricia Cullen and Rebecca Ivers. I was the primary researcher involved in writing the chapter.

Chapter Two	
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Chapter Four	
Reference	**Porykali, B.**, Cullen, P., Hunter, K., Patten, K., Young, N., Ivers, R. Process evaluation of an Aboriginal driver licensing pilot program in the Australian Capital Territory. Health Promotion International. 2022. (*Under review – suggested citation*).
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Abbreviations

ACT Australia Capital Territory

ADI Accredited Driving Instructor

ALRC Australian Law Reform Commission

ALS Aboriginal Legal Service

APY Anangu Pitjantjatjara Yankunytjatjara

CBTA Competency Based Training and Assessment

DESE Department of Education, Skills and Employment

GLS Graduated Licensing Scheme

ICIP Indigenous Cultural and Intellectual Property

IMI Intrinsic Motivation Inventory

L Learner

MMAT Mixed Method Appraisal Tool

MT Maralinga Tjarutja

NEET Not in employment, education or training

NSW New South Wales

NT Northern Territory

O Open

OR Odds Ratio

P Provisional

PRISMA Preferred Reporting Items for Systematic Reviews and Meta-Analysis

PRISMA-ScR Preferred Reporting Items for Systematic Reviews and Meta-Analysis extension for scoping reviews

QLD Queensland

R Regional

Rem Remote

ROA Remoteness of Area

RTP Research Training Program

SA South Australia

SAS Statistical Analysis System

SDT Self-Determination Theory

TAS Tasmania

TfNSW CRS Transport for NSW Centre for Road Safety

U Urban

VTEC Vocational Training and Educational Centres

VIC Victoria

WA Western Australia

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Abstract

Employment and driver licensing are key social determinants for improving health outcomes. In addition, having a valid driver licence and access to transportation improves health and wellbeing by increasing accessibility to essential services such healthcare and employment, and enabling participation in family, community, and cultural responsibilities. Aboriginal and Torres Strait Islander peoples are under-represented as driver licence holders. As such, community-based programs were developed to provide culturally appropriate support for clients to obtain a driver licence. This research set out to examine driver licensing support program to understand the impact they have on client employment outcomes. In doing so this work aims to understand the intersection between driver licensing, employment, and health for Aboriginal and Torres Strait Islander Australians.

This work included a systematic review, and a mixed method approach, including use of Indigenous research methods, was used to examine two independent Aboriginal and Torres Strait Islander driver licensing support programs – The Australian Capital Territory Aboriginal and Torres Strait Islander driver licensing pilot program; and the 'Driving Change' program.

The systematic review showed that forty-two programs were identified as being delivered across Australia, however very few (n = 4) were evaluated, and none examined the impact on employment outcomes. End-to-end programs that provide support in a culturally appropriate way were most effective in improving licensing attainment rates amongst clients, particularly students (secondary and tertiary) aged between 16-24 years. The program evaluations showed that The ACT program was acceptable and successful in supporting licensing attainment. clients who attended the Driving Change program and achieved an independent licence were more likely (OR: 2.5, CI: 1.22 – 5.24, p = 0.011) to report gaining a job/or having a change in job and clients participating in programs from regional areas were more likely (OR: 1.72, 95% CI: 1.27 – 2.33, p < 0.001) to obtain an independent licence than those from urban areas. Transitions into employment through the licensing programs seemed to result from increased intrinsic motivation characterised by improved sense of self-esteem, self-confidence and wellbeing.

The research highlights the need for better recognition of licensing as key facilitator of employment, and the importance of sustained funding for Aboriginal community run licensing programs. Further, this research has highlighted the need for stronger evaluations including collection of employment data. Increasing employment opportunities for young Aboriginal and Torres Strait Islander people is key to addressing health inequities and driver licensing can play a key role in this.

Chapter One: Background and thesis overview

1.1 Publication details

This is an unpublished Chapter in the Thesis.

1.2 Author contributions

BP conceptualised and led the writing of the chapter. KH, MK, NY, PC and RI contributed to drafts and editing of the chapter.

1.3 Introduction to Chapter One

There is a strength and resilience in Australia's First Nations peoples, evidenced by having the longest continuous living culture in the world, the value of which needs to be reflected upon. As such, Chapter One respectfully provides an overview of Aboriginal and Torres Strait Islander peoples, culture and worldviews, and a recount of significant historical events in Australia that provide situational context to current health and socioeconomic status.

Further, Chapter One presents employment and driver licensing as key social determinants of health and provides an introduction into what driver licensing support programs are, why these programs were developed for Aboriginal and Torres Strait Islander communities and why they are important. By contextualising these factors Chapter One will provide a background and overview to this body of research that aims to understand the intersection between driver licensing, employment and health for Aboriginal and Torres Strait Islander peoples.

1.4 Background

Aboriginal and Torres Strait Islander peoples collectively are Australia's First Nations peoples. Aboriginal peoples who traditionally own mainland Australia and the Torres Strait Islander peoples belonging to the group of Islands in the Torres Strait a waterway that separates Australia's Cape York Peninsula from Papua New Guinea, display a set of belief systems, values, protocols, ceremonies and practices that guide the social behaviour that can be understood as culture. The culture is holistic and the ability to maintain strong family, community, land connections and cultural observance manifested itself towards an individual's good health.

Australia's natural environment has an abundance of edible and wild plants, fruits, starchy tubers, nuts and roots[1]. Traditionally the natural environment would indicate and determine what was in season in terms of food sources. Though diets varied, traditional foods were healthy and nutritious, being high in protein and fibre, moderate in complex carbohydrates, high in micronutrients and low in sugar and fat[2]. Traditional diets were of low energy density and coupled with the energy expended through food procurement, this provided a natural constraint on total daily caloric intake. Pre-colonisation, the available data suggests that Aboriginal and Torres Strait Islander peoples had a lean body composition and they were physically fit[3]. Building on this, to illustrate the concept of a holistic culture, it is understood that dietary choices were related to land connection. Importance was placed on local land and sea animals, not only for their nutritional content but also for the customary significance attached to them based on family and social kinship (totems), and for hunting rites. Food preferences were not just a matter of procurement, but these practices were underpinned by connection to 'country' and belonging to the land which promoted wellbeing and a collective sense of identity. Having the ability to engage in traditional practices and cultural observance were protective factors that ensured good health[4].

In current times however, Aboriginal and Torres Strait Islander peoples experience some of the poorest health and socioeconomic outcomes in Australia[5], outcomes comparable to developing nations, despite living in a nation ranked amongst the largest economies of the world[6]. To understand the inequities faced by Australia's First Nations peoples there needs to be contextualisation which brings to light practices and policies

throughout Australian history that subjugated and disconnected Aboriginal and Torres Strait Islander peoples from family, culture, land, traditions and language.

1.4.1 Historical context

Globally, First Nations peoples' pre colonisation possessed a rich tapestry of culture and traditions, one that was deeply rooted with land, family groups, language, customary practises and belief systems based upon their worldviews[7, 8]. Prior to British colonisation, Aboriginal and Torres Strait Islander peoples flourished as a population, through the expert adaptation to the lands they inhabited[9]. Aboriginal peoples of mainland Australia lived a life of nomadic brilliance – unique hunting techniques, seasonal migration and their connection to 'country' enabled perfect adaption to the various landscapes of Australia[10]. With their Torres Strait Islander counter parts being expert sea-farers, both groups deeply understood the interconnected relationship between their subsistence and the survival of their natural environment[11]. This worldview contrasted quite dramatically with the capital economic development sought after by the British colony[12]. April 1770 marked the discovery of Australia by Captain James Cook and subsequently its colonisation led through Governor Arthur Phillip on 26 January 1788. To identify British initial intentions for their methods of colonisations as one of violence and segregation would be disingenuous. Governor Phillips describes his intention for a civil discourse to "gracefully assimilate" Australia's First Nations Peoples[13] that was supported through instructions from the colony

"...to "by every possible means to open an intercourse" with the First Nations inhabitants and "conciliate their affections" to "live in amity and kindness with them" and punish all who should "wantonly destroy them, or give them any unnecessary interruptions in the exercise of their several occupations"...."[13].

However, the difference between sympathetic words and government action was a convenient 1700 kilometres away. The presumptions of Governor Phillip to assimilate First Nation Australians into British culture was rejected by both parties. Increased numbers of penal colony settlers and the development of Australia's pastoral economy saw an aggressive competition for land, food and resources[14]. Violent conflict ensued between First Nation Australians and settlers, leading to the deterioration of race relations[13-15], spiralling Australia into abhorrent practises of segregation, assimilation

and violent confrontations, which decimated a once beautifully adapted population[14, 16-19]. Stoking the embers of flame from its colonial past and preventing progressive steps towards sincere reconciliation amongst Aboriginal and Torres Strait Islander peoples, is the lack of candid dialogue on historical atrocities within Australia's social and particularly educational systems. In its place, through omission, a more palatable construct of Australia's colonial history has been propagated. For stronger relationships based on trust, respect and free of prejudice, early primary education for younger Australians is needed. One that acknowledges past events; promotes and recognises Aboriginal, Torres Strait Islander and non-Indigenous history, culture and experiences as a proud part of a shared national identity.

1.4.2 A timeline of Trauma and Healing

Trauma is an emotional response to a terrible event. It can be caused by an acute single event like an accident, rape or witnessing of a distressing situation; long term repeated and prolonged events such as that experienced through domestic violence and abuse; or it can be complex trauma caused by exposure to varied and multiple traumatic events[20]. Exposure to a traumatic event causes an emotional response and is associated with acute or long term physiological and psychological effects[21].

Traumatic events and experiences cause stress and physiologically this disrupts homeostasis in body systems, impacting the sympathetic nervous system and the endocrine system[22, 23]. Studies by Kendell-Tackett (2009) have indicated that individuals who endure traumatic events have higher rates of chronic diseases including diabetes, cardiovascular diseases, cancer and gastrointestinal disorders than the general population[24]. Further, it is seen that there is a hyperactivity of the amygdala after a traumatic event[22]. The amygdala is responsible for emotional meaning and memory to external stimuli, hyperactivity is reasoned to be why a person can automatically have a biological response and re-experience the event through traumatic reminders such as a sound, face or smell[25, 26].

Psychologically, symptoms relating to traumatic events and experiences include feelings of emotional numbing, anger, aggression, helplessness, shame[27, 28] and dissociation can occur even years after the event from sensory stimuli or triggers. Certain psychotic disorders have been reported as a result of traumatic events and

experiences and substance abuse is common[29]. Of importance, studies on trauma informed care by Bath (2008) noted that children who suffered from complex trauma experienced multiple impacts on their developmental domains of emotions, cognitions and behaviour[30]. An impact that highlighted beyond others was a child's inability to regulate intensity and duration of internal states such as fear, anger and sexual impulses[31, 32].

The psychological treatment of the children and grandchildren of survivors of the Holocaust developed clinician and researchers understanding that trauma can be transmitted through generations and can therefore be experienced indirectly[33]. This collective trauma of a group people have shown to be transmitted through generations by: children experiencing feelings or actions from witnessing their parents suffering; communication styles between family members from endured traumatic experiences; and, particular patterns of parenting demonstrated towards children[22].

1.4.2.1 History of trauma

The sequence of events leading from Australia's colonisation in 1788 can be paralleled to other First Nations Peoples of the Americas and New Zealand. This is one that is commonly characterised by a subsequent sudden decline in the population through violence and the establishment of certain diseases such as small-pox and influenza[34]. The competition for resources in Australia resulted in Aboriginal and Torres Strait Islander peoples being removed from lands and forced to live on the edges of non-Indigenous settlement[35]. Often placed on 'reserves', 'missions' or 'stations' their livelihood was increasingly becoming dependent upon less nutritious rations[35]. This disconnect from traditional way of life contributed to the onset of lifestyle diseases where in 1923 the first recorded case of diabetes was identified in the population[36].

A long-lasting trauma on Aboriginal and Torres Strait Islander peoples was the removal of children from families. Victoria's *'Aborigines Protection'* legislation in 1869 was the first to give the State the rights to manage the interest of Aboriginal and Torres Strait Islander peoples including the removal of children from families to reformatory or industrial schools[37, 38]. Following this precedent, all other States and Territories enacted legislation with the same intentions. As the years progressed legislations developed to give Governments additional powers such as the *'Aborigines Protection Amending Act*

(NSW)' in 1915 giving State abilities to separate children from their families without having to establish in court 'evidence' of neglect[37, 39]. This eventually led to the Commonwealth in 1937 adopting assimilation as a national policy under 'native welfare'[37, 39]. This was one of the most devastating traumas befalling Aboriginal and Torres Strait Islander peoples. The repeal of legislation allowing for the removal of Aboriginal and Torres Strait Islander children occurred in 1969[37], just over 50 years in the past. With the average life expectancy of Aboriginal and Torres Strait Islander peoples being 71.6 years of age for males and 75.6 years for females[40], there are those that have lived through these traumatic events. The issue remains that today, Aboriginal and Torres Strait Islander peoples are being confronted by emotionally significant stimuli about historical traumas that have been and are being transmitted through subsequent generations.

1.4.2.2 A timeline towards healing

The Australian Government does not deny the history of its colonial past[41] and as a result of the long standing fight for equality by Aboriginal and Torres Strait Islander peoples, steady progress towards reconciliation is being recognised within the national agenda[42]. The Australian Referendum in 1967 spearheaded the movement towards equality for Aboriginal and Torres Strait Islander peoples. The ruling from the Mabo High court decision in 1992 was cornerstone for opposition to *'Terra Nullius'*- that Australia was 'nobody's land'*,* the public recognition of the suffering brought about from the Coronial Inquest of 'Bringing them Home' carried forward momentum for the 2008 National apology by the Rudd Government. Despite government consensus for reducing inequities, different fundamental ideologies between political parties in power and their shifting viewpoints between self-sufficiency and self-determination results in changes of policies and budget allocations that often stagnate forward momentum[43]. A closer examination into a unified intergovernmental approach will benefit in achieving outcomes and in increasing confidence amongst Aboriginal and Torres Strait Islander peoples' belief in the resolve of major political parties to reduce their plight.

A National Indigenous Reform Agreement in 2008, led by a council of all Australian Governments and coalition of peak Aboriginal and Torres Strait Islander organisations set out to close the gap in health and socioeconomic disadvantages for Aboriginal and Torres Strait Islander peoples. Seven key target were identified for childhood mortality,

early childhood education, school attendance, literacy and numeracy, year 12 attainment, employment and life expectancy[42]. The decade long targets set out from 2008 were specifically to: halve the gap in childhood mortality by 2018; have 95 per cent of Aboriginal and Torres Strait Islander four year-olds in early childhood education by 2025; halve the gap for Aboriginal and Torres Strait Islander children in reading, writing and numeracy levels within a decade (by 2018); close the gap between Indigenous and non-Indigenous school attendance within five years (by 2018); halve the gap for Aboriginal and Torres Strait Islander Australians aged 20-24 in Year 12 attainment or equivalent by 2020; halve the gap in employment outcomes between Indigenous and non-Indigenous Australians within a decade (by 2018); and to close the gap in life expectancy by 2031[44]. Reporting yearly, the recent 2020 release indicated that only two targets – early childhood education and year 12 attainment – are on track to be met[44].

Unfortunately, what we see in terms of health outcomes for Aboriginal and Torres Strait Islander Australians is that they continue to experience poorer general health, higher rates of chronic health conditions (diabetes, asthma and ear disease), higher exposure to health risk factors (tobacco, alcohol and over-crowded housing)[42, 45] and on average have a burden of disease 2.3 times higher than that of non-Indigenous peoples[45]. The combined effects of these contribute to greater years of potential life-lost for males and females, respectively 10.6 and 9.5 years less, compared to their non-Indigenous counterparts[46]. The key target set out within the National Indigenous Reform Agreement are complex and are associated with interrelated factors such as social determinants of health.

1.4.3 Social and Cultural Determinants of Health

The health of individuals can be influenced by multiple factors such as who they are (age, sex and genetic factors), their lifestyle behaviours (physical activity, health risk factors and diet) and by social determinants. Social determinants of health can be thought of broadly as the set of circumstances that people are born, grow, live, work and age[47]. This includes social and community networks; socioeconomic status; cultural and environment conditions lived in; and health systems available[48, 49]. As a result of inequities in social determinants of health, studies have highlighted that differences in

health outcomes can occur in populations between countries and also between individuals and communities within the same country[50]. Often the overarching structure of governance, policy, values (social, political and public) that influence social determinants are premised upon dominant Western ideologies. For Aboriginal and Torres Strait Islander peoples, the cultural determinants of health include factors such as cultural identity, family, participation in cultural activities and connection to 'country'[51].

It is estimated that social determinants are responsible for over thirty per cent of the health gap between Aboriginal and Torres Strait Islander peoples and non-Indigenous Australians[51]. The main factors contributing to this gap are differences in household income which alone contributes to almost 14% of the overall health gap. Further, differences in employment and time spent working contribute to 12% of the difference[51, 52]. Addressing social determinants of health inequities in a culturally appropriate way for Aboriginal and Torres Strait Islander Australians will contribute towards improving health outcomes.

1.4.3.1 Employment

Employment establishes much needed wealth creation, it increases household income improving standards of living and housing conditions, enables social inclusion that promotes positive mental health through increased self-esteem and self-worth[53, 54]. It is an important foundation for self-determination and self-sufficiency that provides the ability to take back the personal control that was forcibly removed through the impact of colonisation[55]. Unfortunately, the 2018 decade long target to halve the gap in employment outcomes was unmet and still remains unchanged[44, 56].

The socioeconomic disparity experienced by Aboriginal and Torres Strait Islander peoples is an issue of importance and the determinants, trends and barriers to employment are well studied[57]. The compounding influence that low levels of education and health[53], disability[46], incarceration[58], fertility rates[59], geographical location, culture and family responsibilities[59, 60] are factors that that are known to affect employment rates. Further yet, there is a large proportion of young peoples aged 16-24 years within this population who face high rates of unemployment which is a contributing factor to the overall low employment rate. On average, Aboriginal and Torres Strait Islander

peoples have lower levels of education and training (compared to non-Indigenous Australians) and as a result are more inclined to be engaged in casual, part-time or unskilled jobs. Facilitators to improving employment outcomes for those categorised within this labour market segment are vocational training, certification, permits and licensing – such as white cards needed for the construction industry and driver licensing. Amongst the many licenses, certificate and permits for work, the impact that driver licensing has on employment outcomes has received limited research attention.

1.4.3.2 Driver Licensing

There is a growing body of work that has contributed to understanding the importance that driver licensing plays as a social determinant of health and wellbeing, amidst the research evidence we know licensing increases options for employment, improves employability and the capacity to travel to work[61, 62]. Further, the barriers to licensing for Aboriginal and Torres Strait Islander peoples are well documented and have informed the development of culturally relevant driver licensing programs for Aboriginal and Torres Strait Islander Australians[63-65]. These programs have seen the increase and improvement in licensing rates for Aboriginal and Torres Strait Islander program clients[66]. However, limited information is available that has explored the impact of driver licencing programs on employment rates. The potential to build upon the evidence base of licencing programs by using the data to understand the impact that driver licensing has on employment outcomes for Aboriginal and Torres Strait Islander peoples is important for the development of novel programs that contribute towards the improvement of employment outcomes for Aboriginal and Torres Strait Islander Australians.

1.4.4 Aboriginal and Torres Strait Islander health and research paradigm

Models of health are utilised to understand health, health behaviours and used to guide methods of care and interventions. Often health services remain biomedical in focus, where fundamentally, health is viewed as the absence of disease[67]. There are alternatives to this, which take a holistic approach where health is viewed as a state of physical, mental and social wellbeing absent of any disease of infirmity[68]. Aboriginal and Torres Strait Islander Australian have a holistic model of health viewing good

health as '...*more than just the absence of disease or illness; it is a holistic concept that includes physical, social, emotional, cultural, spiritual and ecological wellbeing, for the induvial and the community...*'[69]. Consistent amongst First Nation Peoples is the central role that cultural components play as a health protective factor, appreciation of culture along with historical, political and social sets of circumstances of Aboriginal and Torres Strait Islander peoples that provide a foundation for Indigenous health and research paradigms.

Aboriginal and Torres Strait Islander Australians like other First Nations peoples historically have had little to no influence into the manner of which research was developed and implemented within their communities. Western research paradigms and methodologies have been used, which at a fundamental level are at odds to those relevant for Aboriginal and Torres Strait Islander peoples. The late 1990s saw a shift in social positioning where First Nation intellects challenged Western hegemony towards privileging Indigenous epistemology ('ways of knowing'), ontology ('ways of being') and axiology ('ways of doing') in research principles[70-72]. At its essence, epistemology is the learning process which is fluid and based on the integration of social, political, historical, cultural and spatial dimensions[70, 72]. Ontology is the processes and experiences that an individual recognises and is constructed based on an existing network of entities[70, 72]. Axiology is the synthesis and translation of epistemology and ontology that guides behaviours, conduct, practises that places value on a strength-bases and resilience[70, 72].

To promote good health through effective health research, Aboriginal and Torres Strait Islander research paradigms need to be at the forefront. This is a process that starts by reframing the historical social positioning held towards Aboriginal and Torres Strait Islander peoples to reject deficit-based policies and culturally unsafe systems. Diagrammatically presented by O'Brien (2019) at its core Aboriginal and Torres Islander paradigms incorporate ways of 'knowing', 'being' and 'doing', while implementing appropriate decolonised methodologies[73].
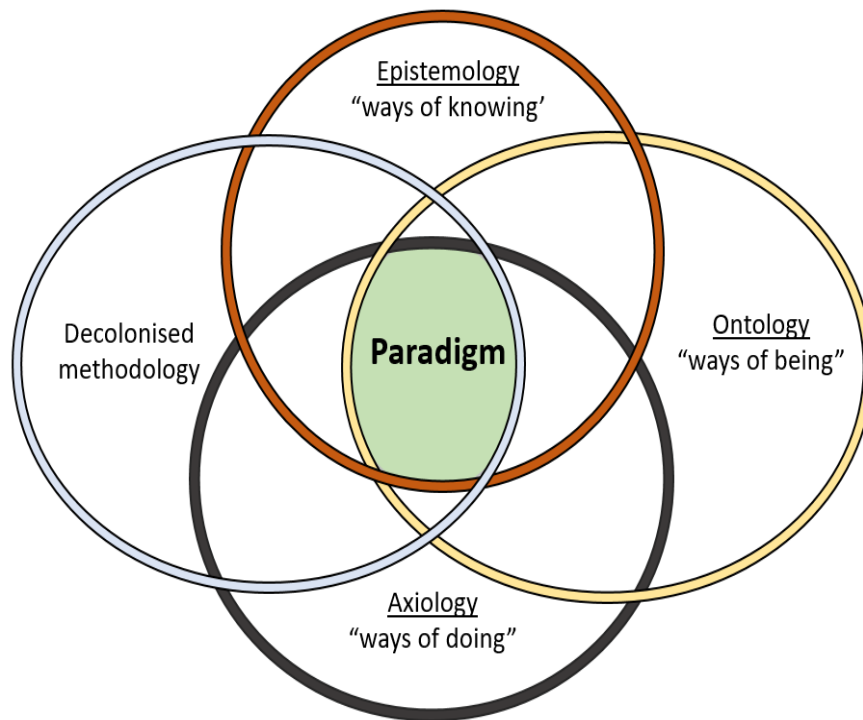
Fig 1. Aboriginal and Torres Strait Islander research paradigm[73].

1.4.5 Conclusion

The impact of colonisation permeating throughout the years has contributed towards a set of circumstances where Aboriginal and Torres Strait Islander Australians experience lower education levels, lower employment rates, predisposed to certain health conditions, die younger and generally have worse health than other Australians[44]. This is not a set of circumstances unique to Aboriginal and Torres Strait Islander peoples, but a reality of First Nations Peoples globally who have suffered the oppressions of colonisation. It has been said that '*the health of populations has a history, and history itself is a determinant of health, both good and bad*'[74] and so contextualising this is important to understanding the health and socioeconomic position of Aboriginal and Torres Strait Islander Australians.

1.5 Thesis overview

The process to obtain a driver licence prepares an individual with the necessary skills to become safer drivers. Driving on public roads without a licence can place an individual at greater risk of involvement in transport related crashes that cause injury or death. Although data on Indigeneity is not recorded for driver licensing, estimates indicate the rate of driver licence holders amongst the eligible Aboriginal and Torres Strait Islander population 16 years and above is considerably lower than the 70% observed amongst eligible non-Indigenous Australian[75, 76]. As a result of inequities in licensing rates and the increased risk of transport related injury and death due to unlicenced driving, previous community consultation around the impact of transport disadvantage and road injury prevention was performed in regional and remote Aboriginal communities of New South Wales (NSW).

What was expressed in the research process was that having a driver licence was an issue of importance in the community and that individuals often faced multiple barriers (such as geographic location, low socioeconomic status, lower literacy levels, contact with the justice system, and access to a licenced driver or vehicle[63, 64, 77]) that prevented them from obtaining a driver licence[63]. This evidence contributed to the development of driver licensing support programs – which were community-based and designed to provide support in a culturally relevant way for program clients to navigate through State and Territory licensing systems and obtain a driver licence. This is important because having a driver licence and accessibility to transport options positively impacts on health and wellbeing by improving access to essential services of education, healthcare, and employment; and promotes social inclusion by providing the opportunity for engagement in family, cultural and community commitments.

The implementation of driver licensing support program has seen many Aboriginal and Torres Strait Islander clients obtain a driver licence. In regional and remote areas where transportation options are limited, it is intuitively understood that being able to drive is essential for work and in securing job opportunities. Despite this, there has been no research evaluating the impact that obtaining a driver licence has on employment outcomes, which highlights a knowledge gap that needs to be addressed. By providing a blueprint so that Aboriginal and Torres Strait Islander driver licensing support programs can build evaluation into their programs, we can examine the impact that obtaining a

licence has on employment outcomes. Knowing that employment is a strong social determinant of health and wellbeing, improving employment rates will work towards increasing health and socioeconomic prosperity of Aboriginal and Torres Strait Islander peoples and communities.

1.5.1 Thesis aims

This work will utilise the foundation of driver licensing support programs to further examine the impact that driver licensing support programs have on client employment outcomes. Through this we will be better able to understand the intersection between driver licensing, employment, and health for Aboriginal and Torres Strait Islander Australians.

The specific aims of this research are:

1. To evaluate the effectiveness and impact of driver licensing support programs on licensing and employment rates for Aboriginal and Torres Strait Islander peoples **(Chapter Two)**.
2. To describe the methodology used to examine the intersection between driver licensing, employment, and health for Aboriginal and Torres Strait Islander Australians **(Chapter Three)**.
3. To conduct a process evaluation of a culturally relevant driver licensing pilot support program – The Australian Capital Territory (ACT) Aboriginal and Torres Strait Islander driver licensing pilot program – and determine whether the program was delivered as intended according to the key service areas and in a culturally relevant format **(Chapter Four).**
4. To examine the impact that driver licensing support programs have on client employment outcomes and assess the influence of geographical area of program delivery on driver licence attainment **(Chapter Five)**.
5. To use the framework of the self-determination theory to examine the factors that promote transitions in employment for clients of the ACT Aboriginal and Torres Strait Islander driver licensing pilot program **(Chapter Six)**.
6. To present key findings of each Chapters in the thesis and to present recommendations to inform future driver licensing programs and guide policy and practice **(Chapter Seven)**.

1.5.2 Thesis outline

The following is an outline and diagrammatic summary of each chapter in the thesis (Fig. 2).

Chapter One of this theses provides historical and social context to understand why Aboriginal and Torres Strait Islander peoples experience health and socioeconomic disadvantages. This chapter also explores social determinants that impact on health, identifies the importance of employment and driver licensing, and explores the meaning of health and research from the perspective of Aboriginal and Torres Strait Islander peoples. **Chapter Two** is an extensive review detailing the current scope of driver licensing programs that support Aboriginal and Torres Strait Islander Australians to obtain a driver licence. Additionally, it reviews the literature to evaluate the impact that driver licensing support programs have on licensing and employment rates. **Chapter Three** describes the methodological approach applied to examine the intersection between driver licensing, employment, and health for Aboriginal and Torres Strait Islander Australians. **Chapter Four** is a detailed process evaluation of an Aboriginal and Torres Strait Islander driving licensing program piloted for the first time in the Australian Capital Territory (ACT). This chapter also presents a framework suitable for the evaluation of Aboriginal and Torres Strait Islander community-based programs. **Chapter Five** examines the direct impact that obtaining a driver licence has on employment outcomes, using data from clients who participated in an NSW based driver licensing support program – Driving Change. **Chapter Six** applies for the first time the Self-Determination Theory of intrinsic motivation to examine the process of transitioning into employment for clients of the ACT Aboriginal and Torres Strait Islander driver licensing pilot program. **Chapter Seven** will present the key findings in each of the preceding chapters. Furthermore, this chapter will succinctly discuss the salient issues around driver licensing program and employment, providing evidence-based recommendations to inform future policy and practice.
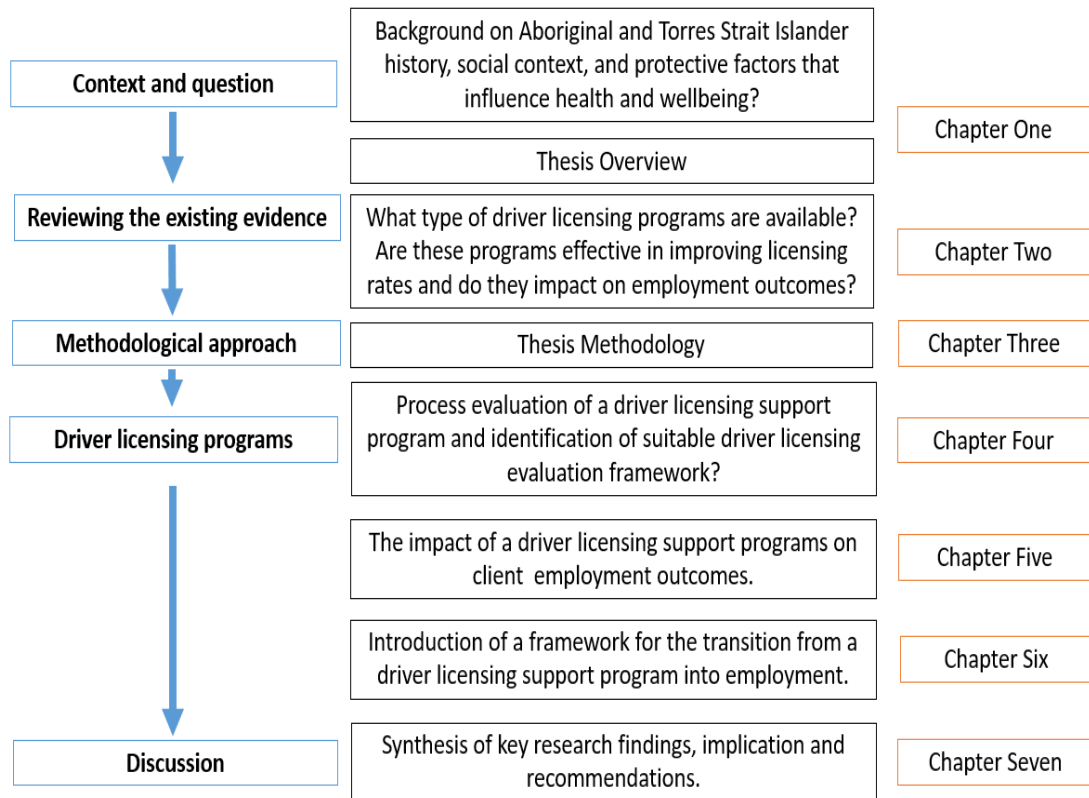
Fig. 2. Diagrammatic summary of research aims and thesis chapters.

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1.7 Conclusion to Chapter One

This chapter outlines Aboriginal and Torres Strait Islander history pre-colonisation was rooted in traditions, customs, culture, lore and connection to 'country', and postulates developing strength-based strategies that are holistic and framed on Aboriginal and Torres Strait Islander paradigms are key factors towards successfully improving health and socioeconomic status.

Chapter Two: The effectiveness and impact of driver licensing programs on licensing and employment rates for Aboriginal and Torres Strait Islander peoples of Australia: A systematic review

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2.1 Publication details

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2.2 Author contributions

BP designed the methods, conducted the literature search, analysis and was a major contributor to the manuscript. AD contributed to quality appraisal and publication screening. KH, NY, ES and RI contributed to the design of the methods, drafting and editing of the manuscript. All authors have read and approved the final manuscript.

