

**Early intervention to reduce young peoples' contact with
the criminal justice system: Local knowledge to inform
practice**

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Abstract

The involvement of youth in justice systems generates high social and economic costs for individuals, their families and communities. Although Victorian crime statistics indicate a decline in youth offending, there remains a subgroup who persist, resulting in adverse outcomes. Despite considerable scholarly attention on the factors that contribute to youth contact with justice systems, the application of this knowledge in some instances has failed to reduce such contact and deliver the desired outcomes.

This thesis asserts that the factors relating to youth contact with justice systems are best understood within the theoretical frameworks of social ecological theory and developmental criminology. A social ecological perspective broadens the understanding of factors associated with youth contact with justice systems and potential intervention opportunities. It is argued that the integration of developmental criminology and social ecological theory within a place-based framework will guide understanding and enhance the efficacy of early intervention strategies.

This thesis highlights the need to consider multiple interacting factors, the value of incorporating developmental data to augment police records and the importance of implementing practice wisdom in the formulation and delivery of developmental prevention strategies. An individual's exposure to adverse childhood experiences is demonstrated as a critical element associated with the risk of future offending. Findings relating to early contact with police as potentially protective and not necessarily predictive of an ongoing offending trajectory provide new insight. It is argued that a place-based approach that incorporates practice partnerships is critical to delivering effective prevention efforts.

This research project was supported through a university–service system research collaboration within the Inner Gippsland region of Victoria. The study has generated ‘local solutions to local problems’ and bridged the practice–research gap by generating conceptually sound, evidence-based interventions that are responsive to the Inner Gippsland community.

Acknowledgements

Many people have assisted me, both personally and professionally, to deliver this thesis.

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I could not have achieved this project without the commitment of my industry supervisors, who gave so much of their time and expertise; I acknowledge their massive contribution. Mark Langhorn, Victoria Police, never wavered in his enthusiasm for, and dedication to the research. His investment in the practical application of the findings is inspiring. Nicola Stuart, Victorian Department of Education and Training (DET), contributed considerable time and knowledge to ensure that the goal to inform practice was met. I would also like to acknowledge Rebecca Holmes from the then Victorian Department of Health and Human Services. As an Industry Supervisor in the initial stages of this project, she ensured that I was well integrated into the service system. Her positive approach was an asset as I navigated potential barriers to making this research happen.

I am also grateful to Donna Risely and the DET student support team for hosting me in their workplace, showing an active interest in the project and helping me to keep on keeping on! The same goes for those on the Youth at Risk panels. It has been illuminating to be alongside

them as they work tirelessly to improve outcomes for youths in Inner Gippsland. Their perspectives and collective input formed a critical component of this thesis in bringing life to the literature.

To the Inner Gippsland Children and Youth Area Partnership (IGCYAP) who initiated and supported this project, especially the then Principal Adviser Rowena Cann, I acknowledge their invaluable assistance. To my fellow IGCYAP doctorate researchers, Lynda, Mary and Alison, affectionately known as the Gang of Four, thanks for all those moments when you listened, shared the joys and frustrations and were there no matter what.

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To Charles, the dog, I apologise for all the time at the desk and solemnly promise that there will be so much more frisbee, beach and walks from here on in. At times, I doubt I would have continued without Guy's words: 'You will do a PhD won't you'. My dear friends Heather and Helen have been enduring in their support and critique, as well as keeping up the supply of bright spark tea. Simon, thanks so much for giving me the space to focus and tolerating the constant screams of 'GRRRRRR!' in the write up stage. I also want to acknowledge all my friends and colleagues for their supportive comments and interest in the project over the years.

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Statement of Authorship

Except where explicit reference is made in the text of the thesis, this thesis contains no material published elsewhere or extracted in whole or in part from a thesis by which I have qualified for or been awarded another degree or diploma. No other person's work has been relied upon or used without due acknowledgement in the main text and the list of references of the thesis. No editorial assistance has been received in the production of the thesis without due acknowledgement. Except where duly referred to, the thesis does not include material with copyright provisions or requiring copyright approvals.

Signed:

Date: 15 February 2021

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Statement of Ethics Approval

Approval

Human Research Ethics Committee



Principal Researcher:	Dr Alistair Harkness	
Other/Student Researcher/s:	Dr Margaret Camilleri Ms Kay Lancefield	Inspector Mark Langhorn Ms Rebecca Holmes
School/Section:	Faculty of Education and Arts	
Project Number:	A18-021	
Project Title:	Early intervention to reduce young peoples' contact with the criminal justice system	
For the period:	5/4/2018 to 27/2/2020	

NB:

- **When developed after completion of Stage 1 and 2, the survey questions must be submitted as an amendment for review and approval.**

Quote the Project No: A18-021 in all correspondence regarding this application.

Approval has been granted to undertake this project in accordance with the proposal submitted for the period listed above.

Please note: It is the responsibility of the Principal Researcher to ensure the Ethics Office is contacted immediately regarding any proposed change or any serious or unexpected adverse effect on participants during the life of this project.

In Addition: Maintaining Ethics Approval is contingent upon adherence to all Standard Conditions of Approval as listed on the final page of this notification.

COMPLIANCE REPORTING DATES TO HREC:

Annual project report:
5 April 2019

Final project report:
27 March 2020

The combined annual/final report template is available at:

<http://federation.edu.au/research-and-innovation/research-support/ethics/human-ethics/human-ethics3>



Fiona Koop
Ethics Officer
5 April 2018

Please note the standard conditions of approval on Page 2:

STANDARD CONDITIONS OF APPROVAL

1. Conduct the project strictly in accordance with the proposal submitted and granted ethics approval, including any amendments made to the proposal required by the HREC.
2. Advise (email: research.ethics@federation.edu.au) immediately of any complaints or other issues in relation to the project which may warrant review of the ethical approval of the project.
3. Where approval has been given subject to the submission of copies of documents such as letters of support or approvals from third parties, these are to be provided to the Ethics Office prior to research commencing at each relevant location.
4. Submission for approval of amendments to the approved project before implementing such changes. A combined amendment template covering the following is available on the HRE website: <http://federation.edu.au/research/research-support/ethics/human-ethics/human-ethics3>
 - Request for Amendments
 - Request for Extension. Note: Extensions cannot be granted retrospectively.
 - Changes to Personnel
5. Annual Progress reports on the anniversary of the approval date and a Final report within a month of completion of the project are to be submitted by the due date each year for the project to have continuing approval.
6. If, for any reason, the project does not proceed or is discontinued, advise the committee by completing the Final report form.
7. Notify the Ethics Office of any changes in contact details including address, phone number and email address for any member of the research team.
8. The HREC may conduct random audits and / or require additional reports concerning the research project as part of the requirements for monitoring, as set out in the National statement on Ethical Conduct in Human Research.

Failure to comply with the *National Statement on Ethical Conduct in Human Research* (2007) and with the conditions of approval will result in suspension or withdrawal of approval.

Approval

Human Research Ethics Committee

Principal Researcher:	Dr Margaret Camilleri	
Other/Student Researcher/s:	Dr Sue Yell Ms Kay Lancefield	Inspector Mark Langhorn Ms Rebecca Holmes Nicola Stuart
School/Section:	Faculty of Education and Arts	
Project Number:	A18-021	
Project Title:	Early intervention to reduce young peoples' contact with the criminal justice system	
For the period:	13/12/2019 to 20/8/2020	

Quote the Project No. A18-021 in all correspondence regarding this application.

Amendment Summary:

N/A

Extension:

Extension approved until 20/8/2020

Personnel:

Alastair Harkness has been replaced as Principal Researcher by Marg Camilleri.
Sue Yell has been added to the project.

Please note: Approval has been granted to undertake this project in accordance with the proposal and amendments submitted for the period listed above. Ongoing ethics approval is contingent upon adherence to the Standard Conditions of Approval on Page 2 of this notification.

COMPLIANCE REPORTING TO HREC:

Annual report/s due:

5 April 2020

Final report due:

20 September 2020

The combined Annual/Final report template can be found at:

<http://federation.edu.au/research/support-for-current-students-and-staff/ethics/human-ethics/human-ethics3>



for

Fiona Koop

Coordinator Research Ethics

13 December 2019

Please note the standard conditions of approval on Page 2:

STANDARD CONDITIONS OF APPROVAL

9. Conduct the project strictly in accordance with the proposal submitted and granted ethics approval, including any amendments made to the proposal required by the HREC.
10. Advise (email: research.ethics@federation.edu.au) immediately of any complaints or other issues in relation to the project which may warrant review of the ethical approval of the project.
11. Where approval has been given subject to the submission of copies of documents such as letters of support or approvals from third parties, these are to be provided to the Ethics Officer prior to research commencing at each relevant location.
12. Make submission for approval of amendments to the approved project before implementing such changes. A combined Amendment request template is available for the following:
 - Request for Amendments
 - Request for Extension. Note: Extensions cannot be granted retrospectively.
 - Changes to Personnel
13. Annual Progress reports on the anniversary of the approval date and a Final report within a month of completion of the project are to be submitted to the Ethics Officer by the due date each year for the project to have continuing approval.
14. If, for any reason, the project does not proceed or is discontinued, advise the committee by completing a Final report form.
15. Notify the Ethics Officer of any changes in contact details including address, phone number and email address for any member of the research team.
16. The HREC may conduct random audits and / or require additional reports concerning the research project.

Failure to comply with the *National Statement on Ethical Conduct in Human Research* (2007) and with the conditions of approval can result in suspension or withdrawal of approval.

List of Abbreviations

ACE	adverse childhood experience
CYAP	Children and Youth Area Partnership
CTC	Communities that Care
CSI	Criminal seriousness index
<i>CYFA 2005</i>	<i>Children, Youth and Families Act 2005 (Vic)</i>
DET	Department of Education and Training
DHHS	Department of Health and Human Services
EIT	Early identification tool
GCASA	Gippsland Centre Against Sexual Assault
HREC	Human Research Ethics Committee
IGCYAP	Inner Gippsland Children and Youth Area Partnership
LGA	local government area
NSW	New South Wales
OHC	out-of-home care
SAC	Sentencing Advisory Council
SD	standard deviation
SPSS	Statistical Package for the Social Sciences
UK	United Kingdom
USA	United States of America

Chapter 1. Introduction

1.1. Introduction

Youth contact with justice systems forms a major community concern, as detailed in the Victorian Auditor-General's report, *Services to Young Offenders* (2008), and the Sentencing Advisory Council's (SAC) report, *Reoffending by Children and Young People in Victoria* (2016). It is critical to identify and understand the factors that underpin youth contact with the criminal justice system to design and deliver effective prevention strategies. The majority of young people do not offend and, for most of those that do, their behaviour is limited to adolescence (SAC, 2016). In Victoria, 1.4 per cent of youths aged 10 to 17 years were alleged by the police to have offended in 2015 (SAC, 2016). Despite recent trends in Australia, which show that youth offending is decreasing (Payne, Brown & Broadhurst, 2018), a cohort of youths persists in serious offending. There is also an over-representation of youth with adverse childhood experiences (ACE) and contact with child protection agencies in those who engage in offending behaviour (Baidawi, 2020).

It is critical to identify those factors associated with initial and ongoing contact with the justice system to reduce the social and economic costs to individuals, communities and governments. Drawing on Moffitt's (1993) seminal work, a significant body of empirical research (e.g., Day & Wiesner, 2019; Piquero, 2008; Sutherland & Millstead, 2016) has identified differences between groups of youth based on their offending trajectories. An offending trajectory is derived from detailed aspects, such as the age at which offending commences, the age at which offending stops, offence specificity and diversity and the volume of offending (Amemiya, Vanderhei, & Monahan, 2017). Early intervention that

prevents or interrupts the trajectories of the cohort of youth who enter the criminal justice system at a young age and commit a disproportionately high volume of all youth crime can substantially reduce adverse outcomes and resource costs for individuals and community.

This study contextualises youth contact with justice systems across the social ecological system (Bronfenbrenner, 1979) in which individuals are embedded and the developmental framework of adolescence. It is asserted that the convergence of these two frameworks enables the identification of factors associated with future offending and how these interact so that interventions can be tailored to reduce risk and promote strengths across social systems.

The responses to youth engaged in offending behaviour reflect a range of socio-political agendas, community expectations and policy paradigms from 'tough on crime' to child welfare. Freiberg and Homel (2011) argued that there is a gap in translating research findings into policy and practice, which often contributes to the reduced efficacy of developmental prevention programs. They attribute this in part to the effects of the socio-political context in which the prevention efforts are developed and delivered.

The thesis is designed to present the research project and findings commensurate with the aim of translating research into practice. The opportunity to conduct a study with prospects for tangible research to practice application was a significant motivation to undertake this project. The researcher has 25 years of experience working with youth in a forensic context in Inner Gippsland. This led to the motivation to improve practice, bring the practice wisdom of frontline workers to the fore, and ultimately to enhance outcomes for youth and the broader community. Consistent with this goal, this thesis incorporates non-traditional outputs responsive to disseminating findings to the service system and contributing to the

scholarly literature. The inclusion of a publication and practice report provides the findings in a form accessible to those with the authority to operationalise practice innovations.

Chapter 1 includes an overview of the project, including the research questions and the framework of the study. The context of the study is provided, along with the rationale for and synopsis of the research design, to orient the reader. This is followed by an outline of the focus of each subsequent chapter.

1.2. Research

This research project was established to inform the priority of the Inner Gippsland Children and Youth Area Partnership (IGCYAP, Federation University of Australia, 2020) to reduce the contact of at-risk youth with the criminal justice system. The study incorporates a trial application of the early identification tool (EIT), a predictive model developed by Victoria Police to aid in early identification of youth offending. The detail of the EIT was provided to the researcher in the original project brief of the research collaboration between the IGCYAP and Federation University and in personal communication between the researcher and Victoria Police in establishing the research design.

A central tenet of this thesis is that early interventions through policy and practice that are responsive to the local context are best placed to reduce youth contact with justice systems. This doctoral project is a component of a research collaboration between Federation University Australia (Federation University) and the IGCYAP. The IGCYAP used a collective impact framework (Kania & Kramer, 2011) to work towards local collaborative service innovations that address complex social issues. The research collaboration between the

service system and academia aimed to conduct investigations to provide findings that would underpin service improvements and enhance outcomes in the local community.

A pilot application of the EIT to support the development of effective place-based responses to vulnerable youth was approved in 2015 by Victoria's Children's Services Coordination Board and the Deputy Commissioner Specialist Operations and Deputy Commissioner Regional Operations, Victoria Police (see Appendix 1). This study, incorporating the EIT trial, provided an important opportunity to contribute to the literature on predicting and preventing youth contact with the criminal justice system. The predictive model had not previously been exposed to external academic attention nor applied in a practice context. The predictive model is a community safety initiative of Victoria Police to employ existing police datasets with the aim of contributing to the service system's capacity to effectively respond to vulnerable youth at the earliest point of contact.

There has been considerable research into Australian youth justice populations that demonstrates the nexus between exposure to ACEs and youth offending (Baidawi, 2020; Malvaso, 2017; Paterson, 2015; Whitten, McGee, Homel, Farrington & Ttofi, 2017). Early intervention to interrupt an offending trajectory reduces the harm to individuals and their families and the social and economic costs to the community (Freiberg & Homel, 2011). Whether through vulnerability or engagement in potentially criminal behaviour, contact with police presents opportunities to intervene before formal involvement in the youth justice system. Understanding the factors across the social ecology that place youth at risk provides a basis for delivering responsive prevention initiatives. The associations between maturation experiences, developmental stage and the social systems in which youth are embedded generate opportunities for intervention.

Further research to understand the interaction between individual and systemic factors contributing to vulnerability and future offending specific to the community of focus is required. Insight is needed on how to effectively utilise research findings to develop and deliver successful developmental prevention programs. This study utilised Victoria Police predictive modelling and the Law Enforcement Assistance Program (LEAP) records, in conjunction with developmental data from the Victorian Department of Health and Human Services (DHHS) and Department of Education and Training (DET), to understand the factors associated with youth offending in Inner Gippsland. Consistent with the purpose of area partnerships, this study was designed to generate pertinent research findings to inform policy and practice decisions within a place-based approach.

1.2.1. Research questions

The central question addressed by this research is: How can the Victoria Police EIT predictive model be used to reduce youth contact with the criminal justice system?

The research sub-questions developed to address the main research question are:

1. What factors, both risk and protective, are associated with an offending trajectory that is predicted by the modelling based on police datasets?
2. How can developmental data from DHHS, DET and Victoria Police file narratives contribute to an improved understanding of these factors?
3. What are the critical factors and intervention points in a young person's social ecology that reduce their contact with the criminal justice system?

This thesis argues that police data that is augmented by a youth's developmental history held by government departments will enhance the service system's capacity to identify and

intervene effectively with youth at risk of persistent contact with the justice system. Jesuit Social Services, in the research report *Thinking Outside: Alternatives to Remand for Children* (2013) (the *Thinking Outside* report) examined the population of children on remand in Victoria and noted that it is the most vulnerable children who have contact with the justice system at the youngest ages. The report details evidence of this perspective, including the geographic concentration of youth who have engaged in offending behaviour in locations of marked socio-economic disadvantage, that the histories of these youths reflect high levels of ACEs and reports to statutory authorities and that there is a pattern of early engagement in antisocial behaviour (Jesuit Social Services, 2013). The *Report of the Protecting Victoria's Vulnerable Children Inquiry* (Cummins, Scott & Scales, 2012) (the *Vulnerable Children Inquiry*) demonstrated links between levels of socio-economic disadvantage in communities, developmental vulnerability and youth contact with the justice system. These findings reinforce the importance of social ecological interventions at key developmental points. This research will expand current knowledge by identifying the gains of matching police data with the developmental and education histories of youth.

1.3. Frameworks that guide the research

The value of early intervention that is central to this thesis is supported by the theoretical framework of developmental criminology, which highlights the vulnerability and potential adverse effects of early contact with the justice system (Dennison, 2011). By focusing on youths who do not follow a predicted trajectory, this study will contribute knowledge regarding the intervention points and elements of the social ecology that need to be strengthened for positive change. The factors shown to relate to youth contact with justice systems will be assessed with an emphasis on understanding the operation of protective

factors. Consistent with Axford and Little's (2006) proposal to shift the focus of child welfare services to prevention, changes to all aspects of policy and practice across the social ecology are required. This research will provide evidence upon which Victoria Police, in conjunction with the Inner Gippsland service system, can make policy and practice decisions to respond more effectively to youth at risk, specific to place.

Section 1.3 provides an overview of the guiding frameworks of this thesis to position the research in the broader field. A full review of the pertinent literature is provided in Chapters 2 and 3.

1.3.1. Convergence of developmental criminology and social ecological theory

Social ecological theory (Bronfenbrenner, 1979) provides a framework that shifts the understanding of engagement with criminal justice systems from predominantly individual factors to understanding the effect of social structural factors in prevention efforts (Bronfenbrenner & Morris, 1998). By recognising the contextual factors and the interaction a young person has within their social ecology, service systems can refine intervention programs and decision-making to reduce the contact an individual has with the criminal justice system (Ingoldsby & Shaw, 2002). Prevention efforts that are guided by predictive models, such as the EIT, have traditionally focused on individual and familial factors and therefore, have targeted these factors for intervention. It is asserted that it is across the entire social ecology in which an individual operates that protective and risk factors are best understood, and interventions implemented. The convergence of an individual's developmental experiences and their social ecology presents opportunities for early intervention.

Given that the predictive modelling of the EIT generates an expected offending trajectory for an individual, the incorporation of broader developmental information allows consideration of the effects of key transition points to understand contact with the justice system (Farrington, 1986; Homel & Thomsen, 2005). It is critical to understand the trajectory of at-risk youth to guide policy and prevention responses (Homel & France, 2008). The convergence of developmental criminology and social ecological theory highlights the importance of interactions between individual and systemic factors in shaping a young person's trajectory and developing early intervention strategies (Malvaso, 2017).

1.3.2. Predictive modelling

Predictive models have been developed to calculate the potential for youth offending so that intervention efforts can be directed to disrupt an individual's trajectory (DeLisi & Piquero, 2011). Identification of youths that are vulnerable to future offending provides the most effective opportunity to intervene and prevent the progression of an offending trajectory (Freiberg & Homel, 2011).

Drawing on developmental criminology, Dennison (2011) demonstrated a clear relationship between an individual's age and the point of onset, persistence and desistence in offending behaviour. Understanding this relationship allows for the identification of opportunities to intervene and change a trajectory. In the Victorian SAC's *Reoffending by Children and Young People in Victoria Report* (2016) into youth reoffending, the age at first contact with the youth justice system was identified as a key factor related to ongoing offending. The SAC (2016, p. 52) noted that:

[The] younger children were at their first sentence, the more likely they were to reoffend generally, reoffend violently, continue offending into the adult criminal jurisdiction, and be sentenced to imprisonment in an adult court before their 22nd birthday. Each additional year in age at entry into the criminal courts was associated with an 18% decline in the likelihood of reoffending.

The EIT enables early intervention efforts to interrupt the trajectory of youths who are flagged to have potentially higher rates of offending and longer criminal careers. This research was designed to identify those individual and social ecological systemic factors associated with contact with justice systems through the EIT trial. The subsequent incorporation of developmental history to contextualise police contact data provides opportunities for nuanced decision-making in developing effective and efficient early intervention strategies.

Sutherland and Millsteed (2016), who sought to develop a predictive model of Victorian youth engaged with the youth justice system, noted that the lack of developmental data restricted their research. The effects of ACEs are not clearly articulated in the current literature on predicting youth contact with the criminal justice system (Ringland, Weatherburn & Poynton, 2015). This research provides further understanding of the role of developmental experiences in identifying youths at risk of contact with the justice system by including the DHHS and DET data to augment police data.

1.3.3. Incorporation of protective factors

Consistent with Catalano, Berglund, Ryan, Lonczak and Hawkins (2004), this thesis argues for the reconceptualisation of prevention strategies, from focusing on the factors that

indicate risks to the protective factors and opportunities for positive youth development.

Intervention decisions based solely on risk reduction tend to focus on individuals or families (France & Homel, 2006; France & Utting, 2005). However, the risks often emerge or are created by the broader social structure, institutional practices or local barriers (France & Homel, 2006; France & Utting, 2005).

A further concern with programs based on minimising risk factors is that there is limited attention given to more positive activities (France & Utting, 2005). Most risk reduction programs focus on negative aspects of behaviour, which can adversely affect both young people and families as recipients of the service and those professionals who deliver the program (Case & Haines, 2009). Positive youth development can be promoted by identifying the protective factors, including an individual's assets and social ecology that shield them from risk.

1.3.4. Place-based approach

This study will seek to understand how the factors associated with youth contact with justice systems and social systems interact specifically in the Bass Coast Shire (Bass Coast), Victoria, to provide early intervention opportunities. The critical element of 'place' has not been thoroughly developed in the criminological literature. Despite a considerable body of evidence focusing on those factors that contribute to youth at risk of contact with justice systems (Farrington & Welsh, 2007; Lipsey & Derzon, 1998), the efficacy of early intervention programs is varied. It is argued that this variability is linked in part with a restricted focus on delivering evidence-based interventions that are responsive to the social ecology of the community in which they are delivered. Allard (2011) asserted that youth

offending is not randomly distributed; place-based prevention acknowledges the significance of the factors specific to the location. Neither the individual level nor the population level of crime prevention approaches focuses on the interrelationship of the social systems and the structural factors of the community in which youth contact with justice systems occur (Smallbone, Marshall, & Wortley, 2008). This research generates knowledge to inform practice innovations, specific to the Inner Gippsland context, to improve results derived from prevention efforts that draw on finite social and economic resources.

The findings from the *Thinking Outside* report (Jesuit Social Services, 2013) strongly support the recommendation of the *Vulnerable Children Inquiry* (Cummins, Scott & Scales, 2012) that there be greater integration and expansion of area-based, early intervention services. Effective early intervention services can help reduce the level of contact with the justice system for vulnerable children and youth. Most crime is committed in an individual's community (Homel & Fuller, 2015). Therefore, the primary focus of preventative action should be local (Homel & Fuller, 2015). At a broader level, the findings from this study provide a significant opportunity to contribute to the community safety agenda outlined in the *Victoria Police Blueprint 2012–2015* (Victoria Police, n.d.) and to develop an evidence base to more effectively engage and influence government and community service partners.

Consistent with the partnership approach that initiated this study, the supervisory panel included both academic supervisors from Federation University and industry supervisors working in the local service system. The industry supervisors reflected key partners: Victoria Police, DHHS and DET. The support of industry supervisors was critical to facilitate access to data sources and increase understanding of policy and practice parameters across the Inner

Gippsland service system. This doctoral project was designed to immerse the researcher in the service system to increase their awareness of local practice issues and establish relationships with the frontline workforce.

1.4. Research context

Interactions between young people and justice systems are affected by the social ecological systems in which the individual is embedded, including cultural norms, legislation and government policy frameworks that guide resource allocation and practice within a given jurisdiction. These overarching systems, coupled with local social and structural features, affect service demand, delivery and capacity. First, Section 1.4.1 details the Victorian legislative frameworks and government departments that contextualise this study. Second, consistent with the place-based approach of this project, Section 1.4.2 provides an overview of the Victorian region of Inner Gippsland in which the study is located.

1.4.1. Socio-political context of youth contact with justice systems

Youth contact with justice systems is influenced by the specific jurisdiction in which it occurs, reflecting the socio-political orientation, legal structures and government policy priorities. Community expectations and government responses to youth offending balances welfare and justice paradigms, indicating the weight assigned to individual culpability instead of capacity based on the developmental stage (Morgan & Newburn, 2012). In the design and delivery of prevention initiatives, the socio-political policy settings directly affect practice and resource allocation (Homel, 2017).

In Victoria, the legislative framework pertaining to youth contact with justice systems is contained in the *Children, Youth and Families Act 2005* (Vic) (the *CYFA 2005*), aligning this with the philosophical orientation of the welfare of the child as the principle that underpins responses to youth offending. Under the *CYFA 2005*, s. 344, the age of criminal responsibility in Victoria is 10 years, and the youth justice provisions relate to individuals under 18 years old. The child protection system within the DHHS is also covered by the *CYFA 2005*. The political and bureaucratic systems influence policy and practice and, at times, disregard the empirical findings from scholarly research seeking to understand complex social issues (Freiberg & Carson, 2010). Throughout this research project, there were significant changes in the Victorian Government priorities that directly related to policy and subsequent practice in responses to youth offending.

Several incidents in the youth justice sector and media reports of youth involvement in crimes in the community contributed to these policy shifts in Victoria. The government department responsible for youth justice was changed from the DHHS to the Department of Justice and Regulation (partly in response to incidents of disruption in youth justice DHHS facilities). To an extent this shifted the focus from welfare to justice and punishment. Now the Department of Justice and Community Safety (DOJCS), this body oversees adult correctional services. During this time, some young people from youth detention facilities were moved to adult prisons, which raised ethical and social justice concerns. New legislation, titled the *Children and Justice Legislation Amendment (Youth Justice Reform) Act 2017* (Vic), was also enacted to introduce Youth Control Orders. In the Victorian youth justice field, the *CYFA 2005*, s. 409A(b), was the first legislation regarding youth that referenced the term 'punishment': 'to penalise the child by imposing restrictions on his or

her liberty'. In many ways, the policy shift was contrary to the empirical evidence about developmental prevention and the welfare of the child paradigm that underpins early intervention. However, community expectations, media-driven agendas and the political imperative to respond overrode the evidence base, resulting in this policy shift.

At a similar time, and in the lead-up to a state election in Victoria during November 2017, there was a focus on reporting about youth involved in community violence, especially youth from African backgrounds (see Figure 1.1).



Figure 1.1 Media reporting of youth violence (Reprinted from Youth delinquency in Australia: Contemporary issues [webinar], A. Deacon & N. Ott, 27 August 2020. Reproduced with permission)

The substantive reporting of incidents involving youths from African backgrounds in mainstream media was contrary to the official crime statistics; media reports disproportionately focused on certain offending and over-represented the prevalence of this behaviour (see SAC, 2018). Such reporting led to heightened community concerns, the

opposition party running a strong ‘tough on crime’ campaign (Victorian Liberal Party, 2018) and negatively affected certain communities and youths. The effects of the socio-political context that frames complex social issues, such as youth offending, must be understood and accounted for in recommendations for practice innovations to translate the research findings effectively into local practice initiatives; this is an important aspect of this project.

1.4.2. Place-based factors and the nexus with youth contact with justice systems

This thesis aims to address the IGCYAP’s priority of reducing youth contact with justice systems by providing local data and knowledge to inform prevention initiatives. The need for place-based research to drive practice innovations was an important element of the IGCYAP. Inner Gippsland is comprised of the local government areas (LGA) of Latrobe City (Latrobe), Baw Baw Shire, South Gippsland Shire and Bass Coast, see Figure 1.2. The research design of this study is designed to inform practice in Inner Gippsland with a specific focus on the Bass Coast LGA.

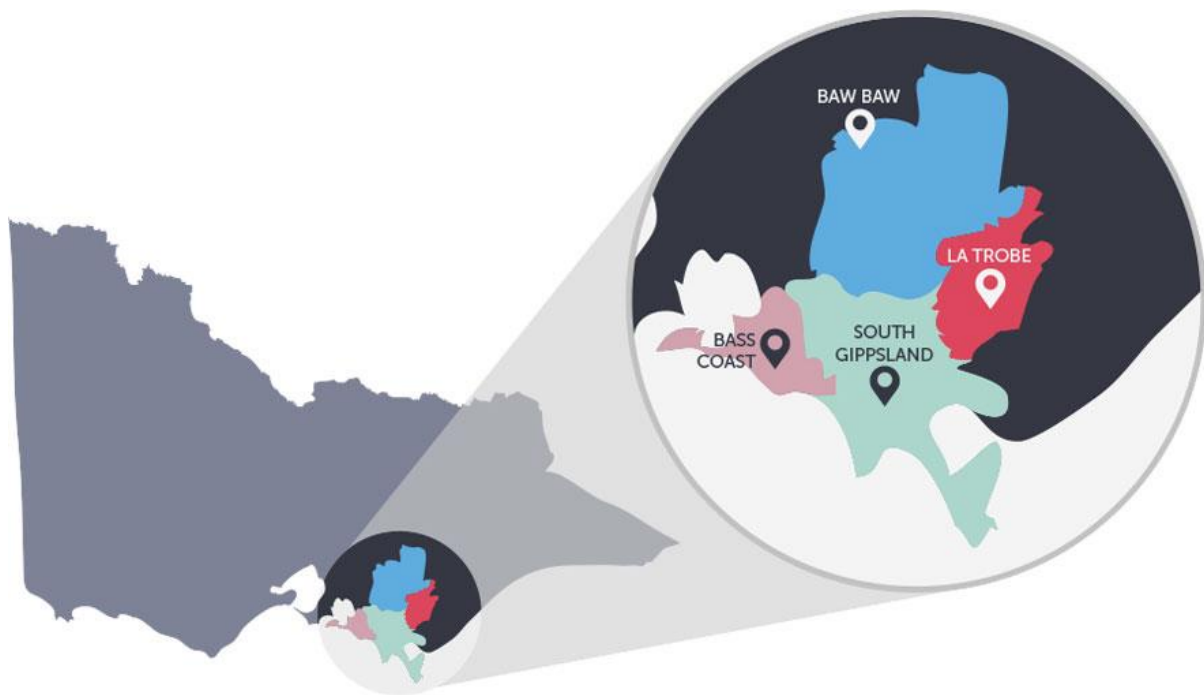


Figure 1.2. Map of Inner Gippsland, Victoria

This project was designed to initially focus on the entire region of Inner Gippsland to identify from police records those factors that relate to youth contact with justice systems. In the second stage of data collection, this understanding was enhanced by analysing a subset of youths in the Bass Coast LGA by including developmental data from the DHHS, DET and Victoria Police file narratives. Finally, the practice wisdom of professionals working in Bass Coast was included to strengthen the findings with a critical perspective that was responsive to the local community.

Inner Gippsland exceeds state averages across a range of social and health indicators representing negative outcomes and disadvantage. This is attributable to the data from Latrobe, which is the major population centre of Inner Gippsland. In the year July 2019 to June 2020, Latrobe recorded 10,089 offending incidents per 100,000 population. Crime statistics for the year ending June 2020 for Bass Coast show 7,000.5 criminal incidents per 100,000 population, above the state average of 6,080.6 per 100,000 population (Crime

Statistics Agency [CSA], 2020a). Bass Coast has the second-highest number of criminal incidents per 100,000 population of the LGAs in Inner Gippsland. Recorded family incidents per 100,000 population in Bass Coast during the year ending June 2020 were 739. When this research project was instigated by the IGCYAP research collaboration (the year ending June 2016), there were 123 alleged offender incidents for offenders aged 10 to 17 years in Bass Coast. More recently, during the year ending June 2020, there were 93 alleged offender incidents for offenders aged 10 to 17 years in the Bass Coast (CSA, 2020a). This indicates that while offending rates are lower than in 2016, there is an ongoing problem of youth offending.

Bass Coast also ranks poorly on indicators of social and economic disadvantage and contact with the criminal justice system. The *Dropping Off the Edge 2015: Persistent Communal Disadvantage in Australia* report (the *Dropping Off the Edge* report) (Vinson, Rawsthorne, Beavis & Ericson, 2015) identified place-based disadvantage across Australia centred on the geographic distribution of 22 indicators of socio-economic disadvantage. In Victoria, 1.5 per cent of postcodes accounted for 12 to 14 per cent of the top 5 per cent of rankings of disadvantage. In terms of youth contact with the criminal justice system, 25 per cent of young people on youth justice orders in Victoria resided in 2.6 per cent of postcodes (Jesuit Social Services, 2013). Bass Coast had a total population of 32,804 during 2016 (Australian Bureau of Statistics [ABS], 2016). Wonthaggi is the major population centre and had a population of 4,965 during 2016 (ABS, 2016). Wonthaggi was ranked in the fifth band from a total of six bands of disadvantage (Vinson et al., 2015). Bass Coast was found to exceed the state average for all indicators (see Table 1.1).

Table 1.1. Social indicators, Bass Coast (IGCYAP, personal communication Cann, R., 2015)

Indicator	Bass Coast	Victorian state average
Single parents with children under 15 years old in 2011	24.8%	19.6%
Jobless families with children under 15 years old in 2011	14.2%	12.3%
Children in families that were dependent on Welfare in 2013	30.4%	21.3%
Children living in a family of most disadvantage in 2013	38.7%	18.4%
Family violence when children present rates per 1000,000 from 2013 to 2014	475.6	387.6

While there was a significant social disadvantage in Bass Coast, this was not as entrenched and extensive as Latrobe. Therefore, prevention initiatives had the potential to deliver a greater return for the social and economic investment. Further, when this project commenced, Bass Coast was selected for specific focus due to concerns regarding at-risk youth. A coalition of local services formed to consider place-based initiatives to prevent progression to youth offending. The inclusion of an in-depth analysis of a group of youth in Bass Coast in this study provided this group with local knowledge, consistent with a place-based approach and the theoretical framework of social ecological systems, to inform prevention responses.

1.5. Research design

The research design combines realist epistemology with developmental criminology and social ecological theory and employs a mixed-methods design. The full details of the research design, data sources, collection and analyses are provided in Chapter 4.

Realist criminology is aligned with understanding complex social problems, delivering interventions in the real-world context and providing findings to guide social policies (Matthews, 1987). A realist stance is consistent with this study's goal of translating the research findings into practice specifically for the Inner Gippsland community. This thesis asserts that the convergence of social ecological theory and developmental criminology best informs an understanding of the factors associated with youth offending and identifying intervention opportunities. This project seeks to understand the complexity of the interactions between the factors related to contact with the justice system across the social ecological systems in which the youth operate.

This research employed both quantitative and qualitative methods providing different types of explanations to integrate the findings across the stages of data collection. The data collection and analysis used multiple methods to generate relevant information for addressing the research questions. Access to the EIT and police datasets provided a unique opportunity for this research. The application of the EIT, a substantial component of the research, predetermined the data collected in Stage 1 of the research. The EIT can generate profiles retrospectively and compare an individual's predicted trajectory and the actual recorded level of contact with the criminal justice system during a specific period. The retrospective longitudinal analysis was undertaken to ascertain the factors related to youth whose trajectories were as predicted or not as predicted. This data was examined to identify both protective and risk factors. The study's retrospective longitudinal design provided data from an individual's first recorded police contact up to mid-2018, thereby allowing sufficient time to include key developmental transitions for youth in the Inner Gippsland sample

(which is consistent with a developmental framework). Findings from each stage of the data collection and analysis further informed the subsequent data collection and analysis.

The literature focuses on the effects that childhood experiences have on the potential for youth offending (Hurren, Stewart & Dennison, 2017). The interplay between early experiences, developmental stages and service systems responses is not clearly understood. To address this gap and provide an enriched understanding of the factors that relate to youth contact with the criminal justice system, the predictive modelling of the EIT was augmented through the inclusion of developmental data. The developmental experiences of at-risk youth, especially ACEs, form a critical component of this study to enhance knowledge of the association of maturation experiences with contact with justice systems.

The use of multiple data sources in a staged process added depth to the analysis and strengthened the research findings. The research design embedded police contact data of time, place and context with respect to the developmental stage. The inclusion of frontline workers' practice wisdom is consistent with the overarching aim of translating this research into practice that are responsive to the local context. The convergence of data sources provided findings to facilitate nuanced decision-making and deliver alternative justice outcomes for individual youth, communities and the service system. The theoretical frameworks adopted in this study are directly linked to the data sources and analyses.

The research design provided findings responsive to the priorities of the service system, privileged practice wisdom and generated an integrated picture of the context of youth contact with justice systems. Overall, this study is consistent with a realist stance of designing what works, for whom and under what contexts (Pawson & Tilley, 1997). As detailed in Section 1.4.1, the application of research findings to policy and practice that

restrict the efficacy of developmental prevention programs is attributed partly to socio-political factors. Social ecological theory provides a framework for the effects of macrosystems to be incorporated into the research design and understanding of these findings. The research findings are presented within the context of the social ecology specific to place to inform policy and practice and reduce the costs of youth offending on individual youth and the broader community.

The overarching place-based framework focuses this research on the social ecology of Inner Gippsland. In line with the local nature of the project, there is a concentration on Australian literature and empirical studies; however, key international studies are noted in the literature review. The legislative frameworks and government structures of the criminal justice system interact with policy and practice, adding to the rationale for focusing on Australian, especially Victorian, research. This project's design and outcomes aimed to be responsive to the context of Inner Gippsland; however, the findings can be applied to other contexts. The realist stance of the research provides a framework to consider the translation of the results more broadly.