2.3 Introduction to Chapter Two

Having a driver licence is important for accessing essential services such as employment, education and healthcare. Particularly in areas where there is limited access to public transportation options, such as seen in regional and remote Australia. Aboriginal and Torres Strait Islander peoples are underrepresented as licence holders and often face multiple barriers to becoming a licenced driver. As a result, driver licensing programs that support Aboriginal and Torres Strait Islander Australians to obtain a licence are being implemented throughout States and Territories. Despite the increase in numbers of licensing programs

being delivered, very few of these programs report licensing attainment outcomes or have been evaluated.

Chapter Two provides a scoping review to identify and describe all Aboriginal and Torres Strait Islander driver licensing support programs being delivered throughout Australian States and Territories. It will also outline a systematic review which will evaluate the effectiveness and impact of driver licensing programs on licensing attainment and employment rates for Aboriginal and Torres Strait Islander clients.

2.4 Abstract

Introduction: Access to a valid driver licence for most Australians can be essential for employment. Aboriginal and Torres Strait Islander peoples however are under-represented as driver licence holders. As such driver licensing programs have been established across Australian States and Territories to support them to obtain a driver licence. The aim of this review is to identify these driver licensing programs and examine the effectiveness and impact on licensing and employment rates for Aboriginal and Torres Strait Islander peoples.

Methods: Two independent searches were performed. The first, a scoping review of the literature to identify and describe driver licensing programs throughout Australia. The second, a systematic review of electronic databases and relevant grey literature to examine the effectiveness and impact of driver licensing programs on licensing and employment rates. Two independent authors assessed publications for eligibility.

Results: The scoping review identified 42 driver licensing programs across all Australian States and Territories between the years 2000-2019. Considerable variations exist between program services and characteristics. The systematic review included eight publications that evaluated four driver licensing programs. Findings suggested end-to-end culturally appropriate driver licensing programs are effective in improving licensing rates. No program evaluated the impact of licence attainment on employment rates although two publication commented on a correlation.

Conclusion: Driver licensing programs are effective in increasing licensing rates amongst Aboriginal and Torres Strait Islander program clients, but despite the significant number of licensing programs operating, few are reporting program outcomes and even fewer have been evaluated. There is considerable variation between program designs, support provision, service delivery and limited consistency amongst evaluation frameworks used. A standardised approach to evaluating driver licensing programs should be adopted that incorporates a nationally agreed framework that include Aboriginal and Torres Strait Islander culture and employment outcomes.

Keywords: Aboriginal; Torres Strait Islander; driver licence; evaluation; employment; health

2.5 Introduction

Aboriginal and Torres Strait Islander peoples compared to their non-Indigenous counterparts experience lower rates of employment (46.6 percent vs 71.8 percent)[1], higher rates of

transport related crashes[2] and lower driver licensing rates within Australia[3]. Estimations of licensing rates are limited as aside from New South Wales (NSW), there is no mechanism by which to determine Aboriginality or indeed ethnicity from current driver licensing data. What is well documented is that Aboriginal and Torres Strait Islander peoples have higher rates of incarceration due to unlicensed driving[4] and there is an association between unlicensed driving and crash rates resulting in transport related injuries and death[5, 6]. Such inequities have seen the development of targeted road safety programs to prevent transport related injury and death[7]; driver education initiatives to reduce unlicensed driving, drink driving and recidivism[6]; and driver licensing programs to support Aboriginal and Torres Strait Islander peoples to obtain a driver licence[8-10].

Obtaining a driver licence is often viewed as a 'rite of passage' for Australians, particularly in regional and remote areas. However, licensing is differentially experienced, with Aboriginal and Torres Strait Islander peoples having low rates of licensing, potentially amplified by the Graduated Licensing Scheme (GLS), now implemented throughout Australian States and Territories[11]. While GLS systems are effective in reducing young driver crash and injury[12], the requisites to obtaining a drivers licence combined with disadvantages already experienced through geographical location, low socioeconomic status, lower literacy levels, fines and contact with the justice system all exist as barriers towards obtaining a licence[13-15]. Identification of these barriers has seen the establishment of driver licensing programs that aims to reduce these barriers by providing support for Aboriginal and Torres Strait Islander peoples to navigate through the GLS to obtain a Learners, Provisional or Open drivers licence[13, 16]. The benefits of a having a valid driver licence are multifaceted and they are considered to be a social determinant of health[17]. Licensing improves mobility and independence; opportunities to participate in community, family and cultural events; and it increases access to health care services and employment options[16, 17].

Employment is a well understood key social determinant of health[18, 19]. Initiatives to increase employment rates for Aboriginal and Torres Strait Islander peoples have largely focussed on improving levels of education, training and the creation of targeted jobs roles[1, 18]. Whilst these target areas address fundamental determinants that can improve employment outcomes, recent reports show the trajectories to close the unemployment gap for Aboriginal and Torres Strait Islander peoples remain unmet[1], indicating the need and opportunity for complementary initiatives. Community based studies on Aboriginal road safety and driver licensing have demonstrated that Aboriginal and Torres Strait Islander peoples who had a

driver licence were up to three times more likely to have a job[20]. Beyond this reported link and despite the increasing number of driver licensing programs operational across Australian States and Territories, limited research has been performed to examine the impact that having or obtaining a driver licence has on improving employment rates for Aboriginal and Torres Strait Islander peoples.

This systematic review will evaluate the effectiveness and impact of driver licensing programs on licensing and employment rates for Aboriginal and Torres Strait Islander peoples. This will be achieved through a scoping review to identify and describe Aboriginal and Torres Strait Islander driver licensing programs and through conducting a systematic review to examine driver licensing program evaluations.

2.6 Material and methods

Two independent search strategies were performed.

The first a scoping review of the literature to achieve an in-depth and broad search to identify and describe all Aboriginal and Torres Strait Islander driver licensing programs delivered within Australia (Search 1). A consistent approach was used without quality appraisal adapted from the Preferred Reporting Items for Systematic Reviews and Meta-Analysis extension for scoping reviews (PRISMA-ScR)[21, 22].

The second, a systematic review to evaluate the effectiveness and impact Aboriginal and Torres Strait Islander driver licensing programs have on licensing and employment rates (Search 2). To extensively search driver licensing programs with driver licensing and employment, Search 2 retrieved results was combined with retrieved results from Search 1, and the standardised method of Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) was used[23].

2.6.1 Search strategy

Electronic databases of Medline, ProQuest, Business Collection, Family ATSIS, Indigenous Collection, EconLit, Business Source Complete and PsycArticles was performed. Search terms included combinations and associated synonyms of the key words: ***Search 1:*** *Aborigin*, Torres Strait Island*, Graduated Driver Licen?e*, Driver Licen?e, Licen*, Unlicen*.* ***Search 2:*** *Aborigin*, Torres Strait Island*, Employment, Unemployment, Graduated Driver Licen?e*, Driver Licen?e, Licen*, Unlicen** (Supplementary Table 1).

Grey literature was purposively searched and included Indigenous HealthInfoNet and google scholar. Relevant government websites of the Department of Prime Ministers Cabinet, Department of Jobs and Small Businesses, Australasian College of Road Safety, AustRoads, Indigenous Justice (clearing house) and National Centre for Vocational Education Research were searched. Reference lists of included publications were searched for relevance and email alerts of respective search criterion was set up in each database for monthly updates. All searches were conducted by first Author BP in August 2019 and repeated in March 2020.

2.6.2 Inclusion criteria

2.6.2.1 Search 1

An open inclusion criteria was used, consistent with the production of a scoping review[24, 25] to identify and describe the broad scope of Aboriginal and Torres Strait Islander driver licensing programs within Australia. There was no limitation imposed on study type or design. For relevance of GLS regulations only licensing programs established and delivered between the years 2000-2019 were included, based within an Australian context and targeted to assist Aboriginal and Torres Strait Islander peoples. Any programs not focussed towards Aboriginal and Torres Strait Islander peoples as the primary program clients were excluded.

2.6.2.2 Search 2

We included publication from peer-reviewed primary and secondary research literature with no limitation imposed on study type or design. For relevance of GLS regulations papers published between the years 2000-2019 were included, based within an Australian context and for Aboriginal and Torres Strait Islander peoples. Only publications evaluating Aboriginal and Torres Strait Islander specific driver licensing programs were included in the final review.

2.6.3 Publication selection

For search 1 (scoping review), publications and grey literature were screened by BP and AD for inclusion. Publications and grey literature assessed as eligible were independently reviewed against inclusion criteria by BP and by second assessor AD for validation of inclusion. The selection process is outlined through an adaptation of the PRISMA diagram (Fig. 1)[23].

Search 1 and search 2 were performed independently of the other, combined and duplicates removed.

For search 2 (systematic review), titles and abstracts of retrieved publication were screened by BP and AD for inclusion. Publications assessed as eligible were independently reviewed against inclusion criteria by BP and by second assessor AD for validation of inclusion. Any disputes regarding eligibility was deferred to a third assessor KH, discussed and resolved in good faith. The publication selection process is outlined through the PRISMA diagram (Fig. 2)[23].

2.6.4 Quality appraisal and analysis

The Mixed Method Appraisal Tool (MMAT) - 2018 version was used for quality appraisal and categorisation of included publications only within search 2[26]. This appraisal tool was chosen as it allows for concomitant appraisal of mixed study designs that focuses on a number of core criteria, enabling a more efficient quality appraisal[27]. In addition to the MMAT, an adapted version of the Cultural Intervention Systematic Review Pro-forma was used to qualify cultural appropriateness of included publications[28]. Relevant data from included publications was extracted by BP and summarised. Publications that did not the fit MMAT criteria were summarised and reasons for omission are outlined in Supplementary Table 2. The data of included publication was analysed through a de-colonised lens and reported according to a narrative synthesis which is succinct with mixed method sources[22].
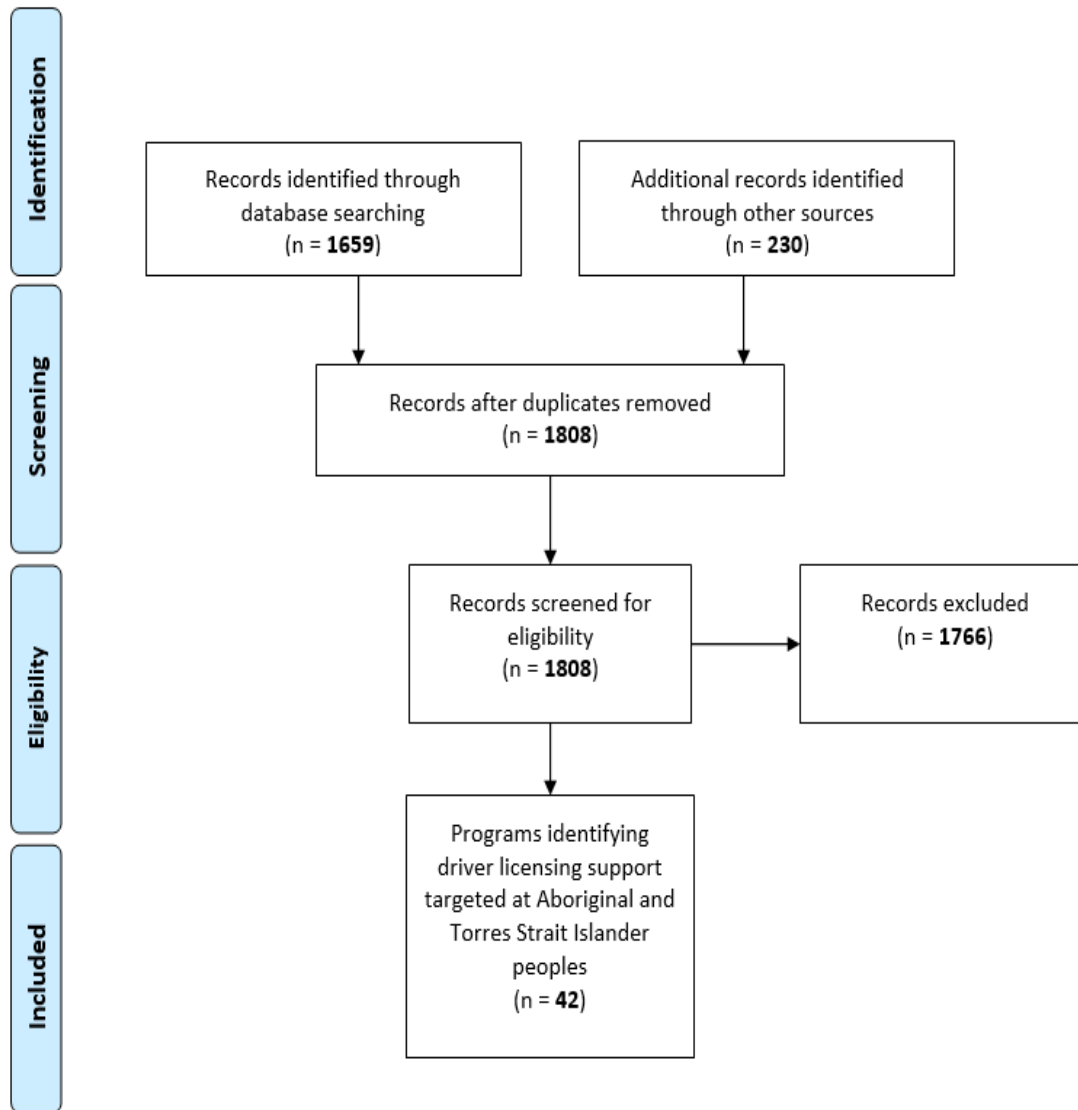
Fig. 1. Search and program selection (scoping review).
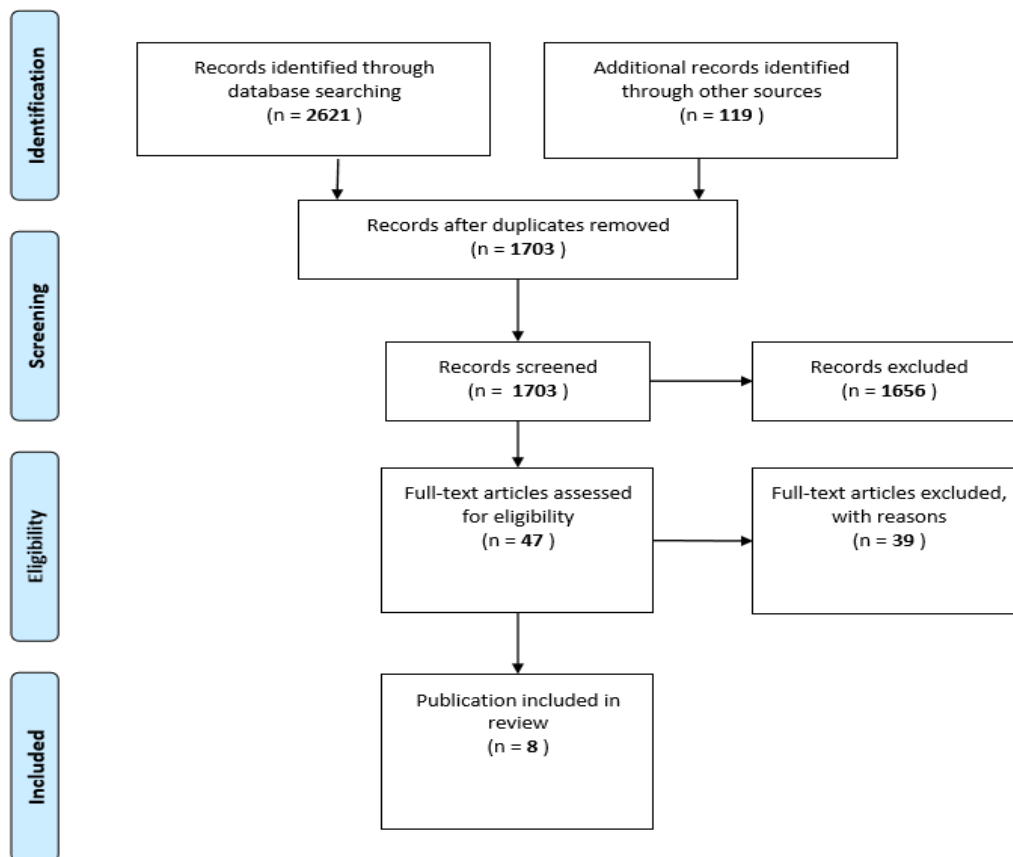
Fig. 2. Search and publication selection (systematic review).

2.7 Results

2.7.1 Scoping review of Aboriginal and Torres Strait Islander driver licensing programs

A total of 42 driver licensing programs focussing on Aboriginal and Torres Strait Islander peoples were identified (Fig. 1 outlines the adaptation of the PRISMA diagram for Search 1). A table was used to guide the descriptive analysis of the programs; data is presented in Table 1. Of the program outcomes reported in Tables 1, 8 programs (19%) reported licensing attainment outcomes and 3 programs (7%) reported employment outcomes. Furthermore, from the total, 30 programs (71%) listed were active and available to Aboriginal and Torres Strait Islander clientele with 12 programs (29%) being inactive and no longer in operation.

Table 1 Descriptive table (Aboriginal and Torres Strait Islander driver licensing programs)

Program	Summary	Program outcomes		Source and link	Status
		Licensing	Employment		
1800Drive4Life	A paid comprehensive professional driver training service that has strong links with Aboriginal peoples and community. The program is provided through Joblink Plus – an employment and training centre.	No	No	Department of Prime Minister and Cabinet • https://www.pmc.gov.au/indigenous-affairs/employment/vocational-training-and-employment-centres-vtecs • http://www.joblinkplus.com.au/drivertraining	Active (NSW)
Aboriginal Driver Education Program	An integrated approach to driver licensing for Indigenous communities within Victoria. The program is provided through Mission Australia and leverages off the 'Ignition learners Permit Program'.	No	No	Freethy, C., Journal of the Australasian College of Road Safety (2012). • http://acrs.org.au/wp-content/uploads/ACRSjournalVol23No4Nov12WEB.pdf	Active (VIC)
Aboriginal and Torres Strait Islander driver licensing pilot project	A comprehensive pilot program aimed at increasing licensing rates through supporting Aboriginal and Torres Strait Islander Peoples of the ACT through all aspects of the licensing system. Delivered through the Aboriginal Legal Service NSW/ACT.	No	No	The George Institute for Global Health; University of New South Wales; Department of Justice ACT; and Aboriginal Legal Services NSW/ACT.	Active (ACT)
Aboriginal Driver Training and Education Project	Offers a range of driver training, education and licensing services to Aboriginal peoples in the criminal justice system to obtain, retain and regain their licence. Offered in 8 location provided by 5 services, 4 of which being Aboriginal Controlled Organisations.	No	No	Department of Justice, Government of Western Australia. • https://department.justice.wa.gov.au/A/aboriginal_driver_training_education_project.aspx?uid=4280-3753-432-5992	Active (WA)

Program	Summary	Program outcomes		Source and link	Status
		Licensing	Employment		
Armadale Aboriginal Driver Training	Offering Indigenous youth 16 years and over access to the learner's permit test for free. The program is Aboriginal specific and provided through a local community controlled centre.	Yes	No	Australian Indigenous Health*Info*Net • https://healthinfonet.ecu.edu.au/key-resources/programs-and-projects/1393/ Willliamson, G (2011): Supporting Aboriginal people to obtain and retain driver licences: an informed review of the literature and relevant initiatives. • https://www.sahealth.sa.gov.au/wps/wcm/connect/cb4472004326d857a5e1ef0aafe4bbfc/Supporting+Aboriginal+People+to+Obtain+and+Retain+Driver+Licences+-+a+Literature+Review-PH%26CS-SRS-20140305.pdf?MOD=AJPERES	Inactive (WA)
Artie Academy driver licensing program	Assist young Indigenous teenagers with access to five free driving lessons, a pre-test lesson, car hire for the test, workshops, free licence test and application. The program is Aboriginal centric, provided through a collaboration between RACQ and the Artie Academy.	No	No	Royal Automobile Club of Queensland and Artie Academy websites • https://www.racq.com.au/TheRoadAhead/Articles/Kicking-goals-on-and-off-the-field • https://www.artie.net.au/	Active (QLD)
Bungala Driving School	Provides learner driver's access to fully licensed drivers to complete supervised driving hours and payment of fines for Aboriginal people in the Anangu Pitjantjatjara Yankunytjatjara (APY) Lands. Has strong links with Aboriginal peoples and community through the provider Bungala Aboriginal Cooperation.	No	No	Willliamson, G (2011): Supporting Aboriginal people to obtain and retain driver licences: an informed review of the literature and relevant initiatives. • https://www.sahealth.sa.gov.au/wps/wcm/connect/cb4472004326d857a5e1ef0aafe4bbfc/Supporting+Aboriginal+People+to+Obtain+and+Retain+Driver+Licences+-+a+Literature+Review-PH%26CS-SRS-20140305.pdf?MOD=AJPERES	Inactive (SA)

Program	Summary	Program outcomes		Source and link	Status
		Licensing	Employment		
Centacare driver licensing program	Centacare driver licensing program Is an 8-week educational scheme for Aboriginal people to gain their learner's licence. Provided through Catholic Charity, Centacare gives educational practices question and test run of DKT.	No	No	Williamson, G (2011): Supporting Aboriginal people to obtain and retain driver licences: an informed review of the literature and relevant initiatives. • https://www.sahealth.sa.gov.au/wps/wcm/connect/cb4472004326d857a5e1ef0aafe4bbfc/Supporting+Aboriginal+People+to+Obtain+and+Retain+Driver+Licences+-+a+Literature+Review-PH%26CS-SRS-20140305.pdf?MOD=AJPERES	Inactive (NSW)
Driving Change	A comprehensive community driven Aboriginal driver licensing program aimed towards navigating young Aboriginal and Torres Strait Islander peoples through the licensing system and attain their driver licence.	Yes	No	Cullen, P et al (2018): Communities driving change: evaluation of an Aboriginal driver licensing programme in Australia. • https://dx.doi.org/10.1093/heapro/dax036 • https://www.drivingchange.com.au/	Active (NSW)
Driving Deadly & Safe	Support Aboriginal young peoples with free professional diving lessons. Delivered through the Healesville Indigenous Community Services Association.	No	No	• https://hicsa.org.au/driving-deadly-safe/	Inactive (VIC)
DriveSAFE Northern Territory Remote driver licensing program	Program addressing the barriers to licensing faced by Aboriginal peoples in Northern Territory communities and implemented to increase driver licensing in these underservices remote communities.	Yes	Yes	Northern Territory Government Information and Services • https://doi.org/10.1016/j.jth.2016.07.004	Active (NT)

Program	Summary	Program outcomes		Source and link	Status
		Licensing	Employment		
Driver Licensing Access Program	Supports Aboriginal and other disadvantaged peoples to enter or re-enter the NSW drive licensing system. Through the provision of end-to-end comprehensive licensing support. Initiated by TfNSW the program is implemented by 11 services across 42 towns.	No	No	Transport for New South Wales, Roads and Maritime Services. • https://www.rms.nsw.gov.au/roads/licence/driver/driver-licence-access-program/map/index.html	Active (NSW)
Driving School (Yourtown)	Providing support and accessible learner driving supervision to young peoples to get a driver licence. The program is not Aboriginal centric but has strong links with Aboriginal peoples and community.	No	No	Department of Prime Minister and Cabinet • https://www.pmc.gov.au/indigenous-affairs/employment/vocational-training-and-employment-centres-vtecs • https://www.yourtown.com.au/our-services/driving-school	Active (SA)
Enhanced Driver Training and Education Program	Addresses difficulties in obtaining a driver licensing people in regional and remote communities. Program assists with learner's permits, driving lessons and driving assessment. Forms part of the Department of the Attorney General's Aboriginal Justice Program.	No	No	Australian Indigenous HealthInfoNet • https://healthinfonet.ecu.edu.au/key-resources/programs-and-projects/907/?title=Gippsland%20East%20Aboriginal%20driver%20education%20project%20%28GEADEP%29	Active (WA)
Gippsland East Aboriginal driver education project	Supports Indigenous community to obtain learners permits, probationary licences, employment, education and training and personal identification documents. All forming a part of the Let's GET connected transport project.	No	No	Australian Indigenous HealthInfoNet • https://healthinfonet.ecu.edu.au/key-resources/programs-and-projects/907/?title=Gippsland%20East%20Aboriginal%20driver%20education%20project%20%28GEADEP%29	Active (VIC)

Program	Summary	Program outcomes		Source and link	Status
		Licensing	Employment		
Indigenous Driver Licensing Program, QLD.	The program provides a roads safety and education program and a dedicated mobile driver licensing unit based in Cairns that takes Queensland Transport's license testing services out in communities. Its aim is to reduce unlicensed driving and its associated impacts on Aboriginal and Torres Strait Islander peoples.	No	No	Queensland Government, Department of Transport and Main Roads. • https://www.tmr.qld.gov.au/Community-and-environment/Indigenous-programs/Indigenous-driver-licensing-program.aspx	Active (QLD)
Indigenous Learners Driver Program	Two year pilot to support Aboriginal and Torres Strait Islander peoples to get their licence by providing training and volunteer driving mentors to accrue the hours, experience and knowledge needed. Provided through Redcross Wagga Wagga and Nowra – funded through NRMA.	No	No	National Roads and Motorists Association • https://www.mynrma.com.au/community/initiatives/programs/indigenous-learner-driver-program	Active (NSW)
Kaditj Kaditj	Goombarrup Aboriginal Corporation and NEEDAC do not offer support but have licensing alternatives/initiatives to support Aboriginal peoples getting a licensing in their local area.	No	No	Goomburrup Aboriginal Corporation • https://www.goomburrup.org/kaditj	Active (WA)
Keys2Drive Program	Providing learner drivers and their parents/supervisors a free driving lesson with accredited professional driving instructor. Has strong links with Aboriginal peoples and communities when provided through Birrang Enterprise Development Company Ltd – an Aboriginal specific employment and training centre.	No	No	Department of Prime Minister and Cabinet • https://www.pmc.gov.au/indigenous-affairs/employment/vocational-training-and-employment-centres-vtecs • https://www.birrang.com.au/road-safety-driver-education/#k2d	Active (NSW)

Program	Summary	Program Outcomes		Source and link	Status
		Licensing	Employment		
Keys for Life Program	An evidence-based pre-driver program that educates young people about safer road use and provides licensing and graduation benefits. Has strong links with Aboriginal peoples and community through the provider Bloodwood Tree Association – an Aboriginal specific employment and training centre.	No	No	Barter (2015): Indigenous Driving in the Pilbara Region: Chapter 5 Proof of Birth • http://www.futureleaders.com.au/book_chapters/pdf/Proof-of-Birth/Proof-of-Birth-Chapter5.pdf	Active (WA)
Kura Yerlo driver licensing program	Learner's education support program providing instruction for Aboriginal people to prepare them to complete the Learner Driver Permit test. Has strong links with Aboriginal peoples and communities – Implemented through Kura Yerlo, a not for profit Aboriginal community controlled organisation.	No	No	Helps, Y., et al. (2010): Aboriginal people travelling well: community report. • https://www.lowitja.org.au/aboriginal-people-travelling-well	Inactive (SA)
L2P (Wellington and East Gippsland Shire)	A community-based volunteer mentor program for young peoples aimed to improve road safety and increase licensing rates. An Indigenous communities focused model of the L2P provided through Mission Australia within Wellington and East Gippsland shire.	No	No	Freethy, C (2012): L2P-learners driver mentor program: Extending driver licensing reach in disadvantaged communities. • http://acrs.org.au/wp-content/uploads/ACRSjournalVol23No4Nov12WEB.pdf	Active (VIC)
Learners Driver Program	Program designed to get you a licence. Assisting with licensing fees, learner Driver knowledge test and supervised driving hours. Has strong links with Aboriginal peoples and communities when provided through Birrang Enterprise Development Company Ltd – an Aboriginal specific employment and training centre.	No	No	Department of Prime Minster and Cabinet • https://www.pmc.gov.au/indigenous-affairs/employment/vocational-training-and-employment-centres-vtecs • https://www.birrang.com.au/learner-driver-program/	Active (NSW)

Program	Summary	Program outcomes		Source and link	Status
		Licensing	Employment		
Learners Licence Assistants Program	Program aims to assist Tasmanian community members of low literacy levels or learning difficulties to obtain a learners licence. Not specifically developed for the Aboriginal population, it has been used at Tasmanian Aboriginal Centres.	No	No	Australian Indigenous HealthInfoNet https://healthinfonet.ecu.edu.au/learn/ determinants-of-health/community-capacity/transport/programs-and-projects/258/?title=Learner%20Licence %20Assistance%20Program%20%28LLAP %29	Active (TAS)
Learners Licence Training Project	Assists Aboriginal peoples to obtain a driver license through driver licencing training and support as part of Fortescue Aboriginal pre-employment training programs. With a partnership between Department of Transport Western Australia, Fortescue Metals Group acts as an agent to road rules theory test.	No	No	Department of Transport Western Australia. https://www.transport.wa.gov.au/media Files/about-us/DOT_P_SubstantiveEqualityAccessing Services.pdf	Active (WA)
Maranguka Driver Licensing Initiative	Established in Bourke to support Aboriginal peoples to attain a driver licence. This program worked in collaboration with the Driving Change program and Birrang Enterprise Development Company Ltd.	Yes	No	The George Institute for Global Health; University of New South Wales. https://www.drivingchange.com.au/site s/bourke/	Active (NSW)
Murris on the Move	Initiative set to assist First Nations Australians to obtain a driver license through the provision of community driving instruction. A cost is associated for the driving services. It is Aboriginal owned and operated and is Aboriginal and Torres Strait Islander specific in its clients.	No	No	https://motom.org.au/	Active (QLD)

Program	Summary	Program outcomes		Source and Link	Status
		Licensing	Employment		
Mutaka project	Provides driver training to young Anangu for obtaining and licence and to obtain employment as drivers within mining, station work, and various opportunities within the APY Lands. Run through Umuwa (Anangu Pitjantjatjara Yankunytjatjara) Trade Training Centre.	No	No	Australian Indigenous HealthInfoNet • https://healthinfonet.ecu.edu.au/key-resources/programs-and-projects/2116/?title=Mutaka%20project	Active (SA)
New England North-West Licensing training project	Providing Aboriginal peoples support with literacy, identification and fine management to obtain a driver license. Program has strong links with Aboriginal peoples and communities.	Yes	No	Willliamson, G (2011): Supporting Aboriginal people to obtain and retain driver licences: an informed review of the literature and relevant initiatives. • https://www.sahealth.sa.gov.au/wps/wcm/connect/cb4472004326d857a5e1ef0aafe4bbfc/Supporting+Aboriginal+People+to+Obtain+and+Retain+Driver+Licences+-+a+Literature+Review-PH%26CS-SRS-20140305.pdf?MOD=AJPERES	Inactive (NSW)
On the Right Track Remote	Aimed to improve licensing outcomes for Aboriginal people living in the Anangu Pitjantjatjara Yankunytjatjara (APY) and Maralinga Tjarutja (MT) Lands.	Yes	No	Howard, M (2017): On the Right Track Remote: Road Safety and Driver Licencing on the Anangu Pitjantjatjara Yankunytjatjara (APY) and Maralinga Tjarutja (MT) Lands • https://www.dpti.sa.gov.au/ontherighttrack/remote	Active (SA)
On the Road Program	Designed to provide support through all stages of the licensing system, enabling Aboriginal Peoples to obtain a driver license. This program is not Aboriginal specific but has strong links with Aboriginal peoples and communities.	Yes	Yes	Clapham (2005): Evaluation of the Lismore Driver Education Program 'On the Road'. • https://www.acecolleges.edu.au/community/aboriginal-driver-education-program/	Active (NSW)

Program	Summary	Program outcomes		Source and link	Status
		Licensing	Employment		
Open Licensing Days	Support community development across the Pilbara through targeting services and providing access to resources for Aboriginal peoples. Coordinated government approach from Department of Transport, Centrelink, Registry of Births, Deaths and Marriages, Fines Enforcement Registry, Aboriginal Justice Program and Other services based on location and need. Forms part of the Enhanced Driver Education Program within the Aboriginal Justice Program.	No	No	Barter, A (2015): Indigenous Driving in the Pilbara Region: Chapter 5 Proof of Birth • http://www.futureleaders.com.au/book_chapters/pdf/Proof-of-Birth/Proof-of-Birth-Chapter5.pdf • https://department.justice.wa.gov.au/A/aboriginal_justice_program_print.aspx	Active (WA)
Queensland Police Service, Indigenous Driver Licensing Program	Involved taking licensing testing and assessment to the communities as a mobile unit and delivering the program in a culturally sensitive manner. Established where police in remote stations have responsibility for issuing licences in their communities in the absence of QT Client Service Centres. This program contributed to the informed development of the Indigenous Driver Licensing Program, QLD.	No	No	Rumble (2006): The Queensland Aboriginal peoples and Torres Strait Islander peoples driver licensing program. • https://healthinfonet.ecu.edu.au/healthinfonet/getContent.php?linkid=570998&title=The+Queensland+Aboriginal+peoples+and+Torres+Strait+Islander+peoples+driver+licensing+program	Inactive (QLD)
Red Dirt Driving Academy	Provides support through the driver licensing system from literacy, Identification document support and practical driving lessons to assist Aboriginal peoples to obtain a driver licensing. Program is implemented through Ngarliyarndu Bindirri Aboriginal Corporation, a community controlled organisation.	No	No	Barter (2015): Indigenous Driving in the Pilbara Region: Chapter 5 Proof of Birth • http://www.futureleaders.com.au/book_chapters/pdf/Proof-of-Birth/Proof-of-Birth-Chapter5.pdf	Active (WA)

Program	Summary	Program outcomes		Source and link	Status
		Licensing	Employment		
REDI.E Driver licensing program	Developed to help Aboriginal peoples navigate through the licensing system, offering subsidised driving lessons. The program is offered through RED.I – a peak body Aboriginal community controlled organisation with driving instruction offered through Birrang Enterprise Ltd.	No	No	Department of Prime Minister and Cabinet • https://www.pmc.gov.au/indigenous-affairs/employment/vocational-training-and-employment-centres-vtecs	Active (NSW)
Remote Area Driver Education Program, Charles Darwin University	Consists of a community based driver instructor program and driver training and licensing support in correctional centres. Assists in increasing the number of licensed drivers in rural, remote and isolated Indigenous communities in the Norther Territory.	No	No	Somssich, E (2005): Overcoming the cultural divide. • https://acrs.org.au/files/arsrpe/RS05009 6.pdf	Inactive (NT, SA)
Right Turn Driver Training Program	Delivered to support young people increase their driving lesson hours, pay for permits and tests. This program is not Aboriginal specific but has strong links with Aboriginal peoples and communities.	No	No	Department of Prime Minister and Cabinet • https://www.pmc.gov.au/indigenous-affairs/employment/vocational-training-and-employment-centres-vtecs	Inactive (SA)
Torres Strait licensing Pilot	Provides a visiting licensing service to the Torres Strait Islands. Administered through Queensland Police Service and Queensland Transport. This program contributed to the informed development of the Indigenous Driver Licensing Program, QLD.	No	No	Edmonston, et al (2003): Working with Indigenous Communities to Improve Driver Licensing Protocols and Offender Management. • https://eprints.qut.edu.au/9393/	Inactive (QLD)

Program	Summary	Program outcomes		Source and link	Status
		Licensing	Employment		
Warburton Graduated Driver Training and Licensing Pilot	Aims to develop an Indigenous-focused, culturally-appropriate graduated driver training and licensing project a pilot program at Warburton.	No	No	Willliamson, G (2011): Supporting Aboriginal people to obtain and retain driver licences: an informed review of the literature and relevant initiatives. • https://www.sahealth.sa.gov.au/wps/wcm/connect/cb4472004326d857a5e1ef0aafe4bbfc/Supporting+Aboriginal+People+to+Obtain+and+Retain+Driver+Licences+-+a+Literature+Review-PH%26CS-SRS-20140305.pdf?MOD=AJPERES	Inactive (WA)
Western Cape College pilot learners licensing project	A school based curriculum for Aboriginal students within remote areas of QLD coupled with practical driver training. Provided to increase licensing rates amongst Aboriginal youth.	No	No	Willliamson, G (2011): Supporting Aboriginal people to obtain and retain driver licences: an informed review of the literature and relevant initiatives. • https://www.sahealth.sa.gov.au/wps/wcm/connect/cb4472004326d857a5e1ef0aafe4bbfc/Supporting+Aboriginal+People+to+Obtain+and+Retain+Driver+Licences+-+a+Literature+Review-PH%26CS-SRS-20140305.pdf?MOD=AJPERES	Inactive (QLD)
Wirrpanda Foundation Aboriginal Driver Training Program	Assisting Aboriginal peoples with attaining a driver's licence in order to increase opportunities for long term, meaningful employment. The program is Aboriginal specific with strong links to numerous communities in Western Australia.	Yes	Yes	Department of Prime Minister and Cabinet • https://www.pmc.gov.au/indigenous-affairs/employment/vocational-training-and-employment-centres-vtecs	Active (WA)

Program	Summary	Program outcomes		Source and link	Status
		Licensing	Employment		
Wunan Driver Licensing Program	Assisting Aboriginal people to navigate towards a driver's licence by providing assistance with required steps, including identification, fine payment arrangements, facilitation of court dates and test bookings and ultimately the attainment of a Driver's Licence. Provided through an Aboriginal development organisation the program operates in Halls Creek & Kununurra and is funded by the Department of the Attorney General.	No	No	• http://wunan.org.au/employment	Active (WA)

Most programs targeted the Provisional licensing stage ($n = 18$), followed by programs targeting all licensing stages (Learner, Provisional or Open) ($n = 17$) and specifically the Learner licensing stage ($n = 7$).

Twenty-two programs provided comprehensive licensing support in all licensing stages ($n = 17$), from Learner to Provisional ($n = 3$) and specifically to obtain a Learner licence ($n = 2$). Fifteen programs offered licensing support specifically for the progression from Learner to Provisional licence and five programs specifically for attainment of a Learner licence. Key components of program services are summarised in Table 2.

Table 2 Program services (type of licensing support provided within programs and each programs targeted licensing stage).

Licensing support provided	Target licence stage		
	*All	*L to P*	*L*
1) **Comprehensive	17	3	2
2) Supervised driving lessons/driving instructions		7	
3) Education and knowledge support		3	1
4) Driver mentor program		1	
5) Supervised driving lessons/driving instructions, education and knowledge support, driver mentor program		4	
6) Driver knowledge test			1
7) Education, driver knowledge test, fine management, licensing fee subsidisation			3
Total number of programs providing support at each licence stage	**17**	**18**	**7**

* All = All licence stages: L (Learner), P (Provisional) and O (Open) | ** Comprehensive support refers to a program that provides support services in all or any area requested for by program clients.

2.7.1.2 Program setting and context

Programs that support Aboriginal and Torres Strait Islander peoples to obtain a driver licence are operational across all six Australian States and two Territories. Eight distinct service providers were identified in program delivery. Programs were implemented across urban, regional and remote geographical settings, and a combination across multiple settings. No

programs were identified to be operational strictly within an urban setting. The key characteristics of program context and setting are presented in Table 3.

Table 3 Program characteristics (service provider type, geographical setting and State/Territory of program delivery).

Service providers	#	Geographical setting	#	State / Territory	#
Government agencies	12	U	-	QLD	6
Business enterprises	2	R	14	NSW	12
Charity and Not for profit organisations	4	Rem	7	ACT	1
Educational institutions	4	U and R	11	VIC	4
Community controlled organisations	1	U and R and Rem	1	TAS	1
Aboriginal community-controlled organisation	8	R and Rem	9	NT	1
Employment and training agency	5			SA	5
Aboriginal employment and training agency	3			WA	11
Multiple service providers	3			NT and SA	1

* U (Urban), R (Regional), Rem (Remote) | ** QLD (Queensland), NSW (New South Wales), ACT (Australian Capital Territory), VIC (Victoria), TAS (Tasmania), NT (Northern Territory), SA (South Australia), WA (Western Australia).

2.7.2 Systematic review of the effectiveness and impact of Aboriginal and Torres Strait Islander driver licensing programs

The search of electronic database records retrieved 2621 records. Purposeful searching of grey literature records retrieved 119 records. After removing duplicates, 1703 records had title and abstract screened for relevance and 47 records were retained for full text eligibility assessment for which eight met the inclusion criteria (Fig. 2 outlines the PRISMA publication selection process for Search 2). Of the 39 records excluded, reasons for which are outlined in Supplementary Table 2 (page 55).

All eight included publications reported primary research, consisting of mixed method program evaluations ($n = 3$)[8, 29, 30], mixed method process evaluations ($n = 3$)[31-33] and synthesis of literature including evaluation of key preliminary program data ($n = 2$)[9, 10]. In total, four driver licensing programs were evaluated: Driving Change ($n = 3$), DriveSafeNT Remote ($n = 3$), On The Road ($n = 1$) and On the Right Track Remote ($n = 1$).

Driver licensing programs: Driving Change, a NSW based program, was reported on in record 1[8] as a program evaluation, record 2[30] as a brief pilot program report and record 3[33] as a process evaluation. DriveSafeNT, a Northern Territory Government program, was reported on in record 4[31] as a process evaluation, record 5[32] a program evaluation and record 6[10] a synthesis of literature presenting detailed 2-year preliminary results. On the Road, a NSW based program, was reported in record 7[29], and On the Right Track Remote, a South Australian program was reported on in record 8[9].

2.7.2.1 Licence support

Navigation through the Learner, Provisional and Open licensing stages of the GLS has been considered a systemic barrier to obtaining a driver licence for Aboriginal and Torres Strait Islander peoples[13, 14]. All four licensing programs provided licensing support in all licensing stages (Learner, Provisional through to Open) of the GLS[8-10, 29, 32]. There were five major categories in which programs provided client support: Identification documents, driver licensing education and information, licensing fees, driver knowledge testing and supervised mentor/professional driving lessons.

Driving Change[8] and DriveSafeNT[10, 32] provided support in all five categories, with On the Road[29] and On the Right Track Remote[9] reporting provision of support in four categories excluding identification document support. Another area of support provided was fine negotiation/debt management that was reported in Driving Change[8] and On the Road[29].

2.7.2.2 Cultural appropriateness

Cultural appropriateness for Aboriginal and Torres Strait Islander programs is critical to the uptake and success of outcomes[34]. Key areas of program appraisal were based upon an adaption of the Cultural Identity Interventions Systematic Review Proforma[28], that included: Involvement of Aboriginal and Torres Strait Islander Ethics committees, steering committee/advisory group and staff; provision of training and capacity building; whether the program was community informed and driven, community involvement in program development, implementation and evaluation, and if results were fed-back in an appropriate format to communities.

All programs[8-10, 29, 32] included description of culturally appropriate research practices, were given a cultural appropriateness appraisal out of 30 and classified as: low (0-24 percent), moderate (24.1-50 percent), satisfactory (50.1-74 percent) and high (74.1-100 percent).

Driving Change, DriveSafeNT Remote and On the Road reported a high level of program cultural appropriateness of 86.6%, 80% and 76.6% respectively. On the Right Track Remote program reported satisfactory level of cultural appropriateness of 66.7%, however the data was abstracted from an extended abstract so critical information was missing.

2.7.2.3 Program setting and context

Records reported programs were implemented in urban, regional and remote settings. Driving Change[8] reported program implementation in 12 communities across New South Wales within urban ($n = 4$) and regional ($n = 8$) settings. DriveSafeNT Remote[10, 32] was implemented across 18 remote communities in the Northern Territory, On The Road[29] reported program implementation across regional community settings ($n = 8$) across the Far North Coast of NSW and On the Right Track Remote[9] reported implementation in 10 remote communities across South Australia Anangu Pitjantjatjara Yankunytjatjara (APY) and Maralinga Tjarutja (MT) lands.

The context in which the driver licensing program was delivered varied. DriveSafe NT Remote[10, 32] and On the Right Track Remote[9] reported program delivery through Government agencies, On the Road[29] through an education and employment training agency. Driving Change[8] reported program implementation through a centralised not-for profit research organisation with program delivery occurring through various service providers of Aboriginal community controlled organisations ($n = 6$), community controlled organisations ($n = 3$), Aboriginal employment and training organisation ($n = 1$) and a not-for-profit organisation ($n = 2$).

2.7.2.4 Program evaluation

On the Road[29] and On the Right Track Remote[9] were program evaluations reporting core program outcomes of: client demographics, driver licensing support outcomes and driver licensing attainment. DriveSafe NT Remote[10, 32] was a process evaluation and in addition to reporting core program outcomes included details on program delivery, acceptability and implementation. Driving Change[8] provided an evaluation reporting on both program and process evaluation outcomes.

Each program[8-10, 29, 32] evaluated program outcomes of: client demographics, driver licensing support provided (identification documents, driver licensing education and information,

licensing fees, driver knowledge testing and supervised mentor/professional driving lessons) and licence attainment (licensing type, demographics of successful clients) outcomes.

2.7.2.5 Licensing

All licensing programs[8-10, 29] reported on client demographics that segregated data into gender and age characteristics.

Evaluation of licensing support provided within each program was reported to varying levels of detail. Programs reported outcomes across five major categories of licensing support: Identification documents (Driving Change[8] and DriveSafe NT Remote[10, 32]), driver licensing education and information, licensing fees, driver knowledge testing and supervised mentor/professional driving lessons (Drive Change[8], DriveSafe NT Remote[10, 32], On the Road[29] and On the Right Track Remote[9]). Additional support for licensing fines and sanctions were provided and evaluated in Driving Change[8] and On the Road[29].

All programs provided an evaluation quantifying the type of driver licence (Learner, Provisional and Open) obtained by program clients[8-10, 29, 32], with DriveSafe NT Remote[10] further evaluating licensing attainment based on gender characteristics. Driving Change[8] and DriveSafe NT Remote[32] reported on number of clients progressing to obtain an Open driver license. On the Road[29] and On the Right Track Remote[9] further reported on additional outcomes, respectively, of attainment of light rigid licenses (legal requirement for persons operating any motor vehicle between 4.5-8 tonnes GVM – any vehicle no more than 8 tonnes which carries more than 12 adults including the driver) and numbers of clients who gained ministerial exemption to obtain a licence.

2.7.2.6 Employment

DriveSafe NT Remote[32] and On the Road[29] reported a correlation between gaining employment as a result of successfully obtaining a driver licence through their respective programs. DriveSafeNT Remote recorded seven clients gaining employment within the transport industry as commercial passenger vehicle drivers. On the Road recorded 16 clients gaining employment in varying industries as a direct result of program participation.

No information was presented from any study towards the demographics or characteristics of the clients who gained employment as a result of obtaining a driver licence. No correlations were presented between gaining employment as a result of participation within Driving Change[8] and On the Right Track Remote[9].

2.8 Discussion

This review was conducted in two sections - the first, a scoping review of the literature provided a descriptive analysis of Aboriginal and Torres Strait Islander driver licensing programs throughout Australian States and Territories highlighted in Table 1. The second was to perform a systematic review to evaluate the effectiveness of driver licensing programs in increasing licensing and employment rates for Aboriginal and Torres Strait Islander peoples. To our knowledge this is the first systematic review of its kind to examine the effectiveness of driver licensing program on licensing and employment rates for Aboriginal and Torres Strait Islander peoples.

Driver licensing programs targeting Aboriginal and Torres Strait Islander peoples were developed primarily to increase licensing rates, by providing support for clients to navigate through the GLS and obtain a driver licence. Support services are aimed towards reducing specific barriers experienced by clients and can vary between programs. Between the years 2000-2019, 42 driver licensing programs were established throughout Australian States and Territories. The number of driver licensing programs being implemented is not indicative of the extensive coverage and reach that these programs have. Many programs are offered across multiple locations, such as the NSW Government Driver Licensing Access Program. Based on a research informed program model, Transport for New South Wales Roads and Maritime Services delivers its Driver Licensing Access Program through 11 independent service providers across 42 towns throughout NSW[8, 35]. The 11 service providers delivering the Driver Licensing Access Program differ in core service function and industry affiliations – from not-for profit organisations and educational institutes through to Aboriginal community-controlled organisations. Along with variation of the service provider types, there are considerable variations in the levels of support service afforded to program clients within each driver licensing programs.

The descriptive analysis of program shows that licensing support offered through the programs can be categorised into four support levels. At the fundamental, level one of support it was observed that programs assist participants through the GLS by providing measures that reduced systemic barriers to licensing attainment, such as through the "Open licensing day" – a cross collaboration of government organisations bringing together services such as birth, death and marriage registry, centre-link and licensing testing services to a single location on a specific day[36]. The next, level two of support from programs were

provided to directly address individual client needs, at minimum they provided a specific licensing support service that targeted at least one licensing stage as seen through the Centacare driver licensing program[15]. Other similar programs offered more than one support service but remained targeted to a specific licensing stage. The Wirrpanda Foundation Aboriginal Driver Training Program is an example of level three support, a program that accommodates for providing multiple support services (i.e., supervised driving lessons, fees support and fine management) as requested by program clients to obtain either a Learner, Provisional or Open licence[37]. The type of programs deemed to be the most comprehensive in supporting Aboriginal and Torres Strait Islander peoples to obtain a driver licence are those that are end-to-end, level four. These end-to-end programs assist clients by providing access to all support services through any or all licensing stages of the GLS. From initial presentation of the clients into a driver licensing program to the attainment of a Learner, Provisional or Open licence, or for the achievement of specific licensing outcomes as requested by the program clients.

Research into transport and licensing has highlighted that Aboriginal and Torres Strait Islander peoples often experience multiple combinations of barriers such as licensing fees, licensing fines, lack of identification documents, access to suitable vehicles, access to a supervised driver within the household, literacy skills and feelings of 'shame', that prevent them from becoming a licenced driver[13, 14, 38]. Licensing program evaluations supported this by observing that the most compelling driver licensing programs for achieving increased licensing rates for clients were those that provided end-to-end licensing support. Though end-to-end programs increased licence attainment rates, when determining what is the most 'effective' driver licensing programs for Aboriginal and Torres Strait Islander peoples it is important to understand that licensing attainment rates are not the only indicative factors of program success and that a decolonised-lens be adapted when assessing overall program effectiveness. The systematic review highlighted that the gold-standard and most effective programs that increased licensing rates amongst Aboriginal and Torres Strait Islander clientele were those that provided end-to-end licensing support in a culturally appropriate format. A common motif can be realised in licensing programs that respectfully engage with Aboriginal and Torres Strait Islander peoples and communities[34, 39]. Which are those that were guided by Aboriginal and Torres Strait Islander people's knowledge in program design and implementation, programs that are developed according to community driven issues, build on capacity and that provide feedback of results to communities in an appropriate

format[32]. Programs that boasted these key cultural characteristics yielded the highest program outcomes and increased potential for sustainability due to community uptake, involvement and ownership.

The primary outcome of licensing programs is to increase licensing rates for Aboriginal and Torres Strait Islander peoples. Despite this, only seven of the 42 driver licensing programs reported the number of licences obtained by clients as a result of participation within their programs through public media platforms. Of the 42 programs presented in Table 1, very few had been evaluated – thirty-eight licensing programs had no form of evaluation, with only four programs being comprehensively evaluated: Driving Change[8], DriveSafeNT[10, 32], On the Road[29] and On the Right Track Remote[9]. Evaluations are essential when assessing for program effectiveness and impact. The four evaluated driver licensing programs of Driving Change[8], DriveSafeNT[10, 32], On the Road[29] and On the Right Track Remote[9] each presented information according to: program participant demographics (age and gender), driver licensing support provided (Identification documents, driver licensing education and information, licensing fees, driver knowledge testing and supervised mentor/professional driving lessons), driver licensing attainment and employment outcomes. Moreover, although these outcomes were evaluated, the level of detail and information provided in reports varied across programs. For example, Driving Change categorised program participant demographics by age and gender whereas DriveSafeNT categorised on gender alone. With the number of licensing programs, their extensive reach and coverage and the importance that driver licensing has for Aboriginal and Torres Strait Islander peoples there is a need for standardisation of data collection and an agreement on an evaluation framework that acknowledges cultural appropriateness. Existing studies based within Aboriginal and Torres Strait Islander community contexts have demonstrated the effective incorporation of culturally appropriate research practices as evaluable outcomes[40, 41]. Such studies may present an appropriate framework of evaluation standards that can be implemented across driver licensing programs. Furthermore, including baseline collection of employment data and its outcomes within the standardised evaluation framework will provide a mechanism to determine the impact that driver licensing has on employment rates.

The link between driver licensing and employment is one that is intuitively recognised but limited empirical evidence is available that validates this association particularly for Aboriginal and Torres Strait Islander people. Amidst recent government reports indicating low employment rates and employment target not being reached[42], driver licensing programs

may present an alternative mechanisms by which to increase employment rates. This review established from retrieved records two driver licensing programs that correlated positive employment outcomes. Clapham et al. (2005) reported that 16 clients gained employment as a direct result of the involvement in the On the Road driver licensing program and reports from DriveSafeNT stated as an unexpected benefit of client participation within its program seven people were able to gain employment as commercial passenger vehicle drivers. The service provider that delivered each program, respectively, was an education and training organisation focussed on securing employment for its client and a government organisation. Understanding the type of service provider delivering the driver licensing programs may present as a determining factor in establishing a correlation between driver licensing programs and employment outcomes. Service providers such as Vocational Training and Educational Centres, specifically train Aboriginal and Torres Strait Islander job seekers to acquire the training and skills needed to secure employment, as guided by employers who guarantees employment after completion of the training. These centres may well be best suited to implement gold-standard driver licensing programs within a culturally appropriate setting to impact on employment rates.

This review found that despite the availability of multiple driver licensing programs, 38 of the 42 programs (90%) were not well evaluated. More robust evaluations will lead to greater funding opportunities and a potential for data linkage between transport and employment.

2.9 Conclusion

Driver licensing programs that provide end-to-end licensing support in a culturally appropriate format are the most effective programs in increasing licensing attainment rates. Despite the number of licensing programs, most were not well evaluated and a research gap exists in evaluating the impact that driver licensing has on employment rates. With the increasing number of driver licensing programs being implemented throughout Australian States and Territories a coordinated approach for rigorous data collection and a robust nationally standardised framework of evaluation that includes Aboriginal and Torres Strait Islander culture and employment outcomes are needed within driver licensing programs.

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2.11 Supplementary Tables

2.11.1 Table 1: Search terms

1	Aborigin*
2	(Torres Strait Island*)
3	Indigen*
4	(First Nation* People*)
5	(Indigenous populations)
6	1 or 2 or 3 or 4 or 5
7	(Driver Licen?*)
8	Driving
9	Lincen?*
10	(Graduated driver licence)
11	(Driving test)
12	(Driver licensing programme)
13	(Driver training)
14	(Driver education)
15	(Road safety)
16	Car
17	Vehicle
18	Automobile
19	Automotive
20	Transport*
21	(Transport disadvantage)
22	7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21
23	Employment
24	Labour
25	Career
26	Work
27	Job
28	Training
29	Vocation
30	Unemployment
31	Joblessness
32	23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31
33	**6 and 22 (Search 1)**
34	**6 and 22 and 32 (Search 2)**

2.11.2 Table 2: Summary of excluded records

	Excluded record	Explanation – Did not meet the inclusion criteria
1	Andrews, R (2011)	4,5
2	Bamford, et al (2007)	1, 4, 5
3	Barter, A (2015)	4,5
4	Bates, et al (2015)	1
5	Battellino, H (2007)	4,5
6	Battellino, H (2009)	4,5
7	Clapham, et al (2017)	4,5
9	Cullen, P (2016)	(PhD dissertation)
11	Cullen, et al (2016)	(Abstract)
14	Cullen, et al (2016)	4, 5
15	Cullen, et al (2018)	Abstract
16	Cullen, et al (2017)	4,5
17	Cullen, et al (2016)	4, 5 (Systematic review)
20	Cullen, et al (2017)	4, 5
21	DPI - WA Government (2019)	(non-peer reviewed)
22	Doyle, U (2016)	(non-peer reviewed)
23	Edmonston, et al (2003)	4, 5
24	Fitzgerald, S (2005)	4, 5 (non-peer reviewed)
25	Freethy, C (2012)	4, 5
26	Helps, Y (2010)	4, 5
28	Ivers, et al (2012)	4, 5
29	Ivers, et al (2016)	(Abstract)
31	Jones, A (2001)	4, 5
32	Kohlman, M (2006)	(Abstract)
33	Ma, et al (2013)	4, 5
34	Malcolm, V (2016)	4, 5
35	McIlwraith, M (2001)	4, 5 (non-peer reviewed)
36	McRae, D (2014)	1 (non-peer reviewed)
37	Rumble, N (2006)	(non-peer reviewed)
38	Skinner, M (2012)	4, 5
39	Somssich, E (2002)	4, 5
40	Somssich, E (2005)	4, 5
41	Somssich, E (2008)	4, 5 (non-peered reviewed)
42	Somssich, E (2009)	4, 5
43	Thomas, B (2003)	4, 5
44	Tracker, (2009)	(non-peer reviewed)
45	Vick, M (2008)	4, 5
46	Vick, M (2006)	4, 5
47	Williamson, G (2011)	4, 5

1. Aboriginal and Torres Strait Islander Peoples, 2. Australian context, 3. Publication from 2000–2019, 4. Licensing outcomes, 5. Employment outcomes.

2.12 Conclusion to Chapter Two

Culturally relevant driver licensing programs that support Aboriginal and Torres Strait Islander peoples to obtain a driver licence have been delivered to some extent in all Australian States and Territories. Of the 42 recognised licensing programs presented within the systematic review, Tasmania and the Australian Capital Territory had the lowest number of programs available for its Aboriginal and Torres Strait Islander population.

Evidence from the systematic review revealed that less than 10% (4/42) of the programs were evaluated and that a framework that captures Aboriginal and Torres Strait Islander culture as an evaluable component is the most appropriate method to determine the impact and effectiveness of programs. Evaluations have been performed on programs delivered in New South Wales, South Australia and the Northern Territory. As transport and licensing are States and Territory Government regulated there is a need for program evaluations to be conducted within each jurisdiction to better understand the specific program processes and delivery methods that best suit the communities in which they serve. In addition, this review highlighted that of the 42 programs delivered over a quarter (n=12, 29%) were inactive. This may be attributed to the vagaries of funding but further goes to highlight the need for a standardised evaluation framework across licensing programs so that the value of these programs to Aboriginal and Torres Strait Islander peoples can be adequately represented.

Chapter Three: Methodology

3.1 Publication Details

This is an unpublished Chapter in the Thesis.

3.2 Author contributions

BP conceptualised and led the writing of the chapter. KH, MK, NY, PC and RI contributed to the editing of the chapter.

3.3 Introduction to Chapter Three

Research is seldom performed in a silo and this thesis builds upon bodies of work on driver licensing programs that initially set out to improve driver safety and driver licensing rates for Aboriginal and Torres Strait Islander peoples. This chapter will first introduce the driver licensing programs that are used to explore the relationship between obtaining a driver licence and employment outcomes. It will explain the use of decolonised methods of data collection in Chapters Four, Five and Six and a culturally appropriate framework for evaluation in Chapter Four. Finally, this chapter will then discuss the strength and limitations of this approach.

3.4 Driver licensing programs

Legalisation for transport and licensing within Australia is State and Territory regulated. Although slight variations exist in each jurisdiction on the process to obtain a driver licence, they are all based on a Graduated Licensing Scheme (GLS) approach. With the aim to make novice drivers competent and safer on public roads, the GLS employs a restricted and staged approach from driving under supervision on a Learner licence – to driving independently, first on a Provisional licence and then finally on to an Unrestricted licence[1].

Highlighted in section '*1.5 Thesis overview*' driver licensing programs were designed to provide support in a culturally relevant way for Aboriginal and Torres Strait Islander people to navigate through State and Territory GLS to facilitate the attainment of a driver licence.

A subset of data from two independent driver licensing programs, the '*Driving Change*' program in New South Wales and the '*The Australian Capital Territory Aboriginal and Torres Strait Islander driver licensing pilot program*', was used as highlighted in Figure 1 to explore the influence that obtaining a driver licence had on employment outcomes for program clients.

3.4.1 The 'Driving Change' program

The Driving Change program was developed to facilitate access to licensing across the State of NSW in 11 Aboriginal communities of: Kempsey, Taree, Raymond Terrace, Redfern, Campbelltown, Shell-harbour, Dubbo, Dareton, Condobolin, Griffith and Wagga Wagga. The program was delivered from February 2013 to August 2016 and reached 933 Clients, with most clients from the target age group 16-24 years (56-89%).

Dataset from a subsample of the clients (n=254) that participated in post program evaluation follow-up was statistically analysed to explore the relationship between obtaining a driver licence and employment outcomes.

3.4.2 The Australian Capital Territory Aboriginal and Torres Strait Islander driver licensing pilot program

The Australian Capital Territory (ACT) Aboriginal and Torres Strait Islander Driver Licensing Pilot program was developed to provide culturally relevant accredited driver instruction and support to increase licensing rates and improve road safety of Aboriginal and Torres Strait Islander Learner licence holders, job seekers and those in contact with the justice system from the ACT and greater regions. The program was delivered from December 2017 to December 2019 and reached 74 clients.

A subsample of clients (n=12) were contacted after program completion to participate in in-depth yarning to further explore client experiences and understand the impact obtaining a driver licence had towards their employment outcomes.
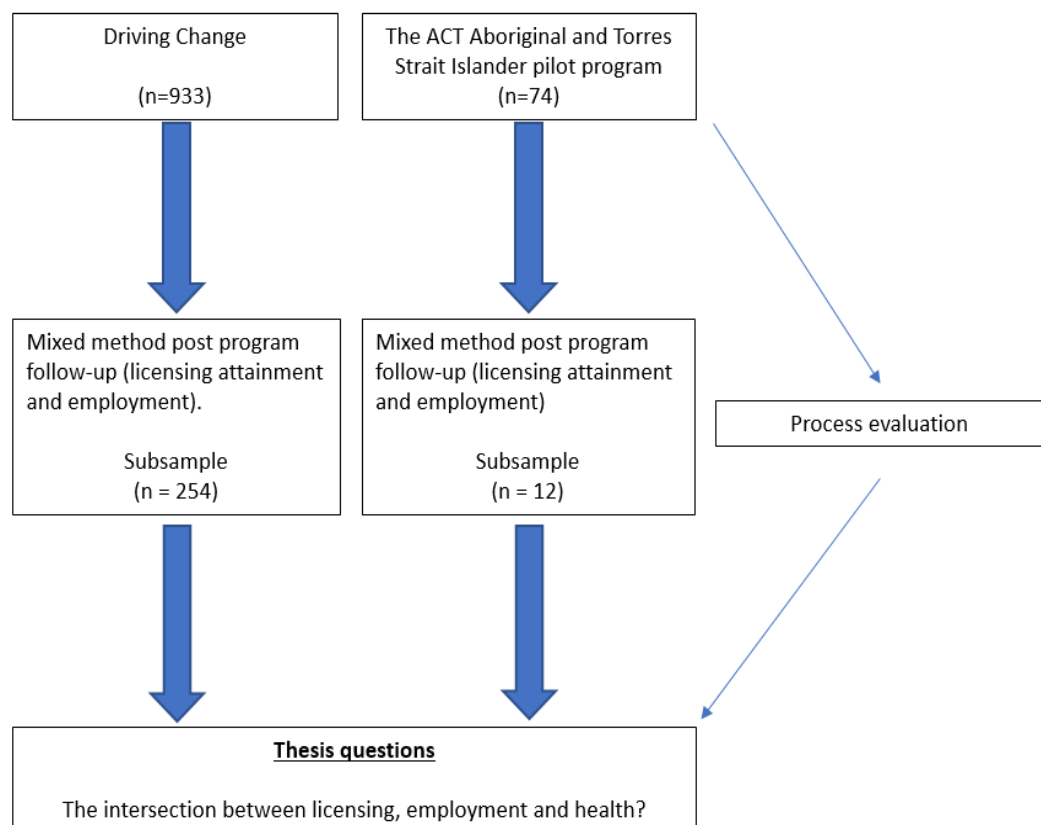
Figure 1. Driver licensing program subset data

3.5 Decolonised Methodology

Within the context of Aboriginal and Torres Strait Islander health research there has been an increase in scholarship promoting the application and use of decolonised methodologies[2, 3]. This is premised upon challenging Eurocentric research methods that undermine Indigenous knowledges and experiences, towards using a system of methods consistent with Aboriginal and Torres Strait Islander peoples[4]. This process is underpinned by the situated knowledge of the peoples, communities and researchers that are involved[5].

This thesis is grounded on Aboriginal and Torres Strait Islander research paradigm as highlighted in Figure 1 of Chapter 1. It decolonises methodological practices by reorientating itself away from problematising Aboriginal and Torres Strait Islander peoples; respects Aboriginal and Torres Strait Islander people's knowledge systems and community priorities; focuses on the strength, capacities and resilience; and stresses the importance of culture and culturally appropriate processes when engaging in communities. Given the use of subset data from the two independent driver licensing programs it was not possible to apply an overarching decolonised methodological framework. However, the method used for qualitative data collection is consistent with Aboriginal and Torres Strait Islander people; the framework for evaluation ensured cultural components were included as evaluable outcomes; and analysis, interpretation and reporting are positioned through a decolonised lens of the researcher to privilege Aboriginal and Torres Strait Islander ways of 'knowing', 'being' and 'doing'.