1.5.1. Research scope

It is beyond the scope of this study to examine indigeneity as it relates to youth contact with justice systems. Indigenous youths in Australia are over-represented at all levels of contact with the criminal justice system (ABS, 2011), and there is a considerable body of literature focusing on the specific factors associated with this issue (e.g., Allard, 2011; Cunneen, 2006; White, 2015). O'Hara (2014) asserted that the factors contributing to indigenous offending could be classified into three broad groups, including historical practices, social support

institutions and individual factors. Many of the individual factors apply to all youth who come into contact with justice systems (such as exposure to ACEs and participation in education, regardless of indigeneity). However, these factors are more prevalent in indigenous youth. The intersectionality of race and colonisation continue to have an enduring effect on indigenous youths' interaction with justice systems. Furthermore, the researcher does not have the cultural expertise to adequately engage in this specific aspect of youth contact with criminal justice systems.

1.6. Thesis structure

The translation of these research findings into practice, which is central to this research collaboration between academia and the service system, strongly informs the structure of this thesis. The requirements of academia to address a gap in current knowledge underpins this study; however, the divergence from a traditional thesis structure reflects the multiple goals of this project. The importance of disseminating the research findings in an accessible format that was applicable to the service system was a priority. The chapters in this thesis include several formats that reflect the importance of utilising the results to inform policy and practice relevant to place and contribute to the broader knowledge base of youth contact with justice systems.

This thesis consists of 10 chapters, including a journal article submitted and accepted for publication (Chapter 7) and a report to inform the decision-making of the senior officers from state government departments in Inner Gippsland (Chapter 9).

Chapter 2 situates the research within the contemporary literature on youth contact with justice systems. This synthesis of the literature explores a series of key themes relevant to

the research problem. Combining social ecological theory and developmental criminology influenced the methodological approach and was central to interpreting the data. The convergence of the two theories provides greater understanding than a single theory because of their epistemological compatibility and potential for mitigating one another's gaps. Chapter 2 reviews the literature on predictive modelling and the importance of understanding the interactions between the social systems that influence vulnerability. The nexus between the potential to engage in offending behaviour and ACEs forms the final focus of Chapter 2.

Chapter 3 considers the literature pertinent to the critical aspect of this project—translating research into practice. It examines the role of academic research to inform practice and the reciprocal process of practice informing research in response to complex social issues, such as youth offending. The effects of the social ecological systems that encompass legislation, government policies and the socio-political ethos are considered because they influence the design and delivery of developmental prevention programs. The literature addressing the research–practice gap, the difference between actual service delivery and the overarching policy framework is also addressed. The value of partnership models of practice in responding to local concerns is reviewed, considering the place-based approach that guided this study. Finally, Chapter 3 argues for adopting place-based approaches to enhance outcomes for individuals and the community.

Chapter 4 details the methodology that guided the overall research design to ensure the research questions can be explored effectively. The research employs both quantitative and qualitative methods providing distinct explanations to integrate the findings across the stages of data collection. The central research question is addressed through a mixed-

methods design, and the sub-questions guide the specific data collection methods and analyses. The quantitative and qualitative data sources provided robust support for the protective and risk factors associated with youth contact with justice systems that were identified in this study.

The results from a retrospective longitudinal analysis of Inner Gippsland youth identified on the EIT are outlined in Chapter 5. The quantitative data is analysed in a staged process to identify interactions and patterns in the factors associated with future offending. Youths who did not offend at the level predicted were considered to pinpoint protective factors.

A case study analysis of the developmental data and police file narratives for a subgroup of youth from Bass Coast is presented in Chapter 6. This chapter aims to provide a deeper understanding of the quantitative results within a place-based approach. Chapter 6 includes the results of the survey of professionals working in Bass Coast to privilege the practice wisdom of frontline workers. The themes derived from this integration of police and developmental data are considered with respect to the local community's service system.

Chapter 7 is a paper that has been submitted and accepted for publication titled, *Using Victoria Police Datasets to Identify Opportunities to Prevent or Reduce Youth Offending*. The paper focuses on the key findings from Stage 1 of the research (see Chapter 5), which considers the opportunity for early intervention to disrupt an offending trajectory. The paper was submitted to *Police Science*, a journal selected for its focus on evidence-based policing in Australia and New Zealand. Disseminating the results of the EIT trial to policing agencies fulfils this study's aim of translating research into practice.

Chapter 8 discusses the themes that emerged from the results with respect to the research questions and, more broadly, early intervention to reduce youth contact with justice systems. The findings are considered for the overarching theoretical frameworks of developmental criminology across all social ecology systems and the literature review in Chapters 2 and 3. Particular attention is given to the interplay between the social ecological systems and developmental prevention initiatives.

Chapter 9 applies the findings in the form of a report to the Inner Gippsland senior officer's group, *Vulnerable Youth: Local Responses Informed by Local Knowledge*. The senior officer's group oversee centrally set policy parameters to respond to youth at risk. The research findings are provided with recommendations for practice innovations specific to Inner Gippsland.

Finally, Chapter 10 outlines the results as they respond to the research questions. Further, the implications of the project for policy and practice are provided. Chapter 10 situates the project with respect to the contribution made to the existing scholarship. The limitations and strengths of the study are examined, and future research opportunities considered.

1.7. Conclusion

Chapter 1 has provided an overview of the rationale underpinning this research project and how this determined the research approach and structure of this thesis. This project prioritised the provision of research findings in a form applicable to informing practice. The place-based approach ensured that the study addressed the aim of the collaboration, which was to generate local solutions to local problems.

Chapter 2 reviews the relevant literature specific to youth contact with justice systems and the importance of early intervention to reduce social and economic costs. The social ecological framework is used to structure the literature review pertinent to identifying those factors associated with youth engagement in offending behaviour.

Chapter 2. Understanding youth contact with justice systems

2.1. Introduction

This thesis is designed to provide an evidence base to inform prevention policy and practice specifically for the local context of Inner Gippsland. Chapter 1 outlined why youth offending is a significant issue of concern for the wider community, policymakers, the service system and, importantly, youth engaged with the justice system and their families. A key argument of this thesis, articulated in Chapter 1, is that it is critical to identify those young people who are at risk of repeated, serious offending because this cohort accounts for the majority of adverse outcomes.

Chapter 2 reviews the empirical literature demonstrating the heterogeneous nature of youth contact with the justice system. It is noted that the majority of youths who offend in adolescence cease before adulthood (SAC, 2016). The literature is reviewed to provide insight as to the cohort of youth who persist in serious offending. Identifying this cohort and the factors associated with persistent offending is critical in designing and implementing effective prevention programs. The literature review draws on both international and Australian studies, focusing on Australian empirical work consistent with the place-based approach adopted in this study. The criminal justice system is structured differently across Western democratic countries and, in Australia, there are minor differences between the states and territories. Given that the thrust of this thesis is that place-based approaches generate the most useful findings, the main focus is on Australian literature and, specifically, findings from populations in Victoria.

First, Chapter 2 examines the literature on identifying those youth at risk of serious persistent offending to target prevention efforts effectively. This chapter provides the basis for the assertion that early intervention offers the best chance to interrupt a potential for future, serious offending (Freiberg & Homel, 2011; Weatherburn, Cush & Saunders, 2007). A shift in focus from risk factors to protective factors is also provided.

Second, Chapter 2 outlines the theoretical frameworks that guide this research, social ecology theory and developmental criminology, and examines how these apply to practice. A social ecological perspective (Bronfenbrenner, 1979) provides structure in the literature review and is used to examine those factors linked with youth offending. Then, the framework of developmental criminology (Dennison, 2011; Farrington, 2003), which identifies opportunities for intervention at critical transition points across the developmental stage of adolescence, is reviewed. Chapter 2 situates the research in the contemporary literature centred on youth contact with justice systems within a developmental framework. Social ecological theory, coupled with developmental criminology, provides a heuristic framework to understand variations in research results on the efficacy of early intervention efforts.

The nexus between ACEs and youth offending is demonstrated in the existing literature (Baglivio & Epps, 2016; Hurren et al., 2017). However, the debate centres on what effect childhood experiences have on the potential for future, serious offending. This interplay between early experiences, developmental stages and service system responses is not yet clearly explicated in the published research. The substantive third section of Chapter 2, Section 2.4, examines the literature to identify those gaps in understanding the link between child maltreatment and youth involvement in the criminal justice system.

2.2. Importance of early intervention

The World Health Organisation (2002) identified the widespread social and economic consequences of violent offending; they stressed the importance of policy and interventions that prevent its onset and development. This thesis, informed by Axford and Berry (2018), asserts that early intervention is a critical component in preventing or reducing vulnerability for youth offending. The age of an individual at initial contact with justice systems and the timing of this contact in respect to key developmental transitions plays a critical role in determining the likelihood and frequency of future offending (Dennison, 2011). Factors linked to vulnerability can be ameliorated through early intervention before adverse developmental outcomes. This research project aims to explore opportunities for early intervention to prevent initial engagement in offending behaviour and interrupt a potential offending trajectory.

Prevention efforts to ameliorate vulnerability at the earliest opportunity are best able to reduce the negative effects of youth offending for the young person, their family and the community in which they live (Homel, Freiberg, Branch & Huong, 2015b; Freiberg & Homel, 2011). Primary prevention strategies aim to prevent the onset of offending. This is contrasted with tertiary interventions that aim to address offending behaviour once it occurs (Tonry & Farrington, 1995). Assink, van der Put and Stams (2014) argue that early intervention is crucial, noting that developmental psychology indicates that childhood behavioural problems become more robust as the individual ages and are, therefore, less open to change.

2.2.1. Age and offending

The relationship between age and offending shows that populations of youth offenders are not homogeneous but reflect distinct subgroups based on factors such as the age of onset and the duration and extent of offending (DeLisi & Piquero, 2011). Empirical evidence from analyses by Sutherland and Millstead (2016) identified distinct groups in terms of onset and persistence across the age span of adolescence in a youth offender population in Victoria, Australia. The empirical literature examining factors related to youth offending has identified that early onset of offending is associated with persistence (DeLisi & Piquero, 2011). This demonstrates the critical importance of targeting prevention efforts at the earliest age for those youth most vulnerable to persistent, serious offending.

The literature on the age–crime relationship (Piquero, 2008; Sampson & Laub, 1993; Sweeten, Piquero & Steinberg, 2013) has established the association between initial contact with the criminal justice system at an early age and an increased likelihood of future, persistent offending. In Australian youth offender populations, research has indicated that the younger an individual is at first contact with the youth justice system the more likely they are to engage in persistent, serious offending (Shepherd, Newton, Harries, Fix & Fullam, 2019; Skrzypiec & Wundersitz, 2005; Weatherburn et al., 2007). However, there are variations in the empirical data and the underlying factors in this variability form a key focus of this review of the pertinent body of literature.

Longitudinal studies have shown that offending rates among children increase from early-adolescence into the teenage years and peak between 15 and 19 years, after which they then generally decrease as children mature into adulthood (Allard, Chrzanowski & Stewart, 2017; Dennison, 2011). Data from the SAC (2016) indicated a similar trend:

offender incidents increased rapidly between the ages of 10 and 16 years, plateaued and then decreased over later years into adulthood.

Numerous research studies (e.g., Farrington, Ttofi & Coid, 2009; Mazerolle, Brame, Paternoster, Piquero & Dean, 2000; Sutherland & Millstead, 2016) have identified specific taxonomies within the youth justice population that group youth offenders by their developmental stage at the onset of offending, desistence and chronicity in offending. The taxonomies that identify empirically supported subgroups can guide early intervention initiatives to direct resources to those youth who are most at risk of persistent, long-standing contact with criminal justice systems. Piquero's (2008) review of research on youth offending trajectories found that studies typically identified two broad groups of offenders who conformed to Moffitt's (1993) seminal work: those whose offending is restricted to adolescence and those whose offending continues into adulthood.

2.2.2. *Youth at risk*

Identifying the individuals most likely to engage in persistent, serious offending is critical to effectively directing intervention resources. Victorian crime statistics indicated a steady decline in youth offending from April 2009 to March 2019 (CSA, 2019a) and a decrease of youth subjected to youth justice processes in Australia since 2000 (Payne et al., 2018). Despite these trends, there remains a subgroup of youth who persist in serious offending, resulting in adverse outcomes for the individuals and their families, in addition to social and economic costs across the community.

Formal contact with the youth justice system, ranging from caution to incarceration, has been linked with higher rates of reoffending and negative effects on future life

opportunities (Evans, Simons & Simons, 2016; SAC, 2016). Drawing on longitudinal data from the New South Wales (NSW) Child Development Study (<http://nsw-cds.com.au/>), Whitten et al. (2020) examined instances of the first contact with the criminal justice system to identify those individuals who are vulnerable to later adverse social and health outcomes. Their research demonstrated that contact with police as a child, whether as a victim, witness or person of interest, was associated with subsequent criminal involvement. These findings highlight that any form of police contact may provide an opportunity for early intervention to prevent later engagement in offending behaviour. Whitten et al.'s (2017, 2020) research supports the argument presented in this thesis regarding the importance of early intervention. This also underscores the rationale for the use of police contact data, both criminogenic and that reflecting vulnerability, in examining those factors that identify youth at risk of future offending.

The effect on social and financial resources and community safety of youth who persist in serious offending is disproportionate to the actual number of youths that fit this category (Wiesner, Capaldi & Kim, 2007). Amemiya et al. (2017) demonstrated that tertiary interventions to interrupt the trajectory for this group of youth are often restricted in efficacy, again underscoring the importance of early intervention. Payne and Weatherburn (2015) stress the importance of distinguishing those youth who are likely to continue to offend into adulthood to enhance prevention opportunities. Several Australian empirical studies have examined offending patterns to identify the cohort of serious, persistent offenders (Broidy et al., 2015; Livingston, Stewart, Allard & Ogilvie, 2008; Marshall, 2006; Whitten et al., 2017). This research demonstrated that the cohort of youth vulnerable to future persistent contact with the justice system is not homogenous and that

developmental data can help identify opportunities to interrupt future offending trajectories.

Identifying trajectory groupings can provide a useful screening device to distinguish specific subgroups of youths in contact with justice systems more accurately and inform prevention efforts (Weaver, 2010). Research evidence can enable policymakers to effectively target youths at risk of future offending, quantify the costs and benefits of specific interventions and prioritise resource allocation. These findings inform the design of this research project, which aims to ensure that resources are directed to prevent or interrupt the trajectories of youths who commit a disproportionately high volume of youth crime and persist in offending into adulthood.

2.2.3. *Factors that ameliorate risk*

Aspects of the social systems within which youths operate and individual characteristics that counteract risks can form a focus for reducing contact with the criminal justice system and in turn, promote positive youth development (Bensen, Scales, Hamilton, & Sesma, 2006). There are inconsistencies in the definitions and terminology used to discuss protective factors in the literature (Loeber, Farrington, Stouthamer-Loeber & White, 2008). In a retrospective analysis of the Cambridge Study in Delinquent Development data, Farrington, Ttofi and Piquero (2016) identified that the interaction between variables (such as high-intelligence ameliorated poor parenting) generated significant results regarding the probability that an individual would engage in offending behaviour. The interaction of factors is a critical finding. Farrington et al. (2016) defined interactive protective factors as those that predict the low probability of offending in at-risk groups but not in other groups.

Grogan-Kaylor, Ruffolo, Ortega and Clarke (2008) examined the influence of complex, at-risk and protective factors and sought to identify the influence of such factors on an offending trajectory. The authors adopted an eco-developmental approach for youth in the child welfare service system in the United States of America (USA). The research explored definitions of these factors and adopted Sameroff and Gutman's (2004) conceptualisation of promotive factors as an external or internal force that helps youth resist or ameliorate risk. The presence of promotive factors may affect the outcomes of exposure to multiple risk factors and facilitate resilience through balancing risk and promotive factors across the social ecology.

Youth justice populations have shown differences in the presence of risk, protective factors and promotive factors. Intervention efforts must be responsive to these variations to be effective (Baglivio, Jackowski, Greenwald & Howell, 2014). By identifying protective and promotive factors, assets within individuals and their social ecology, efforts can be directed to positive youth development (Benson, Scales, Hamilton & Sesma, 2006). By targeting the systems within which young people operate to increase social access and build capacity, greater health and wellbeing can be achieved. Catalano et al. (2004) reconceptualised prevention strategies from concentrating on factors indicating risks to those that affect positive youth development, which includes both protective and promotive factors.

2.2.4. Summary

There is an identified need for further research that considers the factors associated with the cohort of youths vulnerable to persistent offending, particularly by examining the link between age at initial contact and future engagement with justice systems. The literature

review demonstrates that early identification of these youths best provides opportunities to interrupt a potential persistent, serious offending trajectory. The research pinpoints variability in the relationship with age of onset, duration and extent of offending that requires further examination. Identifying the factors that ameliorate risks is identified as valuable, despite challenges in conceptualising protective factors.

This research aims to generate local evidence to inform policy and practice in early intervention efforts for the Inner Gippsland community. Jennings and Reingle (2012) posited that previous research examining the offending trajectory of youths has not focused on policy implications for prevention and intervention targets. Intervention methods for at-risk groups delivered at the earliest opportunity provide the greatest benefit from the resources invested. This thesis argues that the effective translation of research findings at the policy level requires consideration of those factors across the broader social ecology that affect policy and practice. Chapter 3 will consider the barriers and opportunities of applying the research evidence to the design and implementation of prevention initiatives.

2.3. Theoretical frameworks

This thesis argues that the factors related to youth contact with criminal justice systems are best understood within the theoretical frameworks of social ecological theory (Bronfenbrenner, 1979) and developmental criminology (Farrington, 2003). Individuals are affected by the interactions between the systems of the social ecology in which they are embedded. The greatest effects occur within the social systems proximate to the individual, such as family relationships. The developmental stage of adolescence has key transitional points, such as primary to secondary school, where vulnerabilities (both individual and

across the social ecology) are considered critical in understanding youth contact with justice systems.

2.3.1. *Social ecological theory*

Early intervention opportunities to reduce vulnerability can be expanded when the interactions across youths' social ecology form the focus of inquiries. Social ecological theory provides a framework that contextualises engagement with criminal justice systems within interacting social systems (Bronfenbrenner & Morris, 1998). A social ecological perspective broadens the understanding of factors associated with youth contact with the criminal justice system from the individual (and to a lesser extent, the familial characteristics of the young person) to the social systems in which the young person operates and, critically, the interactions between these systems (Smallbone et al., 2008).

Social ecological theory posits that human development occurs in the context of four primary domains or systems, which are represented as nested structures: microsystems, mesosystems, exosystems and macrosystems (Bronfenbrenner, 1979). The microsystem includes individual characteristics, such as an individual's temperament and relationships with their family and peers. The mesosystem includes the reciprocal relationships within the microsystem but not those directly involving the individual, such as relationships between schools and parents. Access to community services, neighbourhood conditions and social resources form aspects of the exosystem, all of which affect the individual and the other social systems. These systems are all within the macrosystem, reflecting cultural norms, legislation, and community expectations that embed the individual in the socio-political

sphere. These multiple interacting systems influence outcomes through the interplay across an individual's social ecology (Malvaso, 2017).

Youth contact with justice systems is not a unidimensional phenomenon, and yet, much of the research examining youth offending focuses on single factors and their effects in isolation. In responding to multifaceted social concerns, such as youth offending, Heise (1998) asserted that there is a tendency for academics, researchers and social advocates to propose single-factor theories rather than explanations that reflect the complexity of real life. Single-factor theories of youth offending, such as social control (Hirschi, 1969), often fail to examine the social ecology's role reflected in parent–child relationships, parent–school relationships and the government's legislative framework. Brezina (1998) highlighted the focus on broader social systems and the interrelationship of these systems in consideration of the links between child maltreatment and youth contact with justice systems. The limitation of adopting single focus theories in responding to multifaceted social issues, such as youth offending, was demonstrated in Farineau's (2016) conceptualisation of delinquent behaviour by youths placed in out-of-home care (OHC).

The social ecology in which an individual operates is not a single context but a constellation of interconnected settings within which youth development occurs and is shaped via increasingly complex interactions (Bronfenbrenner, 1994; France, Bottrell & Armstrong, 2012). Thornberry and Krohn (2005) argued that an interactional perspective features the critical element of bi-directional interactions of the social systems in which individuals are embedded. Figure 2.1 demonstrates how these nested systems affect youth contact with criminal justice systems across the social ecologies within which youths operate.

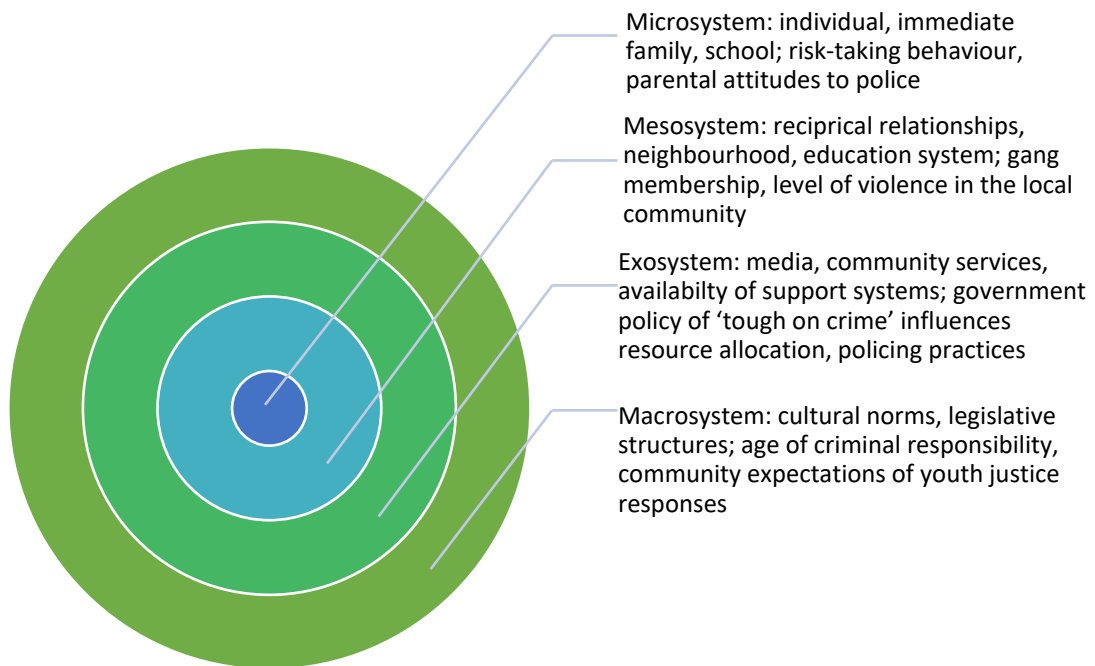


Figure 2.1. Youth contact with justice systems within the social ecological system (adapted by the author from Bronfenbrenner, 1979)

Individualising the drivers of youth contact with justice systems fails to account for the wider economic and political factors that limit access and opportunities and significantly affect young people's lives, choices and social identities (Barry, 2010; Bottrell & Armstrong, 2007). Conversely, a social ecological framework directs attention to the interactions and relationships within which offending arises, persists and perpetuates (Lerner, Almerigi, Theokas & Lerner, 2005).

This thesis argues that adopting a social ecological framework provides multiple points to identify vulnerability factors and to target resources to reduce the costs associated with youth contact with justice systems. The integrated ecological framework was adopted by Heise's (1998) study of the aetiology of violence against women to synthesise previous research reflecting the utility of social ecological theory. Heise's (1998) conceptualisation adopts key elements from Bronfenbrenner's early theory (1979) to examine violence against

women as multifaceted and reflecting the interplay between the individual, microsystem, mesosystem, exosystem and macrosystem. Sallis, Owen and Fisher (2008) asserted that ecological frameworks broaden understanding across multisystemic levels of those factors that affect human behaviour.

The interaction between and within social ecological systems has been used to expand knowledge of childhood abuse (Belsky, 1980; Hurren et al., 2017; Malvaso, 2017) and placement in OHC (Farineau, 2016; Follan & Minnis, 2010; Jonson-Reid, 2004; Whiting & Lee, 2003), both of which are linked to youth offending. Research by Haskett, Nears, Sabourin Ward and McPherson (2006) and Orme and Buehler (2001) further stressed the importance of understanding multiple factors and their mutual influences that may affect the outcomes for youths in foster care. Social ecological theory provides the framework for considering youth contact with justice systems as embedded across interacting social systems, rather than the individual in isolation.

Although social ecological theory provides a structure that enhances knowledge of youth contact with justice systems, there are limitations. The application of social ecological models to intervention programs has mainly focused on the antecedents of negative outcomes (Malvaso, 2017), rather than the consequences of adversity. Some scholars have criticised the framework for being too broad to inform practice directly (Cicchetti & Lynch, 1993; Ungar, 2002). However, this thesis argues that social ecological theory does provide a useful framework to inform preventative interventions and generate evidence-based practice models.

Social ecological theory extends the scope of prevention initiatives to address systemic factors associated with adverse outcomes rather than a sole focus on individual or familial

factors. The advantage of this broad perspective is that it increases the opportunities for intervention to reduce vulnerability. Practice models that incorporate the interactions of individuals within their social systems can positively affect at-risk individuals and the wider community in which they are delivered. An interactional perspective on the development of offending behaviour in adolescents helps to understand the multiple contextual factors contributing to this issue. Social ecological theory also assists research in providing a framework to guide investigations.

Research that adopts a social ecological framework to inform practice for reducing the costs of youth offending is further informed by Farineau (2016), who demonstrated the usefulness of social ecological theory in understanding the drivers of and developing interventions for delinquent behaviour in youth placed in OHC. Regarding service delivery of prevention efforts, Farineau (2016) asserted that workers are often trained in single-factor models restricted to individual characteristics, such as anger. This singular perspective limits both the assessment and subsequent intervention plans in scope and potential efficacy. Incorporating the factors that are rooted in the social ecological systems and the interplay between individuals and the systems in which they are embedded enhances outcomes. Further, Jonson-Reid (2004) held that researchers and clinicians must understand the context and effect of social ecological systems to respond to youth engagement in offending behaviour effectively.

The utilisation of social ecological theory (to include interacting social systems that affect adolescent offending) has implications for policy development. Howe (1983) showed the relevance of policies operating at the macrosystemic level in the context of children placed in OHC. The nexus between placement in OHC and offending in Victoria's youth justice

population has been established (SAC, 2019). This highlights the importance of understanding the interplay between these factors across the social ecology. For example, the government policy on permanency planning for families involved in the foster care system directly influences options for individual cases of children placed in OHC (Howe, 1983). The literature suggests that policy must consider how youths' social ecological systems influence youth offending if they are to reduce adverse outcomes for individuals and the broader community (Farineau, 2016). This thesis argues that failure to address youth offending within the social ecological systems in which young people operate can reduce the success of interventions. Senefeld and Perrin (2014) argued that service systems must work collaboratively across the social ecology in which youths are embedded and policy and practice operate to be effective.

Drawing upon the seminal work of the Chicago school sociologists, Bronfenbrenner and Morris (1998) postulated that social and physical environments could be designed and manipulated to promote protective factors and minimise those factors that facilitate offending or at-risk behaviour. By recognising the contextual factors and interactions a young person has within their ecology, service systems can refine intervention programs and decision-making to reduce the contact an individual has with the criminal justice system (Ingoldsby & Shaw, 2002; Sameroff, Peck & Eccles, 2004). Thus, the social ecological system in which an individual is embedded provides opportunities to ameliorate the effect of those factors linked to future engagement in offending.

2.3.2. *Developmental criminology*

It is necessary to incorporate awareness of adolescent development and the interactions across the social ecology in which the youth is embedded to understand how youth contact with criminal justice systems emerges and therefore, how it can be prevented. The developmental stage of adolescence forms a key life stage, marked by puberty and the physical and psychological development of maturity from a child to an adult (Shaffer & Kipp, 2014). The key developmental task of adolescence is identity development and sensation seeking is a significant feature of this stage as the transition to adulthood is negotiated (Damon & Lerner, 2006). Thornberry and Krohn (2005) asserted that, at critical developmental transition points, interactions of social ecological systems influence an individual's trajectory differentially. During adolescence, it is expected that youth will engage in risk-taking, that the bond with parents will weaken and the influence of peers will increase, each of which can drive engagement in delinquent behaviours (Thornberry & Krohn, 2005).

Section 2.2 detailed the importance of age at initial contact with justice systems for early intervention opportunities. Section 2.3.2 considers how the developmental stage interacts with factors across the social ecology to influence vulnerability. Utilising the age–crime curve (Sampson & Laub, 1993) to identify the specific cohort of youth who have the highest incidence of offending and the longest criminal careers allows for efficient allocation of government and community resources. Interventions for at-risk groups designed to address those key developmental transition points (commencement of education, increased independence and influence of peers) and social structural components of the youths' social ecology provide the greatest benefit of the resources invested (Lerner et al., 2005).

Developmental criminology provides a meta-framework for understanding youth contact with criminal justice systems during the developmental stage of adolescence. Farrington (2003) emphasised the effects of developmental criminology theories on policy development and interventions to reduce youth offending. Adopting a developmental perspective provides a basis for understanding the key factors that underpin youth engagement with criminal justice systems. The social ecology—family, school, community, social, economic and political systems—in which a young person is embedded interacts with and influences developmental outcomes (Allard et al., 2017; Homel, et al., 2015b).

Conflating social ecological theory and developmental criminology contributes to enhanced theoretical and practical knowledge of the connection between developmental stages and youth contact with justice systems. Contextualising youth offending within a developmental framework applied across the social ecology provides direction for service agencies to refine their intervention efforts and inform policy to reduce the costs of youth contact with the criminal justice systems (Borum, 2000; Tolan, 2001). Adopting a developmental framework to explain the desistance from or continued engagement in offending behaviour allows for the enhanced efficacy of prevention strategies.

The function of factors across an individual's social ecology and their effects on adolescent development can explain the onset, persistence, and desistance of youth offending (Thornberry & Krohn, 2005; Ttofi, Farrington, Piquero & DeLisi, 2016). The *Thinking Outside* report (Jesuit Social Services, 2013), which describes a youth justice population in Victoria, converges developmental criminology and social ecological theory in understanding the onset of youth offending. A key focus of the *Thinking Outside* report's main thesis is that interventions must account for the many-faceted environments and relationships that

influence development to promote healthy development and limit youth involvement in the justice system. Individual and systemic factors cannot be considered in isolation. Consistent with a social ecological framework, they must be understood as being integrated, interrelated and dynamic (Thornberry & Krohn, 2005).

The convergence of social ecological theory and developmental criminology has been referred to as an eco-developmental model (e.g., Szapocznik & Coatsworth, 1999; Tolan, Guerra & Kendall, 1995). This multidimensional conceptualisation of factors that underpin youth contact with justice systems reflects the multiple social contexts shaping development and the interrelations among those contexts and the dynamic nature of the contexts. These scholars argued that developmental transition points provide opportunities for interventions to foster positive development individually and across the social ecology and, thereby, reduce the adverse effects of contact with justice systems.

Sections 2.3.3 to 2.3.6 discuss developmental criminology as it interacts across the social ecological systems in which an individual is embedded. The interrelationships between systems and critical developmental transitions that are associated with engagement in offending behaviour are detailed to identify opportunities for early intervention.

2.3.3. *Developmental maturation*

At an individual level, maturation across developmental stages interacts with microsystemic factors influencing individual outcomes. The importance of maturation across adolescence in youth contact with justice systems was demonstrated in a subgroup of adolescent limited offenders identified by Moffit (1993) and Piquero (2008). Further, the escalation of offending behaviours over mid-adolescence, shown in empirical studies of Victorian youth

justice populations (SAC, 2016; Sutherland & Millstead, 2016), highlights the developmental stage of adolescence. Brain development in adolescence is focused on areas that govern high-level thinking, impulse control and long-term judgements (Casey, Jones & Hare, 2008). Therefore, adolescents have a lower capacity than adults to manage and regulate emotions and behaviour in the face of social stimulation and sensation-seeking opportunities (Harden & Tucker-Drob, 2011). Adolescents also have a more limited consideration of the future effects of their actions, and they are more susceptible to impulsive and risk-taking behaviour in the face of peer influence (Scott, Reppucci & Woolard, 1995; Steinberg, 2005). These factors contribute to youths' lack of maturity, propensity to take risks and susceptibility to peer influence, which increases the risk of contact with the criminal justice system (DeLisi, Wright, Vaughn & Beaver, 2010; Richards, 2011).

Early ACEs—such as exposure to family violence, disrupted attachment relationships and impoverished family systems—have been demonstrated to relate to behavioural disturbance and future engagement in antisocial behaviour by adolescents (Lerner & Castellino, 2002; Stewart, Livingston & Dennison, 2008; Whitten et al., 2017). Childhood trauma experiences affect development and can severely comprise future life opportunities (Hurren et al., 2017; Malvaso, Delfabbro & Day, 2018). Robinson, Silburn and Arney (2011) indicated that early social and emotional development and the quality of the parent–child relationships affect the acquisition of social competencies and self-control and are important predictors of later health and social outcomes, such as substance misuse, aggression and crime. Attachment theories highlight the central role of early caregiving relationships as a source of either support and adaptation or risk and dysfunction (Bowlby,

1969). The most immediate microsystemic factors that influence maturation can affect the potential that individuals will be involved in youth justice systems (Clark, 2001).

2.3.4. *Family systems*

Family and education systems, the next most proximate to individual characteristics at the microsystemic level in the social ecology, can affect developmental outcomes and therefore, the risk of youth offending. Family factors, such as poverty, parental antisocial behaviour, residential mobility and authoritarian parenting practices, are associated with child maltreatment (Zielinski & Bradshaw, 2006). Farrington, Piquero and Jennings's (2013) analysis of data from the Cambridge Study in Delinquent Development and more recent longitudinal studies, such as the Pittsburgh Youth Study (Loeber et al., 2008), confirmed the significance of family factors related to delinquency and youth contact with criminal justice systems. These two studies provided datasets that enable ongoing research to test hypotheses regarding factors associated with the age–crime curve and provide substantial empirical data within a developmental framework.

At the microsystemic level, there is empirical support for the interaction of family factors that relate to youth contact with the criminal justice system, such as criminal or antisocial parents, large family size, poor parental supervision, parental conflict and disrupted attachments within family systems (Farrington et al., 2016; Farrington & Welsh, 2007; Kramer-Kuhn & Farrell, 2016). Based on a developmental understanding of key transitions, Kramer-Kuhn & Farrell (2016) focused on the transition from elementary to junior school in the USA to assess the effects over time of a range of family and community factors on aggressive behaviour by youths. The literature demonstrates that the interaction of factors

across the social ecology at developmental transitions provides opportunities for the design and implementation of early intervention to reduce youth contact with justice systems.

2.3.5. Education systems

Engagement in education, a microsystemic aspect, plays a critical role in individual development, and disruption in education is linked to adverse outcomes (Sampson & Laub, 1993). Weatherburn (2001) noted the strong relationship between poor school performance, low rates of school retention, truancy and involvement in youth crime. Further, Weatherburn et al. (2007) found that the significant predictors of reoffending in Australian youth justice population were disrupted school attendance, poor academic performance and incidents of past contact with criminal justice systems. These findings are supported by the *Thinking Outside* report (Jesuit Social Services, 2013), which noted a link between disrupted education and children in the Victorian youth justice system. During 2011, 66 per cent of youth in custody in Victoria had recorded school expulsion or were disengaged from school (Jesuit Social Services, 2013).

Poor school performance was identified by Weatherburn's (2001) review of empirical studies as a strong indicator of engagement in youth offending even when studies controlled for the influence of family socio-economic status. Other factors, such as child neglect or abuse, gender, indigenous status and parental characteristics, provided no additional predictive validity for identifying youth who will reoffend once these key factors are considered (Weatherburn et al., 2007). Participation in education can strengthen social bonds that can mediate the effect of adverse social system factors, such as family poverty (Sampson & Laub, 2005). This extends to the protective influence of engagement in school

on a range of risk factors or cumulative disadvantages that indicate the possibility of future offending (Omaji, 1992).

The empirically supported factors related to youth contact with the justice system are considered from a social ecological perspective that emphasises the interplay of systems to enhance understanding (Thornberry & Krohn, 2005). By way of example, a child who struggles academically, perhaps due to the effects of stressed family relationships, may be more likely to disengage from school often at the point of transition from primary to secondary. This can lead to greater exposure to offence opportunities and reduced chances for forging positive social bonds. Early engagement in offending behaviour can affect future educational attainment and employment opportunities, further weakening positive social bonds.

2.3.6. Community systems

Mesosystems of the social ecology include community features. Youth development and opportunities for intervention exist within the interplay of the social ecology levels. A social ecological model emphasises that there are complex relationships between community characteristics and youth offending. Seminal research by Shaw and McKay (1942) established links between poverty and recorded crime rates in neighbourhoods. More recently, in Australia, the *Dropping Off the Edge* report (Vinson et al., 2015) identified place-based disadvantage across Australia. This report detailed that 3 per cent of postcodes in Victoria have higher unemployment rates, child protection reports, criminal convictions, family violence and poor educational attainment than the rest of the state. In terms of youth contact with criminal justice systems and place, 25 per cent of young people on youth

justice orders in Victoria came from 2.6 per cent of postcodes (Jesuit Social Services, 2013).

Therefore, there is a correlation between youth contact with justice systems and the level of socio-economic disadvantage in specific locations.

The collective efficacy (Sampson, Raudenbush & Earls, 1997) of communities operates within the mesosystem of the social ecology and is linked to opportunities for criminal activity. Collective efficacy reflects shared values, cohesion and willingness to intervene to promote safety within a community. Weatherburn and Lind (1997) explored the relationships between disadvantage, family processes and youth crime in an Australian sample. Their research concluded that economic and social stress and erratic and inconsistent disciplinary practices resulted in higher rates of child neglect and abuse (Weatherburn & Lind, 1997). These factors weakened the bonds between children and their families, resulting in a greater potential for exposure to justice systems. The level of social support or stress within a family was shown to either attenuate or accentuate the levels of economic stress experienced within a community (Weatherburn, 2011). These studies highlight the significance of interactions within the social ecology at key developmental stages for positive youth development or risk of contact with justice systems.

Collective efficacy within a community influences youth development and reflects the critical elements of social contexts important for positive adolescent health and development (Burt & Paysnick, 2012; East, 2013). These elements of communities can buffer youths from a community's socio-economic disadvantage (Aminzadeh et al., 2013), reducing the potential for contact with the criminal justice system. This knowledge can generate an understanding of the intervention points across the social ecology to foster positive youth development and reduce future engagement in offending.

Throughout an individual's life, periods of stability and change affect opportunities to develop strong social bonds. Social control theory asserts that bonds with family, peers and social institutions, such as schools, act as restraints to engage in antisocial behaviour (Gottfredson & Hirschi, 1990; Hirschi, 1969). An absence of strong prosocial bonds reduces opportunities to engage with positive systems, exacerbating the likelihood of ongoing contact with criminal justice systems. Research building on the longitudinal studies of the Gluecks (dating from the 1930s to 1960s) demonstrated the differential effects of social bonds across developmental stages, creating both risk and protective factors (Laub & Sampson, 2003; Sampson & Laub, 1993). Piquero, MacDonald and Parker (2002) addressed turning points, such as employment or marriage, that can alter the trajectory of youths who have engaged in earlier offending. Lerner and Overton (2008) highlighted developmental transition points that provide intervention opportunities to promote positive youth development and build collective efficacy. Further, Buchman and Steinhoff (2017) noted the significance of integrating social inequality and developmental transitions to understand developmental outcomes.