3.5.1 Situated knowledge

Growing up on Bundjalung country in regional far north NSW, as a First Nations man, the value of having a driver licence and the importance that it had towards securing employment was always understood to me. Although I was off Country, being immersed within community, in my early teen years there was a shared lived experience that transport disadvantage had towards quality of life and options for employment. The responsibility to family and personal development deepened the motivation for wanting to work and although employment opportunities were available, they were often missed due to lack of transport options. Addressing this proximal determinant of employment

through the provision of transport to work was one method that pragmatically increased participation in employment. These early opportunities are what built work experience and motivation for career growth which amongst other factors set the foundation for a positive trajectory. It was not until later in life that I was given the opportunity to work as a research officer on the driver licensing program - Driving Change, that I was able to facilitate other Aboriginal and Torres Strait Islander people to attain a driver licence. Whilst working on this program I always had the question in my mind of showing how obtaining a licence improved employment outcomes and the ongoing positive impact this could have particularly for young Aboriginal and Torres Strait Islander peoples living in regional or remote towns.

The access to driver licensing programs through the work opportunity that I was privileged with enabled me to build on my shared lived experience to begin the journey into exploring the impact that obtaining a driver licence has on employment outcomes.

3.5.2 Data collection

Within each independent driver licensing program Yarning was used with program clients as a method for qualitative data collection. This is a decolonised process used by Aboriginal and Torres Strait Islander peoples purposed to break down barriers, formalities and socially constructed hierarchies. As a legitimate form of data collection, it draws upon the oral traditions of storytelling that traverses program clients in a non-linear approach around set research questions. For the purpose of data collection, it involved three stages: the first stage was to build rapport and familiarity (social yarning); the second stage was where the research question is asked (research yarning); the third stage required the researcher to respond to client answers through acknowledgment, reflections and sharing of personal stories (therapeutic yarning)[6-8].

3.5.3 Evaluation framework

For Aboriginal and Torres Strait Islander peoples it is important to understand that licensing attainment rates are not the only indicative factors of program success and when assessing program outcomes cultural contextual factors such as cultural

appropriateness, community uptake and clients' experiences should also be considered as measures of success and included as evaluable outcomes.

It is for this reason to synthesise the multiple interacting program components an evaluation framework of the Medical Research Councils guidance on complex interventions was adapted to emphasise the relationship of context, implementation and mechanisms of impact[9]. To evaluate driver licensing attainment and program outcomes the following measures are included:

- Reach – did the program reach the target clientele group?
- Fidelity – was the key program services delivered as intended?
- Dosage – the quantity of each program service delivered?

To evaluate cultural components the following measures are embedded:

- Engagement – was the program effective in engaging Aboriginal and Torres Strait Islander peoples?
- Acceptability – did the program offer licensing services in a culturally acceptable way?
- Context – what are the factors that facilitated or inhibited successful implementation?
- Impact – was the program effective in increasing licensing attainment and what influence has this has had in the lives of program clients?

3.5.4 Analysis, Interpretation and Reporting

Analysis, interpretation and reporting was undertaken through my decolonised lens which enabled Indigenous epistemology "ways of knowing" to be applied in the analysis[10].

3.6 Strengths

The strength of this methodology is that it is grounded on Indigenous paradigms, which privileges Aboriginal and Torres Strait Islander ways of knowing, being, doing. It uses decolonised methods to collect data; applies a framework of evaluation that includes

client experiences and cultural contextual factors as evaluable outcomes; and analysis, interpretation and reporting are positioned through the decolonised lens of the researcher

3.7 Limitation

The limitation within this methodology is that it is based on subset data of driver licensing programs which focused on licensing attainment. Accordingly, it was not possible to capture complete client employment information at baseline pre-program enrolment and as a result directly ask questions relating to employment improvement. Furthermore, the timeframe for client follow-up post program was limited to the requirements and ethics of the larger studies. To evaluate long-term program outcomes and impact on employment a longer timeframe would be needed which was beyond the scope of each licensing program.

3.8 Reference

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3.9 Conclusion to Chapter Three

This Chapter provides an explanation of how this thesis is framed within an Indigenous paradigm by applying Aboriginal and Torres Strait Islander ways knowing, being, doing and decolonised methodologies. It also provides the rationale for the methods, evaluation, analysis, interpretation, and reporting used in Chapters Four, Five and Six.

Chapter Four: Process evaluation of an Aboriginal driver licensing pilot program in the Australian Capital Territory

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4.1 Publication details

4.2 Author contributions

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4.3 Introduction to Chapter Four

To assess the impact of licensing programs in Aboriginal and Torres Strait Islander communities it is important to take a holistic approach. Evidence in Chapter Two suggests that licensing programs that deliver support in a culturally appropriate format are most effective for communities and that these cultural components need to be evaluated.

The Australian Capital Territory (ACT) was a jurisdiction highlighted in Chapter Two that noticeably lacked the provision of licensing support programs for its Aboriginal and Torres Strait Islander residents. One program that does provide support being delivered within the ACT was a pilot program. Chapter Four will therefore be a process evaluation of the licensing support program piloted within the ACT. The evaluation framework will aim to take a holistic approach that captures Aboriginal and Torres Strait Islander culture and epistemology as evaluable outcomes.

4.4 Abstract

Driver licensing is an important social determinant supporting access to education and employment. The ability for Aboriginal and Torres Strait Islander Australians to obtain a driver licence can often be hindered by not having access to a licensed driver, vehicle, finance and identification documents. This can lead to unsafe driving practices such as driving without a licence, which can result in contact with the justice system. We report a process evaluation of a culturally relevant driver licensing pilot program delivered in the Australian Capital Territory (ACT) that aimed to support licensing attainment for Aboriginal and Torres Strait Islander Learner drivers, job seekers and those in contact with the justice system. A mixed methods approach was used incorporating descriptive analysis for quantitative data and a deductive and inductive analysis of qualitative data. The deductive approach used predetermined themes based on a framework for complex intervention for qualitative analysis, and sub-themes were then developed using an inductive approach. The program reached 74 clients, with 50 gaining an independent driver's licence, highlighting the feasibility of delivering licensing programs in the ACT. Family responsibilities was the main reason for wanting a licence. The program was delivered in a culturally acceptable way to target clientele. Increasing the number of program staff that deliver the program would ensure timely and robust data collection to support ongoing implementation, monitoring and evaluation.

Keywords: Aboriginal; Torres Strait Islander; driver licence; process evaluation; transport disadvantage

4.5 Introduction

A valid driver licence can be essential for usual life activities, particularly for those who live in regional and remote areas and areas not well served by public or active transport[1]. A large proportion of Aboriginal and Torres Strait Islander people reside in regional and remote areas of Australia[2] and their ability to obtain a driver licence is often met with various challenges, such as access to a licensed driver, vehicle, finance, literacy and fine enforcements[3]. The burden of being unlicensed has far reaching effects beyond the capacity to drive – it has impact on access to healthcare, education, employment and social opportunities, and contact with the justice system[4-6]. Poor access to licensing services, compounded by limited access to public or private transportation

options in regional and remote settings, contributes to transport disadvantage[7] which has been shown to influence unsafe driving practices, including driving without a licence and overcrowding in cars[8, 9]. These are known risk factors for road injury, which is a leading cause of death for Aboriginal and Torres Strait Islander peoples in Australia[9].

There is growing recognition nationally that culturally relevant licensing programs that provide support across a range of areas including licensing fees, literacy, identification documents, fine management, driving training and/or access to a suitable vehicle at any or all stages of the licensing process are an important way to improve licensing rates for Aboriginal and Torres Strait Islander peoples residing in urban, regional and remote settings[10-12]. This recognition has been achieved through process evaluations which have provided understanding of cultural contextual factors, support services required and consideration towards how programs should be delivered[13].

The requisites for obtaining a driver licence are regulated by State and Territory Governments and although varied, they are principally based upon a Graduated Licensing Scheme (GLS). A GLS employs a restricted and staged approach from a Learner to Provisional and then Unrestricted licence holder to make novice drivers competent and safer on public roads[14]. Licensing support programs assisting Aboriginal and Torres Strait Islander peoples to navigate through relevant GLS are being delivered throughout most Australian States and Territories[15-18], most recently as a pilot program in the Australian Capital Territory (ACT).

Aboriginal and Torres Strait Islander peoples represent 1.9% of the population in the ACT[2]. Though served by multiple public transportation options, unlicensed driving within the ACT and its fine enforcement system are contributors to their over-representation within the justice system[19]. In the ACT, 12-14% of their offending relates to traffic and vehicle regulatory offences and 15-18% of all traffic-related charges resulting in a term of imprisonment[20]. Imposed monetary fines in the face of financial hardship contribute to further contact with the justice system when unresolved debt leads to disqualification of a licence. ACT incarceration rates show that 3% of Aboriginal and Torres Strait Islander peoples were incarcerated due to traffic and vehicle regulatory offences, and constitute 18% of all those that have been imprisoned with traffic and vehicle regulatory offences[19].

The ACT Aboriginal and Torres Strait Islander driver licensing pilot program was established in 2017 to assess the feasibility of the program within the ACT. We report the process evaluation of this pilot program; our aim was to determine whether the program was delivered as intended according to the key service areas and in a culturally relevant format.

4.6 Materials and Methods

4.6.1 The program

Underpinned by community consultation and established to service the licensing needs of Aboriginal and Torres Strait Islander residents of the ACT, the program targeted Aboriginal and Torres Strait Islander Learner drivers (pre-Learners and those with a Learner licence), job seekers and those in contact with the justice system. Guiding project oversight and ensuring cultural competency, a steering committee of Aboriginal, Torres Strait Islander and non-Indigenous members was established comprising fifteen stakeholders from the key sectors of: Transport (Accent Training Services, Transport Industry and Skills Centre, Australasian College of Road Safety - ACT & Region Chapter); Justice (Justice and Community Safety Directorate – Community and Justice Programs, Legislation Policy and Programs and ACT Corrective Services); Employment (Habitat Personnel) and ACT community members.

The program was developed and delivered by Canberra's Aboriginal Legal Service NSW/ACT Limited (ALS) and funded through the Justice and Community Safety Directorate, ACT Government, 2017 ACT Road Safety Fund Grants Program. The program was funded for 24-months, commencing 1 December 2017. Evaluation of the program was commissioned and funded by Canberra's ALS and independently conducted by The George Institute for Global Health[21].

The first 4-months (1 December 2017 – 1 April 2018) of operations involved program set-up which included recruitment and training of a program staff member. An Aboriginal person was employed to deliver the program and trained as an Accredited Driving Instructor (ADI) and case manager for clients. This allowed the program to be delivered in a culturally relevant way that placed connection and understanding to the clients spiritual, social, emotional and physical identity as an Aboriginal or Torres Strait

Islander person. To become an ADI, the program staff underwent training in a Certificate IV in Transport and Logistics (by Transport and Industry Skills and Training Centre), a 'Train-the-Trainer' course (through Ascent Training Services) was provided along with six weeks of 'Road Ready' course shadow training to enable program staff to deliver a 'Road Ready' course and 'Knowledge Testing' to program clients.

The ADI case management role provided practical assistance and advocacy in a culturally relevant format for clients to fulfil the requirements of the ACT driver licensing system, including Competency Based Training and Assessment (CBTA) system by providing seven key program services:

1. Driving instruction and assessment with a qualified Aboriginal Instructor.

2. Supervised driving practice with volunteer mentor drivers.

3. Access to appropriate vehicles for practice and assessment.

4. Vehicle induction workshops with a local Aboriginal mechanic.

5. Tailored, community-based Road Ready programs and linkage to driver offender programs.

6. Practical support and assistance to navigate the licensing system and manage debt recovery process.

7. Access to full or partial financial assistance to complete the required training and assessment and meet the costs of obtaining or renew a licence.

4.6.2 Evaluation

A mixed-methods approach was used. To synthesise the multiple interacting program components an evaluation framework of the Medical Research Councils guidance on complex interventions was adapted to emphasise the relationship of context, implementation and mechanisms of impact[13]. Table 1 summarises adapted program evaluation measures, based on program Reach, Fidelity, Dosage, Engagement, Acceptability, Context and Impact.

Quantitative data collected by the ADI upon client enrolment included age, gender, education, employment status and main reasons for wanting a driver licence. In

addition, client support requested and provided at each interaction within the program and licencing attainment details were recorded.

Descriptive statistical analysis was used to assess licence attainment, demographics of the clientele and program services used.

Qualitative data collection involved stakeholder semi-structured interviews and client Yarning[22].

Stakeholders were identified based on consultation with the steering committee members, program staff and a representative from the funding body. Fifty-five stakeholders were identified, approached by research staff and invited to participate. Initial contact was made through email then followed-up by phone calls to schedule interviews.

Stakeholder interviews were conducted in a one-to-one format using 11 open-ended questions (Figure S1: Stakeholder interview questions) to stimulate discussion on program context, the need for the program, experiences and expectations of the program, community and stakeholder engagement, implementation barriers and facilitators and important outcomes.

Client data collection was grounded in the Indigenous methodology of *Yarning*[22]. Yarning is a culturally significant, informal process amongst Aboriginal and Torres Strait Islander peoples purposed to break down barriers, formalities and socially constructed hierarchies. As a legitimate and rigorous form of data collection it draws upon the oral traditions of storytelling that traverses program clients through four stages (social, research, therapeutic and collaborative) of yarning[22-24]. To ensure a culturally safe environment conducive for the sharing of knowledge, the researcher adopted a non-linear approach to communication where broad conversations were had to build rapport and familiarity (social yarning), the research question was then asked (research yarning) and client answers were acknowledge through reflections and/or sharing of researchers personal stories (therapeutic yarning). The fourth stage of collaborative yarning often applied to the sharing of research findings was not applicable in this context.

All program clients were initially contacted by the ADI and asked to participate in the yarnings. The details of clients who agreed to participate were then forwarded on to the research staff for follow up contact. Clients were contacted by research staff via text

message and email for participation, follow-up phone calls were then made within 24-hours to schedule times. Yarns were structured around nine indicative questions that explored: experiences with the program and obtaining a licence; acceptability of the program model; access to current services as well as service gaps; and the impact of attaining a licence (Figure S2: Client Yarning indicative questions). Clients were provided with a $30 gift voucher for the time taken to participate. Semi-structured interviews and yarning circles were recorded, transcribed and analysed using NVivo 12.

A deductive approach was used with the evaluation measures as the overarching themes (Table 1) in which indicative questions and yarning were based. An inductive approach

Table 1. Program evaluation measures.

Measure		Data source	Data analysis
Reach	Did the program reached the target clientele group.	Client demographics and baseline client intake form.	Descriptive
Fidelity	Whether the seven key program services were delivered as intended.	Program data, semi-structured stakeholder interviews and client Yarning circles.	Thematic
Dosage	The quantity of each programs service delivered.	Program data.	Descriptive
Engagement	Whether the program had been effective in engaging Aboriginal and Torres Strait Islander peoples within the ACT.	Semi-structured stakeholder interviews and client Yarning.	Thematic
Acceptability	Whether the program offered licensing services in a culturally acceptable way.	Semi-structured stakeholder interviews and client Yarning.	Thematic
Context	Factors that facilitated and inhibited successful implementation.	Semi-structured stakeholder interviews and client Yarning.	Thematic
Impact	Whether the program was effective in increasing licensing attainment and the influence this has had for clients.	Semi-structured stakeholder interviews and client Yarning.	Thematic

was then used in analysing stakeholder and client responses. Thematic analysis was undertaken using a decolonising approach by a Frist Nations researcher; this enabled Indigenous epistemology and "ways of knowing" to be applied in the analysis[25, 26].

Ethics (2019/ETH00547) was approved on 27 March 2019 by the ACT Health Human Research Ethics Committee's Low Risk Sub-Committee.

4.7 Results

Seventy-four clients accessed the program between 1 April 2018 - 1 October 2019. Of these, 50 completed the program to gain a Provisional driver licence, the remaining 24 clients were 'ongoing' - currently accessing the services. The program reached Learner drivers ($n = 71$, 96%), job seekers ($n = 20$, 27%) and those in contact with the justice system ($n = 2$, 4%).

Fifty-six of the clients were aged 16-24years and although not targeted a large proportion (40%) of the total clients that accessed the program identified as being students. Over half ($n = 48$, 65%) the total clients were female and of the total male participants 92% of the male cohort were between the ages of 16-24 years. Table 2 reports the sociodemographic characteristics of all 74 clients. Other main reasons clients participated in the programs to obtain a licence were for family responsibilities ($n = 20$, 27%) and lifestyle independence ($n = 17$, 23%)

The program services were delivered in a culturally acceptable way to 74 clients with 50 gaining an independent licence. 'Driving instruction and assessment with a qualified Aboriginal Instructor' and 'Access to appropriate vehicles for practice and assessment' was the most accessed services within the program. This highlighted the value of having a culturally relevant driver licensing programs that provide these services particularly for Aboriginal and Torres Strait Islander young peoples, job seekers and students within the ACT.

The majority ($n = 30$, 40%) of clients who accessed the program identified as being high school and/or tertiary students aged between 16-24years. Female clientele made up the greater proportion ($n = 48$, 65%) of clients compared to males ($n = 26$, 35%), although a higher proportion of male clients ($n = 24$, 92%) were between the ages of 16-24 years compared to female clients ($n = 32$, 67%).

Table 2. Program client characteristics.

Client characteristics	Successfully completed	Ongoing	Total
	n = 50	*n = 24*	*n = 74*
	n (%)	*n (%)*	*n (%)*
Learner Licence holder	50 (100)	21 (87.5)	**71 (96)**
Female	29 (58)	19 (79)	**48 (65)**
16-24 years	19	13	32 (43)
25-54 years	10	6	16 (22)
Male	21 (42)	5 (21)	**26 (35)**
16-24 years	19	5	24 (32)
25-54 years	2	0	2 (3)
Job Seekers[A]	15 (30)	5 (21)	**20 (27)**
Employed	9	0	9 (12)
Unemployed	6	5	11 (15)
Justice System[B]	2 (4)	0 (0)	**2 (3)**
Student[C]	18 (36)	12 (50)	**30 (40)**
Other[D]	15 (30)	7 (29)	**22 (30)**

[A]Job seekers (Unemployed or employed part-time/casual) | [B]Clients in contact with the justice system | [C]Students (High school and/or tertiary students) | [D]Other (Clients not in workforce or seeking employment including fulltime parents, carers and/or pensioners)

From the stakeholders approached to participate in the semi-structured interviews, eleven responded to communications from which seven interviews were conducted. Those who participated were both Aboriginal (n=3) and non-Indigenous (n=4) stakeholder who represented the key sectors of: Justice (Justice and Community Safety Directorate, ACT Corrective Services and ACT Child and Youth Protective Services), Transport (Sutton Road Training Centre and Australasian College of Road Safety) and Charity/Not-For Profit (Worldview Foundation Limited).

Yarns were scheduled for twelve clients, of which eight clients attended.

4.7.1 Program fidelity

Two service areas delivered with high fidelity, representing client demand, were 'Driving instruction and assessment with a qualified Aboriginal Instructor' and 'Access to appropriate vehicles for practice and assessment'.

The program adapted and partially delivered the 'Vehicle induction workshop with a local Aboriginal mechanic' service. The service of 'Practical support and assistance to navigate the licensing system and manage the debt recovery process' and 'Access to full or partial financial assistance to complete the required training and assessment and meet the costs of obtaining or renew a licence' were partially delivered.

The program did not deliver the 'Supervised driving with volunteer mentor drivers' and 'Tailored, community-based Road Ready programs and linkage to driver offender programs' service.

Table 3 summarises each of the 7 key service areas according to whether each service was delivered as intended and the quantity of each service delivered.

Table 3. Key service areas delivered.

Key service area	Fidelity	Dosage
1. Driving instruction and assessment with Accredited Driving Instructor.	Delivered	10 hours average, per client of accredited driving instruction.
2. Supervised driving practice with volunteer mentor drivers.	Not delivered	No client received service.
3. Access to appropriate vehicles for practice and assessment.	Delivered	An appropriate vehicle was specifically dedicated to program staff for practice and assessment.
4. Vehicle induction workshops with a local Aboriginal mechanic.	Adapted / partially delivered	Clients received 1 vehicle induction prior to engaging in accredited driving instruction. The service was not provided by a 'Local Aboriginal Mechanic' but adapted to be delivered by program staff. Vehicle induction training included: overview of vehicle maintenance (fuel, oil and coolant changes) and Servicing (tyre pressure and dashboard warning lights).

Key service area	Fidelity	Dosage
5. Tailored, community-based Road Ready programs and linkage to driver offender programs.	Adapted and not delivered	No client received a Road Ready course delivered by program staff. The service was adapted, and clients were referred to pre-existing Aboriginal and Torres Strait Islander service to receive the course. No clients attended a linkage to driver offender program.
6. Practical support and assistance to navigate the licensing system and manage debt recovery process.	Partially delivered	<5 clients received support for transport to Access Canberra. No client received debt management support.
7. Access to full or partial financial assistance to complete the required training and assessment and meet the costs of obtaining or renew a licence.	Partially delivered	<5 clients received financial assistance for computerised Road Ready Knowledge Test. No clients received financial assistance for cost of licence obtainment.

4.7.2 Program evaluation key themes

Seven key themes which emerged from stakeholder interviews and client yarning circles which mapped to five program measures. These are summarised in Table 4.

Table 4. Key themes (stakeholder interviews and client yarning).

Measure	Themes
Fidelity	Staffing capacity
Engagement	Diversify modes of engagement | Increase program awareness
Acceptability	Cultural Safety | Flexibility in service delivery
Context	Appropriate service provider
Impact	Wellbeing

4.7.2.1 Staff capacity

One program staff (the ADI) was required to deliver the seven key program services. It was expressed that accredited driving instruction was prioritised. The one-on-one time

required for case management and to provide driving instructions was intensive which limited the capacity of program staff to deliver other key program services and the ability to perform administrative duties such as data collection and recording.

Limited staffing capacity impacted on the time designated to sufficiently establish community and stakeholder engagement and for promotion of program services that resulted in key service areas of *2.* and *4. – 7* being partially delivered or not being delivered as intended.

4.7.2.2 Diversify modes of engagement

The main mode of community engagement and promotion for the program's services in communities was largely driven through informal channels of word of mouth and pre-existing relationships.

> '*Especially in an Aboriginal community ...you know, you might get somebody come up and say, oh, I wish I can get a licence...Mate, this is how you do it...go and speak to Aboriginal Legal Service.*' (Stakeholder interview – Justice)

> '*Most of my like, all the family around here that are Aboriginal, like we're not blood related but we call each other family, we all just when we get together...oh have you tried (program staff - ADI) to get your licence, like cause a lot of young people that I know they don't have, they didn't have access to getting their licence. So when we would mention (Program staff - ADI), they're like oh I haven't heard of him before but I will try....And you know you'd see them again and they like I got my licence...and it was just happy like, it would just bring the community together.*' (Yarning – program client 1).

4.7.2.3 Increase program awareness

Lack of awareness among stakeholders and clients was a prominent theme.

> '*So, I didn't know the ALS project existed, but I also didn't know any program existed that would be cheap or free....so my mum told me about it - - - and what mum said, was a bit like, (program staff – ADI) will drive out to you with a car and pick you up and you just go with him and drive around for an hour or so, and I'm not sure, does it count as driving with a trainer, where your hours are doubled? Um, yeah and basically, all that I know, is that he comes, he picks you*

up, you do your driving and then he'll drop you off, and that's it.' (Stakeholder interview – Justice)

'Well I had my school to work mentor, who didn't actually know about it (licensing program) before me but I was kind of like nagging him about wanting to get my licence so then he looked into it and lead me to (program staff – ADI), so I only really knew about this because of him.' (Yarning – program client)

4.7.2.4 Cultural Safety

Key to acceptability and uptake of the program and its services was cultural safety and feeling of understanding that was experienced by clients. Clients attributed this to having the program delivered through an Aboriginal Community Controlled Organisation and by program staff that was Aboriginal and appropriate for the role.

'Well It was very, it was overwhelming with excitement, it was scary because it was something that I haven't done before but to feel safe and welcome and respected was one of the most best things of the course... It's good here (at ALS), again I feel comfortable, like when I see the flags I am just like yeah, this is home kind of thing.' (Yarning – program client)

'I think (program staff – ADI) presence - like he was just welcoming, he wasn't mean or uptight, he made it very fun, kind of thing, I just felt really safe in his presence.' (Yarning – program client).

4.7.2.5 Flexibility in service delivery

A theme identified by stakeholders and clients was the importance of flexibility and adaptability of program delivery. Stakeholders highlighted that conflicting commitments of clients, such as work, family, education and medical appointments, often took precedence over driving instruction. This included providing driving lessons: on weekends; between various locations so clients could perform driving lessons to and from appointments, and; before business hours so that lessons would serve the dual purpose of transportation to client's place of work or education.

'It's very flexible, and I can let him know all my availabilities and we'll find a time that suits.' (Yarning – program client)

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4.7.2.6 Appropriate service provider

Stakeholders identified unlicensed driving and driving under the influence as increasing issues of concern within the ACT and noted that these issues contribute to Aboriginal and Torres Strait Islander peoples' contact with the justice system. Stakeholders expressed that Aboriginal Community Controlled Organisations that are connected to the justice sectors are best placed to deliver driver licensing services to Aboriginal and Torres Strait Islander people in the ACT.

> *'With Aboriginal Legal Service though, they're the frontline of helping our mob in the court system. And if you look at the courts, there's some of our guys have been incarcerated because traffic fines or no licences.'* (Stakeholder interview – Justice)

> *'Aboriginal Legal Services as they are generally the first organisation to do early intervention work and diversion from the courts with regards to road safety crimes. Generally speaking, the group of people ALS are working with often have very complex needs as vulnerable people, and these are very often associated with road and traffic offences…. I am very supportive of an Aboriginal Community Controlled Organisation undertaking this role, particularly as ALS have established relationships in the community…With ALS providing the project in the Community, it offers the community a culturally safe avenue while also supporting ALS through Aboriginal organisation self-determination and ownership in the ACT community... Should this fail, it is my opinion, that the project should still sit with an Aboriginal Community Controlled Organisation for the same reasonings including cultural safety and proficiency.'* (Stakeholder interview - Justice)

4.7.2.7 Wellbeing

Through yarning, program clients shared how obtaining a driver licence has impacted on their lives beyond the ability of being able to drive. How it is has improved their wellbeing, as it relates to their: self-confidence; motivation to pursue education and employment opportunities; independence and the ability to support their families.

> *'He's a good fellow (program staff - ADI), I have so much respect for him, with the project, like I'm so thankful that they do have this running through the Aboriginal Legal Service. I'd like to thank everyone that organises it, funds it and I hope to see it keep going in the future cause it really does, it does make a difference to people's lives and you know one day you could be sad and down, then you can get your licence and have that support and your life's changed forever.'* (Yarning – program client)

'Um, to help me with my — for employment opportunities. To also take the stress and — stress and pressure off my family and my partner, because they were having to give me lifts to and from work.' (Yarning – program client)

'My plan is to once I get my licence to go back into study so I can also further my job options again and then maybe also look at doing some volunteer work on the side.' (Yarning – program client)

'Um, I've definitely felt more independent now and that I'm – you're not relying on anyone else to get the places I need to be, or to do things I need to do.' (Yarning - Program clients)

'It helped dramatically with my three children, getting them to school their attendance has gone through the roof now because I can get them there. If I didn't have a driving licence like on rainy days I wouldn't be able to send them to school...It's the little things that made a big big difference in my life and having (program staff - ADI) come past and do the lessons it's just changed my life dramatically like being able to do shopping without having to carry fifteen bags on the bus, like that's the biggest yeah – like its dramatically changed my life for the better.' (Yarning – program client).

4.8 Discussion

This evaluation is the first to describe a culturally relevant driver licensing program delivered to Aboriginal and Torres Strait Islander peoples within Australian Capital Territory. The pilot program serviced a broader scope of clients beyond its target group and was delivered in a culturally relevant way, accepted by the communities in which it serviced and was found to impact on the wellbeing of clients who participated.

The program reached Learner drivers and jobseekers, however despite being delivered through an organisation linked to the justice sector, it did not engage to its full potential with clients in contact with the Justice System. Literature has documented associated improvement in employment outcomes for jobseeker clients accessing licensing programs being delivered through organisations linked to the employment sector [27]. An area for closer examination would be research that seeks to understand the relationship between the type of host organisation responsible for delivering licensing programs and characteristics of clients accessing the program.

In line with the known barrier to licensing for Aboriginal and Torres Strait Islander peoples [3, 28], this pilot revealed within the ACT 'Driving instruction and assessment with a qualified Aboriginal Instructor' and 'Access to appropriate vehicles for practice and assessment' are the critical services needed particularly for Aboriginal and Torres Strait Islander young peoples aged 16-24years. Furthermore, since program delivery, recent changes in the GLS of the ACT has come into action from the 1 January 2020 which has introduced a mandatory 100 hours of supervised driving instructions including 10 hours at night for Learners drivers and a staged increment in Provisional licensing from P1 to P2, for those under the age of 25 years[14]. The previous requisites for obtaining a driver licence within ACT based its GLS upon a Competency Based Training and Assessment (CBTA) system[14]. Where unlicensed drivers complete a 'Road Ready' course to become a Learner driver who then are required to develop 23 specific competencies to be assessed before being allowed to drive unsupervised[14, 29]. The previous CBTA system of the ACT arguably is less onerous to complete than the requisites of the new approach. These changes in the ACT GLS requirements pronounces the need for the sustained delivery of culturally relevant driver licensing programs within the ACT.

Effectiveness and impact of a program is commonly measured on the output of outcomes (i.e., licensing attainment) whereas when applying a decolonised lens, consideration to a wider context should be applied to align with the holistic framework important amongst Aboriginal and Torres Strait Islander peoples worldview[12, 30]. Therefore, an important measure reported was the impact that obtaining a driver licence had towards improving clients' self-confidence, motivation to pursue education and employment opportunities, and ability to provide for self and family. Measures which notably contribute to improving the health and wellbeing of Aboriginal and Torres Strait Islander peoples[31]. Provisions in future program designs that include psychometric scales questionnaire pre and post program and client follow-up post program for education and employment outcomes would allow for the impact on wellbeing to be qualified and validated. Further towards a holistic approach, a strength of this program was in a design that embeds Aboriginal and Torres Strait Islander knowledge throughout – from program inception through community engagement, program design, implementation, through to the evaluation process. This collaborative approach to work with Aboriginal and Torres Strait Islander peoples in all stages, aligns

with the newly informed strategies for research and programs aimed at improving health and wellbeing[32]. The sustained funding of programs that are Aboriginal and Torres Strait Island led from inception to evaluation are important to bringing vital services to communities as informed by their self-determined needs

Often reported as a barrier to effectively delivering licensing program is staffing capacity[33]. This program, like other culturally relevant licensing programs, relied on one-on-one driver licensing support from the ADI, which is not feasible in a GLS that requires many hours of supervised driving practice and therefore, compromises the ability to sufficiently deliver program services with high fidelity. Heavy workloads is commonly experienced by Aboriginal and Torres Strait Islander peoples working within communities[34, 35] and due to personal connections, the demand for their availability and professional service, work commitments often extend to times outside of normal business operating hours. Flexibility in the delivery approach of program services is a common theme that is recognised to be effective for achieving licensing attainment outcomes however, the additional workload that this places on program staff is demanding and comes at a cost to fidelity, program administration and data collection[10]. Generally, as stand-alone services, driver licensing programs are often placed within a host organisation with a different primary business activity[10, 16, 27]. Consideration for support from host organisation staff or investment into additional licensing program staff may result in improved delivery of program services.

A strength of this evaluation was it was led through Indigenous research staff which allowed Indigenous epistemology to be applied that enabling a holistic approach to be used when assessing program effectiveness which saw the inclusion of measures such as the impact on the wellbeing of clients.

A limitation of this evaluation was the low response rate from stakeholders and program clients, respectively this was attributed to limited availability of stakeholders from each organisation to participate and difficulties involved in: contacting client's post-program; recruiting clients to participate; and with clients not attending appointments once scheduled. Lower number of stakeholder interviews and clients yarning compromised data saturation and the integrity of themes developed. However, this was a pilot program so evaluation of larger scale programs should consider increasing time frames required for follow-up and methods to improve follow-up response rates.

4.9 Conclusions

This driver licensing pilot program reached Aboriginal and Torres Strait Islander Learner drivers and job seekers within the ACT but failed to reach those in contact with the Justice system. The program was delivered in a culturally relevant way acceptable to community and increased licence attainment amongst clients experiencing transport disadvantage – highlighting the feasibility of delivering licensing programs in the ACT. Greater efforts need to be placed into the engagement process, administration and to provide additional resources into program staffing. This will assist the workload of program staff to maximise provision of key program services.

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4.11 Supplementary tables and figures

4.11.1 Figure S1: Stakeholder interview questions (ACT Aboriginal and Torres Strait Islander Driver Licensing Program Evaluation)

Name………………………………………………………………………………....

Organisation……………………………………………………………………....

Position in Organisation………………………………….......................

Date………………………………………...

Name of interviewer………………………………………………………….

1. What is the main role of your organisation?

2. What services relating to road safety, driver licensing or driver training do you provide? How often are these run?

3. Please describe how your service interacts with other local service providers?

4. Who do you think would be best placed to provide services such as driver licensing in the community?

5. What are the key driver licensing issues you are aware of in this community?

6. What has been the impact of these on the community?

7. What else do you think could be done to address the driver licensing issues?

8. What are the key road safety issues you are aware of in the local community?

9. What has been the impact of these on the community?

10. What else do you think could be done to address the key road safety issues?

11. Are you aware of the ACT Aboriginal and Torres Strait Islander Driver Licensing project? Do you know what services it offers?

12. Are there any other comments that you'd like to make?

4.11.2 Figure S2: Client Yarning indicative questions (ACT Aboriginal and Torres Strait Islander Driver Licensing Program Evaluation)

Gender (please circle)	Female / Male
Age	
Aboriginal and/or Torres Strait Islander	YES / NO
Did you hold a drivers licence before this project	YES/EXPIRED OR SUSPENDED/NO
Do you currently have a valid driver licence	YES/NO
Are you currently employed (full-time/part-time/casual)	YES/NO
Were you employed before starting this licensing project	YES/NO
Indicative Questions: 1. Describe your experiences in obtaining a driver's license (prompt with questions about barriers and facilitators) 2. What made it hard for you to get your license in the past? 3. Has the ACT driver licensing program helped you? If yes, how has it helped? 4. Did Program staff help you get proof of identification, driving lessons and other things you needed to get a license? YES/NO If yes, how did they help? If No, why were they not able to help?	

5. Were you comfortable with the organisation (ALS) that delivered the driver licensing program? YES/NO if yes what was it about the ALS that made you feel comfortable? If No, what was it about the ALS that did not make you feel comfortable?

6. Can you tell me anything that would make the ACT driver licensing project better?

7. In your experience, how important is it for you to have a driver licence when it comes to finding or keeping a job?

8. Can you tell me in your experience, as a result of this project, has getting a driver licence helped you in finding, changing, or keeping a job? If yes, in what way has it helped you?

4.12 Conclusion to Chapter Four

Chapter Four emphasised that there is a need for the evaluation of programs in each State and Territory jurisdiction. It revealed that the delivery of program services was tailored according to the needs of clients residing in the ACT as certain services were provided with high dosage where other services were not. Evaluations will allow us to better understand what works and what does not work and in doing so enables us to better direct program resources (funding or staffing) to the program services that are in demand. Further, this process evaluation highlighted the capacity to include cultural components as an evaluable outcome. As highlighted in Chapter Two, this can be used as a flexible foundation towards a standardised evaluation framework for licensing programs that is culturally relevant for communities.

In line with the messaging in Chapter Two, by applying a holistic approach we see in this chapter that impact and effectiveness of a program may not only rest on licensing attainment outcomes, but also on other measures such as wellbeing and self-esteem which can have far-reaching positive effects in the lives of clients.

Chapter Five: The road beyond licensing: the impact of a driver licensing program on employment outcomes for Aboriginal and Torres Strait Islander Australians

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5.1 Publication details

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5.2 Author contributions

RI, PC, KH, KC, TS and JB contributed to program design and development. PC, JB and BP contributed to program implementation. BP was a major contributor to the manuscript. BP, PC, KH, KR, MK, NY, KC, TS and RI contributed to the design of the methods, drafting and editing of the manuscript. KR was a major contributor to statistical analysis. All authors have read and approved the final manuscript.

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Driving Change Youth Workers, Steering Committee, Investigative Committee and the Driving Change communities.

5.4 Introduction to Chapter Five

It is intuitively recognised that in regional and remote areas of Australia having a driver licence and access to a suitable private vehicle is necessary for employment. Chapter Two highlights there has been an increase in the delivery of culturally relevant licensing programs and that there is limited evidence available that explores the link that obtaining a licence has on the employment outcomes of clients. Previously in Chapter Two it was reported that few programs had examined a correlation between clients obtaining a licence and then going on to secure employment, and Chapter Four reported the impact that obtaining a driver licence had towards improving client's wellbeing, self-esteem and self-confidence. Herein, Chapter Five will build upon this body of evidence by measuring the impact of a culturally relevant licensing program (Driving Change) on employment outcomes of clients.

5.5 Abstract

Background: With increasingly tough graduated driver licensing laws in all Australian States and Territories, driver licensing support programs are recognised as being important to support Aboriginal and Torres Strait Islander peoples to obtain a driver licence. Such programs appear to improve licensing attainment rates, but few studies have examined the broader impact that these programs can have. This research aims to 1) examine the impact of a New South Wales (NSW) based driver licensing support program (Driving Change) on client employment outcomes; 2) assess the influence of geographical area of program delivery on driver licence attainment.

Methods: Driving Change was delivered from February 2013 to August 2016 in 4 urban and 7 regional Aboriginal communities of NSW. Clients were followed-up at 6 months or more following contact with the program as part of routine program operations. Descriptive statistics and regression models were used to analyse data.

Results: From 933 clients contacted 254 agreed to provide feedback, a response rate of 27%. Those that responded were mostly female (57%), aged 24 years and under (72%), unemployed (85%) with secondary education or less (71%) and from a regional area (74%).

Adjusted logistic regression indicated that clients who achieved an independent licence were more likely (OR: 2.5, 95% CI: 1.22 – 5.24, $p = 0.011$) of reporting a new job or change in job than those who did not attain a licence. Clients from regional areas were more likely (OR: 1.72, 95% CI: 1.27 – 2.33, $p < 0.001$) to gain an independent licence than those from urban areas. There was no difference in employment outcomes (OR: 1.2, 95% CI: 0.53 – 2.52, $p = 0.719$) for clients from urban compared to regional areas.

Conclusion: The Driving Change program appears to be effective in improving employment outcomes for those who gained a licence. Clients from regional areas were more likely to gain a licence compared to those in urban settings, and were predominantly young and unemployed, often a hard to reach cohort. Future licensing programs being delivered in regional areas need integrated pathways into employment opportunities to provide holistic services that address the social and economic challenges faced by Aboriginal and Torres Strait Islander Australians.

Keywords: Aboriginal, Torres Strait Islander, Employment, Driver licensing support program, Driver licence

5.6 Introduction

Australia has a vast land mass. With its population widely spread across major cities and regional and remote towns, access to public or private transport is necessary for everyday life. Where there is an inability to access public or private transportation individuals experience transport disadvantage. In regional and remote towns of Australia compared to major cities there are fewer public transportations options, therefore having a valid driver licence and access to private transport is essential for mobility, social inclusion and participation in critical activities such as employment[1, 2]. These geographical areas are often further associated with profiles of lower socioeconomic status and lower levels of average household income which are known barriers to obtaining a driver licence and to ownership of a private vehicle[1]. Higher proportions of Aboriginal and Torres Strait Islander First Nations Australians reside in regional and remote areas than do non-Indigenous Australians[3]. Although poor data precludes robust estimates, the percentage of licence holders amongst eligible Aboriginal and Torres Strait Islander population aged 16 years and above is considerably lower than 70%, which is the observed rate amongst eligible non-Indigenous Australians[2, 4]. Transport disadvantage can therefore disproportionately impact Aboriginal and Torres Strait Islander Australians and contribute to a cycle of licensing adversity[5], whereby people who have no licence have limited access to health facilities, job options and study opportunities[1].

Culturally relevant driver licensing programs have been delivered with increasing frequency over the past 10 years to support Aboriginal and Torres Strait Islander peoples to obtain a driver licence, however very few of these programs have been evaluated[6, 7]. The few evaluated programs have shown an increase in licensing attainment amongst program clients[8-11]. These programs are predominantly delivered in regional and remote settings where transport disadvantage is most pronounced, and employment rates and education levels are lowest[12, 13]. For Aboriginal and Torres Strait Islander peoples, employment rates vary considerably by geographical area lived compared to non-Indigenous Australians. For instance, employment rates for Aboriginal and Torres Strait Islander people are highest in major cities (54.1% for Aboriginal and Torres Strait Islander people compared with 71.8% for non-Indigenous Australians), followed by inner regional (47.2% versus 70.7%), outer regional areas (43.5% versus

72.3%) and lowest in remote (39.8% versus 79.3%) and very remote areas (30.8% versus 85.3%)[13].

Employment is a strong social determinant for improving Aboriginal and Torres Strait Islander people's health outcomes[14, 15] and those who are economically advantaged are more likely to have lower prevalence of health risk factors[16]. Though employment rates have been on the rise over the last decade from 48.2 to 49.1% between 2008 and 2018-2019, there is still much needed improvements to reach parity with the 75% employment rates achieved by the labour force (age 15-64 years) of non-Indigenous Australians[17]. It is known that higher levels of education and training are important determinants for reaching parity in employment outcomes[18], but studies have also shown from the perspectives of Aboriginal and Torres Strait Islander young peoples the importance placed on driving as being an enabler to gaining employment and accessing job opportunities[19]. Our past research also showed that having a licence is associated with increased likelihood of having a job[2]. Despite the emerging evidence limited research beyond this has been placed on further exploring the broader impact that these programs have beyond licence attainment.

In summary, a high proportion of Aboriginal and Torres Strait Islander peoples reside in regional and remote areas[3], where they experience the lowest rates of employment[13], where transport disadvantage is most pronounced and where licensing programs are being delivered with increased frequency[7]. The purpose of this paper is to 1) examine the impact that driver licensing programs have on client employment outcomes; 2) assess the influence of geographical area of program delivery on driver licence attainment. This will be achieved through post program data analysis of a New South Wales (NSW) based Aboriginal and Torres Strait Islander driver licensing support program - Driving Change.

5.6.1 The program

Driving Change was a culturally relevant, end-to-end driver licensing program that provided support to Aboriginal and Torres Strait Islander peoples to navigate through the NSW Government's graduated licensing system and obtain a driver licence.

Informed development of this culturally relevant program was underpinned by extensive community consultation, and formative evaluation[20, 21]. This included a pilot

survey in a remote north-western NSW Aboriginal community at Bourke Aboriginal Medical Service[22], then a large observational study involving four Aboriginal community-controlled health services[23]. Stakeholder interviews were also conducted with a range of policy makers and key community contacts to understand both barriers to licensing, licensing rates and impact of licensing[2]. As a result, the Driving Change program was developed and implemented in a way acceptable to clients and stakeholders[21]. Governance of the program included consistent participation from Government stakeholders, through involvement of the Transport for NSW Centre for Road Safety (TfNSW CRS) and Roads and Maritime Services (Aboriginal programs) in the programs steering committee.

The program was delivered from February 2013 to August 2016 widely across the State of NSW in 11 Aboriginal communities of: Kempsey, Taree, Raymond Terrace, Redfern, Campbelltown, Shell harbour, Dubbo, Dareton, Condobolin, Griffith and Wagga Wagga[8]. The program facilitated access to local services, intensive case management, providing mentoring for young people through the licensing system and provided support to address licensing sanctions imposed by the State[8].

5.7 Methods

5.7.1 Design

This study is a quantitative analysis of post program client interview data.

5.7.2 Processes and measurements

Data was collected as a part of the program's quality assurance processes; clients who attended the program were systematically followed up between June 2014 – August 2016.

5.7.3 Baseline data

Upon initial contact with the program, baseline client data collected contained information on gender (male, female), age (16-24 and 25+ years), employment status (employed, unemployed), education (secondary educated or less, tertiary educated) and community of program delivery, as well as reasons clients were accessing the program and expectations.

5.7.4 Follow up data

As part of routine program operations, clients were contacted by phone 6 months or more after their initial contact with the program and invited to participate in answering a set of open-ended post-program questions to ascertain: the levels of satisfaction with the program, services and support accessed; licensing outcomes; additional program outcomes reported for employment, education, family responsibilities and/or social inclusion. The specific outcomes of interest for analysis were:

- "Whether the client had a change in licence type as a result of the program"
- "Whether since joining the program the client has had a change in work, and if yes to specify employment change ('unemployed and now employed' or 'change jobs')"

The 11 communities where the program was delivered were stratified as urban areas or regional areas - regional areas encompassed inner regional, outer regional, remote and very remote. Stratification of communities as urban (Raymond Terrace, Redfern, Campbelltown and Shellharbour) or regional (Kempsey, Taree, Dubbo, Dareton, Condobolin, Griffith and Wagga Wagga) was in accordance with the classification of the Australian Bureau of Statistics Remoteness of Areas[24].

5.7.5 Analyses

Descriptive statistics (frequency and percentage distributions) were performed to determine respondents' characteristics.

Logistic regression models were used to estimate odds ratio of:

1. a) The association between licensing attainment and self-reported improvement in employment outcomes;

    b) Adjustment for age, gender and carer responsibilities; these were considered important as younger clients were more likely to be engaged in educational commitments, with females and carers more likely to have family priorities impacting on employment outcomes.

2. a) The association between geographical area on licensing attainment outcomes;

    b) Adjustment for literacy, household licensing status, level of contact with the program, age group and level of needs; as these variables influence the ability of a client to successfully obtain a licence.

3. a) The association between geographical area and self-reported improvement in employment opportunities;

   b) Adjustment for age, gender and carer responsibilities; as these variables were considered to impact most on employment outcomes.

5.7.6 Ethics approval

All methods were carried out in accordance with the relevant guidelines and regulations, and all experimental protocols were approved by the Aboriginal Health and Medical Research Council Human Ethics Committee of New South Wales (Eth: 964/13). Informed consent was obtained from all subjects and/or their legal guardian(s). Data was analysed using Statistical Analysis System (SAS) version 9.4 (SAS Institute, Cary, NC, USA).

5.8 Results

Nine hundred and thirty-three people enrolled in the Driving Change program, provided baseline data and were invited to participate in the 6-month follow up interview. A total of 254 clients out of 933 participated in answering the quality assurance post program questions, a response rate of 27%. The majority of those who responded were female, aged 24 years and under, unemployed, with secondary education or less and from a regional area at baseline (Table 1). Two key differences were observed at baseline between respondents ($n = 254$) and non-respondents ($n = 679$) – a higher proportion of respondents were employed (15% versus 9%) and tertiary educated (29% versus 20%) than non-respondents. Of the respondents, those reported gaining a job/or having a change in job proportionally were more often male, under the age of 24 years, secondary educated or less and resided in regional areas (Table 2).

Regression analyses highlighted in Table 3 indicted that clients who achieved an independent licence were more likely (OR: 2.6, 95% CI: 1.27 – 5.23, $p = 0.007$) to reporting gaining a job/or having a change in job. After adjustments were made for potential confounders (age, gender and carer responsibilities) the relationship still held with clients being more likely (OR: 2.5, CI: 1.22 – 5.24, $p = 0.011$) to report gaining a job/or having a change in job. For licensing attainment by geographical area, clients

participating in the program from regional areas were more likely (OR: 1.43, 95% CI: 1.04 – 1.97, p = 0.028) to obtain an independent licence than those from urban areas. After adjustments were made for potential confounders (literacy, household licensing status, level of contact with the program, age group and level of needs) the relationship held with clients participating in the program from regional areas being more likely (OR: 1.72, 95% CI: 1.27 – 2.33, p < 0.001) to obtain an independent licence than those from urban areas. There were no differences in clients reporting having gained a job/or having a change in job between urban or regional areas (OR: 1.1, 95% CI: 0.52 – 2.39, p = 0.780), including after adjusting for age, gender and carer responsibilities (OR: 1.2, 95% CI: 0.53 – 2.52, p = 0.719).

Table 1 Comparison of program client characteristics (respondents versus non-respondents).

		Respondents	**Non-Respondents**	**Program clients**
N (%)		*254 (27)*	*679 (73)*	*933 (100)*
Gender	Male	108 (43)	303 (45)	*411 (44)*
	Female	146 (57)	376 (55)	*522 (56)*
Age (years)	< 24	182 (72)	467 (69)	*646 (69)*
	> 25	72 (28)	212 (31)	*287 (31)*
Employment	Employed	38 (15)	61 (9)	*99 (11)*
	Unemployed	216 (85)	618 (91)	*834 (89)*
Education	≤ Secondary education	180 (71)	538 (79)	*718 (77)*
	Tertiary educated	74 (29)	141 (21)	*215 (23)*
***ROA**	Urban	67 (26)	148 (22)	*215 (23)*
	Regional	187 (74)	531 (78)	*718 (77)*

*Area classification according to ABS 2016 Remoteness of Area (ROA)[24]

Table 2 Respondent employment outcomes (gaining a job/or having a change versus unemployed/no change).

		Employment gained / changed	**Unemployed / no change in employment**
N (%)		*38 (15)*	*216 (85)*
Gender	Male	23 (61)	85 (39)
	Female	15 (39)	131 (61)
Age (years)	< 24	25 (66)	157 (73)
	> 25	13 (34)	59 (27)
Education	≤ Secondary education	23 (61)	157 (73)
	Tertiary educated	15 (39)	59 (27)
*ROA	Urban	14 (37)	53 (25)
	Regional	24 (63)	163 (75)

*Area classification according to ABS 2016 remoteness of area (ROA) [24]

Table 3: Regression analysis.

Model	Odds Ratio	Confidence Intervals (95%)	*p*-value
1 a)	2.6	1.27 – 5.23	0.007
b)	2.5	1.22 – 5.24	0.011
2 a)	1.43	1.04 – 1.97	0.028
b)	1.72	1.27 – 2.33	<0.001
3 a)	1.1	0.52 – 2.39	0.780
b)	1.2	0.53 – 2.52	0.719

* 1a) Association between licensing attainment and self-reported improvement in employment outcomes. | b) Adjustment for age, gender and carer responsibilities.
2a) The association between geographical area on licensing attainment outcomes.
b) Adjustment for literacy, household licensing status, level of contact with the program, age group and level of needs.
3a) Association between geographical area and self-reported improvement in employment opportunities. | b) Adjustment for age, gender and carer responsibilities.

5.9 Discussion

This study showed the direct impact that driver licensing programs can have on improving employment outcomes for Aboriginal and Torres Strait Islander clients and highlighted the influence that geographical area of program delivery has on licence attainment. We found that respondents who obtained a driver licence as a result of participation in the Driving Change program were more likely (OR: 2.5, CI: 1.22 -5.24, $p = 0.011$) to report gaining a job or having a change in jobs. Respondents from regional areas were more likely (OR: 1.72, 95% CI: 1.27 – 2.33, $p < 0.001$) to obtain a driver licence than those participating in the program from urban areas.

Health outcomes of an individual and their communities are closely linked to employment status, and the influence that this has on improving economic and social circumstances[14, 25]. Through post program follow-up, we highlighted a significant self-reported improvement in employment outcomes for clients who obtained a driver licence, and it was shown the majority (69%) of all clients who participated in the Driving Change program were under the age of 24 years. Young Aboriginal and Torres Strait Islander Australians between the ages of 16-24 years experience the highest rates of unemployment within their population[13]. Engaging these young people in programs that promote economic participation and social inclusion are important contributors to improving the health trajectory of the population[26]. The capacity displayed through this licensing program to capture a young cohort of the population who are unemployed serves as an opportune platform for continued engagement into employment pathways post licence attainment.

In existing efforts to target the younger aged population recommendations from the Australian Law Reform Commission (ALRC) 2018 indicated where Aboriginal and Torres Strait Islander young people are likely to complete secondary education and unlikely to face other identified obstacles (such as access to birth certificates), driver licence programs could constitute an elective in the school curriculum [4]. This does provide an opportunity to improve licensing rates amongst Aboriginal and Torres Strait Islander young peoples, but with any rise in numbers of young novice driver on the road there is also a risk of increased transport related crashes, injuries and deaths[23, 27]. To mitigate this risk, it is important that implementation of such culturally relevant driver licensing programs be tailored to employment requirements, for instance students

wishing to pursue an apprenticeship and/or trade. Results from this analysis indicate that respondents who achieved improved employment outcomes were predominately under the age of 24 years (66%) and were secondary educated or less (61%). Therefore, capturing this young target demographic whilst engaged in education is important as research shows the longer an individual remains not employed, not undergoing education and/or training, the more likely they are to remain unemployed[18]. Additional areas of interest could be focussed on the benefit of using licensing programs amongst current initiatives for keeping Aboriginal and Torres Strait Islander youth engaged in secondary education.

The Driving Change program was delivered within both urban and regional settings, with sites chosen for program delivery based upon: communities need, engagement, and support of program; the population of Aboriginal and Torres Strait Islander residents; and socioeconomic status of the area. Research shows employment rates in urban areas for Aboriginal and Torres Strait Islander peoples who are tertiary educated are comparable, if not higher, than that of equivalently qualified non-Indigenous Australians[12, 13]. Whereas unemployment and lack of job security disproportionately impact those with lower levels of education and those residing in regional areas[18, 25]. With lower levels of educational qualifications the importance of traineeships, certificates and licences (such as driver licences) become critical in securing employment opportunities[12, 18]. Our results support this showing that 63% of those who reported improvements in employment were from regional areas and further clients from regional areas were more likely (OR: 1.72, 95% CI: 1.27 – 2.33, $p < 0.001$) to obtain an independent licence than clients from urban areas. Recent evidence shows licensing programs are being delivered in regional communities with increased frequency[7]. These regional settings of program delivery provide an opportunity to further improve employment outcomes through facilitating access to employment pathways post licence attainment for unemployed or at-need clients. Pilot studies are needed to inform how this could be applied. One potential opportunity would be for program subsidisation by Service Australia which positions enrolment into licensing programs as a training service for eligible at need job seekers. Another opportunity could be to provide Aboriginal Employment Organisations with the capacity to host and deliver licensing programs within communities. This would enable unemployed clients

to be targeted and licensing program staff to be situated within an organisation best placed to secure placement into paid employment post licence attainment.

A key strength of this program leading to translation of outcomes, has been through direct Government collaboration where stakeholders from both Transport for NSW Centre for Road Safety (TfNSW CRS) and Roads and Maritime Services (Aboriginal programs) and representatives from a range of other key agencies formed members of the steering committee, which met quarterly. This allowed the program to be refined via input as it was implemented and importantly also allowed program outcomes and learnings to be fed directly back to government agencies with responsibility for the delivery of such services. This informed development and funding of a disadvantaged Driver Licensing Access Program which delivers services across the State[28], with TfNSW CRS representatives highlighting that this was directly informed by the program. Of the 11 sites that originally participated in the Driving Change program seven sites were awarded funding to continue local program delivery: two urban and three regional sites received funding through Roads and Maritime Services; and another two regional sites received NSW Department of Justice Community Safety Grant funding. It is evident that Government collaboration throughout the program delivery has resulted in meeting key recommendation of the Australian Law Reform Commission that '...*State and Territory governments enhance and commit to current government driver education programs, so as to extend the geographic reach of the program and the consistency of service in certain areas*...'[4]. Opportunities for direct Government collaboration where stakeholders from Department of Education, Skills and Employment or peak body Aboriginal Employment Organisation are members of driver licensing program steering committees may present as initial strategies to establish interagency collaboration between licensing and employment services.

A strength in program data was the inclusion of questions specifically related to employment outcomes which allowed for the programs impact on employment to be directly assessed. Historically no studies have reported licensing programs to deliberately include employment data and outcomes as an evaluable program component[7]. Understanding the types of jobs gained and characteristics of clients gaining employment will allow for greater understanding of the link between driver licensing and employment.

A limitation in program data was the homogeneity in those who participated in providing feedback, as most respondents were secondary educated (or a current secondary student) between the ages of 16-24 years. However, this may not be limited to post program analysis, as respondents' characteristics were representative of the characteristic of those who did not respondent.

5.10 Conclusion

Driver licensing programs appear to be effective in improving employment outcomes for Aboriginal and Torres Strait Islander clients who obtain a driver licence, and those in regional areas are more likely to obtain a driver licence than those participating in urban areas. Future licensing programs need to consider mechanisms for facilitating employment opportunities post program for clients who successfully obtain a driver licence. Developing such pathways will provide holistic and integrated services to address the social needs of Aboriginal and Torres Strait Islander Australians.

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5.12 Conclusion to Chapter Five

This chapter showed that the Driving Change driver licensing program likely improve employment outcomes for Aboriginal and Torres Strait Islander clients who obtained a driver licence through the program. Given this, future licensing programs should collect client employment details such as employment status and industry of employment pre and post program. This will allow researchers to better understand transitions in employment and provide further evidence to support the establishment of suitable collaborations linking driver licensing programs to employment organisations. This will promote holistic approaches that will be suitable to address the social and economic needs of young Aboriginal and Torres Strait Islander Australians.

Chapter Six: How does a driver licensing program influence transitions into employment for Aboriginal and Torres Strait Islander people? Using the Self-Determination Theory to explore client experiences of a driver licensing pilot program in the Australian Capital Territory.

6.1 Publication details

The chapter is a reformatted version containing identical text of the manuscript under review entitled 'How does a driver licensing program influence transitions into employment for Aboriginal and Torres Strait Islander people? Using the Self-Determination Theory to explore client experiences of a driver licensing pilot program in the Australian Capital Territory'. Porykali, B., Cullen, P., Hunter, K., Kang, M., Ivers, R (2022). BMC Public Health.

6.2 Author contributions

BP contributed to conceptualisation, collection, analysis of data and was a major contributor to writing the chapter. KH, MK, NY, PC and RI contributed to drafting and editing of the chapter. All authors have read and agreed to the published version of the manuscript.

6.3 Introduction to Chapter Six

The pilot program delivered in the Australian Capital Territory (ACT) highlighted the impact on wellbeing of clients who obtained a driver's licences through the program.

Transitioning into employment for Aboriginal and Torres Strait Islander peoples is an area that is of importance, however to the authors' knowledge no research is available that contextualises how or why this transition occurs. Psychosocial theories aim to contextualise the transition into employment however, to the authors knowledge, no research has been undertaken to understand how this applies to Aboriginal and Torres Strait Islander peoples. This chapter will aim to apply the self-determination theory (SDT) framework to understand transition into employment for clients of an Aboriginal and Torres Strait Islander driver licensing pilot program in the ACT.

6.4 Introduction

Employment outcomes for Australia's working age population of 15-64 years are measured by activity within the domestic labour market, that is, being engaged in employment, education or training[1]. In a Western paradigm the human capital theory situates education and training as key determinants for employment, where education is seen as an economic investment with productivity and labour market activity returns[2, 3]. For those who are not engaged in the labour market, transition into employment within the shortest possible timeframe is crucial, as the longer an individual is not in employment, education or training (NEET) the more difficult it becomes for them to transition into the workforce[4, 5].

Since 2008, there has been a rise in employment rates amidst focussed attention from Governments and peak regulatory bodies towards reducing unemployment rates for Aboriginal and Torres Strait Islander peoples[6]. However, the population unfortunately is still over-represented in national unemployment figures and on average have lower levels of education and training needed to secure employment opportunities[7-10]. The causes of these high unemployment rates are multifactorial, stemming from the ongoing impact of colonisation, and multiple studies have explored the effects that poor health, disability, incarceration, transport disadvantage and geographical location can have on an individual's likelihood of employment[11-14]. Additionally, workplace prejudice, intergenerational trauma, fertility rates, family structure and cultural obligations also contribute to labour market disadvantage experienced amongst this population[11, 15]. It appears that theories like the human capital theory used to predict employment and labour market activity do not adequately consider Aboriginal and Torres Strait Islander 'ways of knowing' and 'ways of doing', where investment into culturally relevant components can influence outcomes of employment activity such as do educational qualifications[3]. Therefore, improving formal education levels needs to be combined with policies aimed at combating other factors contributing to labour market disadvantages[11, 16]. Understanding the social positioning of Aboriginal and Torres Strait Islander peoples will provide insight for developing effective strategies aimed at improving labour market activity and employment outcomes.

Emerging evidence has indicated that successfully obtaining a driver licence through culturally relevant driving licensing support programs appear to improve employment outcomes[14, 17-19]. Transitions in employment can be seen as the movement from unemployment into employment, reemployment and labour market mobility (changing jobs, changing occupation, transition from employment to self-employment and vice-versa). This has shown to be facilitated by several personality and individual intrinsic variables such as high-self-esteem, wellbeing and high job self-efficacy[5, 20]. The reason as to why and how obtaining a driver licence through a licensing support program improves employment outcomes is not yet well understood. What is known, is that having a driver licence improves options for employment and access to employment services[19] and through program evaluations, it has been shown that clients who successfully obtain a driver licence post program, report an improved sense of wellbeing, self-esteem, autonomy and motivation[14, 21].

Social psychological theories are applied to understand and explain social behaviours, thoughts and developments. The self-determination theory (SDT) is one social psychological theory explaining human motivation and personality in social environment contexts[22]. It states that intrinsic motivation is inherent in all individuals and develops naturally in an integrative process. For intrinsic motivation to flourish effectively towards healthy development and psychological well-being, there needs to be an interplay of three specific psychological nutriments of autonomy, competence and relatedness[23]. Autonomy relates to the volition to perform a behaviour according to one's will; competence is the skills and confidence needed to perform a specific behaviour; and relatedness being the support for autonomy through one's own social network. The theory proposes that '*...conditions supporting an individual's experience of autonomy, competence and relatedness foster the most volition and high quality of forms of motivation and engagement for activities, including performance, consistence and creativity...*'. Therefore, the intrinsic motivation for engagement in activities such as employment can either be enhanced or undermined based on the individual experience of autonomy, competence and relatedness[23, 24]. This Chapter aims to use the framework of the SDT to examine the factors that promote transitions in employment (Fig. 1) for clients of the Australian Capital Territory Aboriginal and Torres Strait Islander driver licensing pilot program.
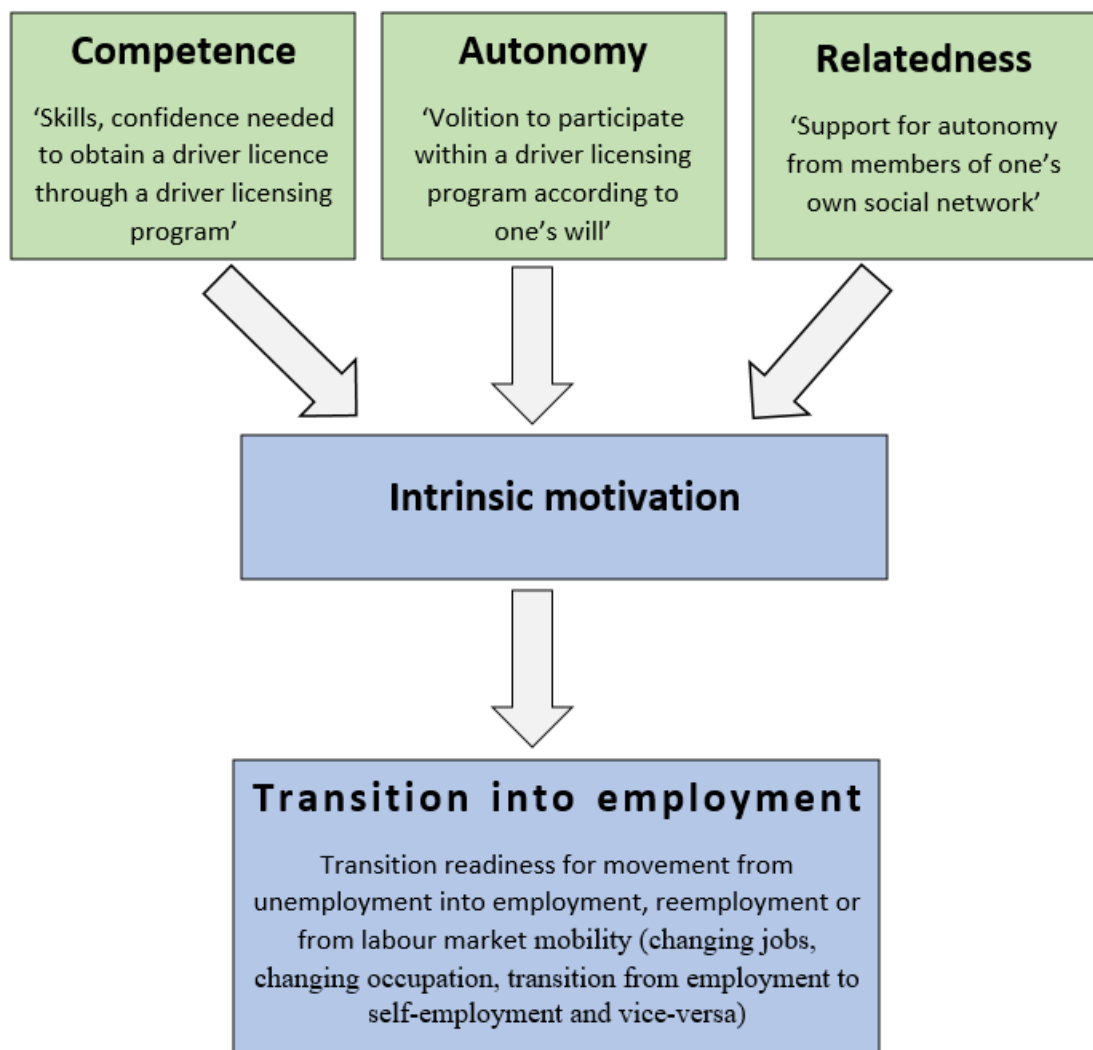
Fig 1. Application of the self-determination theory to describe in the context of a driver licensing program the connection between attainment of a licence, and employment[23].