France, Freiberg and Homel (2010) supported the creation of a pathway to wellbeing to support children across their life course and ameliorate social disadvantage. They asserted that interventions to interrupt adverse trajectories need to focus on developmental stages and interconnections across the social ecology (France et al., 2010). Positive youth development approaches identify strengths within individuals and across their social ecology to promote favourable outcomes (Bensen et al., 2006; Shonkoff & Phillips, 2000).

Social ecological models assist in understanding that youth development occurs through dynamic and enduring interactions between personal characteristics and the surrounding

context. Social ecological systems can mediate vulnerabilities. For example, family systems can provide a protective factor in a neighbourhood characterised by high crime, housing stress and poverty. Family factors can serve as moderating influences or exacerbate risks dependent on the interactions between macrosystems and exosystems.

Early intervention can manipulate social and physical environments to promote protective factors and minimise those factors that facilitate youth engagement in offending behaviour. By recognising contextual factors and the interaction between the developmental stage and social ecology, service systems can refine intervention programs and decision-making to reduce the contact an individual has with the criminal justice system. The convergence of individual characteristics, family, peers, community and the greater social context within a young person's social ecology provides opportunities for prevention and direct intervention activities (Ingoldsby & Shaw, 2002; Sameroff et al., 2004).

2.3.7. Summary

The framework of developmental criminology adopted in this research highlights that youth offending is best understood within the developmental context of adolescence. This thesis argues that opportunities for intervention programs to reduce the costs of youth offending should, ideally, be focused on developmental transitions when vulnerability is at its highest. Developmental criminology applied across the social ecology in which youths are embedded informs the dynamics of young people's contact with the criminal justice system and the development of prevention strategies.

Social ecological theory provides a framework that shifts the understanding of engagement with criminal justice systems from predominately individual factors to the effects of social

ecology factors and prevention efforts. Greater clarity regarding individual, social and contextual factors can help identify those contexts and individuals that inflate or reduce the risk of engaging in serious, persistent offending.

2.4. ACEs and engagement in offending

Section 2.4 considers the interaction between exposure to ACEs and youth offending from the perspectives of social ecological systems and developmental criminology. The link between childhood experiences of abuse and involvement in the youth justice system has been demonstrated in international and Australian research (Baglivio & Epps, 2016; Baglivio, Wolff, DeLisi, Vaughn & Piquero, 2016; Baglivio, Wolff, Piquero & Epps, 2015; Cashmore, 2011; Hurren et al., 2017; Malvaso, 2017; Stewart et al., 2008; Wilson, Stover & Berkowitz, 2009). Youths who have been exposed to ACEs are at risk of adverse outcomes, including higher rates of reoffending after initial contact with youth justice systems, psychological and behavioural disorders, academic failure and suicide attempts (Cauffman, Monahan & Thomas, 2015; Haynie, Petts, Maimon & Piquero, 2009; Wasserman & McReynolds, 2011; Wolff, Baglivio, Intravia & Piquero, 2015). While several factors increase the risk of engagement in youth offending, Livingston et al. (2008) asserted that the detrimental effect of child abuse and neglect is consistently demonstrated as a key factor.

Developmental criminology provides further information about how identified risk factors or ACEs may operate at different ages and stages within a child's life and their family to predict an offending pathway (Dennison, 2011; Homel & Thomsen, 2005). Stewart et al.'s (2008) research proposed that the timing of child abuse was a key variable in its effects on youth offending. Accurately identifying factors that predict ongoing contact with the

criminal justice system should enable effective intervention efforts. These interactions and the effects of life events are most salient at key developmental transitions, such as starting school (Thornberry & Krohn, 2005).

Despite the number of youth offenders who have experienced childhood trauma, most children who suffer ACEs do not engage in offending behaviour (Leschied, Chiodo, Nowicki & Rodger, 2008). Therefore, the factors that distinguish the group of youth who engage in offending behaviour must be identified (Leschied et al., 2008). The interrelationship between ACEs and youth engagement in offending behaviour can be better understood by reviewing the literature examining specific aspects of the experience of maltreatment, such as age, gender and the associated effects of service system responses. The outcomes can be maximised by understanding that risk factors interact differently at different developmental periods (Thornberry, Knight & Lovegrove, 2012).

Consistent with social ecological theory (Bronfenbrenner, 1979), systemic factors are stronger predictors of adverse outcomes than individual factors (Dahlberg & Potter, 2001; Leschied et al., 2008). Ondersma, McGoron and Beatty (2017) asserted that the effects of childhood trauma are reflected across the social systems in which an individual is embedded, from the most proximate to the most distal. Childhood maltreatment exerts immediate and long-term effects on multiple social systems and developmental capacities, and these vulnerabilities increase the likelihood of future adverse outcomes (Jonson-Reid, 2004; Kim & Cicchetti, 2010).

2.4.1. *The extent of the Australian cohort of youth with both ACEs and contact with the justice system*

There is an over-representation of youths with ACEs in Australian youth justice populations (Ringland et al., 2015; SAC, 2019; Whitten et al., 2017). The considerable number of youths with both child protection and criminal justice histories comprises a particularly complex and vulnerable population and accounts for significant social and economic resources.

Therefore, this cohort represents a critical focus in reducing the costs of youth contact with justice systems and increasing community safety and positive youth development (Baidawi, 2020; Baidawi, Mendes, & Snow, 2014).

Consistent with a social ecological framework, the SAC (2019) asserted that ‘the reasons why children known to child protection are over-represented among children who offend are many, complex and likely to vary from child to child’ (p. 96). This thesis argues that explicating the interplay of developmental stages and social ecological systems surrounding the individual leads to a greater understanding of this complexity.

Adverse outcomes, such as offending, substance use and exclusion from education, are over-represented in youths who have experienced trauma, family dislocation and subsequent placement in OHC (Jesuit Social Services, 2013; Ringland et al., 2015; SAC, 2016). The *‘Crossover Kids’: Vulnerable Children in the Youth Justice System; Report 1: Children Who Are Known to Child Protection among Sentenced and Diverted Children in the Victorian Children’s Court* report (the *Crossover Kids* report) (SAC, 2019) examined youth who had contact with both youth justice and child protection services in Victoria. The project considered the trajectory of children in the criminal justice system to identify vulnerabilities in those sentenced in the Children’s Court of Victoria (the Children’s Court).

The study analysed the data of 5,063 children who had offended between the ages of 10 and 17 years (inclusive) and received a sentence or diversion in the Children's Court during 2016 and 2017. Thirty-eight per cent of the study group were the subject of at least one report, including uninvestigated and unsubstantiated reports, to Victorian child protection services from June 1996 to September 2018 (SAC, 2019).

A significant portion of the study group was placed on multiple (five or more) child protection orders during their lifetime (SAC, 2019). This indicates ongoing concerns for their safety and reflects sustained exposure to adverse experiences. Many of the children placed on child protection orders were removed from and placed outside their family system (SAC, 2019). Studies have shown that placement in OHC doubles the risk of post-placement offending (Ryan & Testa, 2005; Stewart, Dennison & Waterson, 2002), particularly if placement occurs during adolescence (Ryan, Herz, Hernandez & Marshall, 2007) and involves placement in a residential care unit (Ryan, Marshall, Herz & Hernandez, 2008). The substantial cohort of youth with both criminal justice and child protection histories highlights the significance of understanding an individual's engagement in offending within the context of their childhood experience of abuse. It is argued that understanding the link between separation from family, placement in OHC and subsequent youth offending should inform the decision-making of statutory bodies, such as children's courts and youth justice agencies (SAC, 2019).

The cohort of youths who have experienced ACEs and formal contact with the youth justice system is substantial. Engagement with the service system at the point of childhood maltreatment also provides an opportunity for early intervention to interrupt a potential

trajectory of serious, persistent offending. Therefore, understanding the interplay between ACEs and youth offending is critical in designing and implementing prevention efforts.

2.4.2. *ACEs and youth offending*

The heterogeneous nature of the experience of maltreatment is acknowledged in the literature (Hurren et al., 2017; Mersky, Topitzes & Reynolds, 2012; Paterson, 2015; Yun, Ball & Hyeyoung, 2011). However, a substantial number of studies focus on a single type of adverse experience or the developmental stage at which it occurs. The interplay of developmental stages, childhood adversity and subsequent interactions with government and community services vary in youths who engage in offending behaviour.

Young people can be subjected to different types of abuse at different times throughout childhood or adolescence and varying levels of severity and frequency. Similarly, young people may experience various levels of intervening services, from placement in OHC to the type, stability and length of placements. Section 2.4.2 identifies the aspects of the interplay of ACEs across social ecologies to pinpoint the gap in knowledge that this thesis aims to address and highlight opportunities for prevention initiatives.

The microsystem the most proximate social ecological system to the individual and includes individual characteristics and the immediate social systems in which the youth is embedded (Bronfenbrenner, 1979). The literature shows that ACEs relate to behavioural disturbances and future engagement in antisocial behaviour (Bender, 2010; Lerner & Castellino, 2002; Stewart et al., 2002). Evidence from neurobiological, behavioural and social sciences has led to major advances in understanding the conditions that affect early childhood development and behaviour during adolescence (Cashmore, 2011; Egeland, 2009; Perry, 2009).

For example, childhood experiences of abuse have been shown to inhibit the development of oral language competencies (Clegg, 2006). This critical aspect of maturation affects a child's social interactions, development and maintenance of relationships, learning capacity and behaviour. Australian research regarding children in the youth justice system identified a high rate of oral language deficits. The criteria for language impairment were met by 50 per cent of a sample of 100 incarcerated young offenders in Victoria (Snow & Powell, 2012). Experiences of childhood trauma affect development and, consistent with the adopted social ecological framework, interact across all domains of functioning; this generates an increased likelihood for contact with the criminal justice system (Evans et al., 2016; Robinson et al., 2011).

While many studies have examined the relationship between child protection involvement and offending, fewer have examined the effect on reoffending. Ryan, Williams and Courtney (2013) focused on neglect and reoffending and found that youth with a substantiated report of neglect were more likely to continue offending than those with no official history of neglect. The association between offending and neglect is confirmed in Victoria's youth justice population by the SAC's reports (2016, 2019).

Characteristics of family systems and the interrelationship with childhood development have been shown to be associated with child maltreatment (Lacourse, Nagin, & Tremblay, 2003; Zielinski & Bradshaw, 2006) and subsequent youth contact with criminal justice systems (Borum, 2000; Clark, 2001; Dahlberg & Potter, 2001; Farrington et al., 2013; Loeber et al., 2008). In an Australian study, Ringland et al. (2015) distinguished differences in the relationship between placement in OHC, runaway reports and reports of risk of significant harm based on gender. The potential for youth exposed to adverse family environments to

be homeless was demonstrated in Australian research by Indig et al. (2011) and Hurren et al. (2017). Homeless youths have greater potential to have contact with police and justice systems than youths with a stable residence (Heerde & Hemphill, 2016; Sandstrom & Cornell-March, 2008). Cashmore (2011) demonstrated an association between running away from home and long-term involvement in crime in Australia's youth justice population. This association is consistent with international studies on homelessness and youth contact with justice systems (Kaufman & Widom, 1999; Thornberry, Ireland & Smith, 2001).

The interplay between ACEs, developmental stages and the context in which the trauma occurs is related to subsequent outcomes. Studies that examined the timing of maltreatment found that young people who are exposed to ACEs that started or extended into adolescence are more likely to reoffend than those whose maltreatment was limited to their childhood (Hurren et al., 2017; Ringland et al., 2015; Stewart et al., 2008; Thornberry et al., 2001).

In Australian research that identified various offending trajectories in the context of maltreatment, engagement in offending peaked when ACEs occurred at or around the transition to education (Stewart et al., 2008). These complex and diverse patterns of developmental vulnerability to various kinds of victimisation at different ages require greater understanding to enhance prevention policy and intervention efforts.

Developmental transitions, including those considered normative, are characterised by periods of uncertainty and potential stress for children and their families. When ACEs occur at critical transition points, a child's ability to negotiate such transitions successfully may be restricted.

2.4.3. Placement in OHC

Placement in OHC can be conceptualised at the mesosystemic level of the social ecology because it involves government and community services, statutory and regulatory frameworks driven by socio-political systems and the interplay of responses from individuals and their families to service system interventions (Farineau, 2016). As evidenced in the *Crossover Kids* report (SAC, 2019) and scholarly literature (Baidawi, 2020; Hayden, 2010; Hurren et al., 2017; McFarlane, 2018; Ireland, Smith & Thornberry, 2002), youth who have been placed in OHC are over-represented in youth justice populations. Research findings have shown that the effect of placement in OHC on criminal involvement is dependent on a range of individual and contextual factors, such as the age at the time of placement, reasons for placement and placement instability (Baskin & Sommers, 2011; DeGue & Spatz Widom, 2009; Ryan & Testa, 2005).

The vast majority of children placed in OHC have had increased exposure to the established risk factors for delinquency. Exposure to ACEs, such as maltreatment, violence and parental neglect, characterises those youth placed in OHC (Baidawi, 2020; Malvaso & Delfabbro, 2015). The removal of children from parental care often disrupts the child's education and connection to community and peers, which can exacerbate the trauma that formed the basis of the initial removal from family.

The response to dysregulated behaviour within OHC systems often includes police involvement, as noted by McFarlane (2018), who referred to this as 'care criminalisation'. This contributes to this cohort's over-representation in youth justice populations (McFarlane, Colvin, McGrath & Gerard, 2019). These factors reflect greater vulnerability for future contact with justice systems; however, the literature demonstrates that it is the

accumulation and interaction of these factors for those children placed in OHC that are particularly salient (Schofield, Biggart, Ward & Larsson, 2015).

The number and stability of placements can affect the risk of subsequent involvement in the youth justice system (Hayden, 2010). Multiple placements can affect the ability to form secure attachment relationships, reduce therapeutic intervention opportunities and disrupt education (Commission for Children and Young People, 2015). Widom (1992) showed that it was not placement in OHC itself that increased the risk of later offending, rather it was the instability and number of placements.

While the literature demonstrates a link between placement instability and youth offending (Jonson-Reid & Barth, 2000a, 2000b), there is no consensus regarding the drivers underpinning this link. Ryan and Testa (2005) found that placement instability was statistically significant only for males. Widom (1992) also identified a gender difference in the association between the risk of offending and placement in OHC. Further, Baskin and Sommers (2011) and DeGue and Spatz Widom (2009) demonstrated a link between future engagement in offending and the number of placements in OHC. However, Ringland et al. (2015) showed that an association between the number of placements and youth offending was not present (after adjustments for demographic and offending characteristics).

Further investigation into the interplay of factors within a developmental framework will enable the link between placement in OHC and youth offending to be better understood.

Transition points present as a time of vulnerability and studies have shown that at the point of leaving a care placement the risk of post-placement offending is doubled (Ryan & Testa, 2005; Stewart et al., 2002). Ryan, Hernandez, and Herz (2007) showed that the link is

particularly significant when initial placement occurs in the key developmental stage of adolescence.

The type of OHC placement has also been shown to have a significant association with the risk of youth offending, with residential care placements exacerbating the likelihood of future offending (Ryan et al., 2008; Wong, 2014). Residential care brings together youths with high and complex needs due to the substantial effects of early trauma (Hayden, 2010; Jonson-Reid & Barth, 2000b; McFarlane, 2016). An individual is frequently exposed to other youths at risk of offending through co-placement in residential care (Mendes, Baidawi & Snow, 2014). McFarlane (2018) asserted that there is a lack of research into the ‘consequences’ of placement in residential care. They further argued that Australian research focused on the over-representation of youths placed in OHC in the criminal justice system is particularly deficient (McFarlane, 2018). This assertion was echoed in the recommendation for further research into the nexus between placement in OHC and youth offending from the SAC (2019). Placement in OHC was not included in research assessing the early onset of crime and delinquency in the *Longitudinal Study of Australian Children: Annual Statistical Report 2014* (Forrest & Edwards, 2014). The association of placement in OHC and an individual’s offending trajectory is considered in this research project to add to the current body of literature.

2.4.4. Exosystemic and macrosystemic factors related to the nexus of youth offending and OHC

Within the social ecological system, the exosystemic and macrosystemic levels do not directly involve the individual youth; however, they do reflect societal values and paradigms

that guide government policies. How society expects governments to respond to child maltreatment and youth offending can shift over time and reflect polarised views from child welfare to punishment or justice positions. These issues have often converged in overarching reviews of legislation, policy and practice, including the *Report of the Special Commission of Inquiry into Child Protection Services in NSW* (Wood & NSW Special Commission of Inquiry into Child Protection Services in NSW, 2008), the *Royal Commission into the Detention and Protection of Children in the Northern Territory* (2017) and the *Seen and Heard: Priority for Children in the Legal Process (ALRC Report 84)* by the Australian Law Reform Commission (1997). These reviews highlighted the contentious issues that arise from dealing with young people involved in the juvenile justice system according to either their 'needs' or their 'deeds' (Richards & Renshaw, 2013). Adolescents can be exposed to ACEs and engage in offending behaviour concurrently. The body of literature demonstrates that these experiences are interlinked (Hurren et al., 2017; Richards, 2011; SAC, 2019) and, therefore, policy and practice should reflect this overlap.

Wong, Bailey and Kenny (2010), in a report for the NSW Youth Justice Coalition, concluded that youth contact with justice systems was often exacerbated by policies and processes where children with both 'care and crime' concerns were managed separately in the child protection and juvenile justice systems. The *Thinking Outside* report (Jesuit Social Services, 2013) demonstrated that there is a clear need to enhance integration and coordination between youth justice and child welfare services to improve the outcomes. The current literature has paid little attention to the complex interaction between service system responses to children who have experienced childhood maltreatment and their subsequent offending behaviour (Jonson-Reid, 2004; Malvaso, 2018; Malvaso et al., 2017). Consistent

with the aim of translating research into practice, this thesis addresses this deficit by generating an understanding of the links between the different systems' responses to ACEs to improve outcomes for at-risk youth in Inner Gippsland.

2.4.5. Summary

The interplay between an individual's developmental stage and the social ecology in which they are embedded informs the link between ACEs and engagement with the youth justice system. The literature is inconsistent on the significance of the timing of maltreatment, the pattern of adverse events, the response of the child protection systems to children exposed to harm and the association of these factors with future offending. The design of this study, which incorporates developmental data to augment police contact records, aims to illuminate the nexus between ACEs and youth contact with justice systems.

2.5. Conclusion

Most youth who have contact with justice systems do not persist in offending. Overall, the literature shows that there is a small group, who are mostly younger when they have their first contact with the formal youth justice system, offend frequently and continue offending into adulthood. It is critical to understand the interplay between developmental stages and life experiences to identify the vulnerabilities that may increase the probability of this trajectory. Interventions to reduce youth contact with justice systems have significant implications for resource allocations, policy directions and practice decisions of government and community services for child welfare, youth development and community safety (Byrne,

2014; Farrington & Welsh, 2007). Early intervention provides an opportunity to interrupt a potential trajectory of serious, persistent offending (see Section 2.2).

The critical literature review in Chapter 2 highlights that intervention to reduce the costs of youth contact with justice systems must be driven by contextualising prevention efforts within social ecological and developmental frameworks. The benefits of prevention can be maximised by appreciating that vulnerability factors will interact differentially at different developmental periods (Dahlberg & Potter, 2001). The interplay of factors within social ecology systems requires further academic scrutiny (see Section 2.3.1). This thesis addresses this gap in the literature to identify intervention opportunities to reduce the cost of youth contact with justice systems in Inner Gippsland.

It is important to identify youths at risk of serious, persistent offending because this group represents the greatest cost to individuals, families, and the broader community. Further work is required to understand the interactions between individual and systemic factors contributing to future vulnerability to offending. This thesis augments the study by Sutherland and Millsteed (2016), who utilised Victorian crime statistics to identify varying trajectories of youth offending. They noted the absence of developmental data restricted findings. This thesis provides an opportunity to address this gap in the literature by further explicating the effects of developmental experiences on an individual's potential to engage in future offending. This research project expands knowledge through the convergence of police, human services, and education data to illuminate those factors related to youth at risk of persistent, serious offending.

Despite the body of literature that focuses on reducing the costs of youth contact with the justice system, consideration of the influence of and opportunities for intervention across

the social ecology remains under-researched. This thesis examines the potential for social ecological theory to increase knowledge about the interplay between factors across social ecological systems that may be linked to youth offending. By recognising the contextual factors and interaction a young person has within their social ecology, service systems can refine intervention programs and decision-making to reduce the contact an individual has with the criminal justice system.

Risk aversion policies have dominated the field of service delivery in prevention efforts (Case, 2006; Case & Haines, 2009). However, this study aims to focus on the strengths across the social ecology rather than individual deficits. At the macrosystemic level, prevention policy must direct resources across the social ecology and shift the focus from risk to earlier intervention opportunities that facilitate positive youth development (Case & Haines, 2009; France et al., 2010). This study will generate findings to improve outcomes across the community in Inner Gippsland through prevention policy and practice directed at enhancing developmental social systems.

ACEs are a widely accepted risk factor for youth offending (see Section 2.4). Youth who have experienced maltreatment as a child, especially those placed in OHC, are over-represented in the cohort of persistent, serious youth offenders. However, as illustrated by a developmental criminological framework, the links between child maltreatment and youth offending are likely to be complex. These complex associations and their specific interactions with place require further research. It is argued in this thesis that information relating to childhood experiences and exposure to adversity will augment justice system data to increase the knowledge about the factors that place youth at risk of future offending. This thesis focuses on the gap in the literature by incorporating multiple data

sources to gain a greater understanding of both the interplay of ACEs with youth offending and the identification of early intervention opportunities across the social ecology.

Chapter 3 reviews the use of research findings to inform practice initiatives designed to prevent and reduce youth engagement in persistent offending. It is argued that the variability in the efficacy of developmental prevention programs can be linked to a gap in translating research findings into policy and practice (Freiberg & Homel, 2011). The context in which interventions are delivered also forms a critical element in the efficacy of developmental prevention; this highlights the importance of a place-based perspective.

Chapter 3 considers the literature that has focused on the translation of research findings into policy and practice. This research will deliver findings to facilitate practice innovations in the Inner Gippsland service system by responding to the identified gaps in the knowledge base.

Chapter 3. Translating research into practice: Enhancing prevention

3.1. Introduction

Chapter 2 demonstrated that considerable scholarly work has been devoted to understanding the drivers of youth engagement in offending behaviour (Allard et al., 2017; Amemiya et al., 2017; Farrington et al., 2016). Despite the established evidence base in the literature, reducing or preventing youth contact with criminal justice systems remains a complex social issue. Chapter 3 argues that there is a gap in translating research findings into policy and practice that often contributes to the reduced efficacy of developmental prevention programs (Freiberg & Homel, 2011). Further, it reviews the relevant literature to provide a greater understanding of how to translate the research findings to design and deliver effective developmental prevention programs.

Several key elements can affect the efficacy of service delivery in addressing complex social issues, such as youth offending. The key elements outlined in Chapter 3 comprise three broad domains: the accessibility and utility of research for practice providers, the socio-political framework that influences policy and resource allocation and the capacity of services to implement evidence-based interventions. Each domain is discussed to identify how they operate and interact across the social systems in which an individual is embedded. Finally, this thesis asserts that applying a place-based framework to design and implement evidence-based interventions is critical to driving positive outcomes for youth and their community. The justice reinvestment framework is discussed to provide an example of a strategy that seeks to address the research–practice gap that adopts a place-based social ecological perspective.

3.2. Research, policy and practice

Developmental criminological research provides understanding about the nature and causes of youth crime and how it can be prevented or, once initiated, reduced (Homel, 2017).

Consistent with a social ecological framework, this thesis argues that the research findings must be effectively communicated to (and have practical application for) those who implement legislation, service delivery and policy agendas to inform prevention initiatives. In response to the variability of prevention efforts and their effects on youth offending, Western democratic governments have embraced evidence-based practices in developing policies and implementing prevention initiatives.

At a policy and program delivery level, evidence-based practice is considered a safeguard against ineffectiveness, such as wasted resources and the generation of unintended harms (Anastas, 2014). Both research and practice operate within the social ecology; however, sometimes, the interrelated systems may not agree about whether ‘the problem’ exists or, if it does exist, what precisely constitutes the problem (Ransley, 2011). Therefore, the identification and application of pertinent research as a basis for program designs may vary across interrelated systems.

The literature contains a diversity of views regarding evidence-based practice. Head (2008b) argues that the notion that science can provide a universally right answer to complex social problems, such as youth offending, is misplaced. Evidence-based policies assume that evidence is both available and utilised in making public policy. Despite such constraints, evidence-based practice can contribute to the development of knowledge and deliver better policies than those made in the absence of research evidence (O’Dwyer, 2004).

Evidence-based practice are restricted when there is a lack of dissemination from peer-reviewed publications to practice at a service delivery level. The transference of research findings to practice is often not a priority of the research community. Effective transference is generated when there is a synergy between what is published and what the workers implementing the prevention initiatives find useful. This is particularly the case with the empirical literature, where there is a lack of continuity between research and practice (Knight, 2013).

In substance abuse research, Einstein, Straussner, Johnson and Gartside (2015) sampled researchers to assess their knowledge of how academic research affected policy and practice. Despite some differences between the field and developmental prevention, it is argued that the findings are transferable because substance abuse research addresses a complex social problem and has generated an evidence base on which policy and interventions are developed. Furthermore, Einstein et al. (2015) asserted that a paradox exists because, although the appropriate use of findings can guide effective interventions, the evidence base is often not used and other interventions that lack an evidence base are adopted.

Homel, Freiberg and Branch (2015a) contend that there has been a lack of systematic research into creating developmental prevention models that explain the process through which interventions bring about change. There is a gap between the peer-reviewed published research and its application in the real world, where the effects of social issues are experienced (Einstein et al., 2015). This thesis aims to explicate an evidence base for developmental prevention initiatives that are responsive to the local context of Inner Gippsland. The findings will provide practical advice specific to the local context to enable

policymakers to effectively deliver developmental prevention policy and programs, enhancing the translation of research into practice.

Evaluating the effects and outcomes of interventions is another aspect of translating research into practice. The methodology employed to evaluate developmental prevention efforts must deliver data that is useful to those implementing intervention programs and detail the effects of the intervention across the social ecology in which it is delivered.

Homel et al. (2015a) argued that evaluation findings could fail to provide the information required by those who manage prevention programs.

There is a range of issues to consider when using quantitative and qualitative research findings to solve complex social problems. Common evaluation frameworks have a restricted capacity to fully assess the outcomes or effects of prevention interventions (Pawson, 2006). The randomised control evaluation designs are not adequate for evaluating crime prevention policies because they cannot account for the media and politically driven demands or emotional responses to value-driven aspects of the justice system in which an intervention is delivered (Haggerty, 2009). Van Belle et al. (2016) concurred that randomised control evaluations could not adequately assess the interplay across the social ecology or detail the process of complex prevention interventions.

Western governments have embraced evidence-based policy, partly, in response to dissatisfaction with the efficacy of previous policies for complex social issues (Pawson, 2006). However, the political tensions that influence policy and practice can restrict the application of research evidence in the design and implementation of prevention strategies. Research methods to evaluate such interventions must incorporate the full range of effects

and outcomes to deliver findings that enhance knowledge and inform future practice (Fox & Albertson, 2011).

All the relevant information for testing potential solutions must be gathered to adopt sound research processes and address complex social problems. However, this would require unlimited resources and time that may not be plausible in the context of competing service delivery priorities and available social and economic resources. A neutral, scientific process ignores the political and ideological environment of policymaking and resource requirements (Bacchi, 2009). In developmental crime prevention, it is argued that evidence-based- programs that seek to strengthen informal social controls to ameliorate youth vulnerability to offending are in their infancy (e.g., Wickes, Hipp, Sargeant & Mazerolle, 2017). This is partly due to the research that has focused on individual and family risk factors for offending, rather than a social ecological framework that incorporates community-level social processes (Haegerich, Oman, Vesely, Aspy & Tolma, 2014).

This thesis advocates that realist evaluation methods (Pawson & Tilley, 1997) are best placed to address the full range of outcomes of initiatives designed to reduce the cost of youth contact with justice systems. A realist evaluation framework provides a structure to examine prevention strategies within specific contexts, providing data on the aspects of those contexts and the specific mechanisms that affect the outcomes (Greenhalgh et al., 2009). Realist evaluation acknowledges that interventions are delivered within dynamic social systems or ecologies and that the interventions cannot be isolated from the social system or kept constant because changes occur through the workings of the entire system (de Souza, 2013).

3.2.1. *Political tensions that influence policy and practice*

The ‘what works’ literature (McGuire, 2004) has dominated youth justice policy and practice for a considerable period. At a macrosystemic level, developmental interventions have focused on criminogenic services rather than welfare-oriented casework that considers the child’s welfare (McAra & McVie, 2012). Research has established that there are substantial effects of contact with the criminal justice system that extend long after the formal involvement with justice systems (Richards, 2014). The scope and development of prevention initiatives can be restricted when governments adopt a risk management paradigm and individual responsibility in criminal justice policy. At the macrosystemic level, interventions that promote the welfare of all children receive less attention when such paradigms are adopted to guide policy and practice. The research that informs resource allocation and policymaking has a crucial role in determining practice models. Lovell, Guthrie, Simpson and Butler (2018) identified two obstacles to substantive reform of the criminal justice system: policymakers’ perceptions of public opinion and the political risk associated with implementing reforms that could fail.

At an exosystemic level, policies in youth justice and child welfare have adopted a position that all risk is foreseeable and manageable (Littlechild, 2008), which is a response to media demands and political concerns regarding youth at risk. This can generate high levels of organisational, professional and personal anxiety when programs and workers struggle to meet unrealistic expectations (Horwath & Morrison, 2011). Macdonald and Macdonald (2010) asserted that government regulations and monitoring had increased the focus on high-risk, low-probability cases compared to actual risk reduction for a greater portion of youths vulnerable to future offending. Policies that are driven by socio-political demands

rather than sound research findings that reduce the costs of youth contact with justice systems affect resource allocations and therefore, the outcomes of such policies.

‘Best practice’ programs and systems have emerged as the prevalent strategy for addressing the variability in the efficacy of youth justice interventions. Young (2004) argued that this frequently occurs when assessing and identifying youths with high-risk characteristics and significant needs. In the context of Australian child protection, Goddard, Saunders, Stanley and Tucci (1999) argued that standardised risk assessment instruments are favoured because they are perceived to minimise error; however, they also limit discretion and the value of the worker’s practice wisdom. Maupin (1993) emphasised the importance of recognising the structural constraints encountered by workers when using risk assessment instruments. In the United Kingdom (UK), public inquiries have criticised service delivery when reviewing child abuse tragedies; therefore, standardised instruments are popular because they purport to reduce the chances for errors (Broadhurst, Hall, Wastell, White & Pithouse, 2010). This reflects an exosystemic commitment to scientific rationalism (Littlechild, 2008).

There are often significant discrepancies between the directions and policy delivered by bureaucrats and practice at the frontline of service delivery (Young, Moline, Farrell & Bierie, 2006). For successful implementation of prevention programs, those involved in designing interventions would benefit from time in the field and consultation with frontline workers. This would enhance efficacy and allow greater understanding of the work environment and context in which the initiatives are to be delivered (Horwath & Morrison, 2011).

At the exosystemic level, the government’s socio-political paradigms reflect varying priorities, incentives, time scales, and languages. Research can generate findings that detail

both implementation knowledge, gained from practitioners, and political knowledge that details government agendas, priorities and advocacy mechanisms (Head, 2008b). The translation of these findings would explicate the conditions and nature of prevention initiatives and their effects and provide insights into the overarching paradigms in which the interventions are delivered. Applying research findings to youth justice policy delivers 'evidence aware or informed' policymaking (Nutley, Walter & Davies, 2003, p. 19). Jones (2001b) critiqued the Labor Party's new youth justice policy direction in the UK. They argued that the term 'offending', compared to the term 'justice', in policy statements reflects the perspectives of the government that influence the resulting policy and practice (Jones, 2001a).

The tensions between overarching paradigms are reflected in the government responses to youth contact with justice systems. There is established research evidence that youth offending is relatively normal, trends are relatively stable over time and that positive universal interventions to prevent the criminalisation of youths are the most effective and reduce adverse consequences (Goldson, 2010; Payne & Weatherburn, 2015). However, at a government level, policies such as 'tough on crime' have public appeal but are not evidence-based; this creates a rift between evidence-based policy and practice.

Policymakers and funding bodies are driven by the socio-political context in which they operate, restricting their capacity to adhere to the evidence base generated through research. Bacchi (2009) argued that policy and practice are affected by political, bureaucratic and media-driven concerns rather than knowledge that is generated through social science research.

Lovell et al. (2018) asserted that policy and practice must combine public opinion, the political context of policy developments and research findings to deliver prevention interventions that have the support of the community. This thesis argues that the prioritisation of socio-political demands over empirical findings is the key tension that affects the efficacy of prevention initiatives.

3.2.2. *Practice partnerships*

A collective impact model as detailed by Kania and Kramer (2011) is based in service system collaboration. Collaboration requires the creation of a new structure that allows for ‘a common agenda, shared data and common measures, mutually reinforcing activities, and consistent and open communication’ (Weaver, 2016, p. 274). Collaborative practice models that address complex social issues, such as youth contact with justice systems, reflect advances in prevention programs (Homel et al., 2015a). This thesis aims to inform the local community about practices to deliver evidence-based early intervention to reduce youth contact with justice systems. Section 3.2.2 focuses on the strengths of partnership models and identifies concerns that may affect their ability to deliver effective interventions.

It is critical to understand how coalitions differ in their capacities and how these differences affect their ability to achieve community-wide change to improve the success of agencies working together in prevention work (Horwath & Morrison, 2011). Coalition capacities are the characteristics that affect a partnership’s ability to identify social and public health problems, mobilise the communities in which they occur and address specific concerns with local solutions (Weaver, 2016). It is argued by this thesis that these coalition capacities

provide the base to effectively utilise research findings to deliver effective practice that is responsive to local contexts.

Horwath and Morrison (2011) asserted that practice partnerships must be based on these key capacities to respond to complex social issues, such as child maltreatment, youth contact with justice systems and family violence. Shapiro, Oesterle and Hawkins (2015) concluded that, without a common agenda within the practice partnership model, there could be an excessive focus on tasks that may distract from the collaboration. The Communities that Care (CTC) (Gloppen, Arthur, Hawkins & Shapiro, 2015; Shapiro et al., 2015) and Pathways to Prevention Project (Homel et al., 2015a) initiatives provide examples of prevention interventions that reflect the key elements of practice partnerships.

The CTC initiative was developed in the USA by Hawkins and Catalano (1992) and implemented globally. It provides a systemic approach to developing and implementing prevention interventions for local crime problems (Hawkins & Catalano, 1992). Gloppen et al. (2012) explained that CTC involves forming collaborative partnerships between community stakeholders to promote the adoption of evidence-based interventions that have been shown to reduce risks and enhance protective factors for adolescent behaviour problems. There is limited published data available from CTC programs in Australia; however, the model has been applied recently in Victoria and other Australian States with positive effects (see <https://www.communitiesthatcare.org.au/>).

A review by Basic (2015) of CTC prevention programs at multiple sites in Croatia supported the critical elements of a shared vision, community readiness and support for initiatives and the evaluation planning. The literature that has examined CTC initiatives (Basic, 2015; Gloppen et al., 2012; Shapiro et al., 2015) helps develop effective collaborations and

increase positive outcomes to address the research–practice gap. However, the evidence base for the efficacy of such community-focused crime prevention approaches is not as robust as it is for developmental and situational crime prevention models (Tonry & Farrington, 1995; Welsh & Hoshi, 2002). In part, this is due to the complexities of partnership models and the problematic nature of applying systematic, controlled evaluation methodologies to these initiatives (Smallbone et al., 2008).

Evaluation of prevention initiatives is critical to inform funding bodies and policymakers of outcomes and refine ongoing policy and practice. The differences in the efficacy of intervention efforts between certain contexts needs to be understood to successfully reduce youth vulnerability to offending and adverse outcomes for individuals and the community. A level of divergence between the user’s needs and the social services provided can occur. To address this potential discrepancy, Horwath and Morrison (2011) asserted that there had been a shift at the policy level from focusing on measuring outputs to understanding the outcomes of program implementation. However, this shift to measuring outcomes has advantages and disadvantages. Focusing on the outcomes, rather than the outputs, enables an understanding of the difference that practice partnerships make to service users (Broadhurst et al., 2010).

Heery, Naccarello and McKenzie (2018) demonstrated that partnership initiatives involve complex interacting systems that operate within a specific context and therefore, are difficult to evaluate with traditional empirical evaluation methodologies. Practice partnerships that are delivered across the social ecology and evaluation methodologies to generate useful findings must be responsive to these aspects (see Weaver, 2016; Wood, 2016). Evaluation methodologies that detail a program’s effects and outcomes are required

by funding bodies, inform practice and future research, and are vital in delivering developmental crime prevention initiatives. Horwath and Morrison (2011) asserted that measuring outcomes has a powerful effect on drawing agencies together and mobilising action because agencies share responsibility for defining and achieving outcomes.

However, the inherent risk in measuring outcomes is that it can be complex because extraneous factors that are beyond the control of practice partnerships can affect the results (Patton, 2001). Realist evaluation frameworks articulated by Pawson and Tilley (1997) provide scopes for 'unintended outcomes' as a component of evaluating interventions that are delivered in complex social conditions. A realist evaluation framework is adopted in this thesis because it is best placed to detail the effects and outcomes of developmental prevention programs that are delivered in a specific context.

The social ecology, policy environment, institutional practices, community readiness, existing local infrastructure and adequate funding affect the efficacy of prevention interventions. Mesosystemic issues influence policy and practice that address complex social concerns, such as youth offending, and affect the service system's capacity to implement evidence-informed interventions. The outcomes are further subjected to implementation factors, such as fidelity to program components and community capacity (Gloppen et al., 2012; Homel et al., 2015a).

According to Homel et al. (2015a), collective impact models lack a foundation in prevention research. Evaluation and monitoring frameworks of partnership program deliveries are critical for funding bodies and policymakers. Wandersman, Chien and Katz (2012) argued that the development of practice partnerships that respond to issues such as program fidelity, identification of a community's needs and the provision of adequate resources form

a crucial component of developmental prevention programs delivered through collaborative practice in specific locations.