6.4.1 The Program

The Australian Capital Territory (ACT) pilot program targeted Aboriginal and Torres Strait Islander Learner drivers (pre-Learners and those with a Learner licence), job seekers and those in contact with the justice system. The program was co-designed with Canberra's Aboriginal Legal Service NSW/ACT Limited (ALS), ACT Aboriginal and community stakeholders, and a panel of leading experts in the field of transport and driver licensing. The program delivered by the ALS and funded through the Justice and Community Safety Directorate, ACT Government, 2017 ACT Road Safety Fund Grants

Program. The Program was implemented for 24-months, from 1 December 2017 – 1 December 2019.

An Aboriginal person was employed to deliver the program and trained as an Accredited Driving Instructor (ADI) and case manager for clients. This allowed the program to be delivered in a culturally relevant way that placed connection and understanding to the clients' spiritual, social, emotional and physical identity as an Aboriginal or Torres Strait Islander person. The ADI role was intended to provide practical assistance and advocacy for clients to fulfil the requirements of the ACT driver licensing system by providing seven key services[21]. The full scope of the seven service areas is outlined in Chapter Three.

6.5 Materials and Methods

6.5.1 Design
This study is a qualitative analysis of post program client interview data.

5.5.2 Processes and measurements
Data were collected as part of the post program follow up; all clients who participated were systematically followed up between January 2021 and March 2021.

6.5.3 Baseline Data
Upon initial contact with the program, baseline client data collected contained information on gender (male or female), age (16-24 and 25+ years), labour market activity (employment and education status) as well as primary reason(s) for accessing the program.

6.5.4 Follow up data
All program clients were contacted 6 months or more post-program completion and invited via SMS to participate. From those who responded, subsequent phone call and/or email were made for confirmation. A set of indicative questions were asked, aimed at exploring client post program employment outcomes and experiences (Supplementary Table S1).

6.5.5 Analysis and framework
A deductive approach was applied and thematic analysis used to develop themes around the SDT framework of autonomy, competence and relatedness. Transcripts were read by researcher (BP) and NVivo (Version 12) was used to organise and code into central themes (Table 1).

Table 1. Self-determination theory framework measures.

Measure		Data source
Autonomy	Factors the facilitated the client's volition to participate in the program and employment.	Program data.
Competence	Did the program provide the skills needed to engage in forms of employment.	Post program client interview.
Relatedness	Whether the program offered support for autonomy from the clients own social network	Post program client interview.
Intrinsic motivation	Whether the program facilitated high quality forms of motivation to engage in employment.	Post program client interview.
Transition into employment	Whether the program was effective in influencing any change in employment outcomes	Program data and Post program client interview.

6.5.6 Ethics approval

Ethics (2019.LRE.00053) was approved on 08 June 2020 by the ACT Health Human Research Ethics Committee's Low Risk Sub-Committee.

6.6 Results

A total of 74 clients accessed the program. Clients were mostly between the ages of 16-24 (76%) compared to those 25 years and above (24%); more females (65%) accessed the program than males (35%); labour market activity ranged from those who were employed (12%) being full-time, part-time, casual, or self-employed; those undergoing education (secondary/tertiary) or training (40%); and those who were not in

employment, education, or training (48%) made up the largest proportion of cohort within this category.

Seven of 74 program clients participated in the in-depth post program client yarning. All respondents successfully obtained a Provisional licence and were females aged between 16-24 years of age. At time of enrollment into the program and prior to obtaining a Provisional licence, from the seven respondents; three respondents were employed to some capacity, three were in education or training and one respondent indicated being NEET. Five of the seven respondents reported having transitions in employment post licence attainment; one reported beginning to actively seek employment opportunities and the remaining respondent who was NEET reported actively pursuing educational opportunities.

6.6.1 Autonomy

The key facilitators for clients to participate in the program were based on family responsibilities. The need to support and care for family was the central reason for most clients participation in the program and wanting employment:

> *'...Um, to help me with my — for employment opportunities. To also take the stress and — stress and pressure off my family and my partner, because they were having to give me lifts to and from work...'* (AR)

> *'...Um, it was definitely just for independence... Um, especially going into uni and stuff, um, it's pretty far away. So catching buses was really inconvenient for me. So I guess getting my licence was super useful and just gave me so much independence. I could help out my mum out with, um, getting my siblings around...'* (CM)

6.6.2 Competence

It appears that learning to drive and particularly obtaining a licence was a key skill needed to transition into employment. Clients who successfully obtained a driver licence expressed an improvement in self-held perception of competence to perform job requirements, ability to seek out and actively apply for employment opportunities:

> *'...I feel like seeing that questions and not having my licence would have definitely deterred me from applying. Um, yeah, so I feel like I'm definitely very lucky to have to it just because if I – if I weren't to have my licence and I did look at those jobs, I probably wouldn't have applied at all...'* (CM)

'...Definitely increased the confidence. Um, just makes me feel like I'm more fit for the job. Even, um, with babysitting roles and stuff I've been really, like, clicking that licence button is just super good...' (RJ)

6.6.3 Relatedness

The cultural relevance of the program was the primary factor impacting on relatedness for clients. The program provided licensing support in an Aboriginal community-controlled organisation, but in particular the driving support came from an Aboriginal driving instructor which appeared to be a factor influencing successful completion of driving lessons for attainment of a licence:

'...And, um, I just found after meeting — I did my lessons with (Aboriginal Driving Instructor)...After I met (Aboriginal Driving Instructor) and he, like I had one lesson with him, he just — I don't know what it was, but he seemed to be able to calm my anxiety...down without making me feel stupid about it...' (AR)

'...Well It was very, it was overwhelming with excitement um it was scary because it was something that I haven't done before, um but to feel safe and welcome and respected was one of the most best things of the course, um yeah just it was fun towards the end and um I sorted missed doing the lessons after...I think (Aboriginal Driving Instructor) presence like he was just welcoming he wasn't mean or uptight, he made it very fun, kind of thing, um I just felt really safe in his presence, yeah...' (CM)

Conversely, client expressed past experiences from not having similar support was expressed negatively:

'...Um, I just wanted to be taught by — uh, I didn't really like being taught to drive by an (Non-Indigenous) person... Um, they felt — they sometimes did make me feel uncomfortable...' (AR)

'...and just how like, they would have um like they were just they weren't about their job. They were just like, you're doing this wrong, you're doing that wrong. So I didn't, it stopped me a lot, for a long time...' (CM)

6.6.4 Intrinsic motivation

Through the interplay of autonomy, competence and relatedness clients completed the program, obtained a driver licence and as a result reported improvement in self-esteem and self-confidence:

'...dramatically (ALS service helped), like I've come out of my shell, let alone like that was the biggest thing like even though it was just driving lessons, after that my confidence boosted – you know I was like I can do this I can do anything, kind of thing...' (EB)

'...It's helped me with confidence, and knowing that I can take my time and I don't have to try push myself past my limits...' (KH)

'...I definitely, um, my confidence and my motivation went up by a hundred per cent... um, when I got my licence, yeah...' (RJ)

'...I'm doing really well with it. I've — I have worked in the last few years, like, since getting it, I've gained a lot more confidence within myself.... And it's — yeah, it's been — it's been really good...' (AR)

6.6.5 Transition in employment

Clients who reported improvement in self-esteem and self-confidence indicated that they had transitions in employment. Namely, it saw a client who was unemployed transition into employment:

'...Yeah, just a licence, in general. Just, um, just because it was harder, you know. I didn't really want to work in retail, that kind of stuff. And when I got that cleaning job, I was just, you know, going house to house driving around. So it was a lot easier on me, just to drive my own car and do it all, and that kind of stuff - - -I just needed a job. So I was like, yeah. I'll just apply for that one - - - and then - - - then I got it straight away, pretty much so it was really good...' (AA)

A client who was employed prior to enrolment in the program had further improvements in employment capacity:

'...Um, no, not really. It was just — because I was a casual I'd get phone calls, you know, a couple of hours before a shift - - - asking if I could work. And if I had like had my licence then I would have been able to take that shift on but because I didn't have that - - - I wasn't often able to say yes, because I'd have to try and find someone to take me to work...Um, so it made it easier after COVID to find more work because I was able to expand my places of work. So I could — I didn't have to look at places in and I could look at the City, Belconnen, Fyshwick, Southside...And knowing that I'd be able to easily get there and home made it a lot better...' (AR)

It facilitated labour market mobility (changing jobs or occupation):

> *'...Oh one hundred per cent. I don't think I would have the job I have today, without a licence....Yeah. So I work for an Indigenous IT company. Um, we get contracted out on Defence jobs or Department of Agriculture jobs, so I'm needing to get to those places. I need to drive there or, you know, I need to be able to attend face to face and see people and do meetings and everything again. Transport, public transport just isn't reliable, sometimes, or you have to — you need an extra hour and a half to get to wherever you need to go or - - -Oh. No, no. It was just an opportunity that came up, and I've been in it ever since...'* (RJ)

> *'...It was part-time in the city, like, as a, um, like a working in a restaurant....Yeah. So after I got my licence, I changed my job into a delivery driver for [Company]....And then I now have a full-time job on the side of my [Company] delivery....I'm a – I'm a business trainee. So I work in Kingston which is again – it's like a 40 minute drive in the morning, so....Yeah. Easily. I wouldn't be able to get that job if I didn't have like a form of transport of my own...'* (YR)

6.7 Discussion

To the authors' knowledge, this paper is the first to apply the SDT framework to understand the transitions into employment for clients of a culturally relevant driver licensing support program. Those who participated in post program follow up were all female and between the ages of 16-24 years. The main reason for wanting to participate in the program stemmed from family responsibilities. Those who obtained a licence expressed an increase in capacity, ability, self-esteem, and self-confidence to actively seek employment and transition into employment.

A characteristic of collectivist cultures is the emphasis placed on the needs of the group over the needs of individuals, and that family and kinship plays a central role to identity. Family needs play a central role in Aboriginal and Torres Strait Islander culture[25] and overall was the primary reason for why clients chose to participate within the program. Sentiments expressed were that by obtaining a driver licence, clients could better assist with children or siblings' responsibilities and by achieving independence they could relieve parents of family responsibilities. The SDT identifies autonomy as an individual's volition to perform a behaviour according to one's will. What appears to be consistent is that clients who transitioned into employment expressed family responsibilities as the primary reason for wanting to participate in the program. Past studies have shown dosage – or level of support – received by clients within a driver

licensing program are contributing factors towards successfully obtaining a licence[26]. In addition to this, reasons for client participation may be an indicating factor that contribute towards successfully completing the program, obtaining a licence and further to transition into employment.

The SDT states the interplay of autonomy, competence and relatedness can increase or decrease intrinsic motivation[24]. Program clients who obtained a driver licence expressed an improved sense of self-esteem, self-confidence and wellbeing – which are key indicators of intrinsic motivation[23] and are known facilitators that promote transition into employment [5, 20]. Clients indicated a range of employment outcomes such as: beginning to actively seek employment; gaining a job; increasing work hours; changing work status from part-time/casual to full-time; and changing jobs or industries. It appears that transitions in employment and improvement in employment outcomes as described are correlated with improved intrinsic motivation. However, to validate this assumption it would be necessary to utilise an assessment tool capable of measuring intrinsic motivation of clients pre-enrolment and at post program follow up. Differing standpoints can be taken for-or-against using psychometric assessments amongst Aboriginal and Torres Strait Islander peoples. However, models such as the Intrinsic Motivation Inventory (IMI) can be adapted to assess intrinsic motivation, while displaying sensitivity for cultural safety and the impacts of trauma[27].

This paper provides an insight into how the innate basic psychological needs are met through a driver licensing support program which promotes transitions into employment. One of the covenants for self-determination is that Aboriginal and Torres Strait Islander peoples have the right to freely determine and freely pursue economic, social and cultural development[28]. Clients who transitioned into employment indicated that jobs chosen was a result of suitable options available at the time. With the increased intrinsic motivation and displayed capabilities of clients, by providing pathways into jobs and industries after successful program completion we may better promote engagement in the labour market and provide opportunities for individuals to freely pursue longer term economic development[29]. Furthermore, the SDT framework applied here can be viewed as cyclical as it has the potential to be applied across different settings from driver licensing program to within employment programs. Meaning that in any environment, by bolstering the nurturing components of autonomy, competence and

relatedness, we can foster improvements in intrinsic motivation for Aboriginal and Torres Strait Islander peoples performances and engagement in self-determined activities.

A strength of this program is in the collection of in-depth qualitative data on employment outcomes which provided an opportunity to explore for the time transitions into employment for Aboriginal and Torres Strait Islander clients. Previous programs have highlighted that licensing programs seem to improve employment outcomes – but by applying a framework to theorise how this occurs researchers can better support these employment outcomes. A limitation of the program was in the low number of clients who responded, therefore themes developed can only be interpreted as indicative; furthermore, as only women participated the research lacks a male perspective. This was a pilot program so, to validate the introduced theory and concepts, future program needs to provide greater resources and employ targeted strategies to improve client response rates.

6.8 Conclusion

The SDT seems to provide a framework that assists us in understanding transitions into employment for clients who obtained a licence as a result of participation within a culturally relevant driver licensing support program. Clients reported improvements in sense of self-esteem, self-confidence and wellbeing – which are key indicators of intrinsic motivation and known facilitators that promote transition into employment. Future programs should aim to validate intrinsic motivation through the culturally appropriate application of a psychometric assessment tool. In doing so, the link between licensing and employment can be validated.

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6.10 Supplementary

6.10.1 Table 1 Interview guide questions

Additional indicative <u>Interview Guide Questions</u> will also be added to the interview schedule:

1. What was the main reason for wanting to get a driver's license?

2. Were you employed before participating in the ACT driver licensing project? If Yes/No, have you had a change in employment status after completing the ACT driver licensing project?

3. Do you feel that getting a license has helped you in getting/keeping/ or having a change in jobs?

4. In your experience, in what way has having a drivers licence helped you in getting/keeping/ or changing jobs?

5. In your experience what have been some of the major things stopping you from getting/keeping/ or changing jobs?

6. In your experience what have been some of the major things that have helped you in getting/keeping/ or changing jobs?

6.11 Conclusion to Chapter Six

Transition into employment for clients of the ACT Aboriginal and Torres Strait Islander driver licensing pilot program seemed to stem from an improvement of intrinsic motivation through the interplay of autonomy, competence and relatedness. Appropriately adjusting these psychological nutriments to increase autonomy, improve competence for an activity and relatedness within an environment can influence levels of intrinsic motivation. Though this was a pilot program it was observed that clients reported an improvement in self-esteem, self-confidence and wellbeing all of which may be facilitators that improve transitions into employment. The hypothesis is that these facilitators are related to and increase intrinsic motivation and future research that measures intrinsic motivation of clients pre and post program would allow for this theory to be validated.

Chapter Seven: Discussion

7.1 Publication details

This is an unpublished Chapter in the thesis.

7.2 Introduction to Chapter Seven

Chapter Seven will synthesise key findings from each preceding chapter. It draws together the salient points of each chapter and discusses the implications for future driver licensing programs and strategies to improve outcomes for Aboriginal and Torres Strait Islander Australians that can influence policy. Finally, key recommendations to enhance future programs and influence policies and practices relevant to employment will be presented. This chapter argues that taking a holistic approach will ensure Aboriginal and Torres Strait Islander peoples are appropriately supported, leading to improved social determinants of health, including improved employment outcomes.

7.3 Introduction

This body of research contributes to understanding the intersection between driver licensing, employment, and health for Aboriginal and Torres Strait Islander Australians. Chapter One provided an insight into a history of colonisation and the subsequent impacts on Aboriginal and Torres Strait Islander peoples. Acknowledgment of the past enables us to value resilience of a people and strength in culture, contextualise health and its social and cultural determinants, and reinforces the need for programs to take a holistic approach based on an Indigenous paradigm which encompasses Aboriginal and Torres Strait Islander ways of knowing, being and doing. This enables a strengths-based approach to be taken and places Aboriginal and Torres Strait Islander peoples and communities in a position to meet their self-determined social, cultural, and economic needs.

We know that employment, income and hours spent working are social determinants that contribute to a large portion of the health gap for Aboriginal and Torres Strait Islander populations[1, 2]. Of itself, having a driver licence and access to a suitable vehicle improves health and wellbeing[3]. We know licensing support programs increase licensing attainment amongst program clients. Adding to the knowledge base, this research shows that driver licensing support programs have the ability to directly improve employment outcomes for clients who successfully obtain a licence[4].

Each chapter within the thesis examined components of driver licensing support programs in order to articulate how driver licensing support programs impact on employment outcomes for Aboriginal and Torres Strait Islander Australians. The aims and synthesis of key findings of Chapter Two, Chapter Four, Chapter Five and Chapter Six are presented below.

7.4 Key findings

Chapter Two set out to examine the effectiveness and impact of driver licensing support programs on licensing and employment rates for Aboriginal and Torres Strait Islander peoples. This was achieved through a systematic review of literature and what was found was that:

- A total of 42 programs were being delivered in Aboriginal and Torres Strait Islander communities across all Australian States and Territories. Of which, only 4 programs were found to be appropriately evaluated.

- Variations existed between programs in levels of support, targeted licensing stage and service organisation delivering the program.

- The most effective programs in improving licensing attainment were those that were culturally relevant providing end-to-end licensing support.

- No licensing program routinely included, collected, or evaluated information on employment outcomes.

In **Chapter Four** a process evaluation was conducted of a culturally relevant driver licensing support pilot program – The Australian Capital Territory (ACT) Aboriginal and Torres Strait Islander driver licensing pilot program. The aim was to determine whether the program was delivered as intended according to the key service areas and what was found was that:

- A total of 74 clients accessed the program with 50 gaining a Provisional licence.

- Clients accessing the program were primarily students aged between 16-24years, with family responsibilities being the main reason for wanting a driver licence.

- The element of the program most accessed by ACT clients was the *'Driving instruction and assessment with a qualified Aboriginal Instructor'*.

- Cultural safety was a key element towards acceptability of the program by individuals and community.

Chapter Five examined the impact that 'Driving Change' had on client employment outcomes and assessed the influence of geographical area of program delivery on driver licence attainment. What was found was that:

- The Driving Change licensing support program appeared to be effective in improving employment outcomes for people who gained their licence through the program.

- Clients who achieved an independent licence were more than twice as likely (OR: 2.5, 95% CI: 1.22 – 5.24, p=0.001) to report a new job or change in job than those who did not attain a licence.

- Clients from regional areas were more likely (OR: 1.72, 95% CI: 1.27 – 2.33, p=0.001) to gain an independent licence than those from urban areas.
- No difference was observed in employment outcomes (OR: 1.2, 95% CI: 0.53 – 2.52, $p = 0.719$) for clients from urban compared to regional areas.

Chapter Six set out for the first time to use the framework of self-determination theory to examine factors that promote transitions into employment for clients of the ACT Aboriginal and Torres Strait Islander driver licensing pilot program. What was found was that:

- Clients reported family responsibilities being the primary reason for wanting to obtain a driver licence.

- Clients indicated that obtaining a driver licence was a key skill needed to transition into employment and having a culturally safe program with an Aboriginal driving instructor was a factor influencing successful completion of driving lessons for attainment of a licence.

- Those who obtained a licence expressed improved sense of self-esteem, self-confidence, and wellbeing, which are key indicators of intrinsic motivation. Transitions into employment was theorised to be related to improvements in intrinsic motivation.

- Transitions into employment included beginning to actively seek employment; gaining a job; increasing work hours; changing work status from part-time/casual to full-time; and changing jobs or industries.

7.5 Implications

Culturally relevant driver licensing support programs improve licensing attainment rates amongst clients[4-9]. Chapter Six hypothesised that attainment of a driver licence positively impacts on intrinsic motivation which in turn influences positive changes in employment. This could in part explain my findings in previous chapters that reported greater odds of changes in employment following attainment of a driver licence[4, 10].

The systematic review indicated that programs which provide end-to-end support in a culturally relevant way are effective in improving licensing attainment outcomes for

clients[5]. However, few of these programs have been evaluated, and as shown in Chapter Four, communities are highly diverse with each State and Territory needing tailored evaluations to inform and strengthen programs, meet community needs and maximise resources of these programs. The impact these programs show on employment outcomes should not be undervalued, as additional income has a significant amount of benefit for lower earning households. It is critical that employment data be collected routinely and there be a standardised framework implemented for programs. This will ensure correct and appropriate data is collected which then will allow us to develop holistic programs that address licensing and employment and include an impact on social determinants of health.

7.5.1 Future driver licensing support programs

Research indicates that designs of driver licensing support programs are acceptable, culturally appropriate and being taken up by Aboriginal and Torres Strait Islander peoples and communities[5-9, 11]. There were two themes observed in Chapter Four which have been repeatedly reported across licensing support programs as limitations to program output, namely staffing capacity and reach (did the program reach its target client group)[6, 11]. This is often due to lack of systemic funding – community-based programs often arise from grass-roots organisations who are poorly funded, and are driven by motivated staff who have many demands on their time. Aboriginal and Torres Strait Islander staff commonly experience a high demand for their skills when working in community[12, 13], and combined with systematic lack of funding for program delivery, the impact can be at a cost to program administration and data collection. This impact is crucial because we know that comprehensive collection of program data helps demonstrate impact, improve and refine program services, as well as drive support for funding. In addition, this research is calling for the routine collection of employment data, which will add additional workloads to already over-stretched program staff[11].

In terms of reach, it is seen that programs are not always reaching their intended target cohort. As in the case of the ACT Aboriginal and Torres Strait Islander pilot program the vast proportion of clients accessing the programs are students aged between 16-24 years, despite the program setting out to target job seekers and those in contact with the justice system. Those aged between 16-24 years are expected program clientele as this

cohort is indicative of the typical education and age characteristics of Learner drivers. Developing strategies to improve the reach of programs will enable future licensing program to specifically target a proportion of the population who are often missed such as those in contact with the justice system, those 25 years and above, or those who are NEET. Although some programs, such as the Driving Change program were found to have a client base that were largely unemployed and without family support for licensing, programs must pay careful attention to the target client base. It is my recommendation, therefore, to improve reach, that future programs liaise directly with the justice system, community services, employment service providers and schools.

The utilisation of computer applications also known as apps for health interventions and research within Aboriginal and Torres Strait Islander populations is increasing[14-16]. Applications have been successfully used as methods to improve data collection in community based programs[14] and used successfully in bridging geographical and socioeconomic divide for community messaging to reach target groups[15]. Furthermore, computer technologies provide a potential cost effective platform capable of reaching wider cohorts of the population for community based program[16]. The systematic review presented in Chapter Two indicated that 42 programs were being delivered throughout Australia, however this does not entirely represent the reach of these individual programs. For example the Transport for NSW 'driver licensing access program' is currently being delivered in over 90 communities across NSW[17]. An exploration of computer-based technologies and development of a database to be used by all service providers of the 'driver licensing access program' could ensure standardisation and guide the collection of licensing and employment data. The feasibility of app-based software may provide an opportunity for program clients to self-enrol in programs, pre-fill baseline data and post-program follow up questionnaire. Furthermore, such technologies will provide a continuity of licensing program service delivery and reduce marginalisation of a cohort in the population who appear to be highly mobile over the short-term[18]. Computer applications and technologies may provide a suitable mechanism to redress the limitation of staffing capacity, program reach, limited funding and provide an active and intentional way to better engage with transient cohorts[18].

7.5.2 Holistic services - driver licensing support programs and employment pathways

Chapter Five highlighted that people who attained a licence through 'Driving Change' had more than twice the odds of changes in employment compared with someone who didn't attain a licence. This offers a promising and critically important area for investment because we know as a social determinant how strongly employment improves health outcomes[1, 2, 19]. Key to success of Driving Change was its development from community driven needs[20]. It is notable in particular that for both of the programs evaluated in this body of work, the ACT driver licensing program and Driving Change, had strong Aboriginal governance and program services delivered by Aboriginal people. Clients enrolled in the ACT program spoke of the importance of this to their comfort with the program, and similar satisfaction, has been previously reported in the Driving Change program[6, 21]. This emphasises again the importance of Aboriginal and Torres Strait Islander community led services as being critical to success. Programs such as these that are accepted and taken up by communities, provide an appropriate foundation on which to build employment pathways[6, 11]. As previously expressed, workplace prejudice, intergenerational trauma, fertility rates, family structure and cultural obligations contribute to labour market disadvantage experienced amongst this population[22, 23]. Therefore investments into culturally relevant licensing programs can influence outcomes of employment activity in as much as the widely accepted educational qualifications[24]. It would be of significant benefit to raise Government awareness on the impact that these programs have on employment so that they become sustained initiatives in the campaign to 'closing the gap' on employment outcomes for Aboriginal and Torres Strait Islander peoples.

Chapter Five showed us that Driving Change clients from regional areas had more than one-and-a-half of greater odds of successfully obtaining a driver licence from the program than those from urban areas[4]. In regional areas employment rates are lower than that of urban areas[25] and as shown within the systematic review, licensing programs are mainly being delivered in regional areas[5]. Experiences from the Driving Change program[4], showed that direct collaboration with Government stakeholders from both Transport for NSW Centre for Road Safety (TfNSW CRS) and Roads and Maritime Services (Aboriginal programs) led to sustained funding of the Driving Change program and informed the development of the 'driver licensing access program'. Furthermore, collaborations for sustained funding of programs are needed for

two additional reasons, the first being there is a higher participation rate of females within driver licensing programs and studies from setting in low-and-middle income communities show that female empowerment has a greater impact towards improving health, social and economic outcomes of families[26-28]. The second being that within short running programs the first groups (student and those aged between 16-24 years) to participate and achieve in licensing reflects a cohort group who would have been more likely to attain a licence. Programs that are sustainable and being delivered long term in communities may organically result in a wider proportion of Aboriginal and Torres Strait Islander populations being reached.

It is my recommendation, therefore, that licensing program delivering support services in regional areas liaise directly with Government stakeholders from Department of Education, Skills and Employment (DESE) and peak body Aboriginal employment organisations to open dialogue to develop suitable options from licensing to employment pathways.

7.6 Recommendations

The key recommendations emerging from this research are:

- A standardised evaluation framework needs to be implemented across driver licensing support program.
- All future driver licensing support programs need to routinely collect employment data on employment status pre and post program and on transitions in employment – movement from unemployment into employment, reemployment and labour market mobility (changes in employment capacity, changing jobs, changing occupation, transition from employment to self-employment and vice-versa).
- Pathways into employment need to be established from licensing support programs so as to provide holistic services that meet the sociocultural and economic needs of Aboriginal and Torres Strait Islander peoples.

7.7 Policy and practice

The link between driver licensing and employment is one that is intuitively recognised and amidst government reporting indicating employment target are not being reached[29] driver licensing support programs are being shown to positively impact on employment outcomes[4, 7, 9]. Service providers such as Vocational Training and Educational Centres

(VTECs), specifically train Aboriginal and Torres Strait Islander job seekers to acquire the training and skills needed to secure employment, as guided by employers who guarantee employment after completion of the training. Gathering investment from Government sectors and private organisations to offer job opportunities through VTECs can provide Aboriginal and Torres Strait Islander program clients with the opportunity to transition into longer term jobs and careers. These centres may well be best suited to implement relevant end-to-end driver licensing programs within a culturally appropriate setting that is directly associated with employment. This is a key area which needs attention of policy makers.

Other initiatives taking place highlighting the successfully links between licensing and employment was observed between Fortescue Metal Group and the Western Australian Government, where an agreed provision was made for Fortescue Metal Group to provide licensing testing services to Aboriginal employees under its training pathway to assist them in securing employment within the mining sector[30]. This sets a great precedence and has implication for practice for similar agreed provision to occur within larger industries such as that of construction and agricultural.

Findings from this research can be translated with opportunities for scale-up and/or translation across other population groups. These culturally relevant programs offer a framework that can be extended to other marginalised populations such as those from culturally and linguistically diverse groups and non-Indigenous Australians from disadvantaged or low socioeconomic backgrounds. Licensing disadvantage is ubiquitous and impacts on multiple marginalised groups who are then also further disadvantaged by poor access to education and employment like Aboriginal and Torres Strait Islander people. Cultural components would need to be tailored and made relevant for each diverse group, however the overarching principles of an end-to-end culturally relevant driver licensing program that provides pathways to employment can be applied. Settings of programs could take place in multicultural community centres, culturally specific organisations, or through employment organisations linked to 'Services Australia' and 'Jobactive' – a national platform linking job seekers with more than 1700 employment providers – to target other Australians in need.

7.8 Strengths and limitations

A strength of this research is that it is grounded in Indigenous paradigms. Indigenous 'ways of knowing' was used to interpret data based on the lived experiences and cultural lens of the participants but also of the researcher. Furthermore, program data collection and evaluation were grounded on Indigenous research methods of yarning.

A limitation across the Driving Change program and the ACT Aboriginal and Torres Strait Islander driver licensing pilot programs was the inability to effectively engage with larger numbers of the clients and stakeholder for post program yarning and interviews.

7.9 Conclusion

Driver licensing programs that are end-to-end and provide support in a culturally relevant way are effective in improving licensing attainment for clients. Clients obtaining a driver licence through these programs have twice the odds of changing employment than clients who do not gain a licence. Those who obtained a licence expressed improved sense of self-esteem, self-confidence, and wellbeing, which are key indicators of intrinsic motivation.

The link between licensing and employment needs increased awareness as licensing and employment as social determinants improve health outcomes for Aboriginal and Torres Strait Islander peoples. Future research needs to be directed to incorporate development of a user-friendly systematic approach to program evaluation such as development of an app. This would create a consistent reporting platform that is holistic in consideration of outcomes and includes measures that are culturally relevant. Furthermore, pathways into employment for Aboriginal and Torres Strait Islander peoples need to be further explored, developed and invested into. Opportunities to build awareness towards the positive impact that licensing programs have on employment may be piloted through VTECs in regional or remote areas of Australia.

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Appendices

Appendix 1: Ethics Approval

The ACT Health Human Research Ethics Committee's Low Risk Sub-Committee (27 March 2019)

ACT Government | **ACT Health**

Research Ethics and Governance Office
Human Research Ethics Committee
Low Risk Sub-Committee

Ms Rebecca Ivers
School of Public Health and Community Medicine
UNSW,
Samuels Avenue,
Kensington NSW 2033

ACT	2019/LRE/00053
REGIS	2019/ETH00547
Title	ACT Aboriginal and Torres Strait Islander Driver Licensing Project Evaluation

Dear Ms Ivers

Thank you for your submission of the above referenced research proposal. The ACT Health Human Research Ethics Committee's Low Risk Sub-Committee received notification of the proposed study at its meeting of 27 March 2019.

I am pleased to inform you that your application has been approved.

The Sub-Committee agreed that the application is for low risk research and determined that the research meets the requirements of the National Statement on Ethical Conduct in Human Research and is ethically acceptable.

I attach for your records an Outcome of Consideration of Protocol form.

I confirm that the ACT Health Human Research Ethics Committee is constituted according to the National Statement on Ethical Conduct in Human Research 2007 and is certified for single review of multi-centre clinical trials. ACT Health HREC operates in compliance with applicable regulatory requirements and the International Conference on Harmonization Guidelines on Good Clinical Practice.

Yours sincerely

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prior to publication.

Professor Paul Gatenby
MBBS PhD FRACP FRCPA
Chairman
ACT Health Human Research Ethics Committee
Low Risk Sub-Committee

27 March 2019

PO Box 11 Woden ACT 2606 | Phone: 6174 7968 or 6174 5659 | E: ethics@act.gov.au

The ACT Health Human Research Ethics Committee's Low Risk Sub-Committee, ACT.
Amendment to protocol (3 July 2019)

ACT Health | ACT Government

Research Ethics and Governance Office
Human Research Ethics Committee
Low Risk Sub-Committee

Ms Rebecca Ivers
School of Public Health and Community Medicine,
UNSW,
Samuels Avenue,
Kensington NSW 2033

ACT	2019/LRE/00053
REGIS	2019/ETH00547
Title	ACT Aboriginal and Torres Strait Islander Driver Licensing Project Evaluation

Dear Ms Ivers

Thank you for your letter requesting amendments to the above referenced study.

At its meeting of 3 July 2019, the Committee approved:

- Voucher to be given to participants valued at $30

This information is now recorded on the Committee's files

Yours sincerely,

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August Marchesi
Head of
Research Ethics and Governance
3 July 2019

The ACT Health Human Research Ethics Committee's Low Risk Sub-Committee, ACT.
Amendment to protocol (8 June 2020)

ACT | **ACT Health**   Research Ethics and Governance Office

Professor Rebecca Ivers
Head of School
Public Health and Community Medicine
Room 325A, Samuels Building
UNSW Sydney NSW 2052

ACT Ref	2019.LRE.00053
Title	ACT Aboriginal and Torres Strait Islander Driver Licensing Project Evaluation

This amendment proposal has been assessed under the usual guidelines for research ethics and site governance. While the COVID-19 pandemic is ongoing researchers must seek explicit departmental approvals before expending resources (including human resources) on this project. Australian Government and Canberra Health Services guidelines must be followed

Dear Professor Ivers,

Thank you for your submission, undated, relating to the above referenced research project.

The following has been approved out of session:

- COVID-19 related study amendments, including:
  - Participant consent and study interviews to be conducted electronic methods, as detailed in your correspondence
  - Script of consent
  - Additional interview questions

This information is now recorded on the study file and will be reported to the next available meeting of the ethics committee.

Yours sincerely,

August Marchesi
Senior Director
Research Ethics and Governance

8 June 2020

Appendix 2: Research Integrity Modules

Graduate Research School

Research Integrity for Students

Certificate of Completion

This is to certify that

Bobby Porykali

has successfully completed

Module 1: Research Integrity and Code of Conduct

Professor Lori Lockyer,
Dean, Graduate Research School

University of Technology Sydney

Date: 13/05/2018

Research Integrity for Students

Certificate of Completion

This is to certify that

Bobby Porykali

has successfully completed

Module 2: Plagiarism and Misconduct
Module 3: Risk Assessment
Module 4: Risk Management and Health & Safety
Module 5: Project Management

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Professor Lori Lockyer,
Dean, Graduate Research School

University of Technology Sydney

Date: *13/05/2018*

Appendix 3: Publications

(Appears on next page)

The effectiveness and impact of driver licensing programs on licensing and employment rates for Aboriginal and Torres Strait Islander peoples of Australia: A systematic review

B. Porykali [a,b,*], K. Hunter [b,c], A. Davies [d], N. Young [a], E. Sullivan [a,e], R. Ivers [a,b,c]

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A B S T R A C T

Introduction: Access to a valid driver licence for most Australians can be essential for employment. Aboriginal and Torres Strait Islander peoples however are under-represented as driver licence holders. As such driver licensing programs have been established across Australian States and Territories to support them to obtain a driver licence. The aim of this review is to identify these driver licensing programs and examine the effectiveness and impact on licensing and employment rates for Aboriginal and Torres Strait Islander peoples.
Methods: Two independent searches were performed. The first, a scoping review of the literature to identify and describe driver licensing programs throughout Australia. The second, a systematic review of electronic databases and relevant grey literature to examine the effectiveness and impact of driver licensing programs on licensing and employment rates. Two independent authors assessed publications for eligibility.
Results: The scoping review identified 42 driver licensing programs across all Australian States and Territories between the years 2000–2019. Considerable variations exist between program services and characteristics. The systematic review included eight publications that evaluated four driver licensing programs. Findings suggested end-to-end culturally appropriate driver licensing programs are effective in improving licensing rates. No program evaluated the impact of licence attainment on employment rates although two publication commented on a correlation.
Conclusion: Driver licensing programs are effective in increasing licensing rates amongst Aboriginal and Torres Strait Islander program clients, but despite the significant number of licensing programs operating, few are reporting program outcomes and even fewer have been evaluated. There is considerable variation between program designs, support provision, service delivery and limited consistency amongst evaluation frameworks used. A standardised approach to evaluating driver licensing programs should be adopted that incorporates a nationally agreed framework that include Aboriginal and Torres Strait Islander culture and employment outcomes.

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  E-mail address: bporykali@georgeinstitute.org.au (B. Porykali).

BMC Public Health

The road beyond licensing: the impact of a driver licensing support program on employment outcomes for Aboriginal and Torres Strait Islander Australians

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Abstract

Background: With increasingly tough graduated driver licensing laws in all Australian States and Territories, driver licensing support programs are recognised as being important to support Aboriginal and Torres Strait Islander peoples to obtain a driver licence. Such programs appear to improve licensing attainment rates, but few studies have examined the broader impact that these programs can have. This research aims to 1) examine the impact of a New South Wales (NSW) based driver licensing support program (Driving Change) on client employment outcomes; 2) assess the influence of geographical area of program delivery on driver licence attainment.

Methods: Driving Change was delivered from February 2013 to August 2016 in 4 urban and 7 regional Aboriginal communities of NSW. Clients were followed-up at 6 months or more following contact with the program as part of routine program operations. Descriptive statistics and regression models were used to analyse data.

Results: From 933 clients contacted 254 agreed to provide feedback, a response rate of 27%. Those that responded were mostly female (57%), aged 24 years and under (72%), unemployed (85%) with secondary education or less (71%) and from a regional area (74%).

Adjusted logistic regression indicated that clients who achieved an independent licence were more likely (OR: 2.5, 95% CI: 1.22–5.24, $p = 0.011$) of reporting a new job or change in job than those who did not attain a licence. Clients from regional areas were more likely (OR: 1.72, 95% CI: 1.27–2.33, $p < 0.001$) to gain an independent licence than those from urban areas. There was no difference in employment outcomes (OR: 1.2, 95% CI: 0.53–2.52, $p = 0.719$) for clients from urban compared to regional areas.

Conclusion: The Driving Change program appears to be effective in improving employment outcomes for those who gained a licence. Clients from regional areas were more likely to gain a licence compared to those in urban settings, and were predominantly young and unemployed, often a hard to reach cohort. Future licensing programs being delivered in regional areas need integrated pathways into employment opportunities to provide holistic services that address the social and economic challenges faced by Aboriginal and Torres Strait Islander Australians.

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Background

Australia has a vast land mass. With its population widely spread across major cities and regional and remote towns, access to public or private transport is necessary for everyday life. Where there is an inability to access public or private transportation individuals experience transport disadvantage. In regional and remote towns of Australia compared to major cities there are fewer public transportations options, therefore having a valid driver licence and access to private transport is essential for mobility, social inclusion and participation in critical activities such as employment [1, 2]. These geographical areas are often further associated with profiles of lower socioeconomic status and lower levels of average household income which are known barriers to obtaining a driver licence and to ownership of a private vehicle [1]. Higher proportions of Aboriginal and Torres Strait Islander First Nations Australians reside in regional and remote areas than do non-Indigenous Australians [3]. Although poor data precludes robust estimates, the percentage of licence holders amongst eligible Aboriginal and Torres Strait Islander population aged 16 years and above is considerably lower than 70%, which is the observed rate amongst eligible non-Indigenous Australians [2, 4]. Transport disadvantage can therefore disproportionately impact Aboriginal and Torres Strait Islander Australians and contribute to a cycle of licensing adversity [5], whereby people who have no licence have limited access to health facilities, job options and study opportunities [1].

Culturally relevant driver licensing programs have been delivered with increasing frequency over the past 10 years to support Aboriginal and Torres Strait Islander peoples to obtain a driver licence, however very few of these programs have been evaluated [6, 7]. The few evaluated programs have shown an increase in licensing attainment amongst program clients [8–11]. These programs are predominantly delivered in regional and remote settings where transport disadvantage is most pronounced, and employment rates and education levels are lowest [12, 13]. For Aboriginal and Torres Strait Islander peoples, employment rates vary considerably by geographical area lived compared to non-Indigenous Australians. For instance, employment rates for Aboriginal and Torres Strait Islander people are highest in major cities (54.1% for Aboriginal and Torres Strait Islander people compared with 71.8% for non-Indigenous Australians), followed by inner

regional (47.2% versus 70.7%), outer regional areas (43.5% versus 72.3%) and lowest in remote (39.8% versus 79.3%) and very remote areas (30.8% versus 85.3%) [13].

Employment is a strong social determinant for improving Aboriginal and Torres Strait Islander people's health outcomes [14, 15] and those who are economically advantaged are more likely to have lower prevalence of health risk factors [16]. Though employment rates have been on the rise over the last decade from 48.2 to 49.1% between 2008 and 2018–2019, there is still much needed improvements to reach parity with the 75% employment rates achieved by the labour force (age 15–64 years) of non-Indigenous Australians [17]. It is known that higher levels of education and training are important determinants for reaching parity in employment outcomes [18], but studies have also shown from the perspectives of Aboriginal and Torres Strait Islander young peoples the importance placed on driving as being an enabler to gaining employment and accessing job opportunities [19]. Our past research also showed that having a licence is associated with increased likelihood of having a job [2]. Despite the emerging evidence limited research beyond this has been placed on further exploring the broader impact that these programs have beyond licence attainment.

In summary, a high proportion of Aboriginal and Torres Strait Islander peoples reside in regional and remote areas [3], where they experience the lowest rates of employment [13], where transport disadvantage is most pronounced and where licensing programs are being delivered with increased frequency [7]. The purpose of this paper is to 1) examine the impact that driver licensing programs have on client employment outcomes; 2) assess the influence of geographical area of program delivery on driver licence attainment. This will be achieved through post program data analysis of a New South Wales (NSW) based Aboriginal and Torres Strait Islander driver licensing support program - Driving Change.

The program

Driving Change was a culturally relevant, end-to-end driver licensing program that provided support to Aboriginal and Torres Strait Islander peoples to navigate through the NSW Government's graduated licensing system and obtain a driver licence.

Informed development of this culturally relevant program was underpinned by extensive community consultation, and formative evaluation [20, 21]. This included a pilot survey in a remote north-western NSW Aboriginal

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community at Bourke Aboriginal Medical Service [22], then a large observational study involving four Aboriginal community-controlled health services [23]. Stakeholder interviews were also conducted with a range of policy makers and key community contacts to understand both barriers to licensing, licensing rates and impact of licensing [2]. As a result, the Driving Change program was developed and implemented in a way acceptable to clients and stakeholders [21]. Governance of the program included consistent participation from Government stakeholders, through involvement of the Transport for NSW Centre for Road Safety (TfNSW CRS) and Roads and Maritime Services (Aboriginal programs) in the programs steering committee.

The program was delivered from February 2013 to August 2016 widely across the State of NSW in 11 Aboriginal communities of: Kempsey, Taree, Raymond Terrace, Redfern, Campbelltown, Shell harbour, Dubbo, Dareton, Condobolin, Griffith and Wagga Wagga [8]. The program facilitated access to local services, intensive case management, providing mentoring for young people through the licensing system and provided support to address licensing sanctions imposed by the State [8].

Method
Design
This study is a quantitative analysis of post program client interview data.

Processes and measurements
Data was collected as a part of the program's quality assurance processes; clients who attended the program were systematically followed up between June 2014 – August 2016.

Baseline data
Upon initial contact with the program, baseline client data collected contained information on gender (male, female), age (16–24 and 25+ years), employment status (employed, unemployed), education (secondary educated or less, tertiary educated) and community of program delivery, as well as reasons clients were accessing the program and expectations.

Follow up data
As part of routine program operations, clients were contacted by phone 6 months or more after their initial contact with the program and invited to participate in answering a set of open-ended post-program questions to ascertain: the levels of satisfaction with the program, services and support accessed; licensing outcomes; additional program outcomes reported for employment,

education, family responsibilities and/or social inclusion. The specific outcomes of interest for analysis were:

- "Whether the client had a change in licence type as a result of the program"
- "Whether since joining the program the client has had a change in work, and if yes to specify employment change ('unemployed and now employed' or 'change jobs')"

The 11 communities where the program was delivered were stratified as urban areas or regional areas - regional areas encompassed inner regional, outer regional, remote and very remote. Stratification of communities as urban (Raymond Terrace, Redfern, Campbelltown and Shellharbour) or regional (Kempsey, Taree, Dubbo, Dareton, Condobolin, Griffith and Wagga Wagga) was in accordance with the classification of the Australian Bureau of Statistics Remoteness of Areas [24].

Analyses
Descriptive statistics (frequency and percentage distributions) were performed to determine respondents' characteristics.

Logistic regression models were used to estimate odds ratio of:

1. a) The association between licensing attainment and self-reported improvement in employment outcomes;

   b) Adjustment for age, gender and carer responsibilities; these were considered important as younger clients were more likely to be engaged in educational commitments, with females and carers more likely to have family priorities impacting on employment outcomes.
2. a) The association between geographical area on licensing attainment outcomes;
   b) Adjustment for literacy, household licensing status, level of contact with the program, age group and level of needs; as these variables influence the ability of a client to successfully obtain a licence.
3. a) The association between geographical area and self-reported improvement in employment opportunities;
   b) Adjustment for age, gender and carer responsibilities; as these variables were considered to impact most on employment outcomes.

Ethics approval
All methods were carried out in accordance with the relevant guidelines and regulations, and all experimental

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Table 1 Comparison of program client characteristics (respondents versus non-respondents)

	Respondents	Non-Respondents	Program clients
N (%)	*254 (27)*	*679 (73)*	*933 (100)*
Gender			
Male	108 (43)	303 (45)	*411 (44)*
Female	146 (57)	376 (55)	*522 (56)*
Age (years)			
< 24	182 (72)	467 (69)	*646 (69)*
> 25	72 (28)	212 (31)	*287 (31)*
Employment			
Employed	38 (15)	61 (9)	*99 (11)*
Unemployed	216 (85)	618 (91)	*834 (89)*
Education			
≤ Secondary education	180 (71)	538 (79)	*718 (77)*
Tertiary educated	74 (29)	141 (21)	*215 (23)*
[a]ROA			
Urban	67 (26)	148 (22)	*215 (23)*
Regional	187 (74)	531 (78)	*718 (77)*

[a] Area classification according to ABS 2016 Remoteness of Area (ROA) [24]

protocols were approved by the Aboriginal Health and Medical Research Council Human Ethics Committee of New South Wales (Eth: 964/13). Informed consent was obtained from all subjects and/or their legal guardian(s). Data was analysed using Statistical Analysis System (SAS) version 9.4 (SAS Institute, Cary, NC, USA).

Results

Nine hundred and thirty-three people enrolled in the Driving Change program, provided baseline data and were invited to participate in the 6-month follow up interview. A total of 254 clients out of 933 participated in answering the quality assurance post program questions, a response rate of 27%. The majority of those who responded were female, aged 24 years and under, unemployed, with secondary education or less and from a regional area at baseline (Table 1). Two key differences were observed at baseline between respondents ($n = 254$) and non-respondents ($n = 679$) – a higher proportion of respondents were employed (15% versus 9%) and tertiary educated (29% versus 20%) than non-respondents. Of the respondents, those reported gaining a job/or having a change in job proportionally were more often male, under the age of 24 years, secondary educated or less and resided in regional areas (Table 2).

Regression analyses highlighted in Table 3 indicted that clients who achieved an independent licence were more likely (OR: 2.6, 95% CI: 1.27–5.23, $p = 0.007$) to reporting gaining a job/or having a change in job. After adjustments were made for potential confounders (age, gender and carer responsibilities) the relationship still

Table 2 Respondent employment outcomes (gaining a job/or having a change versus unemployed/no change)

	Employment gained / changed	Unemployed / no change in employment
N (%)	*38 (15)*	*216 (85)*
Gender		
Male	23 (61)	85 (39)
Female	15 (39)	131 (61)
Age (years)		
< 24	25 (66)	157 (73)
> 25	13 (34)	59 (27)
Education		
≤ Secondary education	23 (61)	157 (73)
Tertiary educated	15 (39)	59 (27)
[a]ROA		
Urban	14 (37)	53 (25)
Regional	24 (63)	163 (75)

[a] Area classification according to ABS 2016 remoteness of area (ROA) [24]

Table 3 Regression analysis

Model	Odds Ratio	Confidence Intervals (95%)	*p*-value
1 a)	2.6	1.27–5.23	0.007
b)	2.5	1.22–5.24	0.011
2 a)	1.43	1.04–1.97	0.028
b)	1.72	1.27–2.33	<0.001
3 a)	1.1	0.52–2.39	0.780
b)	1.2	0.53–2.52	0.719

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held with clients being more likely (OR: 2.5, CI: 1.22–5.24, $p = 0.011$) to report gaining a job/or having a change in job. For licensing attainment by geographical area, clients participating in the program from regional areas were more likely (OR: 1.43, 95% CI: 1.04–1.97, $p = 0.028$) to obtain an independent licence than those from urban areas. After adjustments were made for potential confounders (literacy, household licensing status, level of contact with the program, age group and level of needs) the relationship held with clients participating in the program from regional areas being more likely (OR: 1.72, 95% CI: 1.27–2.33, $p < 0.001$,) to obtain an independent licence than those from urban areas. There were no differences in clients reporting having gained a job/or having a change in job between urban or regional areas (OR: 1.1, 95% CI: 0.52–2.39, $p = 0.780$,), including after adjusting for age, gender and carer responsibilities (OR: 1.2, 95% CI: 0.53 0 2.52, $p = 0.719$).

Discussion

This study showed the direct impact that driver licensing programs can have on improving employment outcomes for Aboriginal and Torres Strait Islander clients and highlighted the influence that geographical area of program delivery has on licence attainment. We found that respondents who obtained a driver licence as a result of participation in the Driving Change program were more likely (OR: 2.5, CI: 1.22–5.24, $p = 0.011$) to report gaining a job or having a change in jobs. Respondents from regional areas were more likely (OR: 1.72, 95% CI: 1.27–2.33, $p < 0.001$) to obtain a driver licence than those participating in the program from urban areas.

Health outcomes of an individual and their communities are closely linked to employment status, and the influence that this has on improving economic and social circumstances [14, 25]. Through post program follow-up, we highlighted a significant self-reported improvement in employment outcomes for clients who obtained a driver licence, and it was shown the majority (69%) of all clients who participated in the Driving Change program were under the age of 24 years. Young Aboriginal and Torres Strait Islander Australians between the ages of 16–24 years experience the highest rates of unemployment within their population [13]. Engaging these young people in programs that promote economic participation and social inclusion are important contributors to improving the health trajectory of the population [26]. The capacity displayed through this licensing program to capture a young cohort of the population who are unemployed serves as an opportune platform for continued engagement into employment pathways post licence attainment.

In existing efforts to target the younger aged population recommendations from the Australian Law Reform Commission (ALRC) 2018 indicated where Aboriginal and Torres Strait Islander young people are likely to complete secondary education and unlikely to face other identified obstacles (such as access to birth certificates), driver licence programs could constitute an elective in the school curriculum [4]. This does provide an opportunity to improve licensing rates amongst Aboriginal and Torres Strait Islander young peoples, but with any rise in numbers of young novice driver on the road there is also a risk of increased transport related crashes, injuries and deaths [23, 27]. To mitigate this risk, it is important that implementation of such culturally relevant driver licensing programs be tailored to employment requirements, for instance students wishing to pursue an apprenticeship and/or trade. Results from this analysis indicate that respondents who achieved improved employment outcomes were predominately under the age of 24 years (66%) and were secondary educated or less (61%). Therefore, capturing this young target demographic whilst engaged in education is important as research shows the longer an individual remains not employed, not undergoing education and/or training, the more likely they are to remain unemployed [18]. Additional areas of interest could be focussed on the benefit of using licensing programs amongst current initiatives for keeping Aboriginal and Torres Strait Islander youth engaged in secondary education.

The Driving Change program was delivered within both urban and regional settings, with sites chosen for program delivery based upon: communities need, engagement, and support of program; the population of Aboriginal and Torres Strait Islander residents; and socioeconomic status of the area. Research shows employment rates in urban areas for Aboriginal and Torres Strait Islander peoples who are tertiary educated are comparable, if not higher, than that of equivalently qualified non-Indigenous Australians [12, 13]. Whereas unemployment and lack of job security disproportionately impact those with lower levels of education and those residing in regional areas [18, 25]. With lower levels of educational qualifications the importance of traineeships, certificates and licences (such as driver licences) become critical in securing employment opportunities [12, 18]. Our results support this showing that 63% of those who reported improvements in employment were from regional areas and further clients from regional areas were more likely (OR: 1.72, 95% CI: 1.27–2.33, $p < 0.001$) to obtain an independent licence than clients from urban areas. Recent evidence shows licensing programs are being delivered in regional communities with increased frequency [7]. These regional settings of program delivery provide an

opportunity to further improve employment outcomes through facilitating access to employment pathways post licence attainment for unemployed or at-need clients. Pilot studies are needed to inform how this could be applied. One potential opportunity would be for program subsidisation by Service Australia which positions enrolment into licensing programs as a training service for eligible at need job seekers. Another opportunity could be to provide Aboriginal Employment Organisations with the capacity to host and deliver licensing programs within communities. This would enable unemployed clients to be targeted and licensing program staff to be situated within an organisation best placed to secure placement into paid employment post licence attainment.

A key strength of this program leading to translation of outcomes, has been through direct Government collaboration where stakeholders from both Transport for NSW Centre for Road Safety (TfNSW CRS) and Roads and Maritime Services (Aboriginal programs) and representatives from a range of other key agencies formed members of the steering committee, which met quarterly. This allowed the program to be refined via input as it was implemented and importantly also allowed program outcomes and learnings to be fed directly back to government agencies with responsibility for the delivery of such services. This informed development and funding of a disadvantaged Driver Licensing Access Program which delivers services across the State [28], with TfNSW CRS representatives highlighting that this was directly informed by the program. Of the 11 sites that originally participated in the Driving Change program seven sites were awarded funding to continue local program delivery: two urban and three regional sites received funding through Roads and Maritime Services; and another two regional sites received NSW Department of Justice Community Safety Grant funding. It is evident that Government collaboration throughout the program delivery has resulted in meeting key recommendation of the Australian Law Reform Commission that '...*State and Territory governments enhance and commit to current government driver education programs, so as to extend the geographic reach of the program and the consistency of service in certain areas...*' [4]. Opportunities for direct Government collaboration where stakeholders from Department of Education, Skills and Employment or peak body Aboriginal Employment Organisation are members of driver licensing program steering committees may present as initial strategies to establish interagency collaboration between licensing and employment services.

A strength in program data was the inclusion of questions specifically related to employment outcomes which allowed for the programs impact on employment to be directly assessed. Historically no studies have reported licensing programs to deliberately include employment data and outcomes as an evaluable program component [7]. Understanding the types of jobs gained and characteristics of clients gaining employment will allow for greater understanding of the link between driver licensing and employment.

A limitation in program data was the homogeneity in those who participated in providing feedback, as most respondents were secondary educated (or a current secondary student) between the ages of 16–24 years. However, this may not be limited to post program analysis, as respondents' characteristics were representative of the characteristic of those who did not respondent.

Conclusion

Driver licensing programs appear to be effective in improving employment outcomes for Aboriginal and Torres Strait Islander clients who obtain a driver licence, and those in regional areas are more likely to obtain a driver licence than those participating in urban areas. Future licensing programs need to consider mechanisms for facilitating employment opportunities post program for clients who successfully obtain a driver licence. Developing such pathways will provide holistic and integrated services to address the social needs of Aboriginal and Torres Strait Islander Australians.

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Declarations

Ethics approval and consent to participate
All methods were carried out in accordance with the relevant guidelines and regulations, and all experimental protocols were approved by the Aboriginal Health and Medical Research Council Human Ethics Committee of New South Wales (Eth: 964/13). Informed consent was obtained from all subjects and/or their legal guardian(s).

Consent for publication
The authors give consent for publication.

Competing interests
The authors declare they have no competing interests.

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Evaluation Report of the Australian Capital Territory Aboriginal and Torres Strait Islander Driver Licensing Pilot Project

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Report prepared by

The George Institute for Global Health UNSW

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Acknowledgements

Executive Summary

Driver licensing is an important social determinant enabling access to education and employment opportunities. However, Aboriginal and Torres Strait Islander people experience significant barriers to attaining a licence, including access to appropriate supervisory drivers and cars to build driving competency. This report outlines the evaluation of the Australian Capital Territory (ACT) Aboriginal and Torres Strait Islander Driver Licensing Pilot Project from project commencement on 1st December 2017 to 1st October 2019. The project recruited and trained an Aboriginal Accredited Driving Instructor (ADI) to deliver case management for Aboriginal and Torres Strait Islander people seeking a driver licence. The ADI role was intended to provide practical assistance and advocacy for clients to fulfil the requirements of the ACT driver licensing system, including Competency Based Training and Assessment (CBTA).

The project has reached 74 Aboriginal and Torres Strait Islander people, with 50 clients (aged from 17 to 55 years) successfully completing CBTA and attaining a Provisional licence. The main reasons clients reported wanting to attain a licence were to meet family responsibilities, access health services, maintain independence and for employment and education opportunities.

The project has seven key service deliverables, with two out of seven being delivered as intended and three being partially delivered. There was a strong focus on the CBTA aspect of the project, with 520 hours of CBTA delivered by the ADI. A key strength of the project was the provision of flexible case management in a culturally safe environment, that was highly acceptable to Aboriginal and Torres Strait Islander people seeking a licence in the ACT.

Barriers to implementation centred on staffing resources and stakeholder engagement with resultant limited implementation of the full scope of services and low levels of interagency collaboration. Investment into additional administrative support and targeted engagement would likely increase the reach of the project and make it feasible to deliver services that were only partially or not delivered. Furthermore, establishing and maintaining electronic records of client data would ensure timely and robust data to support ongoing implementation, monitoring and evaluation of the project.

Key Recommendations

1. Targeted recruitment of clients in contact with the justice system through increased interagency collaboration, particularly with justice organisations.

2. Provision of financial assistance to clients who are experiencing financial hardship to assist with costs associated with licensing or test fees.

3. Raising awareness of support options for debt recovery management with both stakeholders and clients – additionally this will likely increase the reach of the project to include clients who may not be able to access a licence due to licensing sanctions.

4. Targeted approach to engaging with stakeholders in education, employment and justice sectors to increase awareness of the full scope of services offered by the project.

5. Investment in targeted campaigns through media platforms to increase community awareness and uptake of the service areas beyond CBTA.

6. Development of standard operating procedures for recruitment and management of volunteer mentor drivers and the vehicle(s), including application, driving history and working with children checks.

7. Development of a recruitment campaign for volunteer mentor drivers that uses media, social media and local community networks.

8. Establishment of new referral pathways with justice organisations and other key organisations such as schools and employment agencies to better target clientele with high need for the project.

9. Keeping records of interagency and stakeholder engagement to ensure comprehensive coverage and increase awareness of project.

10. An additional dedicated staff member to provide administrative support, which may include arranging administrative processes for financial assistance and debt recovery management for clients as well as recruitment and coordination of volunteer mentor drivers.

11. An electronic record keeping system to ensure consistency and timely access to database of client records.

12. Additional administrative support to undertake data entry for all client records.

13. Additional oversight at the management level to ensure that data management is complete and of high quality.

List of Abbreviations

ACT	Australian Capital Territory
ADI	Accredited Driving Instructor
ALS	Aboriginal Legal Service
CBTA	Competency Based Training and Assessment
CIT	Canberra Institute of Technology
GLS	Graduated Licensing Scheme
JACS	Justice and Community Safety Directorate
NSW	New South Wales
NT	Northern Territory

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Background

A driver licence is an important social determinant of health.[1] Australia is a vast country and for most people, access to a driver licence is an essential part of everyday life. Yet, for a large proportion of Aboriginal and Torres Strait Islander people, there are specific barriers to attaining a licence, which can contribute to transport disadvantage with far reaching impacts on access to health care, education, employment and social opportunities.[2, 3] Transport disadvantage has also been shown to influence unsafe driving practices, including driving without a licence and overcrowding; these are known risk factors for road injury, which is a leading cause of death for Aboriginal and Torres Strait Islander people in Australia.[4, 5]

Aboriginal and Torres Strait Islander people are overrepresented in the justice system, which has been linked to unlicensed driving and the fines enforcement system.[6] According to Justice and Community Safety Directorate (JACS), Australian Capital Territory (ACT) Government, 12-14% of offending relates to traffic and vehicle regulatory offences, with 15-18% of all traffic-related charges resulting in a term of imprisonment.[7] Furthermore, monetary fines in the face of financial hardship can contribute to further contact with the justice system when unresolved debt leads to disqualification of a licence.

Given the impact that driver licensing has on justice, education, employment and health, there is an increasing need for driver licensing programs to be accessible for Aboriginal and Torres Strait Islander people.[2, 8, 9] There is growing recognition that culturally relevant services are necessary to improve access to driver licensing and ensure novice drivers can undertake road safety education. State and Territory governments and non-government organisations have collaborated to deliver driver licensing programs specifically for Aboriginal and Torres Strait Islander people including: DriveSafe Northern Territory (NT)[10], Driving Change[11] and the New South Wales (NSW) Government's Driver Licensing Access Program. These programs have shown that culturally relevant programs that provide holistic case management are effective in supporting Aboriginal and Torres Strait Islander people to attain a driver licence.

ACT Driver Licensing System

Driver licensing in the ACT jurisdiction like other Australian States and Territories has a Graduated Licensing Scheme (GLS). Introduced in 1997, the GLS aims to provide new drivers with driving experience over time in low-risk environments to develop the skills required to reduce risks in the first few years of being licensed. As novice drivers gain driving experience and their skills improve,

they 'graduate' to the next licence step – from Learner, to Provisional and then finally to an Unrestricted licence. The stages to obtaining an ACT driver licence are as follows:[12]

1. Learner Licence	Learner licence holders must be at least 15 years and nine months of age and must successfully complete the 'Road Ready' program. Road Ready is provided by most ACT schools free of charge as part of their Year Ten curriculum. It is also conducted by Road Ready providers at various locations including Yurauna Centre at Canberra Institute of Technology (CIT).
	Road Ready is a classroom program including a variety of interactive activities designed to help make novice drivers aware of issues relating to safer road use before they begin to learn to drive. The program includes a range of problem solving and decision-making sessions, statistical analysis, group tasks and research assignments. After completion of the program the Computerised Road Ready Knowledge Test is performed, which assesses knowledge in categories of: Car General, Alcohol and Drugs, Intersections, Seat Belts, Driving General and Vulnerable Road Users.
2. Learning to drive	During the Learner licence period, novice drivers are encouraged to work together with accredited driving instructors and parent/supervising drivers to ensure that they gain sufficient driving experience.
3. Provisional licence	The minimum age to obtain a Provisional car or motorcycle licence is 17 years and there is a requirement to have held a Learner licence for a minimum of six months. There are two options to attain a Provisional licence within the ACT:

1. Passing a practical driving test with an ACT Government Licenced Examiner.

2. Undertake training and pass continuing assessment with an ACT Accredited Driving Instructor (ADI) through a Competency Based Training and Assessment (CBTA)/Logbook System.

The CBTA System comprises of 22 specific competencies (Appendix 1) that need to be developed by the novice driver to demonstrate during a continuous assessment period in order to attain a Provisional licence.[13] The CBTA system is available and delivered through an ADI who trains and assesses competencies of novice drivers before graduation to a Provisional licence. All lessons and assessment are subject to audit by Access Canberra, audits are selected at random and may take place during a lesson or an assessment.

Description of Project

The ACT Aboriginal and Torres Strait Islander Driver Licensing Project is a two year pilot funded by ACT Roads and Safety Grant and JACS – ACT Government delivered by the Aboriginal Legal Service (ALS) NSW/ACT. The project was initiated to provide culturally relevant accredited driver instruction and support to increase licensing rates and improve road safety. Targeting Aboriginal and Torres Strait Islander Learner licence holders, job seekers and Aboriginal and Torres Strait Islander people in contact with the justice system from the ACT and greater regions.

Development, implementation and delivery of project was administered by the ALS NSW/ACT. To guide project oversight and cultural competency, a steering committee was established with key stakeholders from: Transport (Accent Training Services, Transport Industry and Skills Centre, Australasian College of Road Safety - ACT & Region Chapter); Justice (Justice and Community Safety Directorate – Community and Justice Programs; Legislation Policy and Programs; ACT Corrective Services); and Employment (Habitat Personnel).