3.2.3. Summary

The literature review highlights a range of issues in the translation of research into practice and informing policy. This thesis argues that interventions must be contextualised within the social systems in which they are delivered to address the costs associated with complex social issues, such as youth offending. Variable outcomes can be understood by identifying the gaps between research findings and practice and recognising the socio-political forces that influence the policy and practice models that are designed to address complex social concerns. The demands on government to address community concerns and competing policy paradigms influence the adoption of research findings. Evidence-based practice cannot be divorced from the real-life context in which programs function.

Practice partnerships have features that distinguish them from the cooperation between services in prevention efforts. Differences between prevention efforts have been demonstrated in the evaluation of practice partnerships. This highlights the necessity of fidelity when implementing evidence-based interventions and incorporating the critical features of partnership models (as demonstrated by Shapiro et al., 2015, in the discussion about CTC in Section 3.2.2).

The empirical evaluation of multifaceted prevention programs that are designed to address youth with complex needs is challenging. Adopting evaluation mechanisms that are responsive to complex social issues and account for the range of factors that influence effective services needs to be an integral part of developmental prevention (Patton, 2001).

Realist evaluation frameworks can respond to these concerns and address the full range of elements that affect program delivery and design.

3.3. Place matters

This research project was conducted under a Victoria State Government initiative to drive enhanced outcomes and generate an evidence base for local solutions to local problems.

The Children and Youth Area Partnerships (CYAP) (Victoria State Government, 2017) are an example of practice partnerships (see Section 3.2.2). It was a key objective of CYAPs to provide a pathway to genuine systemic change (Keast, Brown & Mandell, 2007). The IGCYAP identified youth at risk of contact with justice systems as a key priority for the partnership.

In collaboration with Federation University, this research project was established to generate local knowledge to inform policy and practice and address this priority. The advanced tailoring of interventions across the social ecology, specific to the local context, allows locally informed prevention plans to be developed using localised knowledge. This conceptualisation of place facilitates the ecological validity of strategies and their implementation.

This thesis asserts that, through adopting a place-based approach, the efficacy of developmental prevention programs can be enhanced to reduce the adverse effects of youth engagement with justice systems. Place-based interventions that are focused on empirically supported factors provide critical knowledge about the operation of social systems within specific contexts (Rayment-McHugh et al, 2015). The differences between the social ecologies of regional, metropolitan, urban and rural locations in the operation of factors related to youth at risk, service access, and collective efficacy need to be considered

in designing and implementing intervention strategies. However, there are limitations in the success of empirically supported interventions to reduce vulnerability and adverse effects within specific communities. France et al. (2010) argued that adopting a place-based framework provides an opportunity to capitalise on the evidence of the 'what works' literature (McGuire, 2013) and deliver interventions that are responsive to local needs and contexts and increase the engagement and benefits for communities.

Interventions that are relevant to local practice are likely to be more meaningful than the commonly delivered state-wide rollout of programs that do not consider local contexts (Shlonsky & Benbenishty, 2014). Youth offending is concentrated in specific locations rather than randomly distributed, and most youths commit crimes in their own neighbourhoods (Allard, 2012). This suggests that the primary focus for prevention efforts should be local. Place-based approaches are distinguished from population-based approaches, in part, by the focus on local variations in the way the problem presents and the context or social ecology rather than solely on individuals. Pinpointing key problem contexts, opportunity structures and precipitating conditions provides an opportunity to respond at a local level. Structural factors in a specific community, as they interplay with individual features, are an important component of criminal justice responses to crime reduction (Nguyen & Reuter, 2012). This allows for prevention and intervention resources and efforts to be tailored to the contexts where they are most needed and the effects of evidence-based programs to be maximised.

3.3.1. *Conceptualising place*

The definition of 'place' in the criminological literature (e.g., Eck & Guerette, 2012) provides a microsystemic examination of contact with justice systems and subsequent responses.

Consistent with a social ecological framework (see Chapter 2), Brantingham and Brantingham (1993) asserted that the analysis of crime distribution should consider macro, mesosystemic and microsystemic factors. Social ecological theory (Bronfenbrenner, 1979) fits well with place-based approaches because it allows an in-depth understanding of the social systems specific to the location in which the social issue of concern operates.

Place-based crime prevention is established in the body of criminological literature (Weisburd, 2018); however, there is a lack of clarity and variation in the use of the concept of place. Situational crime prevention has demonstrated the value of identifying specific aspects of contexts where crime occurs in prevention efforts (Brantingham & Brantingham, 2003; Clark, 1997; Cornish & Clark, 2003). Situational factors relate to opportunities for offending (Clarke, 1997). Therefore, situational crime prevention efforts target crime opportunities rather than individuals. Recognising the role played by immediate situational factors adds a crucial element to intervention strategies (Brantingham, Brantingham & Taylor, 2005). Instead of conceptualising the problem solely in terms of individuals within their social ecological context, prevention efforts are best informed by the interactions that occur within and are shaped by the wider ecological context.

Further, work by Wilcox and Eck (2011) connected crime occurrence and place. Brantingham and Brantingham (1993) established 'hotspots', which are microgeographic units of analysis for considering crime prevalence. Hotspots and problem-oriented policing, shaped by a detailed understanding of the specific local manifestations of a problem, have proven very

effective for a wide range of offence types (Weisburd, 2018). Crime analysis and mapping are used to identify sites with higher crime rates and understand crime trends at a local level; subsequently, police activity focuses on these specific sites (Eck & Guerette, 2012; Weisburd, Telep, Hinkle & Eck, 2008). There is research to support the effectiveness of this approach, with demonstrated reductions in crime, a degree of flow-on benefits and little displacement to neighbouring locations (Braga, Papachristou & Hureau, 2012; Weisburd et al., 2008).

This thesis argues for a shift from both hotspot analysis and Eck and Guerette's (2012) conceptualisation of place to a broader perspective consistent with managing health and social problems at a local, community level. That is, place should form the location at which services are designed and delivered responsive to the local context or social ecological systems. Eck and Guerette (2012) demonstrated the effectiveness of situational crime prevention specific to place. Place-based approaches facilitate innovative strategies that are sensitive to context, allow for co-design and incorporate evidence-based methods that will be acceptable to and controlled by local stakeholders (Kania & Kramer, 2011). However, the theoretical development of place-based approaches requires greater development (Weisburd, 2018). This thesis argues that conceptualising place more broadly than it is represented in situational prevention or hotspot strategies involves assessing and incorporating social ecological systems of available resources and broader co-existing systemic issues specific to the local context.

Local details regarding the extent and dynamics of youth contact with justice systems are critical in developing place-based responses. This conceptualisation (based in social ecological theory) requires an understanding of the complex social issue at a meso- and

micro-level. A broader conceptualisation draws on collective efficacy (Sampson, 2004) that includes elements of community trust in their neighbourhood. The perspective on place-based prevention adopted by this thesis includes aligning hotspots with social and health indicators, which has shown benefits for communities and crime prevention (Weisburd, Shay, Amran & Zamir, 2018).

Place-based approaches are distinguished from population-based approaches, in part, by the focus on local variations in the way the problem presents and the context or social ecology rather than solely on individuals. By identifying how the issue of concern is reflected in a specific location, place-based strategies can be applied where they are most needed, addressing a limitation of broader population-based prevention efforts. Therefore, place-based prevention refers to prevention initiatives that target small, clearly defined locations or contexts. This facilitates an in-depth exploration of the problem to ensure that its local characteristics are defined and understood.

A place-based framework has been applied to the prevention of child sexual assault (CSA) by Rayment-McHugh, Adams, Wortley and Tilley (2015) to implement a shift from individual to population-based research and prevention initiatives. Underlying dynamics and the prevalence of concerns vary across contexts, and local details can help position prevention resources where they are most needed. This thesis is structured to generate understanding to tailor prevention responses to youths that are specific to the community in which they are embedded. The community's collective efficacy and social resources reflected in the social ecological systems can be considered to address vulnerabilities to offending.

There are distinct differences between designing prevention interventions based on universal empirical findings of risk and protective factors associated with CSA and designing

them based on in-depth knowledge of how this behaviour operates locally (Rayment-McHugh et al., 2015). Widespread dissemination of programs based on generic risk factors might be supported by an economic viewpoint. However, where generic risk factors fail to reflect local abuse trends, broad-based programs may ultimately fail children. A detailed understanding of the mechanisms underlying patterns of abusive behaviour provides the most valuable information about who, what and how to target prevention strategies (Tilley, 2005; Wikstrom, 2007).

The Neighbourhoods Project, implemented by Rayment-McHugh et al. (2015) in Queensland, aims to reduce the extent and effects of youth sexual violence and abuse in two locations: a small, remote Aboriginal community and a culturally diverse suburban precinct within a regional city. Clinical practitioners initially identified these locations, and subsequent systematic analysis indicated endemic problems with youth sexual violence and abuse (Smallbone, Rayment-McHugh & Smith, 2013). The Neighbourhoods Project focuses on defining the presenting problem and analysing the causal structures to tailor the responses at both meso- and micro-levels specifically for the social ecology in which it occurs to inform the prevention responses. For example, intra-familial CSA would require a different prevention intervention than sexual assault within institutional settings. In conceptualising place broadly, an assessment of the systemic influences, such as available services and resources, and broader systemic problems that co-exist in a location can also be included in the design of localised prevention initiatives, implementation of targeted prevention activities and planning of evaluation strategies.

3.3.2. Australian developmental place-based initiatives

The Pathways to Prevention Project in Queensland (Hamel et al., 2006) provides an Australian example of developmental prevention implemented within an ecological and a place-based framework with demonstrated significant outcomes (Manning, Smith & Hamel, 2013). This thesis asserts that the design and implementation of conceptually sound, evidence-based interventions must be responsive to and beneficial for the target community to enhance outcomes. The Pathways to Prevention Project is delivered within a specific location of social disadvantage to direct resources towards the key developmental stage of transition to school and divert potential negative life outcomes, such as contact with criminal justice systems. Hamel et al. (2006) highlighted the critical element of identifying the specific community needs and resources when delivering effective interventions. Further, Payne and Weatherburn (2015) asserted that an important element when assessing youth at risk of future persistent offending is utilising local data and context-specific factors. By identifying locations with endemic problems, place-based strategies can be applied where they are most needed, addressing a limitation of broader population-based intervention programs.

The ReBoot program delivered in Inner Gippsland is another example of a place-based initiative that incorporates developmental prevention principles applied across the social systems in which the individual is embedded. ReBoot is funded by the Victoria State Government's Youth Crime Prevention Grants program. The CYAP model utilises a collective impact framework (Kania & Kramer, 2011) to work towards local, collaborative service innovations and address complex social issues. ReBoot forms a place-based initiative developed to address the specific CYAPs' priority of young people at risk of entering the

justice system. ReBoot was developed through a co-design process (Cabaj & Weaver, 2016) that involved the local community generating issues of importance and creating potential solutions that match community needs and are responsive to that specific context. The community-led program draws referrals from a multi-agency working group where the community's agencies contact with and knowledge of vulnerable youth can be used effectively to enhance prevention activities.

In a similar way to Farineau's (2016) ecological analysis of youth in OHC and at risk of contact with justice systems, this thesis argues that the design, implementation and evaluation of prevention efforts must incorporate contextual elements specific to individual communities for effective outcomes to be achieved. It is argued that the ReBoot program meets the critical components of a place-based approach to reduce youth contact with criminal justice systems. The program is in the initial phase of its application. Therefore, empirical outcome measurements are not yet available; however, early positive aspects have been identified in the pilot phase, and ongoing funding has been achieved.

3.3.3. *Challenges of place-based initiatives*

Adopting place-based approaches requires considering several issues across the design, implementation, and evaluation of developmental crime prevention projects. Redell (2017) posited that the guiding principles of place-based policy in Australia to address place-based disadvantage centre on a systems approach, collaborative practice, governance and measurement of effects and outcomes. The Centre for Community Child Health (2018) outlined key principles to promote place-based collective impact interventions that are similar to those detailed by Kania and Kramer (2011). The key elements of a multi-

stakeholder approach to collective impact include a common agenda, shared measurement systems, mutually reinforcing activities, continuous communication and a strong leading agency. These components of place-based collective impact interventions are customised to the local context and operate at the mesosystemic level by enhancing service system responsiveness and increasing community capital. This emerging field in Australia shows early promising outcomes in responding to child vulnerabilities in disadvantaged communities; however, there are challenges.

Within the macrosystem of a social ecology, the policy environment, institutional practice, community readiness, existing local infrastructure and adequate funding affect the efficacy of place-based interventions. The outcomes are further subjected to implementation factors, such as fidelity to program components and community capacity. Place-based collective impact involves shifting from centralised government management to community-led collaboration (see Horwath and Morrison's, 2011, discussion of collaborative efficacy in child protection policies and practices). Such issues can challenge established policy and practice in addressing complex social concerns, such as youth contact with justice (see Section 3.2.3). Gloppen et al. (2012) reviewed the outcomes of several applications in the USA of the CTC crime prevention program that reflect the theoretical tenets of this thesis. The issues that affected the outcomes were centred on fidelity to program components in implementation and the resources of the specific community to support the program's implementation (Gloppen et al., 2012). Shapiro et al. (2015) discussed how these aspects play a critical role in the implementation and sustainability of crime prevention initiatives within place-based frameworks.

Higher-level partnerships, operating at the macrosystemic level, which provide overarching policy and resources for prevention programs, aid the coordination of program implementation at the mesosystem and microsystems of social ecologies. Locally established partnerships can implement and monitor the evidence-based interventions to allow flexibility for adjustments in response to community concerns, practice wisdom from frontline workers and other pragmatic factors specific to the local context. Evaluation mechanisms, such as realist frameworks, allow the assessment of outcomes and dissemination of new knowledge that is critical for considering the application of the prevention strategies to be applied in other contexts. A realist evaluation assesses what works best for whom, in what conditions and how to improve program designs and provide evaluation clarity that enables the scaling-up of place-based approaches (Pawson & Tilley, 1997; Tilley et al., 2014).

The political sphere affects policies, practice and place-based approaches. Lee and Herborn (2003) identified socio-political tensions in place management, crime prevention programs implemented by local governments in NSW. These programs reflect policy at a macro-level that were developed by the central government rather than strategies initiated at the local level. Police and agencies involved in the delivery of prevention interventions are often state-based organisations and are governed by state-wide operational directives. Place-based programs delivered through integrated multi-agency partnerships that pool resources can challenge organisations that are bound by centralised policy and resource allocation structures.

A Beautiful Safe Place for Youth (ABSPY) is a youth crime prevention program in the USA that reflects and responds to some of these tensions (Nazaire, 2018). ABSPY employs a

community-led place-based approach that is consistent with that adopted in the current research project that is driven by data and uses a non-arrest strategy. It was developed through co-design principles (Cabaj & Weaver, 2016) and aims to change the context in which crime occurs, rather than modifying individual risk factors. MacDonald, Stokes, Grunwald and Bluthenthal (2013) asserted that partnerships such as ABSPY could harness government and community services and collaborate towards a common agenda that will enhance community engagement with the prevention efforts. Such approaches are better integrated into the structure of the local context. The relationship between the police and the local community forms an important component of ABSPY. Place-based initiatives allow police to operationalise state-wide policies at the street level (Morrel-Samuels, Bacallao, Brown, Bower & Zimmerman, 2016). Macrosystemic government agencies act as peer participants to align resource allocations and policy directions with the community's initiatives to effect change.

Place-based approaches depend on the system's readiness for innovation. For example, community service partnerships that implement interventions must have support at an exosystemic level to ensure that the required resources are provided for pertinent data collection, rigorous implementation consistent with the established evidence base and responsive evaluation mechanisms. Consideration of structural and cultural systems across the social ecology of the specific context allows for system reforms and effective practice at the local level.

More research that focuses on design, implementation and evaluation methods is needed in applying the proposed broader conceptualisation of place-based approaches into practical interventions. To address the gap between research and practice, this must be guided by

appropriate data and based on the best evidence available, while simultaneously empowering local individuals to understand and endorse these strategies and control their implementation. Programs focused on at-risk individuals (based on comprehensive understandings of the social contexts within which they live) require a thorough analysis of the factors that operate at multiple levels of their social ecology.

This research project seeks to contribute to Australia's research base to support place-based solutions for reducing youth vulnerability. This thesis argues that the outcomes of evidence-based interventions are enhanced when applied using knowledge about the context of the specific location where the prevention is directed. Governance structures and evaluation frameworks that are responsive to place-based approaches are also required to ensure the efficacy and sustainability of such interventions. Place-based frameworks facilitate an in-depth exploration of issues to ensure that the local dimensions of a problem are defined and understood. Addressing youth contact with justice systems by targeting and manipulating the social ecological systems of a specific place provides a non-stigmatising, practical approach for policymakers and communities that is capable of producing measurable changes. Section 3.3.4 examines the framework of justice reinvestment that demonstrates partnership approaches delivered in local communities and across the social ecology.

3.3.4. *Justice reinvestment initiatives*

The preceding discussion (Sections 3.2, 3.3.2, 3.3.3) highlighted the issues that affect the implementation and efficacy of developmental prevention efforts. Section 3.3.4 provides an overview of justice reinvestment as a framework that seeks to apply empirically sound

knowledge at the policy and practice levels across the social ecology specific to a local community. The challenges associated with the effective implementation of justice reinvestment initiatives across the multiple systems of the social ecology are canvassed by way of demonstrating the translation of research into practice.

The major premise of justice reinvestment is the redirection of funds that are centrally administered by government justice agencies to local communities who are best placed to identify and influence crime prevention and rehabilitative solutions (Brown, Schwartz & Boseley, 2012; Fox, Albertson & Warburton, 2011). International (Labrecque, Schweitzer & Mattick, 2018) and Australian research (Allison & Cunneen, 2018; Desmond Dawes & Davidson, 2019; Wood, 2014) indicates that justice reinvestment interventions provide a contemporary, evidence-based response to the high economic, social, and personal costs of incarceration. Lovell et al. (2018) asserted that justice reinvestment is a philosophy for justice reform and a set of place-based strategies for redirecting resources from criminal justice processes to socially constructive policy interventions that aim to reduce offending.

Responding to youth contact with justice systems involves a range of government and community service agencies that represent the many systems that must be navigated for information sharing, interoperability and privacy. Historically, the government and community service systems have operated independently of one another (regarding their practice models, funding, performance indicators and core priorities). Justice reinvestment interventions reflect a shift towards breaking down this independent approach because they represent a source of preventative financing through which policymakers can shift social and economic resources from correctional responses to community enhancement (Wood, 2014).

The focus on strengthening communities in justice reinvestment is not solely the reallocation of resources from criminal justice into positive community development programs (Wood, 2014). There is also a focus on creating a place-based practice partnership that identifies needs, decides how to address these needs and then determines the initiatives that will be implemented, delivered and monitored. Justice reinvestment programs that are based on practice partnerships reflect the key measures that achieve positive outcomes by reducing the costs of youth contact with justice systems.

Justice reinvestment is derived from an evidence-based public policy strategy that seeks to promote social policies based on research outcomes rather than political agendas and public opinions (Brown et al., 2012). It is cost-driven and recognises that the law has often been separated from the economic scrutiny that drives funding decisions on social infrastructure, such as schools, hospitals and public transport. Clear (2010) argued that, rather than responding to public opinion and politically driven agendas, the use of economic incentives might be more effective for achieving change to public policy and service delivery. However, there is debate about whether the cost savings demonstrated in the emerging research can overcome the more emotional appeal of 'tough on crime' justice policies in Australia (Australian Justice Reinvestment Committee, 2013).

Further, justice reinvestment aligns with government policies that are aimed at addressing marginalisation and social exclusion. In the *Social Justice Report 2009* (Australian Human Rights Commission, 2009), justice reinvestment principles were noted for their substantial contribution to the Australian Government's social inclusion agenda, particularly, the principles of early intervention and prevention and using evidence and integrated data to inform policy. These principles form critical elements of the design of this research project.

There has been a more significant research focus on what aspects of justice reinvestment interventions are effective rather than the overall effects of the interventions at all levels of the social ecology. Labrecque et al. (2018) asserted that research that provides such knowledge to policymakers and justice agencies to design and implement a justice reinvestment strategy is required. The Australian Justice Reinvestment Committee (2013) noted that inconsistencies in data collection and a lack of data sharing across relevant government departments posed a significant barrier to the development and evaluation of justice reinvestment strategies.

The economic and policy implications of the justice reinvestment framework require consideration at the macrosystemic level. Justice reinvestment strategies rely on available resources for early intervention before the economic savings are realised (Wood, 2014). Substantial policy alignment and cooperation between the federal and state governments would be required to address these resourcing concerns. Many of the prevention programs are driven by federal funding, while criminal justice policies and programs are largely the responsibility of state governments. Consistent with partnership practice models, Brown et al. (2012) argued that policy priorities, partnerships and service delivery models are best determined through co-design and negotiated between the separate levels of government. However, if a state-wide justice reinvestment strategy were to be adopted, the important community-driven element of justice reinvestment would be overlooked.

3.4. Conclusion

The translation of research into practice is a critical factor for delivering effective developmental prevention initiatives (see Section 3.2). There is a gap between the academic

findings and policy and practice. Further work is needed to develop mechanisms to improve productive collaborations between communities, researchers, service providers and government policy bodies. Therefore, this research seeks to generate knowledge that meets the needs of the various stakeholders. It is essential that all stakeholders understand the processes for building evidence that informs policy and practice to address the disparities in translating the research findings.

The complexities of delivering practice partnerships across different contexts require greater attention (see Section 2.2.3). Homel et al. (2015a) demonstrated that policymakers and legislators require research findings that are applicable to government priorities and resource availability. Practice partnerships that include integrated information systems, shared service outcome measures and funding that is linked to the ability of services to meet these measures are best placed to reduce the costs associated with youth offending. The integration of practice initiatives must extend across exosystemic factors for enhanced outcomes to be achieved.

The critical literature review in Chapter 2 informs the research question regarding how existing police and government social service data can be used to identify the cohort of youth most vulnerable to future offending. Chapter 3 focused on the potential barriers to translating research findings into practice and delivering effective and resource efficient developmental prevention strategies. The importance of practice partnership models was demonstrated through the literature review. The place-based approach adopted in the current research generates opportunities to reduce the costs of youth contact with justice systems in the Inner Gippsland region. The literature shows that place-based approaches

have the best potential capacity to produce effective outcomes in early intervention programs if they are evidence-based and incorporate a partnership approach.

Chapter 4. Methodology

4.1. Introduction

The IGCYAP and Victoria Police initiated this research project to address the priority of the IGCYAP of reducing youth contact with the justice system and to trial the use of a predictive model developed by Victoria Police (see Chapter 1). The trial of the predictive model substantially influenced the research design parameters. The data from the predictive model and the LEAP, which formed the main data source, was predetermined from the outset of the project. The effective translation of the research findings into practice is a critical goal of this study (see Chapter 3). The pragmatic nature of this research and the drive to generate findings that are useful for practice in the local community also influenced the design of this project.

Chapter 4 details the epistemological stance that guided the research project and the theoretical perspectives that align with the epistemology. Consistent with the theoretical perspectives, Chapter 4 includes the rationale for selecting the research methods, data collection and analysis to answer the overarching research question. The methodology is directly linked to answering the research questions, which reflect the goal of providing the service sector in Inner Gippsland with findings on which to base practice innovations.

4.1.1. *Research question*

The research was designed to provide an evidence base for policy and practice initiatives to enhance outcomes for at-risk youth and the community at large. The overall research question is: How can

the Victoria Police EIT predictive model be used to reduce youth contact with the criminal justice system?

The research sub-questions developed to address the main research question are:

1. What factors, both risk and protective, are associated with an offending trajectory that is predicted by the modelling based in police datasets?
2. How can developmental data from DHHS, DET and Victoria Police file narratives contribute to an improved understanding of these factors?
3. What are the critical factors and intervention points in a young person's social ecology that reduce their contact with the criminal justice system?

4.2. Methodological and theoretical approach

This research adopted a place-based approach and was designed to identify early intervention opportunities to reduce youth contact with justice systems in Inner Gippsland, Victoria, Australia. The central aim of the project is to identify the factors related to youth contact with justice systems to provide an evidence base that can guide prevention policy and practice. Further, the study aims to investigate the influence of developmental experiences on future engagement in offending and how incorporating this information with criminal justice datasets could augment the understanding of factors that increase vulnerability. These factors are based on the complex interactions across the social ecological systems in which youths operate. The methodology was selected because it was the most relevant for responding to the research questions. Further, the methodology was chosen to highlight early intervention opportunities consistent with a realist stance and the

theoretical frameworks of developmental criminology and social ecological theory (see Section 4.2.2).

4.2.1. *Realist perspective*

A realist philosophy of science understands reality as 'comprising multiple, nested, open systems in which change is generative, context dependent and time irreversible' (Westthorp, 2013, p. 365). Wong, Pawson and Owen (2011) asserted that realism argues that an improved understanding of the social world is achieved by acknowledging that the external social reality influences social behaviour. Realism is positioned between positivism and constructivism. Realism aligns with positivism because they both posit that there is a real world. It also aligns with constructivism because they both argue that we know the world is processed by humanity. Realism helps us understand the real world because it acknowledges the existence of an external social reality and that the real world constrains the interpretations that we can reasonably make of it (Wong, Greenhalgh, Westthorp & Pawson, 2012).

Realism in criminology is interpreted as directly addressing crime itself; it proposes the 'square of crime', where crime is a relationship between the offender and victim and between the actors and reactors, providing four potential points of intervention (Hayward & Young, 2012). Realism distinguishes the dynamic interplay between the intervention, actors, context, mechanisms and outcomes (Van Belle et al., 2016). Despite the differences between the scholarly works that adopt realism:

the central unifying elements of the realist approach in criminology are: commitment to detailed empirical investigation; the independence and objectivity of criminal

activity; the disorganising effect of crime; and the possibility and desirability of developing measures to reduce crime. (Matthews, 1987, p. 371)

This research, framed within social ecological theory, is consistent with the realist perspective of understanding a specific community, across all levels of the social ecological system, to provide opportunities for prevention efforts.

Realist criminology does diverge from other epistemological stances in criminology because it demands an emphasis on forming policies that are based on research findings. Matthews (1987) developed the argument that criminology should be both socially and politically relevant; he referred to this as 'public criminology'. The methodology of this research adopts realist criminology because it links theory, methods and policy that are consistent with the aims of the project.

A realist approach looks for interactions between the opportunities or resources provided by an intervention and the responses of those affected by the intervention. Greenhalgh et al. (2009) demonstrated the utility of a realist stance in understanding complex, interactive social concerns such as youth offending. While this place-based, translational research adopts a realist approach, the thesis does not specifically employ a realist evaluation methodology that proposes or tests context, mechanisms and outcomes (de Souza, 2013). Rather, the design of this research project seeks to explicate the complexity of the interaction of the factors related to youth contact with the criminal justice system across the ecological system in which the youths operate. Research designs that seek to control the context and assess the effect of an intervention reduce the potential to understand how, when and for whom the intervention will be effective (Wong et al., 2012). Therefore, a

realist stance is best suited to inform the research design of this study to respond to the critical aim of generating place-based knowledge to inform practice.

4.2.2. *Theoretical frameworks*

There is a range of criminological, sociological and psychological theories addressing youth offending and underpinning prevention efforts (Brezina, 1998). Due to the heterogeneous nature of the phenomena, it is asserted that a single theory cannot adequately explain the factors associated with youth contact with criminal justice systems. The complex interplay of those factors related to youth offending demands dynamic theoretical perspectives that capture this interplay rather than single theory explanations. Social ecological theory and developmental criminology are the key tenets of this research and are pivotal to the overall design. By drawing on these theories, youth offending is understood as a combination of interacting stressors, risks and protective factors. As explicated in social ecological theory (Bronfenbrenner, 1979, 1989, 1994), the social systems in which an individual is embedded can enhance our understanding of those factors related to youth offending. A developmental perspective provides a deeper understanding and explicates the key transition points at which to target prevention initiatives (Catalano & Hawkins, 1996).

Similar events can affect individuals differently depending on a range of factors, including the individual's developmental stage at the time of the event and the context of the event (Malvaso, 2017). However, it is unclear why not all children who experience such events proceed to offend (Hurren et al., 2017; Malvaso et al., 2018; Stewart et al., 2008). The current research design seeks to generate findings to increase understanding of the nexus between developmental experiences, including maltreatment, and future engagement in

offending behaviour. These considerations led to the choice of the theoretical frameworks of social ecological theory and developmental criminology adopted by this study.

4.2.2.1. Social ecological theory

Social ecological theory provides an outline for research to detail the multiple contextual factors that contribute to youths' contact with the criminal justice system. It is important to understand both the individual characteristics and, more importantly, the various contexts within which an adolescent operates when developing practice interventions (Farineau, 2016; Follan & Minnis, 2010; Orme & Buehler, 2001). By considering the factors related to youth offending across interrelated social systems, opportunities for intervention can be broadened. Further, systemic interventions (for example, at the macrosystemic level in guiding prevention policies) can be delivered in an integrated manner across the social ecology to increase efficacy. Social ecological theory supports research designs that allow for the inclusion of interactions across ecological systems when examining the factors that are linked to offending and identifying opportunities for intervention.

4.2.2.2. Developmental criminology

Developmental criminology considers individual changes in offending in relation to interactions with the social systems in which the individual operates. Research in this field has used quantitative methods that aim to measure relationships between developmental processes and offending. A strong emphasis has been on using longitudinal research with repeated measurements to determine the correlations between risk factors, such as abuse or poverty, and subsequent offending (France & Homel, 2006). Seminal studies include the

Pittsburgh Youth Study (University of Pittsburgh, n.d.) in the USA and the Cambridge Study in Delinquent Development in the UK (Farrington & West, 1990). Longitudinal research has linked factors, both risk and protective, and offending trajectories (see literature reviewed in Section 2.2). Identifying childhood experiences that are associated with future offending provides a rationale for early intervention and guides prevention efforts, which is congruent with the goals of this project.

Longitudinal studies are often suggested as a primary means of understanding the interaction of various risk factors associated with serious youth offending. Jonson-Reid and Barth (2000b) asserted that such research designs have difficulty capturing sufficient numbers of children with reported maltreatment and the rare outcome of serious, persistent juvenile justice system involvement. Studies utilising administrative data might be the only affordable means of conducting quantitative multivariate analyses of these sub-populations. The current study uses official police records to identify factors associated with future offending as flags for a qualitative study of a smaller cohort. The inclusion of human services data in research that addresses the links between maltreatment and serious delinquency provides findings that have direct utility to service systems (Jonson-Reid & Barth, 2000a; Ringland et al., 2015).

This research was designed to inform Victoria Police about the utility of the EIT for developing practice to reduce youth contact with the justice system. Predictive models, such as the EIT, are based on the premise of developmental criminology. Dennison (2011, p. 46) noted that 'developmental life course criminology facilitates the testing of theories about the onset, persistence and desistance of youth offending and provides a framework to guide policy and prevention responses'. Examining youth offending during the developmental

stage of adolescence provides awareness about how risk and protective factors affect outcomes and life events can shape a young person's trajectory (McAra & McVie, 2012).

Populations of youth offenders are not homogeneous but reflect distinct subgroups (based on factors such as the age of onset, duration and extent of offending) as demonstrated in criminal career research (DeLisi & Piquero, 2011). Numerous studies have identified specific taxonomies that group youth offenders in terms of the developmental stage at the onset of offending, desistence and chronicity in offending (Farrington et al., 2009; Mazerolle et al., 2000; Sutherland & Millstead, 2016). The taxonomies that identify empirically supported subgroups can guide prevention and youth justice initiatives to direct resources towards youths who are most at risk of persistent long-standing contact with criminal justice systems.

Similar to Ringland et al.'s (2015) study, this thesis considers whether statistical models that predict reoffending using demographic and criminal variables can be augmented with developmental data. To date, the incorporation of service system information, interplay across the social ecology of developmental stage and effects of ACEs are not clearly articulated in the prediction of youth contact with the criminal justice system (see Chapter 2). It is asserted that, consistent with developmental criminology, developmental data can identify critical points for intervention. Therefore, the design of this study seeks to examine the value of augmenting criminal justice data with developmental data to generate an evidence base for policy and practice that reduce youth contact with the criminal justice system.

4.2.3. *Place-based approach*

The research adopted a place-based approach because it was initiated to respond to the IGCYAP priority of youth at risk. Therefore, it was critical that the design allowed for research findings that were relevant to this specific context. A place-based framework facilitates an in-depth exploration of concerns to ensure that the local dimensions of the problem are defined and understood. The assessment of systemic influences, such as available services and resources and broader systemic problems that co-exist in a specific context, can be translated into the design, implementation and evaluation of interventions to reduce the costs of youth contact with criminal justice systems. Further, Payne and Weatherburn (2015) reinforced the importance of generating trajectories using local data and designing interventions that are specific to a local context. Therefore, the research design ensured that the findings have validity for the community from which they were drawn.

4.3. Method

Realism does not necessarily require the adoption of a specific method (Bhaskar, 1979; Matthews, 1987). Pawson (2006) asserted that realist methodology favours neither quantitative nor qualitative methods. Case (2006) asserted that, methodologically, practically and ethically, research should supplement and enrich quantitative, deductive methods with qualitative, inductive information as demonstrated by Axford and Little (2006). The use of mixed methods is established within social research. However, its use is limited in youth justice studies, particularly, those seeking to link factors, such as maltreatment, with offending to predict taxonomies of youth offenders (see Chapter 2).

Policymakers, practitioners and the community may have increased confidence in the validity and responsiveness of interventions if they are underpinned by such methodological approaches (Case, 2006; Presdee, 2004).

A mixed-methods design (Creswell, 2018) was chosen to explore the factors associated with youth contact with justice systems and identify potential opportunities for early intervention. The research design gives equal status to quantitative and qualitative processes to develop a complete understanding in response to the research questions. The use of multiple forms of data to support findings is an additional benefit of this design. Consistent with the pragmatic nature of a mixed-methods approach, the research project is designed to provide an evidence base for the service system to develop early intervention initiatives for youth in Inner Gippsland. The design generates findings to assist policymakers, frontline workers and communities to advance quality practice, assess outcomes and inform stakeholders (Strolin-Goltzman, Woodhouse, Suter & Werrbach, 2016).

The mixed-methods design of the current study enables an examination of the complexity of interactions across the social ecology and developmental stage to understand youth contact with justice systems. Hurren et al. (2017) concluded that a mixed-methods design is well placed for understanding the complex relationships between maltreatment dimensions and youth engagement in offending. While the literature is unclear about the direction of associations, it is possible to build on prior research that has demonstrated variability in youths' interactions with factors that inform contact with justice systems. The use of quantitative and qualitative methods provides different types of explanations to integrate the findings across the stages of the data collection. Sequential data collection was employed to understand the points of early intervention for reducing young peoples'

contact with justice systems. A mixed-methods design allows inferences to be drawn from multiple perspectives.

The central research question is best addressed through a mixed-methods design and the research sub-questions guide the data collection methods and analyses employed.

Quantitative analysis assists with an understanding of the associations between the variables shown in the empirical data. These results are then utilised as signposts for deeper exploration using qualitative methods to extend the knowledge of how those factors associated with youth contact with police affect the outcomes. The qualitative analysis explores the underlying patterns and themes reflected in the factors that are identified in the quantitative analysis. Given the theoretical and pragmatic aims of the research, the subsequent phases of data collection and qualitative findings provide a deeper understanding of the quantitative analysis of the initial data.

The police dataset is augmented through the addition of developmental and narrative data from police files for a subgroup of the total sample to gain an enriched understanding of the factors that relate to youth contact with the criminal justice system. These qualitative data sources provide robust support for the factors related to youth contact with justice systems that are identified in the quantitative data analysis. This enriched understanding is utilised to validate potential opportunities for intervention to reduce vulnerability for at-risk youth. Sutherland and Millsteed (2016) were the first to examine the factors linked with future offending in a Victorian youth justice population. They noted that the findings were restricted due to the absence of developmental data (Sutherland & Millsteed, 2016).

Therefore, this study matched developmental and police data for a cohort of youth from the

total sample. The qualitative aspects of this project's design assess the coherence of the results with the literature review and social theories that guide this study (Daly et al., 2007).

Creswell (2018) identified five approaches for designing qualitative research, focusing on the methods of data collection, analysis and writing. These approaches include a case study, ethnography, grounded theory, narrative and phenomenology (Creswell, 2018). The methodology used in the design of this study focuses on building an understanding through staged data collection and then case studies of a sub-sample of youths. The case analysis seeks to identify themes based on the literature review, quantitative findings and patterns that emerged from the developmental data and police file narratives within a specific context (Moustakas, 2010).

McDonald (2013) argued that reflecting on themes that emerge from file narratives is an accepted approach to qualitative research. Reflective thinking links theory and practice and is consistent with a realist stance because it presumes that there is a social reality that researchers can discover, identify and understand (Tedlock, 2000). The case analysis, coupled with reflective thinking, does not require large sample sizes or randomisation (McDonald, 2013). The researcher's practice wisdom, which was derived from professional practice and immersion in the service system during this study, adds to the interpretation of the findings. This perspective broadens the understanding of the cohort and the service system beyond that of an exclusively academic researcher. The case analysis can demonstrate that a phenomenon exists in a defined group and thereby, identify practice issues for further consideration.

4.4. Data sources

This research trialled the practice utility of the EIT. The secondary data was made available to the project and did not involve the collection of new data. Data from the DHHS and DET was collected and incorporated to improve knowledge regarding the relationship between developmental experiences and youth offending. Finally, to privilege the knowledge of local workers, consistent with the place-based framework, the practice wisdom of Bass Coast workers was drawn from an anonymous survey that sought opinions regarding the factors related to youth contact with the criminal justice system.

4.4.1. EIT

The EIT is a predictive model that utilises the Victoria Police LEAP dataset. Detail of the model was provided to the researcher by Victoria Police through personal communication in the original project brief and is not publicly available. The EIT generates predictions of an individual's engagement in future offending based on variables in LEAP that statistically relate to future offending. The LEAP dataset includes data that reflects vulnerability (such as exposure to family violence and missing person reports) and criminogenic factors (such as engagement in offending, family and peer criminality and formal contact with police in public settings, categorised as 'field contact').

The predictive model of the EIT employs Bayesian statistical inference techniques that update the hypotheses as more data becomes available, providing a dynamic analysis of a sequence of data points. As data concerning an individual is recorded, the prediction value that the individual will engage in future offending is updated. The cumulative effect of the factors included in the analysis exponentially increases the probability of future offending.

The statistical model provides an individual with a criminal seriousness index (CSI) score. The score reflects variables in the LEAP dataset, which are weighted to reflect potential recidivist offending and result in individuals being assigned a CSI. The exact details of the model are confidential due to the sensitive nature of official police data and are not provided here. The EIT uses LEAP data to predict a CSI; the higher the score, the higher the likelihood of future, serious offending. The EIT generates an offending trajectory represented by an individual's CSI score at 21 years old. The EIT predictions allow for early intervention efforts that target individuals who have the potential to engage in persistent, serious offending.