Key Project Services

The project employed an Aboriginal ADI to deliver case management for Aboriginal and Torres Strait Islander people seeking a driver licence. The ADI role was intended to provide practical assistance and advocacy for clients to fulfil the requirements of the ACT driver licensing system by providing seven key project services:

1. Driving instruction and assessment with a qualified Aboriginal Instructor.

2. Access to appropriate vehicles for practice and assessment.

3. Supervised driving practice with volunteer mentor drivers.

4. Vehicle induction workshops with a local Aboriginal mechanic.

5. Tailored, community-based Road Ready programs and linkage to driver offender programs.

6. Practical support and assistance to navigate the licensing system and manage debt recovery process.

7. Access to full or partial financial assistance to complete the required training and assessment and meet the costs of obtaining or renew a licence.

Evaluation Methods

The evaluation aims to establish whether the project is delivered as intended according to the key service areas and to provide insight into the barriers and enablers for uptake and implementation. To determine if the key services were delivered as intended, the evaluation uses a mixed method approach drawing together project data (licence attainment and client information) with key informant interviews. This is structured around an evaluation framework for complex interventions for interpretation and reporting of outcomes.[14] This included: 1) Reach; 2) Dosage; 3) Fidelity; 4) Engagement; 5) Acceptability; and 6) Context.

Project Data

Licence attainment and client information collected by the ADI throughout the project were analysed to answer questions about the key evaluation measures, including:

- Reach: Whether the project is reaching the target clients with a high level of need for licensing support.

- Dosage: Whether the project is delivering sufficient contact and services to meet the needs of clients seeking a licence.

Key Informant Interviews

Key informant interviews were conducted by the evaluation team, this included semi-structured interviews for project stakeholders and research yarns for project clients. These aimed to answer questions about the key evaluation measures, including:

- Fidelity: The extent to which the key project services were implemented as intended.

- Engagement: Whether the project had been effective in engaging communities.

- Acceptability: Whether the project offers licensing support in an acceptable way to communities.

- Context: The factors that facilitated/inhibited successful implementation of the project.

Seven stakeholder interviews were conducted during August 2019, with representatives from Justice (JACS, ACT Corrective Services and ACT Child and Youth Protective Services), Transport (Sutton Road Training Centre and Australasian College of Road Safety) and Charity/Not-For Profit (Worldview Foundation Limited). Stakeholder interviews were conducted in a one-to-one format in which a set

of 11 open-ended question were asked to stimulate discussion on the project context, the need for the project, experiences and expectations of the project, community and stakeholder engagement, implementation barriers and facilitators and important outcomes.

In-depth research yarns with three clients was held between October and November 2019. Data collection was captured using the Indigenous method of Yarning, which is a process that is culturally friendly and builds on the oral tradition of sharing knowledge and information.[15] The approach is based on storytelling, and a sharing of experiences between evaluation team and clients. The yarns were structured around nine questions that explored: Experiences with the project and obtaining a licence; acceptability of the project model; access to current services as well as service gaps; and the impact of attaining a licence.

Interviews and yarns were audio recorded, transcribed and managed using NVivo 12 software.[16] An inductive analysis approach was used to identify and develop common themes arising from the interviews and yarns and reported within the evaluation framework.

Evaluation Results

The project has been operational for 24 months commencing on 1st December 2017. The evaluation results presented here reflect the period from 1st December 2017 to 1st October 2019. The first four months involved project set up, staff recruitment and training. Clients were recruited to the project from 1st April 2018.

Reach

The project was designed to meet the licensing needs of Aboriginal and Torres Strait Islander Learner drivers, jobseekers and people in contact with the criminal justice system within the ACT. The project has reached 74 clients and has been successful in reaching its target clientele of Learner licence holders (n=71) and job seekers (n=20). However, the project reached only a small number of people in contact with the justice system (small cell size not reported) (Table 1). In addition to reaching job seekers, the project was successful in reaching students (n=30) and people who may not be in the workforce or seeking employment including fulltime parents, carers and/or pensioners (n=22). The main reasons clients reporting wanting to participate in the project and attain a licence were to: Meet family responsibilities access health services independence and access employment and education opportunities.

Table 1 Characteristics for current and completed clients

	Completed	Current	Total
	N = 50	N = 24	N = 74
	n (%)	n (%)	n (%)
Female	29 (58)	19 (79)	48 (65)
Male	21 (42)	5 (21)	26 (35)
Learner licence holders	50 (100)	21 (87.5)	71 (97)
Job seekers[A]	15 (30)	5 (21)	20 (27)
Employed	9 (18)	0 (0)	9 (12)
Unemployed	6 (12)	5 (21)	11 (15)
Justice system[B]	<5	0(0)	<5
Students[C]	18 (36)	12 (50)	30 (40)
Other[D]	15 (30)	7 (29)	22 (30)

[A] Job seekers (Unemployed or employed part-time/casual)
[B] Clients in contact with the justice system (Not reported due to small cell size less than five)
[C] Students (High school and/or tertiary students)
[D] Other (Clients not in workforce or seeking employment including fulltime parents, carers and/or pensioners)

Completed clients

- 50 clients obtained a Provisional licence as a result of participation in the project, their ages ranged from 16 to 54 years: Males (n=21; 42%) and females (n=29; 58%).

- Clients were mostly aged 25 years and below (n=39; 78%).

- All clients were Learner licence holders (n=50) when they enrolled in the project.

- 15 clients (30%) were job seekers, their ages ranged between 18 to 34 years.

- 18 clients (36%) were students, their ages ranged between 17 to 20 years.

- Clients in contact with the justice system completed the project (small cell size not reported).

Current clients

- 24 clients are currently participating in the project, their ages ranged from 17 to 55 years: Males (n=5; 21%) and females (n=19; 79%).

- 21 clients were Learner licence holders when they enrolled in the project.

- Five clients (21%) are job seekers, their ages ranged between 17 to 50 years.

- 12 clients (50%) are students, their ages ranged between 16 to 22 years.

- No clients who are currently participating in the project identified as being in contact with the justice system.

- There are an additional 12 clients on a waiting list to participate in the project.

Dosage

The primary support that clients requested was driving instruction with the ADI, with all clients receiving lessons from the ADI and access to the car. The ADI has delivered 520 hours of CBTA leading to the successful completion of 50 clients attaining a Provisional licence.

On average clients who successfully obtained a Provisional licence received five lessons to successfully pass the CBTA. This equated to an average of 10 hours of accredited driving instruction per client, which ranged from 1-20 hours depending on the needs of the novice drivers.

Fidelity

The project was initially established with seven key services to deliver. Of these, two were delivered as intended, three were partially delivered, and two were not delivered as intended (Table 2).

Table 2 Key project services delivered as intended, partially and not at all

Key service	Delivery
1. Driving instruction and assessment with a qualified Aboriginal instructor	Delivered as intended
2. Supervised driving practice with volunteer mentor drivers	Not delivered
3. Access to appropriate vehicles for practice and assessment	Delivered as intended
4. Vehicle induction workshops with a local Aboriginal mechanic	Partially delivered
5. Tailored, community-based Road Ready programs and linkage to driver offender	Not delivered

programs such as Know the Risk, Think Ahead and Never Again	
6. Practical support and assistance to navigate the licensing system and manage debt recovery processes	Partially delivered
7. Access to full or partial financial assistance to complete the required training and assessment and meet the costs of obtaining or renewing a licence	Partially delivered

Services delivered as intended

Driving instruction and assessment with a qualified Aboriginal instructor

At the establishment of the project an Aboriginal project officer was appointed by Aboriginal Legal Services NSW/ACT to deliver the key project services. The Aboriginal project officer successfully completed specialist training, attaining a Certificate IV in Transport and Logistics by Transport and Industry Skills and Training Centre to become an ADI.

Access to appropriate vehicles for practice and assessment

The ADI has had sole access to one project vehicle to provide CBTA to participants. The ADI and vehicle were accessible on weekends to create flexibility in driving lessons as needed by clients.

> *'It definitely helps with access to the instructor and the car definitely helps as well, again I don't have any family here, so having someone that can actually tick off those proficiencies and that has all that time to do the hours as well.' (Research yarn - project client)*

Services partially delivered

Vehicle induction workshops with a local Aboriginal mechanic

A total of 74 clients received a vehicle induction workshop, however this was provided by the ADI rather than a local Aboriginal mechanic. As part of the specialist training in Certificate IV in Transport and Logistics to become an ADI, training on vehicle maintenance and servicing was undertaken by the ADI. During introduction into the licensing project, the ADI provided clients with training in the mechanical features of the vehicle and on the foundations of vehicle maintenance (fuel, oil and coolant changes) and servicing (tyre pressure and dashboard warning lights).

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Practical support and assistance to navigate the licensing system and manage debt recovery processes

Clients were transported to Access Canberra as needed in the course of their CBTA sessions with the ADI. One client specifically requested support to Access Canberra outside of the CBTA sessions and this was provided.

No clients requested support with debt management, however as this was not explicitly offered to clients, it is possible that there were clients who could have benefited from this service had they known it was available. The lack of uptake of this aspect of the service area is attributed to low awareness of the scope of the project by clients and stakeholders and therefore there were not referral processes in place.

Access to full or partial financial assistance to complete the required training and assessment and meet the costs of obtaining or renewing a licence

One client requested access to financial assistance towards the computerised Road Ready Knowledge Test, which was provided. As this was not explicitly offered to clients, it is possible that there were clients who could have benefited from financial assistance had they known it was available. The low of uptake of financial assistance is attributed to low awareness of the scope of the project by clients and stakeholders.

Service not delivered

Supervised driving practice with volunteer mentor drivers

The volunteer mentor aspect of the project was not delivered as intended. The recruitment of volunteer mentors was highlighted by project staff to be difficult and a key barrier to implementing this aspect of the project. Informants noted that only Aboriginal and Torres Strait Islander people were approached to become volunteer mentors and non-Indigenous people were not approached to become volunteer mentors.

Tailored, community-based Road Ready programs and linkage to driver offender programs such as Know the Risk, Think Ahead and Never Again

The Road Ready course and linkage to offender programs were not delivered to clients as intended. The ADI attended a 'train-the-trainer' program through Ascent Training Services to enable delivery of the Road Ready course and Knowledge Testing to clients seeking to obtain a Learner licence. Furthermore, the ADI cumulatively completed six weeks of a Road Ready shadow training. Despite receiving the training, the ADI did not deliver the Road Ready course as he referred clients to an external existing provider of the course. This avoided duplication of services and indicates that

current Road Ready Course service providers are meeting the needs of Aboriginal and Torres Strait Islander people within the ACT.

The linkage to offender programs was not delivered as intended, with informants citing that clients did not present with a need for such programs. Few clients were in contact with the justice system. This could be indicative of a lack of referral pathways and connections with organisations representing people within the justice system.

Engagement

The project is reaching all three target client groups but has been most successful in engaging Learner licence holders and job seekers, with limited success in engaging people in contact with the justice system. Of the fifty successful clients who attained a Provisional licence there were only a minimal proportion (number not reported due to small cell size) who were in recent contact with the justice system.

The project was presented by the ADI at three services and at one event to engage and inform community members about the project services being offered (Table 3). These presentations were all conducted in 2018 and the number of people who attended the information sessions was not recorded.

Table 3 Licensing project presentations to stakeholders by ADI

Date of presentation	Service or event
27 March 2018	Gugan Galwan Youth Centre
30 April 2018	ThroughCare ACT
04 May 2018	ACT Council of Social Services - Gulanga Program workshop
07 May 2018	Winnunga Men's group
16 May 2018	Winnunga Men's group

Informants stated that awareness of the project in communities was largely driven through word of mouth and pre-existing relationships between the ALS staff and the ADI.

> *'Especially in an Aboriginal community ...you know, you might get somebody come up and say, oh, I wish I can get a licence...Mate, this is how you do it…go and speak to Aboriginal Legal Service.' (Stakeholder interview – Justice)*

> *'Most of my like, all the family around here that are Aboriginal, like we're not blood related but we call each other family, we all just when we get together...oh have you tried (project staff - ADI) to get your licence, like cause a lot of young people that I know they don't have, they didn't have access to getting their licence. So when we would mention (project staff - ADI), they're like oh I haven't heard of him before but I will try....And you know you'd see them again and they like I got my licence...and it was just happy like, it would just bring the community together.' (Research yarns – project client)*

Despite word of mouth referrals, there was low awareness of the full scope of the project among informants from stakeholder organisations. Some informants were not aware of the project through formal networks and had instead heard about it informally (word of mouth) or by investigating options for clients who had licensing needs. In particular, half of the informants from ACT justice organisations were not aware of the project being offered through the ALS. Furthermore, apart from accredited driving instruction and access to an appropriate vehicle, none were aware of the specific Road Ready course and linkage to offender programs being offered through the project.

> *'So, I didn't know the ALS project existed, but I also didn't know any program existed that would be cheap or free….so my mum told me about it - - - and what mum said, was a bit like, (project staff – ADI) will drive out to you with a car and pick you up and you just go with him and drive around for an hour or so, and I'm not sure, does it count as driving with a trainer, where your hours are doubled? Um, yeah and basically, all that I know, is that he comes, he picks you up, you do your driving and then he'll drop you off, and that's it.' (Stakeholder interview – Justice)*

> *'Well I had my school to work mentor, who didn't actually know about it (licensing project) before me but I was kind of like nagging him about wanting to get my licence so then he looked into it and lead me to (Project staff – ADI), so I only really knew about this because of him.' (Research yarns – project client)*

> *'Through the Belconnen community services...it was through a staff member trying to find various things to help me...maybe just making sure the community centres are aware so that they can pass on the information, my worker did quite a bit of digging I think to find it.' (Research yarn – project client)*

Acceptability

Informants reported that the project offered licensing support in an acceptable way to Aboriginal and Torres Strait Islander clients. The ADI was responsible for delivering project services in a culturally safe way to clients and this was considered to be a key aspect to the project's acceptability. Furthermore, the ADI was very flexible in delivering the CBTA, which included providing driving lessons: 1) on weekends; 2) between various locations so clients could perform driving lessons to and from appointments; and 3) before business hours so that lessons would serve the dual purpose of transportation to client's place of work or education.

> *'It's very flexible, and I can let him know all my availabilities and we'll find a time that suits.' (Research yarns – project client)*

A strength of the program and key to the project acceptability and uptake was cultural safety and understanding experienced by clients. Clients attributed this to having the project delivered through an Aboriginal Community Controlled Organisation and by Aboriginal and Torres Strait Islander project staff.

> *'Well It was very, it was overwhelming with excitement, it was scary because it was something that I haven't done before but to feel safe and welcome and respected was one of the most best things of the course... It's good here (at ALS), again I feel comfortable, like when I see the flags I am just like yeah, this is home kind of thing.' (Research yarns – project client)*

> *'With (project staff - ADI), it was like if I did – – – like a mistake, he'd be like ah nah you didn't do it good okay, but what we are going to do is I'm going to teach you how to do it and I am like oh thank you, like yeah he was really good and calm.' (Research yarns – project client)*

> *'He didn't put pressure on, I had one lesson (with another driving instructor) beforehand as well and he would be really like strict on what I was doing and I was ....it would freak me out like it would actually make me worse at driving. So, with (project staff - ADI) he was super easy going, which made it so much more relaxed so I could actually learn better and I wanted to learn, rather than being scared of my lessons.' (Research yarns – project client)*

> *'It was definitely very easily accessible, and I guess I feel like because it's an Aboriginal service...it feels a lot more comfortable to access.' (Research yarns – project client)*

Context

Informants identified unlicensed driving and driving under the influence as increasing issues of concern within the ACT and highlighted that these issues are a pathway to contact with the justice system. For this reason, informants felt strongly that Aboriginal Community Controlled Organisations that are connected to the justice sector are best placed to deliver driver licensing projects to Aboriginal and Torres Strait Islander people in the ACT.

> *'With Aboriginal Legal Service though, they're the frontline of helping our mob in the court system. And if you look at the courts, there's some of our guys have been incarcerated because traffic fines or no licences.' (Stakeholder interview – Justice)*

> *'Aboriginal Legal Services as they are generally the first organisation to do early intervention work and diversion from the courts with regards to road safety crimes. Generally speaking, the group of people ALS are working with often have very complex needs as vulnerable people, and these are very often associated with road and traffic offences…. I am very supportive of an Aboriginal Community Controlled Organisation undertaking this role, particularly as ALS have established relationships in the community…With ALS providing the project in the Community, it offers the community a culturally safe avenue while also supporting ALS through Aboriginal organisation self-determination and ownership in the ACT community… Should this fail, it is my opinion, that the project should still sit with an Aboriginal Community Controlled Organisation for the same reasonings including cultural safety and proficiency.' (Stakeholder interview - Justice)*

Enablers

Two factors were highlighted as key enablers to the successful delivery of the project. The first was that the CBTA addressed a community need for access to professional driving instruction and driving experience, which is a major barrier that clients had faced in getting a licence previously. The second was that it was delivered in a culturally safe way by someone well equipped to deliver the program ('ensuring the right person for the job').

Firstly, all clients requested assistance with driving instruction as this had been the main barrier they had encountered to attaining a Provisional licence. According to the ADI and other informants, the primary reason clients reported wanting to access the project was the prohibitive cost of professional driving lessons.

> *'The payment was the biggest stop for me, because it would be, one lesson would be one thing but then another one was, it was just so expensive' (Research yarns - project client)*

> *'With the Road Ready, like the test, I did that through CIT (Yurauna centre) so again I felt safe and welcome, but then as soon as it got to like wanting to get the driving lessons. That was the biggest halt, was like just money wise basically and who to go through and who was like not going to rip me off or anything.' (Research yarns – project client)*

> *'Yeah money was a big thing for me as well, it was way too expensive, and I didn't really know, I wasn't confident enough to take the test which is also expensive... and then doing more lessons, it was just too expensive.' (Research yarns – project client)*

Secondly, the ADI was a key enabler to delivering flexible case management and licensing outcomes. Clients expressed that the ADI being Aboriginal was important for establishing rapport and a meaningful understanding of the barriers they faced. However, it was not simply that the ADI was an Aboriginal man, it was also identified as important to have the CBTA delivered by staff who engaged clients in a respectful and appropriate manner to create a conducive environment for successful completion of the CBTA. The ADI was highly regarded and commended for ensuring that clients felt comfortable during CBTA.

> *'I think (project staff – ADI) presence - like he was just welcoming, he wasn't mean or uptight, he made it very fun, kind of thing, I just felt really safe in his presence.' (Research yarns – project client)*

> *'He was just really easy going so I didn't really fell nervous around him and he was just super easy going with how he taught...instead of getting angry if I did something wrong, it was just yeah good.'(Research yarns – project client)*

Barriers

There were four main barriers to implementation: 1) Meeting the workload; 2) Scheduling to meet client availability; 3) Data collection and administration; and 4) Awareness of the scope of the project. Underlying these barriers was the expectation that one team member would deliver all aspects of the project; however, it was challenging for the ADI to provide CBTA to clients and ensure that the administrative and interagency aspects of the project were fully realised.

Essentially, having only one project team member performing all program elements (CBTA along with administration, data entry and engaging with stakeholders) resulted in the workload being a barrier to successful implementation of all service areas. Informants reported that increased numbers of project staff would address this by allowing for task delegation and more efficient project delivery. A related issue was the flexible approach to case management, which was challenging at times as clients were not always available during business hours and not always ready as arranged. Therefore, it was challenging with only one ADI to meet demand and align with client schedules.

> *'Sometimes, clients were difficult to reach and contact. Clients would not be home when (project staff - ADI) would come to visit them to get to know them and talk about the project…While he is managing well and enjoying his job, it is sometimes difficult with only one ALS staff member working on the (Project).' (ALS – project staff)*

High quality and timely data collection are a crucial element to successful project implementation and evaluation; however, this is often not prioritised when service delivery demands are high. It emerged that there were not standardised processes in place for ensuring that project record database was maintained with up to date client information. While records were kept in paper format, an electronic record of project data would offer greater scope for timely reporting of outcomes, services delivered as well as understanding the needs of clients and identifying who the project was not reaching.

The final observed barrier to full implementation of the project was low level of project awareness and interagency collaboration. As aforementioned, relevant stakeholders either weren't aware of the project or were only aware of the CBTA aspects and therefore referral pathways were not well established or utilised beyond existing networks of project staff.

Impact

The licensing project has had a positive influence on client wellbeing, self-confidence and motivation for pursuing employment and educational opportunities. In particular, the driving lessons conducted by the ADI has had led to positive and successful client outcomes reaching beyond attaining a licence.

> *'At the start of the project, clients were often nervous and lacking confidence. By the end of the project once (they) successfully obtained their licence, their confidence in themselves grew and they were significantly less anxious and more confident in themselves and their abilities. This project is highly beneficial for*

helping clients keep their lives on track and boosting their self-esteem.' (Project Staff)

'He's a good fellow (project staff - ADI), I have so much respect for him, with the project, like I'm so thankful that they do have this running through the Aboriginal Legal Service. I'd like to thank everyone that organises it, funds it and I hope to see it keep going in the future cause it really does, it does make a difference to people's lives and you know one day you could be sad and down, then you can get your licence and have that support and your life's changed forever.'

'Dramatically (ALS service helped), like I've come out of my shell, let alone like that was the biggest thing like even though it was just driving lessons, after that my confidence boosted – you know I was like I can do this I can do anything, kind of thing' (Research yarns – project client)

Clients also reported that attaining a licence has had a positive impact on the lives of their families and community, including improvements in school attendance for children and young people, being able to get groceries as well as transporting family members to work and social events.

'It's just made me more independent with school and stuff like I can drive myself around just whenever I need to, to work and to school, and when I'm helping out my mum with my siblings and I can drive them to parties or to school back and just to their friends. Help them with their friends and stuff and it's just like helped me and my whole family like my mum has really benefitted from me having my licence cause it takes the strain off having all of us kids to have to yeah fend for.' (Research yarns – project client)

'It helped dramatically with my three children, getting them to school their attendance has gone through the roof now because I can get them there. If I didn't have a driving licence like on rainy days I wouldn't be able to send them to school...It's the little things that made a big big difference in my life and having (project staff - ADI) come past and do the lessons it's just changed my life dramatically like being able to do shopping without having to carry fifteen bags on the bus, like that's the biggest yeah – like its dramatically changed my life for the better.' (Research yarns – project client)

'I haven't had a job, but going to school like I can actually go back to school now and that's just the biggest thing like just being able to get in the car and go down there, it's good.' (Research yarns – project client)

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> *'My plan is to once I get my licence to go back into study so I can also further my*
> *job options again and then maybe also look at doing some volunteer work on the*
> *side.' (Research yarns – project client)*

Conclusion

The project has supported 50 clients to attain a Provisional licence and is continuing to work with 24 clients who are progressing through CBTA. There is a high demand to participate in CBTA as evident by the 12 people who are on the waiting list to participate. The project has reached clients with a high need for the project, including the target clientele of jobseekers and Learner licence holders as well as parents and people with caring responsibilities. However, the project has been less effective in reaching people in contact with the justice system and this is attributed to low awareness of the full scope of services and lack of referral pathways with justice organisations.

The project has a strong focus on delivering CBTA, which meets the primary need of the clients for support to progress from a Learner to Provisional licence. This aspect of the project has been effective in overcoming the main barriers that clients have previously faced, including the high cost of professional driving instruction and access to a car and supervisory driver.

The project has not fully delivered five out of seven service areas, in part this reflects being responsive to the needs of clients, which was primarily for CBTA. However, this also points to some of the implementation challenges around resourcing and interagency collaboration. It emerged that with the strong focus on delivering CBTA to clients, it was not feasible for the ADI to be tasked with implementing all aspects of the project, as well as managing the data collection and stakeholder engagement.

A potential solution could lie in implementing one of the key service areas to deliver supervised driving practice with volunteer mentor drivers, which may lessen the time required for the ADI to provide driving instruction. One of the barriers cited by project staff to implementing this service was the challenge around recruitment of volunteer mentor drivers, which has been similarly highlighted as a barrier in the NSW Driving Change Aboriginal and Torres Strait Islander licensing program.[11] Implementation of this service would require significant resources for recruiting and managing volunteers as well as standard operating procedures for recruitment and management of the volunteers and the vehicle(s).

The aspects of the project that were not delivered as intended reflects adaptations to the project during implementation to meet the needs of clients with the resources available. For example, in terms of delivering the Road Ready course, it may be more practicable to continue to link in with

existing providers who are currently delivering the course and meeting the needs of Aboriginal and Torres Strait Islander people in the ACT. Similarly, it may be sufficient for the ADI to provide vehicle induction rather than outsourcing this to a fully qualified local Aboriginal mechanic. In this way, the project has adapted to meet the needs of the community and deliver support pragmatically without duplicating services. However, addressing the remaining service areas that were not fully delivered as intended (e.g. financial assistance, debt recovery management and linkage to offender programs) may require additional resourcing and targeted strategies to increase awareness of the full scope of services that the project offers.

While informants were supportive of the project and found it to be highly acceptable delivery of licensing support, there was low awareness of the full scope of services that the project could deliver among relevant agencies. This was due to an overreliance on word of mouth and working with existing networks. While word of mouth can be an effective mechanism to spread information within Aboriginal and Torres Strait Islander communities, the key to increasing stakeholder engagement is a collaborative interagency approach between organisations that are impacted by licensing and transport affairs for Aboriginal and Torres Strait Islander people, particularly those within justice, education, employment and health. Establishing strong links between agencies and a concerted effort for active advertising of the project, will ensure a greater awareness and wider reach, particularly to offer greater support for people in contact with the justice system.

Health and wellbeing of Aboriginal and Torres Strait Islander people is most effectively improved through a holistic approach that adapts to their cultural perspectives and worldview. The project has been successful in achieving this and was highly acceptable in supporting people through the licensing process and increasing their confidence not just in their driving but also in pursuing educational and employment opportunities. A key to this was the culturally safe environment that the ALS and the ADI provided, and also that the ADI was highly regarded for consistent, respectful and patient instruction. The impact of attaining a driver licence for Aboriginal and Torres Strait Islander people through licensing programs has been shown to have far reaching effects beyond being able to drive.[2] In line with this, clients who attained a licence through the project report benefits that flow to their family and community.

Robust data collection allows for evaluation and for optimisation of implementation. Ideally this would be using electronic data capture, which could be integrated into the client data management processes to streamline reporting and ensure that staff are responding to client need and meeting the project deliverables.

Key Recommendations

Reaching target clients

1. Targeted recruitment of clients in contact with the justice system through increased interagency collaboration, particularly with justice organisations.

Delivering all service areas

2. Provision of financial assistance to clients who are experiencing financial hardship to assist with costs associated with licensing or test fees.

3. Raising awareness of support options for debt recovery management with both stakeholders and clients – additionally this will likely increase the reach of the project to include clients who may not be able to access a licence due to licensing sanctions.

4. Targeted approach to engaging with stakeholders in education, employment and justice sectors to increase awareness of the full scope of services offered by the project.

5. Investment in targeted campaigns through media platforms to reach clients and increase community awareness and uptake of the service areas beyond CBTA.

6. Development of standard operating procedures for recruitment and management of volunteer mentor drivers and the vehicle(s), including application, driving history and working with children checks.

7. Development of a recruitment campaign for volunteer mentor drivers that uses media, social media and local community networks (project staff noted that only Aboriginal and Torres Strait Islander people were contacted to become volunteer mentors and non-Indigenous people were not targeted or approached).

Interagency collaboration

8. Establishment of new referral pathways with justice organisations and other key organisations such as schools and employment agencies to better target clientele with high need for the project.

9. Keeping records of interagency and stakeholder engagement to ensure comprehensive coverage and increase awareness of project.

Adequate staffing

10. An additional dedicated staff member to provide administrative support, which may include arranging administrative processes for financial assistance and debt recovery management for clients as well as recruitment and coordination of volunteer mentor drivers.

Monitoring and evaluation

Effective data management processes are critical, therefore investment is needed into both establishing and maintaining an appropriate system. This requires:

11. An electronic record keeping system to ensure consistency and timely access to database of client records.

12. Additional administrative support to undertake data entry for all client records.

13. Additional oversight at the management level to ensure that data management is complete and of high quality.

Appendix 1 Competency Based Assessment and Training System / 'Log-Book' System

Competency 1	Vehicle control	Demonstrate use of wipers in wet weather, correct use of demister (front and rear), lights, dip switch, indicators, horn, choke, steering lock. Demonstrate the effective control of foot brake and accelerator (and clutch in a manual transmission vehicle).
Competency 2	Cabin drill	Demonstrate the ability to correctly adjust seat, head, restraint, mirrors and seat belt.
Competency 3	Starting up procedures	Ensure handbrake is firmly on and check appropriate gear position (manual and automatic). Demonstrate use of choke if required.
Competency 4	Moving off procedures	Demonstrate ability to select the correct gear. Demonstrate correct use of mirrors, head checks and appropriate revs. Demonstrate good clutch/accelerator co-ordination (manual). Apply brakes when selecting gears (automatic). Release handbrake, check dashboard warning lights, signal and allow for approaching traffic.
Competency 5	Gear changing	Demonstrate the ability to change up/down when necessary and select the appropriate gear for speed and conditions (manual and automatic). Demonstrate good clutch/accelerator co-ordination (manual).
Competency 6	Steering control	Demonstrate correct positioning of hands as well as cornering ability. Demonstrate 'Pull Push' steering methods at all times. Hand over hand steering is acceptable for slow speed manoeuvres. Demonstrate the ability to maintain position within traffic lanes.
Competency 7	Turns, left and right	Demonstrate the ability to communicate intentions by giving adequate signals. Demonstrate the ability to use mirrors, engage an appropriate gear, select appropriate gap, position the vehicle correctly for turns, obey road markings and turn into appropriate lanes.
Competency 8	Speed control	Demonstrate smooth use of the accelerator and the ability to reach appropriate speeds quickly, so as to not obstruct traffic. Maintain an appropriate following distance for visibility and road conditions. Demonstrate the ability to choose an appropriate speed for the

		traffic and road conditions, allowing for visibility, and driving within the speed limit.
Competency 9	Slowing procedure	Demonstrate the correct use of mirrors and smooth use of footbrake. Demonstrate the ability to reduce speed progressively, brake firmly when travelling in a straight line and vary braking effort according to the road surface and conditions.
Competency 10	Stopping procedure	Demonstrate the correct use of mirrors and smooth use of footbrake. Demonstrate the ability to reduce speed progressively, depress the clutch at the correct time and remain in gear until stopped (manual).
Competency 11	Hill starts	Demonstrate the ability to select the correct gear, use of mirrors, signal, perform the handbrake and use appropriate revs. Avoid rolling backwards or stalling.
Competency 12	Give way rules	Demonstrate a sound knowledge of the road rules as well as good anticipation and observation.
Competency 13	Reversing	Demonstrate the ability to reverse in a straight line, scanning to the rear whilst reversing.
Competency 14	Right angle parking	Demonstrate the ability to check for approaching traffic, signal appropriately and select the gear required. Demonstrate the safe and accurate parking between two vehicles at right angles to the kerb then leave parked position to face opposite direction. No part of the vehicle may strike another vehicle, kerb or object.
Competency 15	Reverse parallel parking	Demonstrate safe and accurate parking behind a vehicle by stopping beside a parked vehicle, reversing to a parked position behind a vehicle, then leaving the parked position. Demonstrate the correct use of signals and use of appropriate gear, scanning to the rear whilst reverse parking at an appropriate distance from the kerb. No part of the vehicle may strike another vehicle, kerb or object.
Competency 16	U turns	Demonstrate the ability to check for approaching traffic, signal, use an appropriate gear and maintain observations during the turn

Competency 17	Turning around in the road, e.g. Three point turn	Demonstrate the ability to check for appropriate traffic, signal, then turn using forward and reverse gears with good co-ordination of vehicle controls, within a reasonable time and using a reasonable number of movements.
Competency 18	Lane changing, merging, entering freeways. Form one lane	Demonstrate merging at 70 kph or more, changing lanes to the left and right, forming one lane, entering freeways. Demonstrate the correct use of mirrors, indicating, head checks and the selection of an appropriate gap. Demonstrate awareness of blind spots, the correct use of signals and head checks, and good anticipation.
Competency 19	Overtaking	Demonstrate the ability to choose a safe place to overtake and use good anticipation. Demonstrate the ability to check the road behind, give correct signals, keep a safe distance from the overtaken vehicle and avoid cutting in or obstructing traffic.
Competency 20	Observations skills, visual searching and scanning, hazard recognition	Demonstrate the correct use of mirrors and the ability to gather all the necessary information from the road environment. Demonstrate continuous forward scanning and regular observations to sides and rear of vehicle.
Competency 21	Compliance with the system of vehicle control	Demonstrate the use of the Systems of the Vehicle Control in an accepted sequence.
Competency 22	Vulnerable road users	Demonstrate good observation skills, recognition and risk management and display appropriate calm decision making to lessen and avoid risks and harm to any vulnerable road users.

Competency 23	Final drive on busy roads and unfamiliar roads	Demonstrate safe, controlled and efficient driving on busy and unfamiliar roads. Demonstrate driving in a variety of environmental conditions.

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