The main focus of predicting youth contact with criminal justice systems has been on models where the individual has been proven to have engaged in offending behaviour or formally processed through criminal justice systems. Several Australian studies have reviewed the predictors of youth offending at different points on the continuum of formal contact with the criminal justice system (Dennison, Stewart, & Hurren, 2006; Garth & Lind, 2002; Vignaendra & Fitzgerald, 2006). In most of the previous studies of offending trajectories, the cohorts were identified by formal contact with criminal justice systems and the research predicted reoffending (Assink et al., 2014; Sutherland & Millstead, 2016).

The Victoria Police dataset includes records where individuals have entered as the 'offender' against a criminal incident, were not arrested by police and therefore, were not formally processed in the criminal justice system. This may be due to the individual being below the age of criminal responsibility, which is 10 years old in Victoria under the *CYFA 2005*, police discretion or insufficient evidence to proceed to court. This forms a critical difference between the EIT and the majority of previous studies in predictive modelling. This research

utilises the EIT as a key data source for accessing records that reflect both vulnerability and criminogenic factors and data prior to formal justice procedures. The methods adopted in this study seek to identify how these differences in the predictive model enhance understandings of the interplay between contact with the police and vulnerability to later adverse social and health outcomes. This aspect of the Victoria Police data analysis and generation of potential trajectories is a critical point of difference from previous empirical studies of offender trajectories (see Chapters 2 and 6).

4.4.2. *Inner Gippsland cohort*

The retrospective research design considered a sample of 57 Inner Gippsland youths with a projected CSI and an actual CSI at 21 years old. Victoria Police LEAP data was provided for the sample to identify factors and compare the predicted trajectories with the actual levels of contact with the criminal justice system. There have been fewer studies and policy focused on what factors counteract risks of contact with the criminal justice system and, in turn, promote positive youth development than on those that correlate with risks (Case & Haines, 2009). This research aims to identify the variables present for those individuals who did not reach the predicted level of offending. Such an approach enables a focus on opportunities for positive youth development and strengthening the social ecology in which the youth were embedded.

The retrospective data was dated from an individual's first entry in the LEAP database to the end of the data collection period (2018). This provided adequate time to assess a youth's potential offending trajectory and included the transition from primary to secondary school, which is identified as a critical transition linked to risk of contact with the criminal justice

system from a developmental perspective (Kramer-Kuhn & Farrell, 2016; Weissberg & O'Brien, 2004). Piquero (2008) highlights the significant effects of developmental prevention when interventions focus on the key transition points, such as primary to secondary education.

Chapter 2 examines the nexus between ACEs and youth contact with justice systems. Therefore, for the purposes of the current study, a new variable, ACE, was created by the researcher. The process of amalgamating the LEAP records indicative of ACEs into a single variable sought to ensure that the developmental experiences of individuals were fully considered across the sample.

4.4.3. Bass Coast cohort

A subset of youths from the Inner Gippsland sample was analysed to develop a deeper understanding of the context of individual youths and the influence of developmental experiences. The total Inner Gippsland sample (n = 57) was too large to make it practicable for the departments to match data and facilitate the qualitative case analysis. The place-based approach adopted by this project informed the focus on a specific social ecology for the subset of youth for whom developmental data was collected.

The subset was created by selecting those youth who resided in Bass Coast at the point of inclusion in the study sample (2005). Developmental data from the DHHS and DET datasets and narratives from Victoria Police files were collected to augment the Victoria Police records. Bass Coast was selected for several reasons. Crime statistics (CSA, 2020a) show that in 2013/2014 Bass Coast had the second-highest number of crimes per 100,000 population of the five LGAs in Inner Gippsland and was above the state average. The level of place-

based disadvantage (Vinson et al., 2015) was evident; however, it was not as extensive or entrenched as in the Latrobe LGA of Inner Gippsland. This provides for prevention efforts that have a greater chance of influencing the social and economic resources delivered than in an area of greater socio-economic disadvantage. The Bass Coast community had raised concern regarding vulnerable youth and, in response, a coalition of local government and community agencies had formed to consider potential interventions. This aspect of the project design seeks to inform and support prevention initiatives for Bass Coast in response to the identified concerns about vulnerable youth.

For a Bass Coast group of 10 youths, Victoria Police provided a specific numeric identifier utilised across the service system that matched the DHHS and DET data and ensured anonymity. The DET and DHHS developmental data were collected to provide a richer understanding of the factors that relate to the level of contact with the criminal justice system.

The data collected from the service system was based on the factors shown to be associated with offending in previous Australian research on youth contact with the criminal justice system (Ringland et al., 2015; Weatherburn et al., 2007). The complexities and constraints involved in matching police data and data from government departments are considerable. For this reason, the case analysis of this smaller cohort was more practical than analysing the overall Inner Gippsland cohort, while still enabling a rich picture of each young person's experience and their ecology to emerge.

4.4.4. Survey of Bass Coast workers

An anonymous online survey that drew on the practice wisdom of professionals working in Bass Coast was undertaken to derive a greater understanding of the factors that relate to youth contact with the criminal justice system in Bass Coast. Thirty-seven members of the Bass Coast Youth at Risk panel were invited to complete the survey. This approach is consistent with the place-based approach and ecological framework applied in this research because the agencies reflect the systems within the social ecology of the Bass Coast youth cohort.

The professionals from the Bass Coast Youth at Risk panel who were surveyed were from the following bodies:

- DET (principals of Bass Coast primary, secondary and specialist schools, student support services, Wonthaggi Pathways and Transitional Setting and LOOKOUT Education Support centres)
- DHHS
- Victoria Police
- Bass Coast Health, School Focused Youth Service
- IGCYAP
- DOJCS, Community Correctional Services
- Bass Coast Shire Council
- St Joseph's School Wonthaggi, Catholic Education Commission of Victoria
- Chisholm TAFE.

4.5. Data collection

The data was collected in three stages—each stage built upon the findings from the previous stage. The data collection process is provided in Table 4.1.

Table 4.1. Stages of data collection

Stage	Activity	Method	Source
1	Identify factors that support and interrupt youths' trajectory of contact with the Inner Gippsland region's criminal justice system.	A retrospective longitudinal study of youths in Inner Gippsland identified on the EIT (2005) (n = 57).	EIT, LEAP database, Victoria Police
2	Identify a cohort of youths via the EIT who reside in Bass Coast. Link cohort with service contact information to understand the factors derived from Stage 1.	A case study analysis of Bass Coast cohort (n = 10) matching developmental data and file narratives from Victoria Police files.	EIT, Victoria Police, DET, DHHS
3	Establish workers' perceptions of the importance of the factors identified in previous stages as they operate across Bass Coast.	An anonymous online survey rating the importance of factors related to youths' contact with the criminal justice system.	Survey responses from Bass Coast Youth at Risk panel (n = 22)

4.5.1. Stage 1: EIT data

Victoria Police provided the researcher with retrospective data for the Inner Gippsland sample (n = 57). De-identified data was provided for youths who met the EIT parameters on 1 January, 1 March and 1 June 2005. The data for each of the 57 individuals dated from that individual's first record in the LEAP database to July, 2018. The variables from the LEAP database collected for the cohort of youth from Inner Gippsland include the:

- date of the offence and offence type for which the individual was listed as an offender against an offending incident
- missing person reports and age at the time of the report

- reports of the individual as the victim of an offence against the person when aged under 18 years and age at the time of the report
- CSA reports and age at the time of the report
- family violence reports, including as the person harmed and as the person who engaged in the behaviour and age at the time of the report
- field contact reports (an individual has contact with the police in public and the police make a record of the contact) and age at the time of the report
- the predicted CSI at 21 years old and the actual CSI at 21 years old
- demographics at the point of inclusion in the dataset for this study (2018), including age, gender and CSI.

The data included in this study were de-identified to protect the confidentiality of the individuals identified in the retrospective longitudinal data collection. Each youth was assigned a case number and the case number used in all subsequent data collection and analyses.

All data provided was coded into the Statistical Package for the Social Sciences (SPSS) database. The gender of each case was coded. The researcher tallied the number of records when the individual was recorded as the offender against an offending incident when they were below 18 years old (youth offences). A range of offence records was also classified and tallied into two broad categories: offences against the person and property offences. The recorded age of an individual when they were first listed as an offender against an offending incident was also coded. Similarly, the number of records for each individual listed as the offender against an offending incident when they were 18 years or older was also coded

(adult offences). The categories of offences against the person and property offences as an adult were tallied.

The recorded number of missing person, field contact, family violence and child victim reports and the age of the individual at the first report was coded. The variable to reflect exposure to ACEs was created by the researcher by summing: the number of missing person and family violence incidents or reports recorded when the individual was under 15 years old, field contact reports when the individual was under 10 years old and the total number of child victim reports. The total number of ACE reports and age of the individual at the first record was coded in the SPSS dataset.

The EIT data included each individual's CSI at the point of identification for inclusion in the sample, the projected CSI at 21 years old at that time, the CSI at the point of data collection in 2018 and the actual CSI at 21 years old. The numeric value of the CSI was coded, as was the variable that indicated if the actual CSI at 21 years old was above or below that predicted.

4.5.2. Stage 2: Bass Coast case analysis

The cohort of 10 individuals that resided in Bass Coast was drawn from the total Inner Gippsland sample of 57 youths. The data was recorded in a separate SPSS database for the Bass Coast cohort (see Section 4.5.1). The youths all resided in Bass Coast at the point of identification.

De-identified data from both the DET and DHHS related to service contacts for the Bass Coast youths and their families were provided. The DET data included information on school

attendance, disciplinary actions and referrals for support and intervention. The DHHS child protection data included reports of substantiated exposure to trauma and OHC placement history. Further, the DHHS data included youth justice involvement, disability status and the Department of Housing (Victoria) history.

An analysis of the file narratives in the Victoria Police database was undertaken to derive a deeper understanding of each individual from the Bass Coast cohort. Given the privacy and sensitivity issues regarding researcher access to the police database, a police supervisor accessed the LEAP database and provided information from the case file narratives. The information was provided verbally for each assigned case number (so that the individual's identity remained anonymous) and the researcher took notes. The recorded details included the parental and/or sibling criminal history, circumstances of recorded field contact and missing person reports, involvement with co-offenders, the presence of family or caregivers during a police interview or contact and exposure to or engagement in family violence incidents. The details gathered from the file narratives was guided by the findings from Stage 1 of the data collection, the literature review and the researcher's practice wisdom.

The details contained in the narratives varied across the cases, partly due to the differences in police recordings and the information regarding the youth's circumstances that were available at the point of contact. Occasionally, the narratives recorded by police referred to an engagement with community support services, the involvement of the DHHS, mental health concerns and participation in education. The file details also indicated residential mobility. The extra details in the file narratives helped establish a deeper understanding of the youth's life context at the time of the police contact. Where available and pertinent, this information was also noted by the researcher.

4.5.3. Stage 3: Survey of Bass Coast workers

On anonymous online survey using the LimeSurvey platform was conducted to gain the practice knowledge of the members of the Bass Coast Youth at Risk panel (see Section 4.4.4). The researcher disseminated information about the research to the Youth at Risk panel members at a scheduled meeting. All relevant information about the project was provided, and any questions or clarifications were answered at this time. A group email address list for the Youth at Risk panel was used to send the online survey link and request to participate anonymously in the survey.

The self-administered survey asked respondents to rank the importance of the factors associated with youth contact with the criminal justice system. The factors were grouped according to the domains of education, family, and justice that were derived from the literature review and data collection from the first two stages of the research design (see Appendix 2 for a copy of the survey). The respondents were asked to rank the factors provided on a 5-point Likert scale. They were also asked to identify additional factors that protected youths from contact with the criminal justice system and promoted positive outcomes. The importance of the additional factors was ranked (as with those derived through the previous stages of data collection). The survey was live for two weeks, at which point the recipients were sent a reminder email. After four weeks, the survey was closed.

4.6. Data analyses

4.6.1. Stage 1

The EIT and LEAP data gathered in Stage 1 was analysed using the IBM SPSS Version 22. Descriptive statistics, such as mean and median, were generated for each data variable. The ACE variable (see Section 4.5.2) was included in all analyses and treated the same as the other LEAP records. The distributions of the variables were explored for normality to ensure that the subsequent statistical analyses were applicable to the data. The correlations found between the variables helped identify statistical relationships, whether causal or not, between the variables. In the broadest sense, correlations include any statistical association; however, it commonly refers to the degree to which a pair of variables are linearly related (Field, 2013).

The Inner Gippsland dataset ($n = 57$) was divided based on whether the actual level of offending was above or below that predicted. This was to consider which variables ameliorated or exacerbated the likelihood of youth offending. Given that the difference between the predicted and actual level of offending at 21 years old was minimal in some cases, the subgroups of above or below the actual level of offending compared to the predicted levels were divided further into two groups. The standard deviation (SD) of the predicted offending level was calculated. SD is a measure expressing the variability within the dataset (Field, 2013). It was used to divide the offenders into four groups: those more than one SD below their predicted trajectory, those less than one SD below, those less than one SD above and those more than one SD above their predicted trajectory. Using a SD below or above the predicted offending gave greater confidence in statistical conclusions

about the correlations between the variables within the 'above' and 'below' groups. The analysis identified those variables related to the predicted and actual level of engagement in offending at 21 years old. This analysis was consistent with the research aim of identifying the protective and/or promotive variables in a social ecology rather than focusing on singular risk variables that are often individualistic.

One element of this research was to identify opportunities for early intervention to reduce future engagement with the criminal justice system. The literature reviewed in Section 2.2 demonstrates that the earlier an individual has contact with the justice system, the greater the likelihood of further contact. Therefore, the age of first contact was considered to identify the variables that correlated with an early onset of offending. The age of onset of offending was defined by the age an individual was first recorded as the offender against an offending incident in the LEAP database.

These initial analyses served to identify associations between the variables to generate information that would answer the research questions. Dimension reduction analysis techniques were applied to examine whether groupings of variables, similar to the taxonomies identified in the literature (Moffit, 1993; Sutherland & Millsteed, 2016), were present in the dataset. Such taxonomies reflect subgroups of youth offenders based on the age of onset, progression and desistance of offending. This categorisation provides an opportunity for intervention efforts to be directed towards youths who represent the community's greatest cost and promote positive outcomes for individuals, their families, and the community.

An exploratory factor analysis (Principal Components Analysis) was conducted to reduce the large number of variables into fewer factors consisting of linear combinations of the original

variables. This technique preserves the maximum common variance across all variables and constructs a smaller number of common factors by recombining the original variables (Coakes & Steed, 2001) which can be interpreted.

4.6.2. Stage 2

In Stage 2 of the data analysis, the matched data for the Bass Coast cohort was analysed by the researcher through reflection and narrative analysis to identify the themes present and draw together the influence of developmental experiences and social ecological systems on each case. Each case was considered with respect to the factors identified through Stage 1 of the data collection, the literature review and the researcher's reflections by drawing on extensive practice wisdom. Commonalities across the 10 cases were recorded, and the individuals whose offending was consistent with the CSI at 21 years old as predicted on the EIT and those whose CSI score was below or above that predicted were identified.

4.6.3. Stage 3

A total of 21 responses to the online survey were received, representing a response rate of 64 per cent of the Youth at Risk panel population. The respondents did not answer all questions. Therefore, the percentages of responses for individual items is less than this total response rate. The results from the online survey of the Bass Coast Youth at Risk panel members were collated in Microsoft Excel to identify the level of concurrence between their opinions as to which factors, derived from previous stages of the research, related to youth contact with the criminal justice system. The open-ended question responses were

examined to identify concurrence across the respondents of other factors they nominated as effecting youth contact with justice systems.

4.7. Data limitations

4.7.1. Official data compared to self-report data

The datasets used in this thesis are based on official police and departmental administrative records. The literature discusses how accurately official data reflects the lived experience of individuals. Wiesner et al. (2007) asserted that self-reported and official records of offending behaviour have specific strengths and weaknesses. Official records may include more serious offences, and the level of accuracy is greater than self-reported records for details such as age at the time of an offence. However, they do not capture the totality of the number of offences committed. Many crimes go undetected by the police; some offenders are not apprehended and, in some instances, there are errors in the crime records. Self-reporting measures are affected by various biases, including memory and the failure to disclose the full extent of the behaviour. However, self-reported data is more accurate in terms of the actual number of offences committed (Farrington et al., 2003; Farrington, Loeber, Stouthamer-Loeber, Van Kammen & Schmidt, 1996).

There are also limitations when relying on criminal justice data, such as police records, to understand the factors that correlate with youth offending. Thornberry and Krohn (2000) argued that the inclusion of self-reported engagement in offending behaviour has greater reliability and validity as a measure of offending behaviour. Farrington, Ttofi, Crago and Coid (2014) demonstrated a considerably greater volume of offending based on self-reported records than official statistics. Official police data may underestimate the true extent of

youth offending, and the results may not be consistent across geographic locations, types of crimes or socio-economic groups.

The findings from this research project must be interpreted in the context of officially recorded offences and not self-reported offending data, which can reveal longer criminal careers and more offences (Farrington et al., 2014). However, the LEAP data records individuals as offenders against an offending incident prior to formal processing. Therefore, the dataset is broadened from the substantive number of previous research studies. The data includes official police records; however, it also includes individuals for whom no formal criminal justice procedures have been instigated. This aspect of the study differentiates the findings from previous research (see Section 4.4). The fact that the LEAP records are not just a finalised formal 'offence' addresses the differences between official and self-reported data. The inclusion of individuals listed as offenders against an offending incident who are below the age of criminal responsibility is another element that distinguishes the data in this research. This means that the EIT data may reflect an individual's engagement in offending behaviour more accurately than official records of formally processed offences committed when the individual was of the age of criminal responsibility.

The issues associated with recognising and reporting maltreatment are similar to those concerning police datasets. Further, departmental reporting, file documentation and procedures affect the accuracy of data held in the departmental datasets. For example, Paterson (2015) noted the differences between substantiated reports and unsubstantiated reports to child protection services. The Victoria Police dataset in the current research included records of offences against the person of a child under 18 years old. There is a

difference between child protection reports of maltreatment (both substantiated and unsubstantiated) and the police data. However, both reflect exposure to ACEs. In the case of the child protection reports used in Stage 2 of the project, substantiated reports were used because they have the greatest policy relevance of the two. However, an alternative possibility is that a higher number of notifications may indicate a challenging developmental context for the child, which may increase the risk of offending.

4.7.2. *Retrospective design*

A retrospective longitudinal analysis was chosen because it provided an opportunity to collect a significant amount of data and compare predicted levels of offending to actual offending. The period during which the lived experience of a young person was tracked would not have been possible under the requirements of the current project if a retrospective design was not adopted. The use of a retrospective design included some limitations, including the fact that some aspects of the data collected may represent a historical view of the social ecology of place rather than a current snapshot. Government policy and practice evolved and changed during the period in which the data was collected. For example, the youth justice department changed from the DHHS to DOJCS during February 2017 due to state government reforms (premier.vic.gov.au/building-a-stronger-and-more-secure-youth-justice-system/). During the period in which the pre-existing data was drawn, some of the records come before and after the changes to the data collection and recording processes were made. The study includes data that straddles these changes in legislation, policy and practice. For example, police and service system responses and recording requirements for incidents of family violence were altered in line with the

recommendations from the Victorian Royal Commission into Family Violence (State of Victoria, 2016).

4.7.3. Sample limitations

There were 57 youths identified in Inner Gippsland during 2005 by the EIT. In total, there were 50 males and seven females. The gender distribution is indicative of the Victorian youth justice population, where 73 per cent of youth offenders were male during the 12 months to March 2019 (www.crimestatistics.vic.gov.au/crime-statistics/historical-crime-data/year-ending-31-march-2019/spotlight-youth-offending). Therefore, there were insufficient cases to conduct a statistical analysis of the association between individual variables and gender. However, the research design did not specifically seek to explore gender differences.

The sample size, combined with some skewed data, restricted the use of some statistical analysis methods. However, the main purpose of the quantitative analysis was to identify flags of potential factors associated with an offending trajectory to analyse the qualitative data in the later stages of the research.

It is acknowledged that the findings from this study are specific to the cohort of focus and community in which they reside. The approval of the EIT trial was for the Victoria Police, Eastern Region Division 5, the police division of Inner Gippsland. Essentially, the current research design and findings are specific to this location; however, the realist stance allows for broader considerations to be drawn.

4.8. Ethics

The research project conformed to the requirements detailed in the relevant sections of the *National Statement on Ethical Conduct in Human Research* (National Health and Medical Research Council, Australian Research Council & Universities Australia, 2018b) and the *Australian Code for the Responsible Conduct of Research* (National Health and Medical Research Council, Australian Research Council & Universities Australia, 2018a). The research was approved by the Federation University Human Research Ethics Committee (HREC: A18-021) and Victoria Police Research Coordinating Committee (RCC 845). The research drew on data from other partners within the IGCYAP, specifically the DHHS and DET, who accepted Federation University HREC approval.

Despite Victoria Police approving the EIT trial and including this as a doctorate project of the research collaboration between IGCYAP and Federation University, considerable issues regarding the presentation of the research and dissemination of the findings arose throughout the project. Research using LEAP data is particularly sensitive, and every step was taken to ensure that the data provided to the researcher was de-identified. The protection of the identity of those youths in the research sample was paramount. However, maintaining the anonymity of these youths was a challenge because of the place-based approach of this study, data-matching in Stage 2, the relatively small Bass Coast cohort and the researcher's professional work in the region over 25 years. The risk that individual youths could be identified was reduced by using a specific numeric identifier. Further, the developmental data that was collected by departmental staff was provided to the researcher in a de-identified form. In relation to the case file narratives held by Victoria

Police, all data were collected by a police member under the numeric identifier and provided verbally to the researcher, who made notations against the case number.

The privacy of the youths who were discussed at the Youth at Risk panel meetings was protected by signing a deed of confidentiality. The ethical issues associated with using an individual's information in a predictive model without their knowledge and using this information across the service sector are discussed in Chapter 7, paper submitted and accepted for publication and Section 9.8.

The survey of the Bass Coast Youth at Risk panel members was conducted online to ensure anonymity and allow individuals to formulate their responses independently without influence from colleagues or managers. This also enabled the respondents to allocate time within their schedules to complete the survey in a considered manner. The submission of a response to the anonymous online survey of the Bass Coast Youth at Risk panel members confirmed an individual's consent. A plain language information statement was provided with the online survey (see Appendix 2). The researcher was not aware of who participated in the survey because the LimeSurvey platform de-identified the responses. All data is presented in an aggregated form. Therefore, no individual workers were identified in the research output. To further protect the identity of the anonymous online survey respondents, the prescribed number of characters in the open-ended survey question, which allows for respondents to add and rate additional factors, was limited to 50. This limited the respondents from making statements that included details that might identify their professional roles.

It is important to recognise the specific considerations that resulted from the model of industry-funded doctoral research. The researcher experienced some tension to manage the

participants' expectations of the potential outcomes. The dissemination of findings in a responsive and timely manner to the service system and the balance of peer-reviewed research and academic rigour raised issues to be considered and managed. A key goal of the research was to inform practice in Inner Gippsland. However, it was impossible to anticipate whether the findings would be adopted or positively affect practice. The nature of the research collaboration that established the doctoral projects did provide opportunities for the researcher to gain feedback from the service system and discuss interim findings. This occurred through presentations to IGCYAP meetings, attendance at the Inner Gippsland senior officer's group meeting, academic presentations at conferences and symposiums and the delivery of a podcast within a series commissioned by the IGCYAP research advisory group.

4.9. Conclusion

The theoretical perspectives adopted in this study inform the overall research design. The methodological approach was selected to understand the factors related to the risk of contact with the criminal justice system across the social ecology, framed within the developmental context of adolescence and specific to place. The use of different analytic methods allows an extensive examination of those factors linked to youth offending.

The mixed-methods design and data sources enabled the study to respond to the research questions and deliver robust findings supported through multiple sources of data and analyses. The methodology is directly linked to the goal of providing the service sector in Inner Gippsland with findings on which to base practice innovations. The realist approach

provides a framework for considering whether the results achieved in the Inner Gippsland community could be applied in different contexts.

Chapters 5 and 6 provide the data analyses of the three data collection stages and the study results. In Chapters 8 and 9, the results and practice implications are discussed in depth, returning to a number of the considerations canvassed in Chapter 4. Chapter 7 presents a paper submitted and accepted for publication that discusses the application of the EIT and associated ethical issues in greater detail.

Chapter 5. Police data results

5.1. Introduction

The results and analyses are presented in Chapters 5 and 6, followed by a published paper (see Chapter 7), which reflects the goal of disseminating the results to the community. The data collection and subsequent analyses were undertaken in a staged process to address the overarching research question of how the EIT can be used to reduce young people's contact with the criminal justice system (see Section 4.5). The presentation of the results in two chapters reflects the staged process of the research design. Chapter 5 presents the Stage 1 data from the sample of youths from Inner Gippsland ($n = 57$). The preliminary analyses of the quantitative data are included to highlight the protective and risk factors and identify the patterns related to youth contact with justice systems.

First, descriptive statistics for the Inner Gippsland sample and the significant associations between the LEAP records, such as the level of youth offending and exposure to family violence, are provided. The trajectories predicted in the EIT are considered to identify those factors that serve to interrupt an individual's trajectory of future contact with justice systems. Second, those factors that are associated with youth who persist in offending behaviour are identified.

Chapter 5 provides analyses to identify the patterns in the interactions between the factors that relate to youth offending. The results from the Stage 1 data provide signposts to guide the subsequent analyses of Stage 2. The convergence of the developmental data and police file narratives are presented in Chapter 6.

Consistent with the mixed-methods design, Chapter 6 describes Stages 2 and 3, the quantitative and qualitative analyses of the subset of the Inner Gippsland sample from Bass Coast (n = 10). The addition of file narratives from Victoria Police and the DHHS and DET data aimed to generate a deeper understanding of the patterns and themes identified through the Stage 1 data analyses. A broader interpretation of the results and implications for practice are developed in greater detail in Chapters 8 and 9.

5.2. Stage 1: Inner Gippsland sample

The Inner Gippsland sample was generated from youth identified through the EIT predictive modelling. A minimum of 50 youths was required to enable an analysis that generated statistical associations between LEAP records and offending. This resulted in a sample of 57 youths, 50 males and seven females, residing in Inner Gippsland on the 1 January, 1 March and 1 June 2005. Victoria Police generated this sample, and the de-identified data was forwarded to the researcher in accordance with the research and ethics approvals from the Federation University HREC and the Victoria Police Research Coordinating Committee. The modelling predicts the level of offending for a youth at 21 years old based on a CSI score (see Section 4.4.1). The CSI score for each person at the point of inclusion in the sample and the CSI predicted at 21 years old was provided. Historical data that included all records for the variables from LEAP for each of the individuals in the Inner Gippsland sample (n = 57) was provided (see Section 4.5.1) along with the LEAP record variables up to June 2018.

The sample is weighted towards males, which is consistent with youth offending populations (Chrzanowski & Wallis, 2011; CSA, 2019b). The low number of females does not allow for statistical differentiation on the basis of gender. An initial exploration of the data

based on gender did not identify notable differences in the variables for females compared to the total sample.

Given that the criteria for inclusion in the sample included youths who resided in Inner Gippsland and were identified on the EIT as at risk of future offending, there were variations between the ages of the youths on the date of inclusion in the sample. The date of birth or age of the individuals at the point of inclusion in the sample was not provided to the researcher to protect their identity. The snapshot sample included youths at varying ages, resulting in each case having differing time as a youth or an adult (18 years and older) during the period for which the data was provided.

The researcher created the variable ACE (see Section 4.5.1), and this variable was included along with the variables of individual LEAP records in all analyses of the Inner Gippsland sample. The ACE variable included the number of LEAP records of missing person and family violence reports recorded when the individual was under 15 years old, field contact reports recorded when the individual was under 10 years old and the total number of child victim reports.

The Inner Gippsland sample ($n = 57$) is described in Table 5.1. Table 5.1 lists the minimum, maximum, mean and median number of each LEAP variable. Similarly, the age at the first record and the minimum, maximum, mean and median ages at the first record in each LEAP variable are recorded. The range of the data variables was skewed, such as total adult offences, with the minimum number of records being zero and the maximum being 171 offences. Therefore, when one individual has a number of offences much higher or lower than the majority of the sample, the median number of reports (rather than the mean) best represents the overall picture reflected in the data.

Table 5.1. Variables of the Inner Gippsland sample (n = 57)

Variables	Minimum	Maximum	Mean	Median
Age of onset (years)	5	16	10.89	11
Total youth offences (n=57)	2	148	34.88	29
Total adult offences (n = 50)	0	171	35.30	17
Number of MP reports (n = 32)	0	16	1.68	1
Age of first MP report (years)	3	23	12.66	13
FC (n = 55)	0	79	11.70	8
Age of first FC (years)	5	19	14.05	14
Number of CV reports (n = 34)	0	6	1.37	1
Age of first CV report (years)	2	17	10.59	11.5
Number of FV reports (n = 48)	0	60	8.58	5
Age of first FV report (years)	6	28	15.00	16.06
Number of victims of CSA reports (n = 13)	0	5	0.35	0
Age of first CSA (years)	2	15	7.62	6
ACE (n = 45)	0	15	3.25	2

Note: MP = missing person; FC = field contacts; CV = child victim; FV = family violence; CSA = child sexual assault; ACE = adverse childhood experiences.

The relationship between the age at which an individual first engages in offending behaviour and the likelihood of future offending has been shown to be significant (see Section 2.2.1).

Section 5.2.1 considers the association between age of onset and future offending in the Inner Gippsland sample.

5.2.1. Age of onset

The age of onset is defined as the age at which an individual was first recorded in the LEAP data as an offender against an offending incident. The minimum age of onset of offending behaviour was 5 years, and the maximum was 16 years, with a median of 11 years. The LEAP record of 'listed as an offender against an offending incident' does not indicate that the individual was charged with an offence or that formal justice proceedings occurred.

The sample was considered regarding the age when first listed as an offender and then engagement in offending as both a youth (under 18 years old) and an adult. The data

provided details of offending for each case, from their initial record up to June 2018. Section 5.2.1 considers youths' patterns of offending in relation to the age of onset. The taxonomy was devised by considering the trajectory of each youth in the Inner Gippsland sample. The categories reflect the age of onset, number of offences by youths and adults and age at cessation of offending. Five categories were formulated using the age of onset and desistence and offence numbers above or below the median for the Inner Gippsland sample, including adolescent limited, low, high, desisting and later developing. The colour-coded taxonomy in Table 5.2 shows these five distinctive categories consistent with the developmental taxonomies discussed in the literature review (see Section 2.2.1). This analysis provides opportunities for early intervention because the groups that reflect the greatest vulnerability for future persistent offending can be identified for prevention efforts.

The adolescent limited category includes instances where the offences recorded in the data collection period ceased prior to the age of 18 years. This is the most common trajectory for adolescents who engage in offending behaviour. The low category includes youths whose number of offences as both youths and adults were below the median for the Inner Gippsland sample. The high category includes the opposite: youths whose number of offences as both youths and adults were above the median for the Inner Gippsland sample. The desisting category includes youths whose number of youth offences were above the sample median and whose adult offences were below the median. Finally, the later developing category includes cases where the number of offence records increased as their age increased into adulthood. The 57 youths from the Inner Gippsland sample are included Table 5.2; each individual's data forms a single row. The table shows the sample (n = 57) in order of age of onset.

Table 5.2. Age of onset, total youth and adult offences and taxonomic categories

Age of onset	Total youth offences	Total adult offences	Taxonomic category
5	42	13	Desisting
6	13	5	Low
7	29	0	Adolescent limited
8	25	2	Low
8	12	9	Low
8	13	12	Low
8	18	13	Low
8	52	89	High
9	3	0	Adolescent limited
9	40	0	Adolescent limited
9	18	7	Low
9	17	7	Low
10	2	0	Adolescent limited
10	28	0	Adolescent limited
10	45	0	Adolescent limited
10	46	4	Desisting
10	25	15	Low
10	26	28	Later developing
10	148	38	High
10	70	171	High
11	41	0	Adolescent limited
11	8	1	Low
11	27	3	Low
11	40	12	Desisting
11	38	13	Desisting
11	12	17	Later developing
11	28	23	Later developing
11	26	24	Later developing
11	27	25	Later developing
11	42	27	High
11	4	29	Later developing
11	13	31	Later developing
11	23	86	Later developing
11	12	88	Later developing
12	31	8	Desisting
12	52	13	Desisting
12	47	16	Desisting
12	20	53	Later developing
12	57	54	High
12	50	58	High
12	49	60	High
12	40	99	High
12	23	116	Later developing
12	54	126	High
12	32	128	High
12	72	131	High
12	72	131	High

Age of onset	Total youth offences	Total adult offences	Taxonomic category
13	24	3	Low
13	17	7	Low
13	30	15	Desisting
13	16	20	Later developing
13	43	23	High
13	71	64	High
14	26	33	Later developing
14	53	33	High
15	42	8	Desisting
16	54	24	High

Note: **desisting** = offences above the median as a youth and below the median as an adult; **low** = offences below the median as both a youth and an adult; **adolescent limited** = no adult offences; **high** = offences above/at the median as both a youth and an adult; **later developing** = offences below the median as a youth and above the median as an adult.

The taxonomy shown in Table 5.2 is similar to those detailed in the literature (DeLisi & Piquero, 2011; Sutherland & Millstead, 2016). There is a relatively equal spread across each of the categories. The greatest number of youths are in the high (n = 16) category. The adolescent limited category had the lowest number (n = 7). This is inconsistent with the general youth offender population in Victoria, where most youths who offend cease by adolescence (SAC, 2016). These results are mainly attributed to the Inner Gippsland sample being derived from the EIT, which predicts the likelihood of future offending based on weightings of LEAP records indicative of risk.

5.2.2. Field contact reports

Field contact reports can reflect critical information when considered within a developmental perspective. For example, an 11-year-old found wandering the street at 1.00 am differs markedly from a 14-year-old with peers in school grounds at 4.00 pm on a Saturday. The first scenario could suggest a lack of safety or adequate supervision in the child's home. The second scenario is indicative of peer relationships and risk-taking consistent with the developmental stage of adolescence.

Field contacts reports were recorded for 55 youths in the sample, with the median age at first field contact being 14 years old. Therefore, half the sample had their first field contact when under 14 years old. This is potentially indicative of vulnerability and the lack of capable guardianship in the individual's home. The point of police contact through the field contact record may be an opportunity for intervention to address the factors underpinning why the police recorded the individual.

5.2.3. *Missing person reports*

The age at which an individual is reported as a missing person reflects critical information. For the Inner Gippsland sample, the median age of 13 years provides a further potential point of intervention. A missing person report also indicates a level of concern for the youth from his/her primary guardians. When a youth is placed in OHC, policy dictates that a missing person report must be lodged if the youth is absent from placement for a specified period. This practice may account for some of the higher numbers of missing person reports in the sample.

5.2.4. *Child victim reports*

The LEAP child victim records represent individuals who were the victim of an offence against the person when aged under 18 years. More than half the sample, 34 youths from a total of 57 cases, experienced a form of child victimisation. The median age of the first incident was 11.5 years. There were two or more child victim reports for 11 youths from the sample. CSA reports, a sub-category of child victim records, were recorded for 13 individuals

in the sample. The youngest age for the first CSA report was 2 years, and 3 years was the most common age for the first recorded sexual assault for those 13 individuals.

5.2.5. Family violence

The experience of family violence was common, with 48 of the total 57 youths having a family violence report recorded. Police practice were strengthened in 2004 by introducing the *Code of Practice for the Investigation of Family Violence*. It was further supported in 2008 through the *Family Violence Protection Act 2008* (Vic), which led to significantly higher levels of reporting and referrals for support. The preparedness communities to report varies over time, location and across subgroups within the community. The Inner Gippsland regions rate of family incidents recorded by Victoria Police 1 July 2019 to 30 June 2020 per 100,000 was 2,299.1, which was higher than that for Victoria, where the rate was 1,253.1 per 100,000 during the same period (CSA, 2020b). The median age for family violence reports of 16.6 years reflects the inclusion of family violence reports where the youth was the designated offender. Involvement in family violence has negative effects, irrespective of their designated role in a police report, and has is detrimental to cognitive, emotional and physical development and future life outcomes (Campo, 2015).


5.2.6. ACE

The ACE variable was created to reflect the developmental effects of maturation experiences and further explore the potential associations with youth offending (see Section 5.2). The creation of the ACE variable is consistent with the developmental framework of this study. The LEAP records for each youth at the ages described were summed because

the records of family violence (whether listed as the affected family member or the perpetrator), missing persons or first contact suggest vulnerability. Given the link between child maltreatment, inadequate guardianship and youth offending (Malvaso, 2017; Paterson, 2015; Ringland et al., 2015), the inclusion of the ACE variable in the analysis sought to identify whether this association was reflected in the Inner Gippsland sample.

ACE reports were recorded for 44 youths from the Inner Gippsland sample (n = 57). The median number of reports was two, and the youngest age at first report was 2 years.

Figure 5.1 provides a case study prepared by the researcher that uses the descriptive statistics for all variables to represent a typical youth from the Inner Gippsland sample. The data is presented as a vignette of a typical youth to position the statistical findings in a context that is consistent with practitioners' experience and bridge the gap between research and practice.



Mark was 11 years of age when he was first recorded as an offender in the Victoria Police database. He continued to offend into early adulthood and has 29 youth offences and 17 adult offences. He was reported as a Missing Person on one occasion at age 13 years. His first Field contact was at age 13 and there were eight further contacts up to early adulthood.

Mark was exposed to family violence; his initial exposure was at age 15 years and he has been recorded as involved in family violence on five more occasions. He has had adverse childhood experiences that are related to his offending, increasing the likelihood of this occurring.

Figure 5.1. Case study: A typical youth from the Inner Gippsland sample (Mark)

5.3. Correlations between variables in the police data

A correlation analysis was conducted for the data from the Inner Gippsland sample to explore further the variables related to contact with the justice system and the risk of future offending. Pearson's correlations measure the strength of a linear relationship between two variables (Allen, Bennett & Heritage, 2014). A positive or negative correlation indicates the direction of the relationship, with a positive correlation meaning that when one variable increases, the associated variable also increases. The reverse occurs for negative correlations; when one variable increases the associated variable decreases (Field, 2013).

Table 5.3 presents the statistically significant correlations in the LEAP dataset for the Inner Gippsland sample ($n = 57$). The correlation matrix shows the strength and direction of the association between the variables in the dataset. The correlation is denoted at two levels of significance, $p < 0.05$ (*) and $p < 0.01$ (**). The strongest correlations are those that are significant at the $p < 0.01$ level. Only statistically significant correlations are presented.

Table 5.3. Correlation matrix for the LEAP records (Inner Gippsland sample)

		Age at		Number of								
		First field contact	First missing person	Youth property offences	Youth drug offences	Adult property offences	Adult drug offences	Field contacts	Family violence reports	Child victim reports	Adverse childhood experience reports	Total Adult offences
Age at	Onset	.333*	.437*	.289*		.264*		.262*				
	First missing person	.399*										
	First family violence report	-.292*										
	First child victim report	.457** -.583**										
Number of	Adult offences against the person	.454*										
	Missing person reports	.358**										
Total	Youth offences			.948**	.501**	.452**	.305*				.357**	.382*
	Adult offences			.346**	.263*	.333*		.559**	.293*			

Note: All correlations presented in table are Pearson's correlation coefficients (r), $n = 57$; * $p < 0.05$, two-tailed; ** $p < .01$, two-tailed.

Sections 5.3.1 to 5.3.3 discuss the statistically significant correlations (see Table 5.3) and how the associations between the variables in the LEAP data provide a greater understanding of youth contact with justice systems.

5.3.1. Offence records

The extent of youth offending was positively associated with the extent of adult offending, indicating persistence to adulthood.

The total number of youth offences was strongly related to the number of youth property offences (.948**) and youth drug offences (.501**). This is to be expected because these offence categories are a component of the total number of offences. However, it demonstrates that property offences, followed by drug offences, are a significant part of youth offending for the Inner Gippsland sample. There was also a significant association with the number of adult property offences (.452**). This also indicates that property offences form a significant portion of the adult offending in this sample.

The significant correlation between the number of youth offences and the number of field contact reports (.305*) may reflect that those with high rates of youth offending are more active and therefore, more likely to be noticed by the police. There may also be an aspect of familiarity because regional communities are smaller than metropolitan communities, and therefore, there are greater opportunities for familiarity between individuals and police to develop.

The number of adult offences and number of youth property offences (.346**), number of youth drug offences (.263*) and number of adult drug offences (.333*) were associated. The

positive associations between the number of adult offences and youth property offences, and, to a lesser extent, youth drug offences, suggests that persistence is greater in these offence categories. There was also a strong positive correlation between the number of field contacts and the number of times an individual was listed as an offender as an adult (.559**).

The age of onset was associated with the number of youth (.289*) and adult (.264*) drug offences. ACEs, which are also positively correlated with youth offending (.357**), may increase the likelihood of substance use to manage the symptomology of childhood trauma.

The age of onset of offending was positively associated with the age at the first missing person report (.437*) and first field contact (.333**). Similarly, the age at first missing person report and field contact were positively associated (.399*). This indicates an opportunity for intervention strategies to be applied at this point of contact with the police.

5.3.2. Family violence

The nexus between exposure to family violence and negative outcomes, as demonstrated in the scholarly literature (Campo, 2015; State of Victoria, n.d.), was present in the Inner Gippsland sample. The number of family violence reports were positively correlated with the age of onset (.262*), total number of adult offences (.293*) and number of adult offences against the person (.454*). The association between adult offences against the person and level of family violence may reflect that exposure to violence is related to a greater propensity to engage in violence as an adult.

There was a significant negative correlation between the number of family violence reports and the age at an individual's first report ($-.292^*$). The higher number of reports occurred for those who were younger at the initial report. This suggests greater exposure to family violence and possibly the lack of positive outcomes from reporting family violence.

There was a strong positive association between the number of family violence reports and the age an individual was at their first child victim report ($.457^{**}$); that is, the older a child was when they were first a victim of an offence against the person, the greater the number of family violence reports. This correlation requires further exploration to understand the interactions between these variables. The qualitative analysis in Chapter 6 will undertake further exploration through the case studies of the Bass Coast cohort from the total sample.

5.3.3. *Child victim*

The number of child victim reports was positively associated with the number of missing person reports ($.358^{**}$). This may suggest that the individual did not feel safe in their home due to victimisation, and therefore, they left home, which resulted in a missing person report. An alternative hypothesis could be that within a developmental framework, peer connections are a significant feature of adolescence, and therefore, the attraction of peer activity resulted in a greater likelihood that an individual would leave home without parental permission, resulting in a report. The fact that the youth was out of the home and potentially engaging with peers may also lead to greater opportunity to be victimised. It is expected that these child victim reports may indicate conflict and physical altercations between peers.

The age at first child victim report was negatively associated with the number of reports ($-.583^{**}$). That is, the younger an individual was at the first report, the greater the number of reports. This may indicate sustained exposure to victimisation and a lack of intervention at the initial report to reduce future victimisation.

The child victim variable includes the incidence of being listed as a victim of sexual assault when under 18 years old. However, the details of the childhood sexual assault records were provided in the data as a separate variable. Due to the number of these cases in the sample ($n = 13$), it is difficult to make confident assertions based on statistically significant correlations. However, for those cases with CSA records, this experience is a substantial factor worth noting. Smallbone et al. (2008) noted that CSA is related to general child maltreatment and can be predicted by the same family and environmental risk factors, such as exposure to family violence, harsh parenting styles and socially disadvantaged neighbourhoods.

The total number of youth offences was associated with the age at the first CSA record ($.587^{*}$). This may reflect several underlying issues, such as family disruption, exposure to negative peers if placed in OHC or, at an individual level, dysregulated behaviour as a response to the experience of CSA. Higher levels of behavioural disturbance and dysregulation are features of populations who have experienced childhood victimisation (Jennings, Higgins, Tewksbury, Gover & Piquero, 2010).

The interrelationship between family violence records and CSA is also noted. The number of CSA reports was significantly negatively correlated with the age at first family violence report ($-.345^{**}$). This indicates extended exposure to adverse experiences. That is, the

greater the number of CSA records, the younger an individual was when they were first exposed to family violence.

The correlation between the number of family violence reports for an individual and the age at first CSA record (.672**) may reflect that the experience of sexual assault affects interpersonal relationships throughout an individual's life course.

5.4. Youth below and above the predicted trajectory

The modelling based on Victoria Police data allows predictions regarding an individual's potential level of offending at 21 years old, at the point of identification on the EIT and at any given day once the individual meets the parameters for inclusion in the model.

The Inner Gippsland sample was considered in respect to those whose recorded offending at 21 years old was below (the 'below' group) or above (the 'above' group) the predicted level. From the sample of 57 youths, 33 youths were in the 'below' group, and 24 youths were in the 'above' group.

The difference between the actual and predicted level of offending at 21 years old was minimal in some cases and therefore, may not reflect a true difference. It was necessary to understand the factors associated with a true difference between the recorded and predicted levels of offending. Therefore, the sample was divided further through groupings that represented those cases that were one SD below and above the predicted trajectory. This division formed the subgroups of cases, SD 'above' (n = 8) and SD 'below' (n = 11).

Table 5.4 provides comparative data for the total sample, 'below', SD 'below', 'above' and SD 'above' cases. The reported variables reflect substantial differences. The variables with

minor or no differences across groups are not reported. For some variables, the spread was skewed, and therefore, the median values are reported.

Table 5.4. Descriptors of below and above predicted offending at 21 years old

LEAP Variable	Median				
	Total sample (n = 57)	'Below' (n = 33)	SD 'below' (n = 11)	'Above' (n = 24)	SD 'above' (n = 8)
Age at onset*	11	10	9	12	12
Number of youth offences	29	25	13	49.5	70.5
Number of adult offences	17	8	4	59	76.5
Number of field contact reports	8	5	2	15	19.5
Age at first field contact*	14	14	12.5	14.5	13.5
MP reports	1	1	1	1	1
Age at first MP report*	13	13	11	12.5	13
FV reports	5	3	3	10.5	6
Age at first FV report*	16.06	13	18	14.5	13
CV reports	1	1		1	1.5
Age at first CV report*	11.5	11	6.5	12.5	5
ACE reports	2	2	1	2	2.5

Note: * measured in years; MP = missing person; FV = family violence; CV = child victim; ACE = adverse childhood experience.

The age of onset was older for people in both the 'above' and SD 'above' groups than those in the 'below' and SD 'below' groups. Given that the number of incidents where the individual was listed as the offender is a major component of the CSI variable, it is to be expected that those above their predicted CSI at 21 years old had higher numbers of youth and adult offences.

The differences between the 'below' and 'above' groups for the number of family violence reports are notable. The 'above' group had the highest number of family violence reports (10.5) compared to the total sample (5). Further, the age of first exposure to family violence occurred at an older age for the SD 'below' group (18 years) compared to the total sample (16.06 years). This may indicate that the absence of exposure to family violence as a child for those whose offending was well below that predicted for people at 21 years old.

Therefore, it is likely that in the majority of the recorded family violence incidents for an individual 18 years or older reflected that the individual was recorded as the perpetrator of the violence.

5.4.1. Correlations in the 'below' and 'above' groups

Table 5.5 presents the statistically significant Pearson's correlations of the criminogenic records in the LEAP dataset for the 'below' and 'above' groupings in the Inner Gippsland sample ($n = 57$). Criminogenic records are those associated with offending. The correlation matrix shows the strength and direction of the associations between the variables in the dataset. The correlation is denoted at two levels of significance, $p < 0.05$ (*) and $p < 0.01$ (**). The strongest correlations are those that are significant at $p < 0.01$. Only statistically significant correlations are presented.

Table 5.5. Criminogenic variables: Correlations for trajectory groups

LEAP Variable	'Below' (n = 33)	SD 'below' (n = 11)	'Above' (n = 24)	SD 'above' (n = 8)
Total youth offences	Youth POs = .883**		Adult OAP = -.517** Age first FC = -.530**	Youth POs = .967** Youth drug offences = .859** MP reports = .736* Age first FC = -.828* CV reports = .804* ACE reports = .902**
Total adult offences	Adult POs = .712** Adult OAP = .666** FCs = .540*	Age of Onset = -.714* Adult POs = .812** Adult OAP = .822** FC reports = .654*		Youth OAP = -.733* Adult POs = .958** Adult drug offences = .858** Age first MP report = .981*
Age of onset	Age first MP report = .554* CV reports = .392* Age at first FC = .356*	Adult OAP = -.704* Age first MP report = .857*		
Age first MP report				Adult POs = .992**
Number of FC reports	Adult POs = .453** Adult OAP = .571**	Adult OAP = .893**		
Age first FC report		MP reports = -.713*	Age first MP report = .608* Adult OAP = .550**	MP reports = -.841* Age first MP report = .995** Youth POs = -.804*

Note: POs = property offences; OAP = offences against the person; MP = missing person; FC = field contact; CV = child victim; ACE = adverse childhood experience.
Note: All correlations are Pearson's correlation coefficients, *p < 0.05, two-tailed; **p < 0.01, two-tailed.

In the 'below' group, the younger the individual was when they were first listed as an offender, the younger the individual was at the first missing person report (.554*) and field contact report (.356*). This may indicate that contact with the police (when first listed as an offender, reported missing or had a field contact) formed a protective factor for youths whose engagement in offending behaviour was lower than the predicted level.

The greater the number of youth offences in the SD 'above' group, the higher the number of missing person (.736*), child victim (.804*) and ACE (.902**) records. The number of youth offences for this group was negatively correlated with the individual's age at their first field contact record (−.828*). This indicates a significant association between youth offending and sustained exposure to ACEs, especially childhood victimisation and multiple records of police contact.

Table 5.6 presents the statistically significant correlations between the records in the LEAP dataset that indicated vulnerability for the 'below' and 'above' groupings in the Inner Gippsland sample ($n = 57$). Vulnerability records are those that are potentially associated with exposure to ACEs. The correlation matrix shows the strength and direction of the association between the variables in the dataset. The correlation is denoted at two levels of significance, $p < 0.05$ (*) and $p < 0.01$ (**). The strongest correlations are those that are significant at the $p < 0.01$ level. Only statistically significant correlations are presented.

Table 5.6. Vulnerability variables: Correlations for trajectory groups

LEAP Variable	'Below' (n = 33)	SD 'below' (n = 11)	'Above' (n = 24)	SD 'above' (n = 8)
Number of FV reports	Total adult offences = .531* Adult POs = .526** Adult OAP = .402* FCs = .535**	Age first FV report = -.550* Adult POs = .684* MP reports = .738**	Age first FV report = -.440* Age first CV report = .564*	Adult OAP = .947**
Age first FV report		Youth OAP = -.984** CV reports = -.732*		Number of FCs = .897**
Number of CV reports	Age first CV report = -.817**		MP reports = .548**	Total youth offences = .804* Youth POs = .727* Youth drug offences = .856** ACE reports = .813*
Number of ACE reports	MP reports = .477** Age first FV report = -.507** CV reports = .802**	CV reports = .887**	Total youth offences = .704** Youth POs = .680** MP reports = .875** Age first FC = -.454* CV reports = .523** Age first CV report = -.530*	Total youth offences = .902** Youth POs = .832* MP reports = .935** FCs = -.974* Age first FC = -.827* CV reports = .813*

Note: FV = family violence; CV = child victim; POs = property offences; OAP = offences against the person; MP = missing person; FC = field contact; ACE = adverse childhood experience.

Note: All correlations are Pearson's correlation coefficients, *p < 0.05, two-tailed; **p < 0.01, two-tailed.

In the 'below' group, the younger an individual was when they were the victim of an offence against the person when under 18 years old (child victim), the greater number of child victim reports ($-.817^{**}$). This is a stronger correlation than that for the total Inner Gippsland sample ($-.583^{**}$). This may indicate that contact with police when the child victim report occurred reduced the potential for future offending behaviour. This association suggests that ongoing exposure is linked to negative effects on future outcomes. However, this does not present as a component of greater engagement in offending because the predicted trajectory in this group was not reached.

In the 'above' group the, the greater the number of family violence reports, the younger the individual was at their first family violence report ($-.550^{*}$). This raises some concerns regarding the effect of sustained exposure to, and engagement in, family violence. Because this correlation exists in individuals whose level of offending was greater than predicted, the effects of family violence may drive offending behaviour. The positive correlation in the SD 'above' group between total youth offences and the number of child victim records suggests a potential link between ACEs and high rates of offending. As detailed in the correlations of criminogenic variables for the SD 'above' group, there was a significant relationship between youth offences and ACE reports. This confirms the empirical literature that highlights the nexus between childhood trauma and contact with youth justice systems (Lipsey & Derzon, 1998).

Figures 5.2 and 5.3 show the case studies that were developed by the researcher to summarise these results for a practitioner audience. They were each developed to represent typical youths from the groups whose level of engagement in offending behaviour was below and above the predicted level at 21 years old.



Tony was 9 years of age when he was first recorded as an offender in the Victoria Police database. His youth offending was minimal and mainly property offences. He ceased offending by adulthood. He had minimal Police contact; he was reported as a Missing Person on one occasion at age 11 years. His first Field contact was at age 12.5 years of age with one other Field Contact.

Tony was not exposed to family violence or adverse experiences when a child. His exposure to family violence was when he was above 18 years of age.

Figure 5.2. Case study: A typical youth offending below the predicted level (Tony)



John had an early onset of offending that persisted into adulthood. He was 12 years old when first listed as an offender and he engaged in a relatively high level of both youth and adult offending. His youth and adult offending was diverse across offence types.

John's first and only Missing Person report was at age 13 years. He was 13.5 years of age when he had his first Field Contact with Police and up to early adulthood he had a further 20 Field Contact reports.

John was impacted by adverse childhood experiences and he was 5 years of age when first recorded as a child victim. Exposure to and engagement in family violence was substantial for John and this commenced when he was 13 years old. John experienced sexual assault as a child and this impacted significantly on him. His adverse childhood experiences and age of victimisation were linked to his considerable engagement in youth and adult offending.

Figure 5.3. Case study: A typical youth offending above the predicted level (John)

Despite Tony's early onset of offending, he did not progress to adult offending (see Figure 5.2). His level of police contact was minimal, especially when compared to that of

John (see Figure 5.3). The key difference between Tony and John is the level of exposure to ACEs.

5.4.2. *Factors that interrupt a predicted offending trajectory*

One of the aims of this research was to identify protective factors that relate to reduced contact with criminal justice systems. Therefore, youths with a recorded level of offending that were substantially (one SD) below the predicted level were considered. Section 5.4.2 highlights those variables that may indicate opportunities to intervene and strengthen the responses to reduce youth contact with justice systems.

Section 5.4.2 discusses the 11 cases of male youths who were 11 years or younger when they were first listed as an offender. When considering those youths with offending levels below those predicted, nine youths had a total number of youth offences below the median for the total Inner Gippsland sample (median = 29), three had no listed adult offences and eight had a total number of adult offences below the median for the Inner Gippsland sample (median = 17). The main offences listed for this group were property offences with minimal interpersonal violence present. The level of field contact and missing person reports indicates minimal police contact. For eight youths, their offending was limited to adolescence, with the majority being property offences. This is consistent with this developmental group in other empirical studies (Baker, Falco Metcalfe & Jennings, 2013; Lab, 1984; Walker, 2017).

Three youths in this group had no family violence reports. The youths with family violence reports (the majority = 5) experienced family violence after they were 18 years

old. The age at the first report of family violence was considerably older than for the Inner Gippsland sample: 11 years compared to 6 years old.

Only two youths in the group had been listed as victims of an offence against the person when under 18 years old. The child victim reports included CSA for both these youths. Two out of 11 in those whose offending was substantially below that as predicted had experienced CSA, compared to four out of eight cases for whom their offending at 21 years old was substantially higher than predicted.

Six youths in the below group had ACE records (comprised of family violence and missing person reports when under 15 years old, field contact reports when under 10 years old and child victim reports). A lower level of exposure to ACEs is a key feature for this group. There were minimal drug offences, which may be consistent with lower exposure to trauma and therefore, a reduced need for substance use in response to such experiences.

5.5. Interactions between the factors

The Stage 1 data analysis demonstrates that the interaction between factors informs the trajectory of an individual. Section 5.5. further highlights those factors that interact to drive an individual's trajectory.

Seminal international research (Farrington et al., 2016; Lipsey & Derzon, 1998; Moffitt, 1993) has demonstrated a range of factors related to youths who have engaged in offending to identify those who are most likely to reoffend and commit serious crimes. The Australian literature has been extended by Homel and Thomsen (2005), Stewart et al. 2008, Allard et al. (2017), Livingston et al. (2008) and Sutherland and Millsteed

(2016). Sutherland and Millstead (2016) conducted the first study to identify youths at risk of serious offending in Victoria. Moffitt's (1993) early work identified two distinct categories of youth offenders: those where the engagement in offending was limited to adolescence and those who persisted in offending into adulthood, each with a unique trajectory and aetiology. The current research explores whether similar groupings exist in the Inner Gippsland sample and identify those factors that provide an understanding to develop responsive intervention opportunities.

The literature regarding taxonomies reflects the trajectories (provided in Section 5.2.1) that involved the age of onset and the trajectories of the Inner Gippsland sample. The categories of adolescent limited, low, high, desisting and later developing provide the findings regarding offending patterns and age of onset. Section 5.5.1 seeks to understand the interactions between the factors that contribute to these groupings.

5.5.1. Factor analysis

Principal components analysis, a type of factor analysis, was undertaken to examine the cases that account for a substantial amount of the variance in the Inner Gippsland cohort. This exploratory method is a data reduction technique that identifies mathematical patterns in data, by reducing the variables to a smaller number of factors that summarise the essential information contained within the original variables (Coakes & Steed, 2001, p. 155). All available numeric variables were used in this analysis, except for sexual offences and child sexual assault, and the breakdown of crime per category was preferred to total youth and adult crimes to see if the crime categories loaded onto different factors.

Prior to executing the principal components analysis, the variables were examined for normality. The variables relating to child sexual assault and sexual offences were excluded due to their small sample size and heavily skewed distributions. Correlation matrices were used to confirm that the relationships between variables were generally linear (see Section 5.3).

A scree plot (Figure 5.4) was used to identify the number of factors to retain. The first change in direction of the plot occurs after three factors, suggesting that three useful factors could be extracted. Table 5.7 details the total variance that can be explained by the principal components analysis. There are six factors which have eigenvalues greater than one, indicating that they explain more than one of the original variables.

Exploration of an initial six factor solution found the final three factors were only lightly populated with isolated variables, and the three-factor solution suggested by the scree plot was chosen.

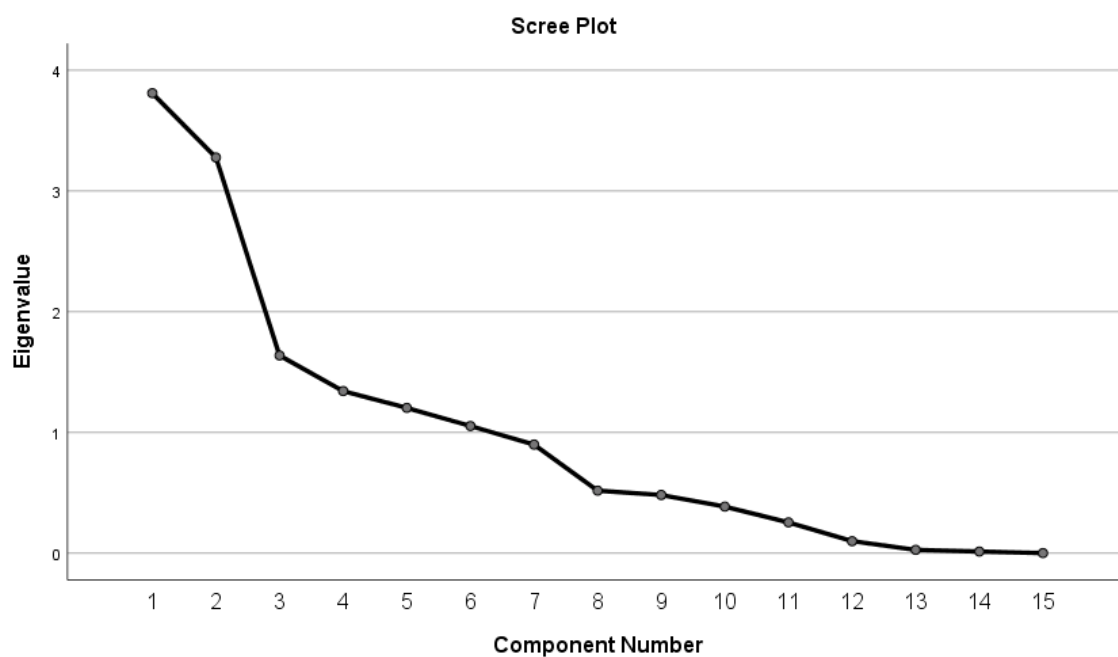


Figure 5.4. The scree plot

Table 5.7. Total variance explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.810	25.401	25.401	3.810	25.401	25.401
2	3.277	21.846	47.246	3.277	21.846	47.246
3	1.637	10.914	58.161	1.637	10.914	58.161
4	1.342	8.949	67.110	1.342	8.949	67.110
5	1.203	8.021	75.131	1.203	8.021	75.131
6	1.053	7.020	82.151	1.053	7.020	82.151
7	.899	5.993	88.145			
8	.517	3.449	91.593			
9	.482	3.211	94.804			
10	.385	2.568	97.372			
11	.255	1.697	99.069			
12	.099	.662	99.731			
13	.027	.178	99.909			
14	.013	.088	99.997			
15	.000	.003	100.000			

Extraction Method: Principal Component Analysis.

Table 5.8 presents the results of this factorisation. Of all the oblique and orthogonal methods of rotation attempted, Varimax with Kaiser normalisation provided the cleanest separation of components.

Table 5.8. The rotated factor matrix

	Component		
	Early contact with police	Peer influence	Disrupted family system
Age of onset		.599	
Number youth personal offences	.860		
Number of adult personal offences		.690	
Number of youth offences against the person		-.634	
Number of adult offences against the person	-.426		
Number of youth drug offences	.688		

Number of adult drug offences		.584
Number of missing person reports		-.495
Age at first missing person report	-.679	
Number of family violence reports		.864
Age at first family violence report	.795	
Number of child victim reports	-.694	
Age at first child victim report	.437	.590
Number of field contact reports	.640	
Age at first field contact	-.871	

Note: extraction method = principal component analysis; rotation method = Varimax with Kaiser normalisation (rotation converged in five iterations).

The factor analysis identified three factors that account for 58 per cent of the variance in the Inner Gippsland sample (early contact with police, peer influence and disrupted family system). The factor loadings presented in Table 5.8 indicate the strength and direction of the association between the listed variables and the factors. Section 5.5.1.1 to 5.5.1.3 explore the combinations of the original variables that make up these three factors. The factors were named based on what the combination of variables revealed about the characteristics of each factor and interpreted in terms of the social ecological influences on police contact.

5.5.1.1. *Factor 1: Early contact with police*

Factor 1 reflects early contact with the police through missing person and field contact records. Youth offending was centred on property and drug offences, and this factor is less likely to include adult offences against the person. Overall, the factor is characterised by variables indicating being out of the home and in public spaces,

potentially signifying vulnerability. Given that early police contact occurred outside the home, the family system may not have provided adequate care and protection.

5.5.1.2. Factor 2: Peer influence

Adult offending for Factor 2 was generally personal offences. Age of onset is influential for this factor. There are positive correlations with field contact records, and age at first family violence report and first child victim report. There is a negative correlation with the number of child victim reports, however. The variables loading on this factor present as peer-influenced activity, which is consistent with the developmental stage of adolescence.

5.5.1.3. Factor 3: Disrupted family system

The combination of variables loading on Factor 3 may indicate victimisation in mid-adolescence, and considerable exposure to, or engagement in, family violence. This factor has a negative correlation with the number of missing person reports. This could indicate family systems that do not report incidents when youths are absent from the home. Alternatively, the home may be a place of safety. Drug offences are the main the recorded adult offending type for this factor, which may relate to substance use as a strategy to manage trauma from ACEs.

5.5.1.4. Factor analysis summary

The factor analysis, which uses mathematical patterning to create factors, helps understand the findings relating to early onset of offending. To some extent, the

findings from this research challenge the established literature. The analysis indicates that there are two factors with very differing trajectories (early contact with police and peer influence), and another that sits in between (disrupted family system). Factor 1, early contact with police, indicates a proximate social-ecological system that is protective, and therefore, makes reports and responds effectively when police contact occurs. Factor 2, peer influences, highlights the significance of peer relationships in mid-adolescence and the associated engagement in offending behaviour. Lastly, Factor 3, disrupted family system, demonstrates that when family support and caregiving is disrupted, this results in particular patterns of police contact.

5.6. Conclusion

The empirical findings have been explored through multiple numerical analyses providing a statistical, unbiased understanding of the Inner Gippsland sample. First, the descriptive statistics in the data were provided, followed by correlations. Then, patterns in the factors were identified using factor analysis. The statistical techniques reduced the complexity of the data, and consistent patterns emerged across the findings.

Overall, the results from the Inner Gippsland sample show clear associations between certain factors and youth offending present in the body of literature. The nexus between ACEs, especially exposure to family violence and later engagement in offending, was present for the Inner Gippsland sample. It is evident that understanding the interactions between official police reports and an individual's potential to engage in serious, persistent offending enhances awareness of intervention opportunities. The findings indicate that no single factor will determine a trajectory; however, early intervention

opportunities and prevention are enhanced by considering the developmental stages and interactions with police. The EIT can help this process by indicating those youths where intervention options may be most effectively directed. The groupings identified in the above analyses provide further information regarding the interactions between the factors associated with youth contact with justice systems, thereby, further informing potential intervention opportunities.

Chapter 6 considers 10 cases from Bass Coast in greater detail, including data from Victoria Police file narratives, the DHHS and DET, to provide more explanatory details. The findings from the online survey of Bass Coast workers' perspectives regarding factors that are related to youth contact with justice systems are detailed to enrich the understanding drawn from the quantitative analysis, with data specific to the local community.

Chapter 6. Results: Understanding police data within a developmental and social ecological context

6.1. Introduction

Chapter 6 is the second of the two chapters presenting the results from the study and data analysis. Chapter 5 presented the data and analyses of the total Inner Gippsland sample (n = 57) (the Stage 1 data). Chapter 6 provides findings on the enriched understanding gained from contextualising the Stage 1 data, LEAP records and EIT predictions with developmental data. A place-based approach is an important element of this research project. Therefore, youths from the Inner Gippsland sample who resided in Bass Coast were selected for case analyses (see Section 4.4.3). The case analyses of the youths who resided in Bass Coast was undertaken to provide a richer understanding of those factors identified in the quantitative analysis of the total Inner Gippsland sample and identify opportunities to interrupt potential future engagement in offending.

Section 6.2 presents an overview of the Bass Coast cohort based on quantitative data to detail the representativeness of these cases for the Inner Gippsland sample. The case analysis incorporating the DHHS, DET and Victoria Police file narratives is provided. The key themes reflected in the matching of the developmental data are outlined. Then, the results from Stage 3, the online survey of local service professionals in Bass Coast, are presented.

Section 6.6 presents the key themes for the Bass Coast cohort that are derived from the findings from the data analysis, case studies and perspectives of frontline workers. The researcher's practice wisdom is also applied in considering the results. Including qualitative data, such as file narratives, enriched the data and allowed a greater understanding of the complex interaction between the factors that bring youth into contact with justice systems. These findings are explored to enhance further insights and identify points for early intervention, consistent with a place-based approach.

6.2. LEAP and EIT data for the Bass Coast cohort

There were 10 youths, eight males and two females, who resided in Bass Coast at the point of inclusion in the Inner Gippsland sample (2005). Data from the DHHS, DET and Victoria Police file narratives were collected for these youths (see Section 6.2) to contextualise police records within developmental experiences across the social ecology in which the youths are embedded. The statistical analysis in Chapter 5 includes this sub-group of youths. The following discussion compares the EIT data of the Inner Gippsland sample and the Bass Coast subgroup to consider its representativeness of the entire sample.

6.2.1. *Criminogenic factors*

The following presents the de-identified data supplied by Victoria Police of LEAP records that relate to engagement in offending behaviour and criminogenic factors. For the 10 Bass Coast youths, the recorded offending at 21 years old is compared to the predicted offending from the EIT.

The level of offending listed in the LEAP records for the Bass Coast cohort was similar to that of the entire Inner Gippsland sample. For the Bass Coast cohort, the median number of youth offences was 30, and in the Inner Gippsland sample, the median number of total youth offences was 29. The median number of adult offences for the total Inner Gippsland sample was 17, and for the Bass Coast cohort, the median was 20. The age of onset of offending was slightly higher in the Bass Coast cohort, with a median of 12 years compared to 11 years for the total Inner Gippsland sample. There were a similar number of field contact reports for both groups. The median age of first field contact report was older (16 years) in the Bass Coast cohort than the Inner Gippsland sample (14 years).

An analysis of the actual offending compared to that predicted on the EIT at 21 years old showed that, for the 10 youths from in the Bass Coast cohort, five were below, one was equal to and four were above the predicted level. The distribution across the Bass Coast cohort (in terms of offending above and below the predicted trajectory) was evenly spread. Of those below the predicted level, two (of five) were substantially below the predicted level of offending. For those above the predicted level, two (of four) were substantially above the predicted level offending. Overall, the criminogenic variables in the Bass Coast cohort reflected similarities with the total Inner Gippsland sample. The consistency between the two groups indicates that the Bass Coast cohort represents a similar profile of youths to the entire Inner Gippsland sample.

6.2.2. Vulnerability factors

Section 6.2.2 presents the de-identified data supplied by Victoria Police of LEAP records that relate to adverse experiences, such as exposure to family violence and child victimisation.

The Bass Coast cohort's mean age at first missing person report was a little older (13.14 years) than the total Inner Gippsland sample (12.66 years). The number of family violence records was higher in the Bass Coast cohort (median = 8) than the Inner Gippsland sample (median = 5). The median age at first family violence record was lower (14 years) than the median age (16.06 years) for the total Inner Gippsland sample. There were a similar number of reports of being a victim of an offence against the person when under 18 years old for both groups. The median age of the first child victim report was older (13.5 years) in the Bass Coast cohort than the Inner Gippsland sample (11.5 years).

In the Bass Coast cohort, a total of six of the 10 youths had a LEAP record of CSA; one youth had five records of CSA. The minimum age at the first record was 2 years, and the maximum age was 15 years. For the total Inner Gippsland sample, 13 of the 57 youths had a record of CSA. This demonstrates a considerable incidence of recorded CSA in the Bass Coast cohort police data. In Section 6.6.2, the prevalence of exposure to sexual harm is discussed in depth.

6.2.3. Summary

The themes reflected in the Bass Coast subgroup show that the youths were slightly older than the Inner Gippsland sample when they initially engaged in offending

behaviour and had contact with police through a missing person report or field contact.

The number of offending incidents as an adult was slightly higher in the Bass Coast cohort. As noted in the data for the total Inner Gippsland sample, this may be due to the age of the individuals when they were first included in the cohort, thereby, influencing their time as an adult in the data collection period.

Conversely, the data for family violence reports and age of the first report showed that there were a higher number of reports and a younger age of first exposure to family violence for the Bass Coast cohort than for the total Inner Gippsland sample. This may reflect a greater level of awareness of others and higher reporting rates in a smaller community. The older age at the first child victim report for the Bass Coast cohort may indicate involvement in peer conflict rather than the victimisation of children by substantially older people. In the LEAP database child victim records denote an individual as a victim of an offence against the person when the individual is under 18 years old. Therefore, engagement with peers that may involve assault would result in a child victim record. Such behaviour is developmentally consistent with mid- to late-adolescence when peer relationships form significant connections. The level of community awareness and reporting in a smaller community may influence these findings.

The case studies detailed in Section 6.3 provide a deeper understanding of interactions between the developmental stages, social ecological systems and level of engagement in offending behaviour.

6.3. Case analysis

Section 6.3 details the matching of the DHHS and DET data and Victoria Police file narratives with the EIT modelling and LEAP data. The case analysis of the 10 youths who resided in Bass Coast contextualised police contact records with developmental history derived from the DHHS and DET databases.

The DET and DHHS data detailed the service contact and education participation for the 10 Bass Coast youths and their families. The DET data included school attendance, enrolment history, disciplinary actions and referrals for support and intervention. The DHHS child protection data included substantiated reports of child abuse and OHC placement history. The DHHS data also included the youth justice contact, disability status and Department of Housing history.

Notations made from the Victoria Police file narratives included (when available) the parent or sibling criminal histories, context of field contact and missing person reports, family presence at the point of the police interview, references noted to underlying issues that may have led to contact with police and reference to engagement with support services. The detail included in the available data obtained from the three sources varied considerably. Therefore, not all the information was available for each of the individuals.

There are complexities and constraints involved in matching the police records with the data from the government departments. The process for matching the data was extremely time and resource intensive. The individual identifiers were different between the police, DHHS and DET datasets, which required several steps to identify and de-

identify each case so that the confidential data could only be delivered to the researcher using the case number. Departmental staff undertook this task at a considerable time impost to themselves. Therefore, the case analysis of this smaller cohort was more practical than matching this data for the entire Inner Gippsland sample of 57 youths. The Bass Coast cohort data still enabled a rich picture of young people's developmental experiences and social ecology to emerge.

6.4. Themes emerging from the matched data of the Bass Coast cohort

Section 6.4 details the key themes for the Bass Coast cohort and provides examples of cases from the 10 youths that best reflect the themes. The case studies of the individual Bass Coast youths provide the data from the EIT, LEAP records, police file narratives, DHHS and DET. The categories of offending trajectories (adolescent limited, low, high, desisting and later developing) (see Section 5.2.1) are also provided for each case. The four case studies included in this section exemplify the themes that emerged from the case analyses. The remaining six case studies are provided in Appendix 3.

The data provided by the DHHS, DET and Victoria Police has provided a greater understanding of the context of the EIT trajectories and LEAP records that were analysed during Stage 1 of this research project. These data sources generated further information on the developmental experiences of the Bass Coast youths and exposure to ACEs through substantiated reports of child abuse to child protection, DHHS. The DHHS data also included the history of any placements in OHC. These factors are noted in the literature related to engagement in offending behaviour (Cashmore, 2011; Paterson, 2015). The DET data provided further detail regarding the youths' engagement

in education, which is also a factor that, when disrupted, is related to adverse outcomes (Jesuit Social Services, 2013; Weatherburn et al., 2007). Baidawi (2020) noted that there is an advantage to obtaining data regarding an individual's circumstances from multiple sources because it provides enhanced reliability through crosschecking and triangulation.

This research sought to identify factors that interrupted a predicted offending trajectory and promoted positive youth development. However, it was difficult to identify the potential protective factors because the departmental data was focused on negative events and potential risks. There were limited references to interventions in response to these negative events, and when present, it indicated that the youth did not 'engage'. Occasionally, participation in education and youth justice intervention presented as protective. The themes that emerged from the case analyses are exemplified in the individual case studies from the Bass Coast cohort.

6.4.1.1. Disrupted family system

The first of the four case studies included in this section (Peter) highlights the effects of family conflict, separation, exposure to family violence and contact with police. In several cases in the Bass Coast cohort, there is a cluster of LEAP records of offending, field contact and missing person reports at or around the point of exposure to conflict in the family home. This understanding of conflict in the home was derived from the developmental data and file narratives. Peter's case study reflects the interaction between conflict in the home, developmental experiences and engagement in offending behaviour.

Bass Coast cohort case study: Peter

Adolescent limited: age of onset = 10 years; total youth offences = 28; total adult offences = 0

Peter's family was local to Bass Coast. The data indicated that his parents were separated and that he lived in both of his parent's homes at various times. It appears that the separation, exposure to family violence and instability and risk in both parental homes resulted in Peter's placement in OHC.

There were six substantiated child protection reports, prior to 2005, with no further reports between 2005 and 2018. The initial report occurred when Peter was 4 years and 7 months old. Police data showed that Peter had five child victim reports; the first at 4 years old, which was a CSA record.

Peter had nine OHC placements prior to 2005, with no further placements since. The initial placement was when Peter was 11 years and 11 months old, with five placements over one year when he was 12 years old. The data did not show if Peter was returned to his family or remained in the final recorded placement. Peter was not placed in residential care, and all placements were in the Bass Coast area. He had no recorded public housing addresses.

There were two reports of exposure to family violence, both prior to Peter turning 10 years old; the initial report occurred when he was 6 years old. Reports reflect sexual harm and engagement in sexualised behaviours in the family home and OHC. The behaviours were also noted in interactions with other students in

primary school when Peter was 10 years old, which resulted in his expulsion from school. Peter was engaged in services with a DET psychologist during this time.

The reports reflected considerable 'runaway' behaviour. His first missing person report was made by his father when Peter was 9 years old (when his father spoke of persistent behaviour problems). There was one other missing person record in LEAP; however, the file narratives indicated parental concern that Peter was often away from home without his parents' knowledge of his whereabouts. Peter was often found in the Dandenong area (outer Melbourne adjacent to Inner Gippsland), at times with peers, some of whom were also placed in OHC. There were five field contact reports. The first was reported when Peter was 15 years old, and they continued into adulthood.

Peter's first police contact in relation to an offence was at 10 years old when it was alleged that he engaged in harmful sexual behaviour with a peer-aged male with whom he was placed in OHC. This did not result in him being listed as an offender. He was later interviewed at Wonthaggi Police Station at 14 years old and listed as an offender at 15 years old. He had no recorded offences against the person and no adult offences recorded in the data collection period up to June 2018. The level of his actual offending at 21 years old was below the predicted level for that age.

Peter completed a youth justice order with no record of intervention under the order.

There were family violence orders recorded for Peter's father. There was no other involvement in the criminal justice system noted for his family members.

All his primary school attendance was in Bass Coast, and there were two primary schools recorded. Peter attended two secondary schools in metropolitan Melbourne, and the records indicated multiple suspensions and disrupted schooling. The data recorded a high number of absences in Years 8, 9 and 10, with a comment that he 'doesn't want to go to school or go home'.

From an early age, Peter was often 'on the street', possibly as a respite from conflicts at home, and therefore, at risk of harm and exploitation. His mobility continued into adolescence. There did not appear to be a strong association between engagement in offending behaviour and his placement in OHC. This may be because the placements did not include residential care and were all within Bass Coast. Peter's involvement in offending presents as adolescent limited.

6.4.1.2. Peer relationships

A group of male peers within the Bass Coast cohort, with family local to Bass Coast, engaged in offending together and were often recorded together in field contact records. For these four youths, the level of offending remained mostly constant across adolescence and into adulthood; the majority of offences were property offences. There was frequent contact with the police through field contact reports. All of them had youth justice orders. For most, there was no recorded parental or sibling criminality. Two of the four youths had not had a missing person report, and for the two who did,

the reports included a single instance when the parents were concerned that the youth was absent without explanation. None of these youths had a DHHS history of OHC or substantiated reports to child protection. All four of them had family violence records pertained to adult intimate relationships or conflict with parents during late-adolescence or as an adult. This group has similar elements to the peer influence group (Group 2) from the factor analysis (see Section 5.5.1). The convergence of findings across multiple data sources reinforces the effects of peer relationships in potential contact with justice systems.

The Bass Coast cohort case study of Dave reflects the interaction between peer relationships and engagement in offending behaviour.

Bass Coast cohort case study: Dave

Desisting: age of onset = 11; total youth offences = 47; total adult offences = 5

Dave was from a family residing in Bass Coast. He participated in local sports and presented as connected to his community. His parents separated in his late-adolescence and his father re-partnered. Police data indicated that there was some conflict between Dave and his father over this relationship. The file narratives indicated that his family was involved and that his mother could 'calm him down' and felt he was easily led. There were no DHHS reports or child victim reports in the police data.

Dave was first listed as an offender at 11 years old; this involved minor delinquent behaviour (graffiti) with peers, some of whom are also included in the Bass Coast cohort. There were minimal adult offences, and his adolescent

offending was consistent during this period and mainly involved property and public order offences with peers. His offending level at 21 years old was a little below the predicted level.

Dave has been placed on six youth justice orders and served a period of detention. He completed intervention as a condition of his youth justice orders. The positive effects of intervention efforts were noted.

No parental or sibling criminality was recorded.

The vast majority of the 13 field contact records occurred when Dave was under 18 years old, with the first being at age 14, when he was 'on the street' with peers. There were no missing person records.

Dave's involvement in family violence was minimal. There were three reports, with the first at 15 years old, which was derived from conflict with his parents. The later family violence records included reports relating to his partner of seven years.

Dave's education was completed at primary and secondary school in Wonthaggi. His last enrolment record was in Year 9.

Overall, Dave's contact with justice systems is described as 'adolescent limited offending', with an early onset of mainly property and public order offences with peers. Youth justice intervention appears to have positively affected his criminal trajectory. There were no records of ACEs.

6.4.1.3. ACE

The second common theme that emerged from the case analysis was involvement with DHHS and subsequent placement in OHC and considerable exposure to ACEs.

Wonthaggi, the main population centre in Bass Coast, had two residential units for youths in care during most of the data collection period. For those youths placed in OHC (four in the Bass Coast cohort), multiple placements were common, resulting in frequent changes in residence and location. In one case, there were five placements during 12 months. Further, three of the four youths had placements in residential units.

Placements in residential units concentrate youths with prior adverse experiences together, often exacerbating behavioural concerns (see Section 2.4.3).

There were frequent changes in placement for a number of these youths that directly affected their engagement in education and opportunities to build positive peer connections. Often, there were noted incidents of sexual assault and exploitation. The two females in the cohort also had multiple reports as victims of family violence in their adult relationships.

Contrary to the peer influence grouping, for these youths, their engagement in offending behaviour presents as being associated with negative experiences as a child and/or in early-adolescence and placement in OHC. The peer relationships formed in their placements were often disrupted due to multiple placement changes and reflected connections through adversity rather than positive relationships. Exposure to family violence in early maturation was indicative of adverse outcomes in later life.

Exposure to or allegations of engagement in harmful sexual behaviours formed another theme for this cohort. Consistent with the literature on the level of reporting and substantiated reports of sexual assault (Australian Institute of Family Studies & Victoria Police, 2017) these incidents were contained in file notations rather than reflected in substantiated matters or criminal processing. Four of the 10 youths had LEAP records of CSA, and there were notations relating to harmful sexual behaviour in six of the cases. One female had five CSA records in LEAP. The ongoing effects of sexual harm are clear in this case.

The following two case studies from this subgroup of four youths placed in OHC (Mary and Bill) reflect the interactions between ACEs, placement in OHC and engagement in offending behaviour.

Bass Coast Cohort case study: Mary

High: age of onset = 12; total youth offences = 50; total adult offences = 58

Mary had child protection involvement since she was 1 year and 8 months old, with three substantiated reports to child protection, the last when she was 12 years old. One of Mary's placements in OHC was in a residential unit in Bass Coast. Her family of origin resided in East Gippsland, and her multiple placements in OHC involved multiple changes in residence, thereby, resulting in frequent changes in schools attended.

Mary was first placed in OHC at the age of 12 years and 1 month, with four subsequent placements prior to turning 13 years old. Her last recorded placement was in kinship care at the age of 15 years and 5 months. Mary had

eight placements in total up to 2015, including residential care. The police file narratives indicate that Mary was exposed to and experienced sexual exploitation within her family of origin, the OHC sector and in her intimate relationships. There were multiple (61) family violence reports, both as an affected family member and as the agent of abusive behaviour, the first of which was at 10 years old. Mary lived at 15 public housing addresses up until 2015, which indicates residential instability. The police data included one instance of Mary being recorded as the victim of an offence against the person when under 18 years old, at the age of 15 years.

Limited data were available relating to the support services accessed. A referral was made to a sexual assault service in response to sexual exploitation when in care; however, Mary did not engage. There was a record of engagement with a counselling service in mid-adolescence. The records indicated successful completion of intervention through youth justice. There was also significant involvement with mental health services into adulthood.

There were no recorded missing person reports for Mary.

At the time of inclusion in this cohort, Mary had already had multiple contacts with police in LEAP data; the first was at 10 years old in the form of a family violence incident. She was first listed as an offender (age of onset) at 12 years old. The Victoria Police data showed that she continued to engage in offending behaviour up to 2018 at 28 years old. Her level of offending at 21 years old was significantly elevated from that predicted in 2005. Mary's first field contact with police was at 16 years old, and records indicated ongoing field contacts, a total of

four, as an adult. Mary received two youth justice orders and breached on one occasion. She completed intervention under a condition of one of the orders. Her mother and one brother have recorded criminality.

Mary attended three primary schools and two secondary schools. The changes in schools were due to multiple OHC placements. Education may have acted as a protective factor. Despite the disruptions due to changes in location, Mary engaged in Year 12 in the area of her origin.

Mary had significant ACEs and considerable residential instability, all associated with her offending behaviour during adolescence and adulthood.

Bass Coast cohort case study: Bill

Adolescent limited: age of onset = 11; total youth offences = 41; total adult offences = 0

Bill was 16 years old when he was included in this cohort. He was placed in OHC in Bass Coast as one of four placements. Bill had one address recorded in public housing prior to 2005.

Notations in the police file narratives indicated that Bill's mother was unable to protect him from violence enacted by his father and that there were concerns about neglect. He had a history with the DHHS, with his first substantiated report to child protection at 5 years old; there were five substantiated reports in total prior to 2005. Bill's OHC placements included residential care, and from 11 to 12 years old, he experienced four placements.

There was a record of Bill experiencing CSA at the of age 12. There was one family violence report when Bill was 11 years old. The police data recorded that Bill was a child victim on two occasions, the first of which occurred when he was 11 years old.

Bill was first listed as an offender at 11 years old, and his early offending pattern was with peers, who were often co-residents in care. There was no record of adult offences in Victoria. However, the police notes indicated some minor offending during early adulthood interstate. Bill's offending trajectory was well below that predicted at 21 years old.

Bill was placed on and completed one youth justice order. There were no conditions for intervention on the order.

There were no missing person reports for Bill. He had a single field contact, which occurred at 16 years old.

There was no record of parental criminality, other than the DHHS notation of violence perpetrated by Bill's father. The police file narrative indicated that his younger brother had been recorded as an offender.

The DET data was limited; however, it was recorded that he attended a primary school in Bass Coast and two secondary schools in another LGA in Inner Gippsland, with enrolments in Years 9 and 11. The DET notes indicated that, during OHC, an application for re-entry to secondary school was made, which stated that Bill had been home-schooled, had a diagnosis of oppositional defiance disorder and presented with violent behaviours. There was also a

notation indicating developmental delay and that previous re-entry attempts at a Wonthaggi primary school were unsuccessful. Bill's participation in education appears to have been affected by multiple care placements across Gippsland.

Bill experienced ACEs, including CSA, and it presents that he was exposed to violence in the home during early childhood. Bill's offending, despite a substantial number of youth offences, was mostly restricted to adolescence. It may be that the statutory interventions were a protective factor in terms of future offending for Bill.

6.4.2. Summary

The incorporation of developmental history from the DHHS, DET and further context of life circumstances derived from the Victoria Police file narratives has enhanced the understanding of the interaction of factors and how they are associated with engagement with justice systems. The four case studies provided highlight these associations and potential points of early intervention that, if instigated, may have altered future outcomes. Such points of early intervention include the initial response at the first report to child protection, maintaining stability in OHC placement and education and responses at contact with police (for example, at attendance at a family violence incident). The patterns that emerged are consistent with those derived from the numerical data for the entire Inner Gippsland sample. This strengthens the confidence in the results of this study. The variability in the data sources available to the researcher is noted, and the implications for practice are discussed in following Chapters 8 and 9.

6.5. Practice wisdom

The final step in data collection was to survey the workers from the Bass Coast service system (see Section 4.5.3). The anonymous online survey drew from the practice wisdom of the Youth at Risk panel professionals who work in Bass Coast to further contextualise the results with local knowledge and understanding regarding the factors that relate to youth contact with the criminal justice system in Bass Coast, consistent with the social ecological approach applied in this research.

The Bass Coast Youth at Risk panel includes a broad range of professionals from the local service system (see Section 4.4.4). The Youth at Risk panel meets regularly, chaired by Victoria Police, to respond to youths identified as at-risk on the EIT and youths and families whom the workers consider as at-risk. The partnership model of practice provides an opportunity to share data and service system contact information to formulate integrated early intervention responses and reduce vulnerability. Utilising the local service system collaboration for survey data collection is consistent with the ecological framework applied in this research because the agencies reflect the systems within the social ecology of the Bass Coast youth cohort.

The practice wisdom of the Bass Coast Youth at Risk panel members was collected through an anonymous online survey (see Section 4.5.3). There are 30 regular members of the service collaboration, and emails were sent to the mailing list of 33 workers who requested participation. Some emails resulted in leave advice messages, and some were no longer valid. A total of 21 responses were received with a response rate of 64 per cent.

Table 6.1 and Figure 6.1 present the responses regarding the role of specific factors in increasing or decreasing the risk of youth contact with the criminal justice system. There were some missing items (indicated in Table 6.1). Therefore, the percentages of the responses for individual items may be less than the total response rate. The pattern of responses indicated that three of the respondents misidentified the direction on the Likert scales. In these cases, the responses were omitted from the analysis. The scale points of 'somewhat' and 'significantly' decrease or increase have been summed in the data presented in Table 6.1.

Table 6.1. Professional perspectives on factors that increase or decrease the risk of contact with justice systems

Factors	Increased risk of contact with justice systems (%)	Decreased risk of contact with justice systems (%)	Minimal or no effect (%)
Charged with an offence (n = 17)	88	12	0
First contact with police under 14 years old (n = 16)	88	6	6
Contact with police in public space (n = 16)	37	44	19
Listed as a missing person (n = 16)	69	6	25
Placement on a youth justice order (n = 15)	93	7	0
Receiving intervention on a youth justice order (n = 15)	73	27	0
Exposure to neighbourhood crime (n = 16)	100	0	0
Family member with criminal history (n = 16)	94	6	0
Regular school attendance (n = 21)	14	81	5
Academic achievement (n = 21)	10	76	14
Parental support for education (n = 21)	14	81	5
Successful transition from primary to secondary school (n = 20)	15	85	0
Frequently changing schools (n = 20)	85	10	5
Receiving support services in school (n = 20)	15	85	0
Positive peer connections (n = 18)	0	100	0
Exposure to family violence (n = 19)	100	0	0
Experience of child abuse (n = 19)	100	0	0
Placement in out-of-home care (n = 18)	89	5	6
Family receiving services from community agencies (n = 18)	22	61	17
Strong positive family bonds (n = 18)	11	89	0
Placement on a child protection order (n = 18)	78	11	11

Factors	Increased risk of contact with justice systems (%)	Decreased risk of contact with justice systems (%)	Minimal or no effect (%)
Socio-economic disadvantage in youth's community (n = 18)	100	0	0
Living in public housing (n = 18)	67	5	28
Frequent change of address (n = 18)	84	0	16

Figure 6.1 presents the data from Table 6.1 to highlight the levels of concurrence and differences between the responses.

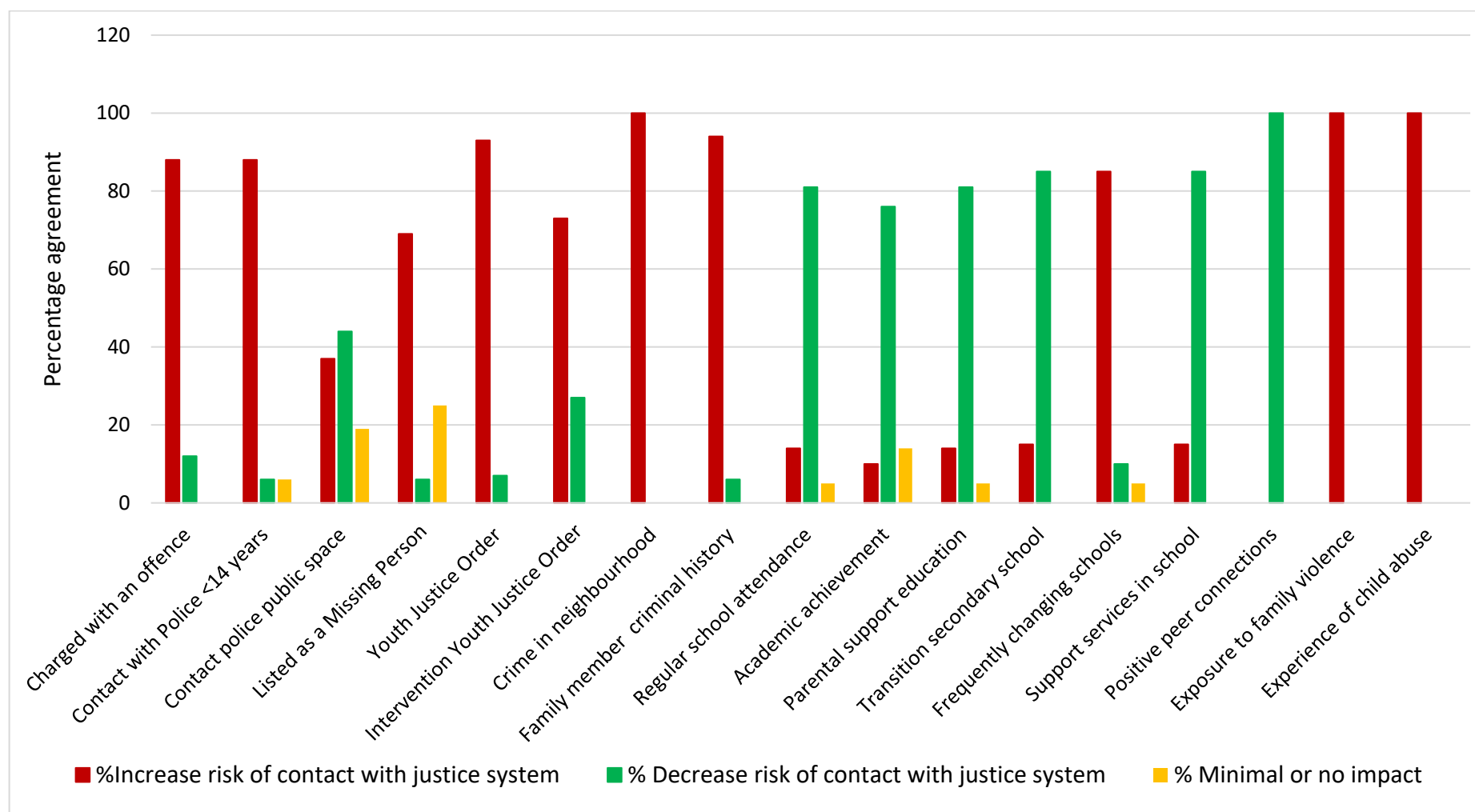


Figure 6.1. Professional perspectives on factors that increase or decrease the risk of contact with justice systems (prepared by the researcher).

The survey responses indicated a considerable level of agreement between the multidisciplinary members of the Bass Coast Youth at Risk panel. According to the respondents, engagement in education was a key protective factor, along with stability in family and positive peer connections. Consistent with the quantitative analysis and the body of empirical literature, ACE formed the primary factor endorsed by all workers as increasing youth contact with justice systems. Disrupted developmental transitions and contact with police, especially when young, were also highlighted as increasing risks in the worker's responses.

There was a minimal divergence of opinion on the effects of the factors regarding contact with justice systems. The contact with police in public space factor showed the greatest difference, with 73 per cent of respondents rating this as increasing and 44 per cent as decreasing contact with justice systems. Receiving intervention on a youth justice order also showed a divergence of opinion, with 73 per cent of respondents rating this as increasing contact and 27 per cent as decreasing. The responses were anonymous; however, it is hypothesised that the basis for differences in the ratings may be associated with the individual's professional role. It is likely that workers in justice agencies would have an investment in the processes of their role as fostering positive outcomes. In contrast, welfare agency workers may have differing opinions about justice-based interventions. The additional factors recorded by respondents were focused on positive role models or mentors and strong community connections, which were rated as decreasing the risk of contact with the criminal justice system.

The results from the survey of the Bass Coast workers showed a considerable degree of consensus across the Youth at Risk panel members. The presence of positive community

connections was understood to ameliorate potential risk factors reflected in the immediate family system or through contact with the criminal justice system.

Engagement in education, a form of positive connection at the microsystemic level, was strongly endorsed as reducing the likelihood of contact with justice systems. Overall, the views of frontline workers were consistent with the research findings (based on the analysis of the EIT data and the case studies, including the developmental data). The perspectives of the frontline workers confirm the understandings derived from the case studies and Inner Gippsland data analyses. The survey results demonstrate the value of including practice wisdom in designing and implementing interventions specific to the local context.

6.6. Integration of findings

Section 6.6. discusses the features of the Bass Coast subset of youths, their social ecology and how the interactions across the social systems influence youth contact with justice systems. In part, the researcher's perspectives inform the considerations. This lens comes from 25 years of professional practice in Inner Gippsland with youth involved with justice systems and the doctoral study model that embedded the researcher in the service system.

There was considerable variability in the data available from the DET for the 10 youths from Bass Coast. The implications data access and storage and what records were retained is discussed in greater detail in Section 8.4.2. There were also considerable variations between the details provided in the Victoria Police files narratives for each of the Bass Coast youths.

6.6.1. Police contact

Overall, in terms of criminogenic factors, the Bass Coast cohort reflected similar offending trajectories to those present in the Inner Gippsland sample (see Section 6.1).

The matching of the developmental data from the DHHS services, including child protection, housing and youth justice, and the education history from the DET helped contextualise the police records to identify potential intervention points and enhance the understanding of factors related to future engagement in offending behaviour.

The multiple data sources highlighted the significance of peer relationships, a critical component of the developmental stage of adolescence, and how these influence contact with police and developmental outcomes. There was a clear link between four youths from the Bass Coast cohort: they were involved in offending behaviour together, and were often together at the point of a recorded field contact. On the enrolment data available from the DET, four of the youths attended the same primary school at the same time, facilitating peer connections. The police file narratives highlighted peer involvement across all the Bass Coast youths. This subgroup of the Bass Coast cohort had similarities with the 'peer influence' grouping identified in the factor analysis of the Inner Gippsland sample (see Section 5.5.1). The convergence of findings across the multiple levels of data analyses strengthens the associations between the factors, such as peer relationships and youth contact with justice systems.

Three of the 10 Bass Coast youths had family members (parents or siblings) with a criminal history recorded by Victoria Police. The file narrative for each of the Bass Coast youths was not consistent in the information recorded. Therefore, there could potentially be other youths in the cohort who had family members with a criminal

history. On the basis of the researcher's practice wisdom and the results from the Bass Coast cohort case studies it is asserted that the attitude to police and/or government authorities of a youth's family system may affect their preparedness to make reports to police and seek support services. This can interact with the service system response to families who have an extensive history of contact across the service system, including the police. Therefore, when a member is interviewed by the police or is missing from home, the family's response will be influenced by prior contact with the police and other statutory agencies, such as child protection services.

The police file narratives indicated differences between parental attitudes and the effects on the individual youths. A family's response or willingness to engage with police, either at the point of contact or through a missing person report, was linked to outcomes regarding future offending and service system involvement. In terms of making a missing person report, where the youth lived with their family, the absence was recognised as a concern, and there was a degree of confidence that the police could assist. Parental involvement at the point of police contact, when contextualised by developmental data and police file narratives, support the researcher's contention that this involvement reflected a responsive caregiving or family system.

There was considerable involvement in the youth justice system by youths from the Bass Coast cohort. Consistent with the taxonomy of adolescent limited offending, four of the nine youths who had been placed on a youth justice order had no or minimal adult offending. This finding shows that involvement in youth justice does have the potential to interrupt a predicted trajectory; however, this tertiary form of prevention, due to the formal criminal history, can have consequences that affect the outcomes for youths.

Employment opportunities can be restricted if an individual has a finding made against them in court. Meeting the requirements of an order may also interrupt a range of potentially protective connections. Formal contact with youth justice is associated with future offending (SAC, 2016); this was the case for five of the nine youths with a youth justice history. Further, a history of youth justice can affect a youth's access to positive protective community connections, such as employment.

6.6.2. *Developmental experiences association with future offending*

The case analyses of the Bass Coast youths also confirmed the adverse effects of exposure to family violence. All youths had LEAP records of family violence and, with the additional developmental data, further exposure to family conflicts was clear. There were more family violence records in the Bass Coast cohort than the Inner Gippsland sample. The Bass Coast cohort youths were also younger at the first record of family violence than the average Inner Gippsland youth. The findings related to exposure to family violence indicated that if the police at the point of contact with children and youths in day-to-day community policing could access LEAP records, such as family violence reports, this would facilitate early intervention opportunities. Persistent offending was associated with the degree of exposure to family violence and child victimisation.

In Bass Coast there were two residential units for youths placed in OHC, both of which have since closed; one, in June 2015 and the second, in September 2016. At the point of identifying the Bass Coast cohort in 2005, and for most of the time during which the data for this project was collected, residential care was a component of the service

system in Bass Coast. A total of four of the 10 youths were placed in OHC, with the DHHS records indicating that three of these youths had residential care placements.

Residential care placements occur through substantiated reports of harm in the family home, and behavioural disruption or specific needs that require residential care rather than being placed in another placement, such as foster care.

The work of Cashmore (2011) and in particular McFarlane (2016, 2018) highlighted the potentially negative unintended consequences of placement in OHC, especially residential care, which can increase contact with police for these youths. The policy in the OHC sector require that a missing person report be made when a young person is absent from placement for a specified period (DHHS, 2019). This process can affect the number of missing person reports recorded for youths in OHC and increase contact with police. Bass Coast youths placed in out-of-home persisted in offending at or above the level predicted on the EIT. Therefore, the findings from this study confirm the associations between OHC and youth offending.

Residential care or other out-of-home placements can exacerbate the effects of ACEs because it is common that youths experience multiple placements and are often relocated geographically distant from their families and peer systems. One youth experienced nine placements in under two years, with four occurring in under 12 months. For a young person to experience multiple placements across the region breaks community connections, some of which may have formed a protective factor. Placement in OHC leads to disruption in education and positive peer connections. Placement, especially in residential care, increases exposure to other youths with similar ACEs. Care criminalisation (McFarlane, 2016, 2018) increases a negative dynamic with police. The

results have shown the convergence of police and developmental datasets assists in identifying critical developmental transitions when they interact with vulnerability.

A theme of exposure to or engagement in harmful sexual behaviours was evident from the addition of developmental data. Sexual harm, although not necessarily substantiated or resulting in formal processing, was recorded for eight of the Bass Coast youths. There were three youths with LEAP records of CSA. This difference between the official records of sexual harm is consistent with the levels of sexual harm in the general community in terms of reports, substantiations and associated formal justice processing (Australian Institute of Family Studies & Victoria Police, 2017; Fitzgerald, 2006). This understanding, derived from narrative information in the case analyses, highlights the value of including such data when building an understanding of the experiences of youths at risk of offending and can inform the service system responses to vulnerability. It is important that families and youths have access to support services in a timely and responsive manner to ameliorate the effects of exposure to sexual harm. The practice wisdom further supports the importance of access to support services when families are exposed to adverse experiences.

6.6.3. *Education participation*

Engagement in education plays an important role in individual development and reflects critical developmental transitions, such as primary to secondary school (Gottfredson, 2001). There is a strong relationship between school performance, rates of school retention, truancy and involvement in youth offending (Jesuit Social Services, 2013; Weatherburn, 2001). From the data available, attendance at multiple primary and

secondary schools was evident in six of the Bass Coast youths. The results showed a clear association between disrupted education and youth offending. For one youth in the Bass Coast cohort (Mary) (who had child protection involvement since infancy, which was indicative of exposure to ACEs, multiple OHC placements and persistent offending), the completion of secondary education (Year 12) presents as a protective factor that may have served to ameliorate other concerns. The final year of education was completed in this youth's community of origin, which also suggests the protective nature of local connections and community support.

Aspects of place, such as the location of schools across a region, warrant consideration when considering engagement in education. In Bass Coast, many youths attend smaller local primary schools and then transition to the central secondary school in Wonthaggi. The secondary school has a bigger population and, for some youths, this involves travel from the smaller town. This reduces community awareness of the individual and may disrupt positive connections. The maturation tasks of adolescence are strongly connected to peer relationships. There is a broader and more diverse group of peers to interact and negotiate with when the smaller primary school populations converge in the secondary school, creating a potential point of vulnerability.

The need for travel to attend secondary education can be challenging for some families. Anecdotal information gained from attending the Bass Coast Youth at Risk panel highlighted the demand on families, particularly for single parents and those families with mental health concerns or active family violence in the home. It was often a challenge for the parent/s to commit to children regularly attending school and having the resources to ensure that this occurred. The case analysis of the Bass Coast cohort

demonstrated the protective nature of participation in education and, in particular, the importance of a successful transition from primary to secondary school. The local professionals, through the survey of the Bass Coast Youth at Risk panel members, endorsed these factors and strengthened this finding.

Concerns around school engagement were a key factor leading to the establishment of the Bass Coast Youth at Risk panel because there were groups of students and families across the local primary and secondary schools that presented with difficulties with school attendance. The level of disengagement from education as a concern for increased contact with police was evident in the notations in the DET records and the Victoria Police file narratives and was endorsed in the survey of worker's perspectives. Attendance for some of the at-risk students was as low as one day of school per fortnight. Low levels of attendance are well recognised as having a severe impact on learning and future opportunities that foster positive social outcomes, such as employment (Gottfredson, 2001).

The DET data was incomplete due to their system of recording and retention of records relating to attendance, enrolment, and suspensions/expulsions (see Section 8.4.2 for a full discussion of access to the DET datasets). Confidence in conclusions about the influence of engagement with education was restricted due to the inconsistencies in the information available for each of the youths in the Bass Coast cohort.

6.7. Summary

The convergence of multiple data sources for the Bass Coast youths has provided depth and context to the findings derived from the quantitative analysis of the total Inner

Gippsland sample. The addition of the DHHS, DET, Victoria Police file narratives and practice wisdom of local professionals enhanced the understanding of those factors that affect an individual's offending trajectory.

The findings highlighted the utility of employing multiple data sources because no single factor, such as disengagement from education or family disorganisation, can account for the complex relationships between the factors across the social systems in which an individual is embedded and youth engagement with justice systems. The addition of developmental data and practice wisdom to the EIT outputs and LEAP dataset contextualised the contact with the police within a developmental framework and the systems that form the social ecology.

The findings from this study demonstrated that the interactions across a community's social ecology need to be understood to inform prevention initiatives. Protective elements can be formed, and risks can be exacerbated, within the interactions between the factors that relate to youth contact with justice systems. The research findings highlighted that exposure to ACEs and subsequent placement in OHC disrupts positive factors and can increase contact with police. Consistent with the developmental stage of adolescence, the role of peers in engagement with justice systems was shown to be critical.

The findings demonstrated the key developmental transition points, such as the transition from primary to secondary education and peer engagement as a feature of adolescence, as important opportunities for early intervention. Local knowledge about community resources and the interactions of social ecological systems specific to place

highlighted in the practice wisdom of the Bass Coast Youth at Risk panel formed a critical component in delivering effective developmental prevention strategies.

The results for the Inner Gippsland sample and Bass Coast cohort are discussed in Chapters 7 and 8. The broad themes identified through the analyses and the implications of the findings are examined in Chapter 8. Chapter 8 also considers the research project more broadly, focusing on the barriers to translating this research into practice and the macrosystemic influences on policy and practice.

Chapter 9 provides specific recommendations for practice to reduce youth contact with justice systems derived from the research results. Chapter 9 is delivered as a report to the Inner Gippsland senior officer's group consistent with the goal of this project to provide an evidence base for practice innovations to address the priorities of the Inner Gippsland service system. The practice implications that may ensure that a service system is responsive to the local context are also detailed in Chapter 9.

Chapter 7. Dissemination of results

Consistent with one of the goals of this dissertation, of generating findings in a form useful to the broader audience of the research and practice communities, Chapter 7 presents a paper submitted and accepted for publication. The *Police Science* journal was selected due to its focus on Australian and New Zealand evidence-based policing. The paper presents interim quantitative results, as detailed in Chapter 5, with the discussion focused on the policy and practice implications of the findings.

The focus on predictive modelling provides a greater depth of examination for this field and the distinguishing features of the Victoria Police EIT model. Opportunities for early intervention at the point of police contact to interrupt a predicted offending trajectory are highlighted. The ethical considerations and limitations of the study are canvassed during the consideration of how the findings can inform practice innovations.

Using Victoria Police data sets to identify opportunities to prevent or reduce youth offending

This paper provides an analysis of a sample of youth who have been recorded as an offender at least once in Victoria Police data sets to identify early intervention opportunities to interrupt an offending trajectory. The adverse consequences of youth offending and finite community and government resources require that prevention efforts are targeted towards those factors that will lead to beneficial outcomes for youth, their families, their neighbourhood, and the community as a whole. Police in Victoria, Australia utilised existing data sets of both criminogenic and vulnerability factors to develop a model to assist early identification of youth at risk of coming to the attention of the State's criminal justice system. A retrospective longitudinal analysis was utilised to generate further understanding of potential early intervention opportunities to reduce persistent youth offending. Consideration is given to how the results can inform policy and practice decisions to enhance prevention efforts.

Introduction

This paper presents initial findings from a broader study focused on early intervention to reduce youth contact with justice systems. As outlined by Payne and Weatherburn (2015) there is a need to accurately target prevention efforts to those youth who are at risk of persistent serious offending. The research study presented in this paper responds to the objective to address youth at risk of offending within the Child Youth Area Partnerships (CYAP) agenda of the Victorian State government in Australia (Victorian State Government, 2014). The CYAP framework consistent with collective impact (Kania & Kramer, 2011) was established to generate local solutions to local problems. Despite Victorian crime statistics indicating a steady decline in youth offending over the period April 2009 to March 2019 (Crime Statistics Agency, 2019) and a decrease in numbers since 2000 of youth subject to youth justice processes in Australia (Payne, Brown, & Broadhurst, 2018) there remains a sub-group of youth who persist in serious offending behaviour resulting in adverse outcomes for the individual and their

families as well as social and economic costs across the community. The current place-based study utilises official police data to examine those factors related to youth contact with police to provide an evidence base to develop effective interventions to reduce these costs within a local context.

This paper adopts the theoretical framework of developmental criminology that outlines the importance of early intervention, reflecting established research on the age crime curve (Sweeten, Piquero, & Steinberg, 2013; Sampson & Laub, 1993). The empirical research in identification of youth offending trajectories with a focus on Australian studies is examined to enhance understanding of the importance of focusing prevention resources for maximum impact. The results are discussed with respect to informing practice and policy to enhance early intervention opportunities. The findings from the current study indicate, somewhat contrary to previous studies, that early contact with police can act as a protective factor in certain contexts.

Importance of early intervention

A key aim of this study was to explore opportunities for early intervention to prevent youth engaging in offending behaviour as well as to interrupt a potential offending trajectory. Primary prevention strategies aim to prevent the onset of offending rather than tertiary interventions that aim to address offending behaviour once it occurs. Assink, van der Put, and Stams (2014) argue that early intervention is crucial, noting that developmental psychology indicates that childhood behavioural problems become more robust as the individual ages and are therefore less open to change. Early intervention to prevent onset of

offending has social and economic benefits including reducing adverse impacts on young persons.

The age of an individual at initial contact with justice systems plays a critical role in determining the likelihood and frequency of future offending. The body of literature on the age-crime relationship reviewed by Piquero (2008) establishes the key relationship between initial contact with the criminal justice system at an early age and an increased likelihood of future persistent offending. In Australian youth offender populations research demonstrates that the younger an individual was at first contact with the youth justice system the more likely they were to engage in persistent, serious offending compared to those youth who were older at first contact (Shepherd et al, 2019; Weatherburn, Cush, & Saunders, 2007; Skrzypiec & Wundersitz, 2005). Formal contact with the youth justice system, ranging from caution to incarceration, has been linked with higher rates of re-offending (Sentencing Advisory Council, 2016). The consequences of contact with the criminal justice system can impact on future life opportunities and thereby increase the potential of future offending (Evans, Simons, & Simons, 2017).

Variations in arrest trajectories in regard to age of onset has been described in research by Wiesner, Capaldi and Kim (2007) utilising data from the Oregon Youth Study. A similar proportion of the sample with early onset (defined as under 14 years) were categorised in both the high level and low level chronic offender groupings. These differences are discussed with respect to the statistical modelling techniques used in the study and the comparisons between self-report and official records of engagement in offending behaviour (Wiesner, Capaldi, & Kim, 2007).

Youth who persist in a high level of serious offending behaviour throughout their life significantly impact on resources and community safety, disproportionate to the actual number of youth that fit this category. Research has demonstrated that tertiary interventions to interrupt the trajectory for this group of youth are often restricted in efficacy (Amemiya, Vanderhei, & Monahan, 2017). The study reported here explores how existing Victoria Police data sets can be utilised to identify youth at risk of lifelong adverse consequences and significant impact on the community to allow resources to be directed to this cohort. Payne and Weatherburn (2015) stress the importance of distinguishing those youth who are likely to continue to offend into adulthood to enhance prevention opportunities.

Factors related to offending trajectory

The accumulation of multiple risk factors has been shown to have greater impact on the likelihood of engaging in offending behaviour than the acquisition of a specific risk factor (Allard, Chrzanowski, & Stewart, 2012). The importance of identifying and understanding the interaction of factors (Thornberry & Krohn, 2005) related to potential offending allows for resources to be directed to those individuals most likely to persist in contact with justice agencies. Research focused on examining the relationship between individual characteristics, criminogenic variables and vulnerability factors and youth offending seeks to identify cohorts of youth for whom intervention can be prioritised (for Australian empirical studies see Broidy, Stewart, Thompson, & Chrzanowski, 2015; Livingston, Stewart, Allard, & Ogilvie, 2008; Marshall, 2006).

As asserted by Payne and Weatherburn (2015) empirical research is critical to identify from those youth who engage in offending behaviour who will persist in

offending and who will desist. Sutherland and Millsteeds' (2016) study, a first in the Victorian context, sought to identify the characteristics of offenders who follow diverse offending trajectories to develop understanding of; who would benefit most from intervention, at what age interventions are best targeted, and the type of interventions best suited for the different groupings. Their analysis identified a developmental taxonomy of four categories of youth with differing offender trajectories based on age of onset and frequency of offending. This categorisation provides an opportunity for intervention efforts to be directed to those youth who represent the greatest cost to the community to promote positive outcomes for the individual, their family and the community.

Predictive modelling

To guide policy and practice prospectively distinguishing those youth at risk of future persistent serious offending is critical. Predictive models have been developed to statistically estimate the potential for future offending so that intervention efforts can be directed to disrupt an individual's trajectory. In essence, they aim to identify those youth most likely to persist in serious offending and thereby represent the greatest social and economic cost to the community. Statistical techniques such as semi parametric group-based methodology (SPGM) developed by Nagin & Land (1993) are used to identify age-related patterns of contact with criminal justice systems, for specific cohorts of individuals and how these relate to future offending. A significant body of empirical research (including Piquero, 2008; Day & Wiesner, 2019) has identified differences in groups of youth based on their offending trajectories. A trajectory includes the age at which offending commences, the age at which offending stops, offence specificity and diversity, and the volume of offending. Early

intervention forms a key tenet of this research to ensure that resources to prevent or interrupt the trajectories of youth who enter the criminal justice system at a young age and commit a disproportionately high volume of all youth crime.

It is critical to identify the factors associated with youth at risk of future persistent offending and as asserted by Borum (2000, p. 1264) “to accomplish that through some systematic process”. However, Weatherburn, Cush, and Saunders (2007) note that a full assessment of all youth at their initial contact with criminal justice systems is not practical in terms of time and access to data and is prohibitive financially. The practicality and cost of assessment of all youth at initial contact with justice systems as well as the value of early identification of at-risk youth, highlight the potential value of predictive modelling to identify those youth at greatest risk of future offending.

Weaver (2010) proposed that identification of trajectory groupings can provide a useful screening device to more accurately distinguish the level of future contact of specific sub-groups of youth in contact with justice systems. Ferrante’s (2013) research utilised a SPGM to identify the best fit trajectory model, that detailed unique conditions related offending patterns, in a Western Australian sample of youth offenders. Such findings enable policy makers to better quantify the cost/benefits of specific interventions to increase efficacy of comparison and prioritisation of resource allocation. To enhance positive outcomes for youth and community safety, Victoria Police initiated a process to utilise existing data sets to identify opportunities to interrupt offending trajectories for those youth at risk of future offending.

Point of contact with justice system

In much of the scholarly Australian and international literature examining offending trajectories, cohorts studied were identified at the point of formal criminal justice processing (charged with an offence and received an outcome in court) and examined the likelihood of re-offending (Assink et al., 2014; Sutherland & Millsteed, 2016). Australian research in the main has examined factors that relate to youths' ongoing contact with the criminal justice system once formal youth justice processing has occurred (Allard et al., 2014; Ferrante, 2013; Stewart, Allard, & Dennison, 2011; Sutherland & Millsteed, 2016).

To identify youth at risk of offending prior to engagement in offending behaviour presents as the most effective point to intervene and prevent progression of a potential offending trajectory. Assink, van der Put, and Stams (2014, p. 848) noted that "no valid and reliable instrument is yet available for predicting the onset of general delinquency among juveniles". Therefore, Assink et al (2014) undertook predictive analysis of Police data in the Netherlands to develop an actuarial tool to calculate an estimate of future delinquency. The aim of their research was to develop a screening tool that would enable Dutch Police when in contact with individuals prior to offending to identify youth who may be at risk of future offending and so act to counteract that risk.

The work of Victoria Police to identify early intervention opportunities that minimise formal criminalisation of youth addresses this gap in the current body of Australian empirical work. The predicted offender trajectories generated from the Victoria Police database, include data prior to an individual being processed by Police for an offence. As demonstrated by Evans, Simon and Simon (2017) and

in the studies detailed above formal contact with the criminal justice system is a factor associated with re-offending. The data analysis of vulnerability and criminogenic factors undertaken by Victoria Police provides an opportunity to interrupt a potential offending trajectory prior to engagement in offending and subsequent formal criminal justice processes.

Identification of potential protective factors

One of the aims of the current study was to identify those factors that interrupted a predicted trajectory. A considerable proportion of empirical research in modelling has related to identification of risk factors and prediction of recidivism and a risk paradigm has dominated government policy (Case & Haines, 2009). The evidence regarding protective factors within a developmental and ecological framework is in its infancy compared with research on risk factors (Tolan, 2007, 2001).

Identification of protective factors in the current research is seen as important, as risk based interventions can be stigmatising and fail to promote expectations of better outcomes for those individuals and their families for whom they are designed, impacting on engagement and therefore efficacy (Ward & Maruna, 2007; Heffernan & Ward, 2018). The findings from the current study are examined to identify potential protective factors, those that ameliorate risk, to further enhance opportunities to generate positive outcomes for individual youth and the community in which they live.

Current Study

This study formed a component of a trial, the aim of which is to utilise existing police data sets to contribute to the service system's capacity to effectively

respond to youth at risk. A key aim of the current study is to identify intervention opportunities to prevent the onset of offending and interrupt the trajectory of youth early after the onset of offending. The initial findings discussed in this paper contribute to an evidence base to foster positive youth development at the optimal point in developmental stage.

Utilising a data set obtained from the Victorian Police Law Enforcement Assistance Program (LEAP), potential trajectories based on factors that have been demonstrated to be associated with future offending are generated. The data set includes both data that reflects vulnerability such as; exposure to family violence, missing persons reports, as well as criminogenic factors such as; engagement in offending, offence type, and when an individual has formal contact with police in public settings, categorised as Field Contact.

The data set includes records where an individual was recorded against a criminal incident though the individual was not arrested by police. This may be due to the age of the individual being below the age of criminal responsibility which is age 10 years, in Victoria (*Children Youth and Families Act, 2005*), police discretion or insufficient evidence to proceed to court. This aspect of the Victoria Police data analysis and generation of potential trajectories is a critical point of difference from previous empirical studies of offender trajectories.

Victoria Police developed the criminal seriousness index (CSI) a numerical value based on the quantity and seriousness of offending calculated on a daily basis.

The CSI is devised from a Canadian model called the Criminal Severity Index (Wallace, Turner, Matarazzo, & Babyak, 2009). Statistical modelling from the LEAP data set provides an individual's current and predicted CSI at age 21 years. This process provides information so that early intervention can be

considered for youth for whom there is the greatest potential to serious persistent engagement in offending.

Method

The study has Ethics approval from both Federation University Australia and Victoria Police. The trajectory of 57 youth from the specified police division in regional Victoria were generated retrospectively therefore allowing for comparisons between predicted and actual CSI score at age 21 years. De-identified data was gathered for youth who met the parameters of the model at 1 January, 1 March and 1 June 2005 in the police division, for a follow up period of thirteen years. It is acknowledged that this analysis may reflect context specific findings given the sample was drawn from one Victoria Police division in regional south east Victoria.

For the sample of 57 youth the following data from Victoria Police LEAP database was provided:

- Date when and offence type for which the individual was recorded against a criminal incident,
- Missing Person (MP) reports, age at the time of the report,
- A record of the individual being listed as the victim of an offence against the person when aged under 18 years (CV), age at time of report,
- A record of the individual being listed as the victim of a sexual offence when aged under 18 years (CSA), age at time of report,
- Family Violence (FV) Incident/Reports where the individual has been recorded as either the perpetrator or affected family member, age at the time of the incident/report,

- Field Contact (FC): where an individual has contact with Police in public and a record of the contact is made by the Police, age at the time of the report, and
- Demographics at the point of identification in 2005 (age, gender).

All historical data on the data set, as listed above, at the point of identification in 2005 was provided, as well as the data up to June 2018. In addition both the current CSI and the predicted CSI at age 21 years at the point of identification was provided for the total sample of youth.

For the purpose of the current study a new factor, adverse childhood experience (ACE), was created by the researcher. This included: the number of Missing Person and Family Violence incidents/reports recorded when the individual was under 15 years; Field Contact reports when the individual was under 10 years; and the total number of Child Victim reports.

Analysis

All analyses were computed using the Statistical Package for the Social Sciences (SPSS). In the reporting of results and discussion section the designation of 'age of onset' is the age of the individual when first listed against a criminal incident in the LEAP database.

Results

The analysis generated a sample of 57 youth that included 50 males and 7 females.

The sample as generated included youth at varying ages thereby each case had differing time as a youth or an adult (18 years of age and over) across the period for which data was provided. The youngest age at inclusion in the sample was

8.2 years and the oldest 17.80 years with a mean of 14.46 years and standard deviation of 2.166 years.

Table 1 provides the statistical details of the data set collected for the total sample. Both the mean and median values are provided as for a number of the data points the data was skewed therefore the median provides greater understanding of the data for the total sample than the mean.

Table 1. Summary Statistics for the Data Set Total sample n=57

	Minimum	Maximum	Mean	Median
Age of Onset of offending	5 years	16 years	10.89 years	11 years
Total Youth Offences	2	148	34.88	29
Total Adult Offences N= 50	0	171	35.30	17
Number of Missing Person (MP) reports N=32	0	16	1.68	1
Age first MP report	3 years	23 years	12.66 years	13 years
Field Contact (FC) N=55	0	79	11.70	8
Age first FC	5 years	19 years	14.05 years	14 years
Number of Child Victim (CV) reports N=34	0	6	1.37	1
Age first CV report	2 years	17 years	10.59 years	11.5 years
Number of Family Violence (FV) Reports N=48	0	60	8.58	5
Age first FV report	6 years	28 years	15 years	16.06 years
Number of Child Sexual Assault Reports N=13	0	5	0.35	0
Age first Child Sexual Assault	2 years	15 years	7.62 years	6 years
Number of Adverse Childhood Experiences N=45	0	15	3.25	2

A total of 50 youth progressed to adult offending with 7 of the sample not engaging in adult offending in the data collection period 2005-2018. As noted there was variation in the time as an adult for individuals in the sample impacting on the opportunity to be recorded as an adult offender.

Missing Person reports were recorded for 32 of the total sample, with a median of only one report. The age range of first Missing Person report was considerable with the youngest occurring at 3 years and the oldest at 23 years, with the median age of 13 years. Field Contact were recorded for almost all the sample, 55 of the total 57, with again a considerable range of age at first report, with a similar median age of 14 years.

Vulnerability factors; exposure to family violence, child victimisation, and adverse childhood experiences; were present for the vast majority of the sample.

Age of Onset of Offending

In this analysis the age of onset refers to the age of an individual when s/he were first recorded against a criminal incident in the LEAP dataset.

For the total sample 5 years of age was the youngest age of onset of offending with a median age of 11 years. In previous empirical studies age 14 years is often accepted as early onset (Wiesner, Capaldi, & Kim, 2007) , however as discussed the samples in the majority of studies are youth who have had formal contact with the criminal justice system.

For those youth in the sample who did not progress to adult offending (n=7) for all the age of onset was 11 years or below. For those youth who had greater than the median number of youth and adult offences the age of onset was older, 12 years and above.

To explore the data related to contact with the justice system and risk of future offending further a correlation analysis was undertaken. Table 2 presents correlations significant at the 0.05* (two-tailed)* and 0.01** (two-tailed) level of significance.

Table 2. Correlation Matrix Criminogenic Factors Total Sample (N=57)

	Total Adult Offences	Number of Youth Property Offences	Number of Youth Drug Offences	Number of Adult Property Offences	Number of Adult Drug Offences	Number of Field Contacts	Age at first Field Contact	Age at first Missing Person
Total Youth Offences	.382*	.948**	.501**	.452**		.305*		
Total Adult Offences		.346**	.263*		.333*	.559**		
Age of Onset			.289*		.264*		.333*	.437*
Age first Missing Person							.399*	

Total youth offences correlate strongly with youth property and youth drug offences. Youth property offences have the strongest correlation indicating this is the dominant type of youth offending.

The significant positive correlations between age of onset and age at first Field Contact and Missing Person report demonstrate an association between age at contact with Police and age at initial engagement in offending behaviour.

Table 3. Correlation Matrix Vulnerability Factors Total Sample (N=57)

	Age of Onset	Total Youth Offences	Total Adult Offences	Number of Adult Offences against the Person	Age at first Family Violence report	Age first Child Victim report	Number of Missing Persons reports
Number of Family Violence reports	.262*		.293*	.454*	-.292*	.457**	
Number of Child Victim reports						-.583**	.358**
Number of Adverse Childhood Experience reports		.357**					

The number of Family Violence reports were positively correlated with; the age of onset, total number of adult offences, and number of adult offences against the person. This indicates that the greater the number of Family violence reports the older the individual was when first recorded against a criminal incident and a higher number of total adult offences, and those reflecting interpersonal violence.

Adverse childhood experience and engagement in youth offending were positively associated. There was a significant negative correlation for both the number of and age at first Family Violence and Child Victim report. This indicates sustained exposure to family violence and victimisation when under the age of 18 years.

Actual CSI Below Predicted CSI at Age 21 years

In line with the aim to understand potential protective factors, the total sample was split into two groups; those youth whose actual CSI score at age 21 years was below the predicted level (n=33) and those youth whose CSI score was above the predicted level (n=24). However, given the margin of difference between actual and predicted CSI was in some cases too small to be meaningful, a decision was taken to create sub group of youth with an actual CSI at age 21 years that was a standard deviation below (SD Below) the predicted score at age 21 years. The SD Below group represented 11 of the total sample and all were male.

Table 4. Comparison of Median Scores on Criminogenic Factors of Total Sample (n=57) with Standard Deviation Below Group (n=11)

	Median age at onset	Median number of Youth Offences	Median number of Adult Offences	Median number of Field Contact reports	Median age at first FC report	Median age at first Missing Person report
Total sample N= 57	11 years	29	17	8	14 years	13 years
SD below N=11	9 years	13	4	2	12.5 years	11 years

Table 5. Comparison of Median Scores on Vulnerability Factors of Total Sample (n=57) with Standard Deviation Below Group (n=11)

	Median Number of Family Violence reports	Median Age at first Family Violence report	Median Number of Adverse Childhood Experience reports	Median Age at first Adverse Childhood Experience report
Total sample N=57	5	16.06 years	2	11.5 years
SD below N=11	3	18 years	1	6.5 years

There is a substantial difference between the SD Below sub group and the total sample in number of Family Violence reports. The age of first exposure to family violence occurred at an older age for the SD Below group (18 years) compared to the total sample (16.06 years).

The SD Below group, as shown in Table 4 above, were younger than the total sample when first listed as an offender, as well as at both the first Missing Person and Field Contact report.

Overall there was less exposure to adverse childhood experiences in the group who were below the predicted CSI at age 21 years than in the total sample.

Discussion

The data presented here is the initial phase of a broader doctoral study. The current paper details only the first phase of the study and the following discussion is focused on two key findings and how these in interaction may inform current practice. Further analysis of results has been undertaken and the second phase of the research involved matching data from the Victorian Department of Health and Human Services and Department of Education to further explore opportunities for early intervention to promote positive youth development.

Findings identified that in this sample early onset of offending was not necessarily a flag for future persistent offending. This contrasts with the association between age of onset of engagement in offending behaviour and level of future offending as described in the relevant literature (Dennison, 2011; Loeber & Farrington, 2000; Piquero, 2008). The current study shows an association between adverse childhood experience and youth offending consistent with findings from previous

Australian research (Sentencing Advisory Council, 2016; Ringland, Weatherburn, & Poynton, 2015).

Potential protective opportunities

Results from this study demonstrate that the key differences between youth below the predicted level of contact with justice systems at age 21 and the total sample is that the median age at initial contact with police, through onset of offending, Field Contact and missing person reports, was lower than that of the total sample (see Table 4). In the total sample there was a positive correlation between age of onset of offending and age of at first Field Contact and Missing Person report. This finding of initial contact with Police at an early age and not engaging in the level of serious offending as predicted warrants further exploration.

Consideration of Field Contact and Missing Person reports within the context of developmental stage and within the social ecology in which they are embedded enhances opportunities for police contact as a protective response. It is argued that if at age 11 years a child is found by Police on the street at 3am that the factors reflected in this context and therefore the potential response is markedly different from three 14 year old youth recorded in school grounds on a Saturday afternoon. The initial scenario may indicate a lack of safety or adequate supervision in the child's home and warrant referrals to child protection authorities or family support services as a part of the Police response. The second scenario may result in consideration of situational prevention measures such as increasing school security or community responses to increase positive youth recreation opportunities.

Similarly consideration of Missing Person reports within a developmental perspective generates greater understanding of this data. First a Missing Person report requires an individual to recognise that the youth is absent and demonstrate concern and confidence that a report to Police will be useful. In the case of a child removed from their family and placed in alternate accommodation, by child protection authorities, it is procedure that a resident absent from their placement for a specified period must be reported missing by the placement agency (Health and Human Services, 2019). For those youth living within their family, a Missing Person report may be indicative of the extent of care the family demonstrates and willingness to take formal steps to ensure the safety of the child.

The results that early onset being related to youth who do not persist in offending as predicted, contrasts to the empirical literature that identifies early onset of offending as a factor associated with persistence. It is argued that contact with police whether through investigation of responsibility for an offending incident, being reported as missing or a field contact in early adolescence or younger may provide an opportunity for preventative intervention. Families and other social systems such as schools could be activated through the individual having police contact to increase safe guarding practices and reduce potential risk of further contact with justice authorities. Given this cohort of youth also had less exposure to family violence and childhood victimisation it is more likely these youth are from 'pro-social' family systems. In the instance of police involvement a form of re-integrative shaming (Braithwaite, 1989) may be operating. Families activate to address the context in which the police contact occurred and therefore this along

with Police procedures contributes to interruption of a potential offending trajectory.

Practice implications

Intervention based in the recognition of the reciprocal and interdependent relationships of structural, social and community factors that impact youth's contact with the justice system and that reflect the developmental context of adolescence provide the basis for opportunities to interrupt a potential adverse trajectory (Lerner & Castellino, 2002). Field Contact, Missing Person and even interview in relation to an offending incident may provide a context in which this contact with police forms an intervention that can buffer the individual from the risk of future contact with justice systems.

Assink et al (2014) sought to identify those variables prior to engagement in offending that were most strongly associated with future delinquency. This understanding leads to opportunities for police to effectively intervene prior to the onset of offending for specific youth. The findings from the current study may be utilised by police to inform decision making at the earliest point of contact similar to the tool to predict onset of delinquency developed in the Netherlands by Assink et al (2014). The point of contact with police, reflected in the LEAP data on which the Victoria Police modelling is based, may form a protective factor. In the case that a youth has a family system that is positive and able to access community resources to support future positive development then no further action above current practice may be necessary. It is for the cohort of youth with substantial exposure to family violence and/or childhood victimisation that referrals to support

services may be warranted to reduce the potential for future engagement in offending.

The data sets and analysis used in the current research, differs from the majority of predictive modelling reported in the literature, in that it is inclusive of data prior to formal processing of offending and contact with the youth justice system. The critical differences in the Victoria Police data analyses are consistent with the underlying intent in utilising LEAP data to enhance community safety and undertake early intervention.

Significance of false positives and negatives

In predictive modelling, there are limitations both in predictive validity and the scope of data in which the models are based. Falsely identifying a young person at risk or the converse can have both resource and ethical implications.

Erroneous decisions to refer youth for intervention have implications for the individual, their family as well as the effective use of limited economic and social resources (Berk, 2019). There are ethical considerations in relation to the impact of a false positive. There is potential that stigmatisation of youth identified as likely to persist in offending can have subsequent adverse effects on well-being and behaviour. Similarly a false negative, when a youth likely to offend is not identified, represents a cost to the individual, society and resources due to impact of the offending across the social ecology. However to screen youth for potential further assessment or referral, on the basis of existing data sets, may result in benefits for all and is not as intrusive as full assessment of all youth at the point of contact with Police.

Limitations of this study

The sample was drawn from one regional police division and therefore findings may not be applicable to other locations such as metropolitan settings. This paper emanates from a project which is part of a broader research collaboration with a regional Child Youth Area Partnership (State Government of Victoria, 2014) and associated University to generate local collaborative service innovations to complex social concerns. The findings reported in this paper can be delivered specific to location and therefore the findings have validity for the community from which they were drawn. Payne and Weatherburn (2015) reinforce the importance of generating trajectories using local data and designing interventions specific to local context.

Data sets

The limitations of reliance on criminal justice data, such as police records and court outcomes, to understand the factors that correlate with youth offending is acknowledged. The inclusion of self-report of engagement in offending behaviour, Thornberry and Krohn (2000) argue, has greater reliability and validity as a measure of offending behaviour. Farrington, Ttofi, Crago, and Coid (2014) demonstrated a considerable greater volume in offending on the basis of self-report compared to official statistics. Official police data may underestimate the true extent of youth offending and the results may not be consistent across geographic location, type of crime or socioeconomic group.

There are ethical considerations if police database information is to be shared with other government authorities and community service agencies. La Fors-Owczynick (2015) assert that 'protecting' children from risk justifies prevention

efforts however when these interventions contravene privacy and other rights there arises a tension between the 'best interests' of the child compared with 'best interest' of public safety.

Conclusion

The current study provides an application of analysis of criminogenic and vulnerability factors in police data to identify opportunities for early intervention to reduce youth persisting with life course offending. The findings indicate a cohort of youth for whom early onset of offending may not reflect potential for future persistence. The nexus between adverse childhood experiences and youth offending were supported by the results. The research supports the potential for early intervention at initial contact with police with the overarching aim being to ameliorate risk and strengthen protective factors.

The majority of the research in predictive modelling details trajectories once youth have had youth justice outcomes and predicts re-offending. This study differs from this empirical base in that predictions can be generated that include youth prior to formal criminal justice system contact. These findings, specific to the location from which the sample was drawn, may further inform current processes where police at the earliest point of contact with an individual, on the basis of available data sets, decide whether or not to facilitate further assessment or referral for support.

Furthermore the critical aspect of ethical and practice implications needs to be well understood if policy and practice to reduce the costs of youth contact with justice systems is to be achieved.

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Chapter 8. Discussion

8.1. Introduction

This chapter consolidates the themes that emerged from the research results (see Chapters 5 and 6), focusing on the implications for policy and practice. The overarching aim of this research was to identify opportunities for early intervention to reduce youth contact with criminal justice systems in Inner Gippsland. The findings are discussed with respect to the research sub-questions provided below:

1. What factors, both risk and protective, are associated with an offending trajectory that is predicted by modelling based on police datasets?
2. How can developmental data from DHHS, DET and Victoria Police file narratives contribute to an improved understanding of these factors?
3. What are the critical factors and intervention points in a young person's social ecology that reduce their contact with the criminal justice system?

The research design used multiple data sources in a staged process to respond to the main research question and three subsidiary research questions. The results across all stages of the study highlighted the critical importance of the interaction between the factors associated with contact with justice systems to deliver early intervention initiatives with respect to the developmental stage.

The key findings regarding the staged design of the study are discussed by addressing each of the research sub-questions. However, given the importance of the interplay between police contact and developmental experiences within the social ecology, the

discussion integrates the data sources as they relate to the specific research findings.

The results from the study are then considered to highlight particular areas of practice innovation across the social ecology of Inner Gippsland and, in particular, Bass Coast.

First, Chapter 8 examines the role of police datasets and the EIT in identifying the factors that interrupt an offending trajectory (see Section 8.2). Section 8.3 considers the use of developmental data to augment the EIT in practice, drawing on findings from the Bass Coast case analysis. Section 8.4 discusses how the research findings can inform practice to generate early intervention and highlights the value of practice wisdom in this process. Finally, Section 8.5 considers the implications of translating these findings from research into practice and the value of evidence-based research and local solutions to local problems.

8.2. Using the EIT to guide early intervention

The findings of this project supported the utility of the EIT for those working to reduce youth contact with the justice system. The predictive modelling of the EIT provides opportunities for targeted early prevention strategies for those individuals who are at risk of serious, persistent offending. The critical finding of this study is that prevention responses are best informed by the interactions between the factors arising at the point of police contact. For example, the results showed that the age an individual is first recorded as an offender and the potential for future offending is best understood within the context of family systems. Section 8.2.1 to 8.2.4 detail the research findings that demonstrate how police data records can guide intervention responses when they are considered in relation to each other.

8.2.1. Early onset of offending

The findings from this study indicated that, in certain contexts, early onset did not necessarily result in persistent offending. This is contrary to the substantial body of empirical literature (Dennison, 2011; Loeber & Farrington, 2000; Piquero, 2008; SAC, 2016; Shepherd et al., 2019). Previous research has mostly considered populations that have had formal contact with the criminal justice system (Allard et al., 2014; Ferrante, 2013; Weatherburn & Ramsey, 2018) and the identification of factors associated with reoffending. The EIT and associated LEAP data (see Section 4.4.1) includes youths prior to formal processing and variables reflecting vulnerability. In contrast with prior research, this finding concerning the early onset of offending underscores the potential value of the EIT in facilitating opportunities for responsive early intervention.

The results showed that police contact formed a protective factor for subgroups of youths in the Inner Gippsland sample. The findings identified two distinct groups within the Inner Gippsland sample of youths who had contact with police when under 12 years old: one group did not progress to future, persistent youth offending, and the other group did engage in such offending. The results showed that police contact reduced the likelihood of future offending for youths with limited exposure to ACEs and a supportive family or caregiving system. This finding that highlights the interaction between factors was also reflected in the results from the survey of the Bass Coast professionals. The responses indicated that for individuals under 14 years old who had contact with police and experienced child abuse there was an increased risk of future offending.

8.2.2. *Youth at risk of persistent offending*

Research sub-question one related to identifying the factors that interrupt an offending trajectory. The findings that relate to youths who persist in offending also inform an understanding of those factors that can be targeted through early intervention to reduce the level of future contact with justice systems. For those youths whose future offending exceeded the level predicted for those at 21 years old, the key feature that contributed to their continued offending identified in the research findings was exposure to ACEs. The LEAP data that characterised and distinguished this group included ongoing exposure to family violence, a greater number of reports of childhood victimisation than the total sample and field contact records commencing from an early age. This group has considerable overlap with the youths identified in the factor analysis with a disrupted home context (see Section 5.5.1).

The results from the Inner Gippsland sample reflected the established developmental taxonomies of offending pathways based on the age of onset, offence type and role of childhood risk factors (see Section 2.2.1). The factor analysis detailed in Section 5.5 highlighted the subgroups within the Inner Gippsland sample, reflecting different trajectories and developmental experiences. The more detailed analysis of the Bass Coast cohort provided in Section 8.3.1, where developmental data is matched with police data, also reflects these dimensions.

The current study demonstrated that the EIT predictive modelling generates taxonomies that are consistent with those found in the literature (Piquero, 2008). Taxonomic categories are useful for understanding offending pathways on a broad scale (see Sutherland & Millstead, 2016). However, the aim of this research project was to inform

early intervention to reduce contact with justice systems rather than describe the general categories of offenders. The results from Stage 1, utilising the EIT and police LEAP records, demonstrated that understanding the interaction between the factors in police datasets best informs local and individual responses and provides for early intervention. The prediction of an individual's trajectory from the EIT coupled with findings from this research, such as the age of onset and presence of supportive family, has been shown to inform opportunities for early intervention. The understanding of interactive factors has greater utility in driving practice reforms than solely confirming the presence of specific taxonomies.

The multiple family violence reports in this subgroup of 'persistent' youths suggest that police responses at the point of the initial incidents were not effective in reducing future harm from, or later engagement in, family violence. There was a positive correlation between the number of adult offences against the person and the number of family violence reports for those youths whose offending was substantially above that predicted at 21 years old. This association suggests the adverse effects of exposure to violence in the family and the increased future negative consequences for the individual and those with whom they form interpersonal relationships. The effects on social and economic resources are also considerable because the justice and service systems must respond to ongoing harmful behaviour (KPMG, 2017).

It is important to understand the offending trajectories of these persistent youth offenders because this group has the greatest effect on social and economic resources. For the majority of youths, their offending behaviour is an aspect of maturation and, in general, most offending desists during adolescence (see Section 2.2.1). The findings

from this study contribute to the important task of identifying the factors associated with youths at risk of future, persistent offending. Persistent offenders represent the smallest group responsible for most offences, and therefore, should be at the forefront of intervention and incapacitation efforts (Payne & Weatherburn, 2015; Sutherland & Millstead, 2016). The EIT modelling, coupled with the findings from this research, allows for identifying persistent youths that could provide significant social and economic savings if preventative interventions are instigated to interrupt their offending trajectories.

8.2.3. How the results can guide responses at early police contact

Contact with police when they attend family violence incidents, through child victimisation, field contact and missing person reports, provides a potential point of intervention. The findings from this research showed that police contact at these times might reduce the chance that such experiences will influence the likelihood of engagement in future offending. The potentially negative consequences of police contact (Farrington, 2012; McAra & McVie, 2007; Wiley, Slocum & Esbensen, 2013) highlight the importance of the results from this research, which demonstrate the potential for police contact to facilitate positive outcomes.

The findings showed that the interaction of multiple factors relates to potential future offending and intervention opportunities. Police responses at initial contact with a young person provide an opportunity to engage children and their families in prevention programs. Dennison et al. (2006) used a Queensland cohort to show that formal police cautioning is not sufficient as a crime prevention strategy in the presence of other risk

factors. However, intensive or high-resource intervention programs should be limited to those children with multiple risk factors to ensure resource efficiency. The convergence of LEAP records that formed the ACE variable in this study, which was demonstrated as a factor associated with future offending, could be utilised at the point of police contact to guide discretionary referral decision-making.

The results showed that contact with police represents an opportunity for targeted intervention because police are responsible for making critical (at times, discretionary) decisions about whether and how young people enter the criminal justice system or are referred to other support services (Dennison et al., 2006). The findings from this study showed that in the context of positive microsystemic factors surrounding an individual, early police contact of any form could form a protective factor. Again, it is the nuanced understanding driven by converging LEAP records to contextualise behaviour within a developmental framework that can enhance intervention responses from service systems.

The research findings from this study indicate opportunities, facilitated by the EIT and LEAP records, for enhanced police practice at the point of contact with youths. The implications of contact with police require consideration regarding the individual's developmental capacity at the time and within the social system in which the youth is embedded. The police response at that point of contact interacts with these factors and affects outcomes. For example, in a case where a youth has a curfew as a bail condition that is designed to reduce opportunities to engage in offending with peers, the time that the youth spends at their residence will increase. If there are incidents of family violence between the youth and their siblings or parents, the potential for harm is exacerbated

by the curfew that was originally instigated as a protective factor. Where there is knowledge of existing family violence, referral of the family for support could reduce the likelihood of increased harm in the home and adverse consequences for the individual youth. Therefore, the understanding gained regarding an individual's circumstances from timely access to LEAP records would allow full consideration of the effects of police responses and could reduce unintended adverse outcomes.

In a NSW cohort of youths, Whitten et al. (2020) demonstrated that youths who have police contact as a witness, person of interest or victim of crime are at risk of future offending and adverse outcomes, including criminal behaviour. They found that this potential risk increased the younger the individual was at first contact with police. Whitten et al. (2020) asserted that this finding enhanced opportunities for early prevention efforts. The findings of this thesis are consistent with Whitten et al.'s (2020) findings that early contact with the police can increase the risk of youths offending. However, unlike Whitten et al.'s study (2020), this study found that, for youths with a positive support system, early police contact (regardless of its nature) forms a protective factor that ameliorates the risk of future offending. The EIT data in this study includes individuals exposed to family violence. Conversely, Whitten's et al.'s (2020) data only included one individual who was the primary victim of domestic violence. However, it is argued that the findings in the current research are reinforced by Whitten et al.'s (2020) findings and that the opportunity for early intervention is extended through the use of the EIT.

Assink et al. (2014) and Whitten et al. (2017, 2020) also demonstrated that police contact of any form offers opportunities for early intervention to prevent the onset of

offending that proceeds to formal criminal processing. The findings from the current project, consistent with Assink et al. (2014), support using the EIT to identify potential at-risk youths before they enter formal youth justice systems. The results also extend the findings from Whitten et al. (2020) by including individuals exposed to family violence in the dataset. The LEAP records included in the ACE variable (see Section 4.5.1) strengthen the understanding of vulnerability at the point of police contact and therefore, can inform the police response. The findings show that access to pertinent LEAP records, such as contemporaneous family violence incidents, indicate that referrals for support at the point of police contact are likely to decrease future offending.

8.2.4. Summary

The findings demonstrate that the convergence of EIT predictions and LEAP records provide critical information to inform potential intervention decisions. In the context of supportive family systems, reflected in the absence of LEAP records indicative of exposure to ACEs, police contact of any form can serve to interrupt a predicted persistent offending trajectory. Future social and economic resource costs can be reduced if those charged with making referrals for support can access data promptly to inform this process. The research findings indicating that the early onset of offending was not necessarily linked to persistent offending, somewhat contrary to previous research, can inform the responses of the police at points of contact with youths and their families. This study concurs with Sayer's (2000) argument that understanding youth contact with the criminal justice system involves more than just identifying the contributing factors. Effective intervention strategies can be facilitated by recognising

the interactions between these factors and understanding the conditions in which these interactions occur.

8.3. Using developmental data to augment the use of the EIT

In response to research sub-question two, the results showed that a greater understanding of youth contact with the justice system and opportunities for early intervention was gained by including the DHHS and DET contact history and the file narratives from Victoria Police. Through augmenting the EIT data with the developmental context for a subset of the youths in the Inner Gippsland sample, a richer understanding of critical factors and their interactions emerged. The findings addressed the gap noted by Sutherland and Millsteed (2016) regarding the lack of developmental data, such as life events and familial and educational experiences.

Section 8.3.1 to 8.3.3 consider the findings relating to the inclusion of developmental data to augment the findings from the EIT and LEAP records and refine the responses to youths at risk across the service system. Section 8.3.1 considers the research findings on how including youths' developmental history and experiences (as reflected in the data on human services contact and education history) in conjunction with the records of police contact provides insights into the points of vulnerability and opportunities for protective intervention.

8.3.1. *Integrated context of police data*

The findings demonstrated that the interaction between the factors generates outcomes and enhances understandings consistent with the eco-developmental framework of this

thesis (see Section 2.3.2). The results show that data from the service system and education history provide critical intervention opportunities before a young person engages in offending behaviour. This comes into sharp focus through the integrated analysis of the subgroup of Bass Coast youths, which provided context to those findings generated for the Inner Gippsland sample (see Chapter 6 and Section 8.2).

Ringland et al. (2015) and Sutherland and Millsteed (2016) sought to identify those at risk of reoffending. The findings in this study provided points for intervention to prevent offending in the first place, rather than predicting reoffending. A distinguishing feature of the EIT data is that it extends beyond adjudicated youth justice populations and includes records of police contact due to vulnerability. This is a key difference from the substantive body of literature (see Chapter 2).

The current research findings highlighted how the interrelated social systems influence an individual's offending trajectory, demonstrating the importance of considering this to bring about change. Consistent with social ecology theory, the more proximal the system is to the individual concerned, the more direct and powerful its influence (Bronfenbrenner, 2005). The influence of the microsystems most proximate to the individual, such as peers and family, significantly affected youths in the Bass Coast cohort.

The nexus between ACEs and later engagement in offending behaviour demonstrated in the Inner Gippsland cohort was reinforced through the case analysis of the subset of Bass Coast youths. The convergence of police file narratives and child protection data gave context to the LEAP records of family violence. The findings related to exposure to family violence indicated that if police could access critical LEAP records, such as family

violence reports, at the point of contact with children and youths in day-to-day community policing, their decisions for referrals to services could be facilitated. Access to developmental data held across the service system could then inform early intervention opportunities (the practical implications of data access are detailed in Section 8.4.2).

The case analysis highlighted the significance of peer relationships, a youth's family system's attitudes in relation to and prior contact with police and statutory agencies, and engagement in education. The case analysis demonstrated the significance of peer relationships in a group from the Bass Coast cohort who were frequently recorded as co-offenders or together at the point of field contact. These critical components considered within the context of the developmental stage of adolescence, interact at the point of contact with police. Similar to the findings relating to early contact with police (see Section 8.2.1), decision-making, both at the point of police contact and subsequent responses from the service system, is enhanced by building a picture regarding the context of the social systems of an individual.

The results of this research demonstrated that field contact with youths and action on a missing person report present an opportunity to build positive engagement between police, youths and their social ecology, as well as a critical point of intervention. Missing person reports that are made when the individual is placed in OHC are best contextualised within the sector's policy and practice guidelines (DHHS, 2019) and differ to those made for youths in a positive family system.

The case studies demonstrated the substantial effects of placement in OHC, especially multiple placements, which were a feature for youths in the Bass Coast cohort, and

subsequent police contact. Education was disrupted for these young people due to placement instability, often leading to disengagement from school, a potentially protective system. As a result of disengagement from education, these young people had increased time in the community, which correlated with increased police contact shown in the number of field contact records and the police file narratives.

Placement in care increased contact with other vulnerable youths, especially when the placement was in a residential unit. The influence of peer relationships in the developmental stage of adolescence is a critical driver of behaviour. The effects of these developmental experiences can be exacerbated by placing youths with complex needs and considerable exposure to ACEs together (Mendes et al., 2014). Policy and practice in the sector, at both the mesosystem and exosystem levels, interact with potential contact with police. Augmenting police records with developmental data showed that youths in OHC had considerable contact with police through field contact records and missing person reports. The policy and procedures for missing person reports and responses to behavioural problems, especially in residential care units, further increased police contact with youths. These findings are consistent with the research of Baidawi (2020) and Victoria Legal Aid (2016), which highlighted the increased likelihood for youths in care in Victoria to have increased police contact. The police contact often resulted in official charges, which increased the likelihood of involvement with the youth justice system. Nine of the 10 Bass Coast youths had received a youth justice order, increasing adverse outcomes and resource costs.

The inclusion of developmental data highlights the interrelatedness across the social ecology of the factors associated with youth contact with justice systems. The case

analysis provided an understanding of the unintended adverse consequences of placement in OHC and how these related to youth offending. Community expectations relating to child abuse and child protection policy settings operate at the macrosystem and exosystem levels of an individual's social ecology. At the more proximate level, the practices of child protection agencies and providers of OHC, and the interrelationship with other systems, such as schools, police and community services, operate at the mesosystemic level. These interrelated systems within which youths and their families operate directly influence the outcomes, and therefore, can provide opportunities for intervention strategies.

The convergence of police and developmental datasets assists with identifying critical developmental transitions when they interact with vulnerability. Similar to the work of Malvaso (2017) and Paterson (2015) on the association between age of placement in OHC and youth offending, the findings from the Bass Coast cohort can be applied when decision-makers have access to multiple datasets, such as child protection reports, absence data from schools and the presence of support, to contextualise official police records.

The findings derived from this research project demonstrated that informing police contact events, such as field contacts, with an understanding of an individual's developmental experiences and current circumstances can provide opportunities for individually tailored intervention. Australian Developmental Crime Prevention Consortium (1999) asserted that developmental prevention highlights the significance of developmental phases and transitions because they reflect both risks and opportunities. The application of social ecological theory demonstrates that those interventions that

target the factors related to contact with justice systems are most effective when delivered promptly, responsive to the developmental stage and integrated across the individual's social ecology (Homel & Thomsen, 2005; Smallbone et al., 2008).

Developmental prevention initiatives are best implemented at the earliest developmental phase, such as entry to education, and across the socially immediate environment, such as family and peers. The results generated from the current research highlighted the utility of incorporating the developmental transitions into decision-making. The importance of this is underscored by the finding that early contact with the police can be a protective factor for youths with a proximate positive caregiving system.

8.3.2. *Focus on protective factors*

The research design sought to identify the aspects of youths who did not progress to serious, persistent offending despite indicators of risk present in the trajectory predicted through the EIT. This study aimed to shift the focus to ascertain the assets within individuals and their ecologies that interrupted the predicted trajectory to address the deficits of the research and policies that have focused on risks (Benson et al., 2006; Case & Haines, 2009). The Inner Gippsland sample and the subset of the Bass Coast cohort were identified through the EIT. This predetermined that the findings would relate to risks; however, by converging multiple data sources that reflected an individual's developmental experiences, this study was also able to identify the interactions that ameliorated the existing risk factors.

The protective factors for youths who did not reach the level of predicted offending included minimal exposure to or an absence of ACEs, living within a positive family system and engagement in education. The presence of these elements reduced the expected adverse outcomes associated with contact with police and engagement in offending behaviour when under 12 years old. The findings support the importance of considering the individual within a developmental framework and contextualising the contact within the interaction of factors across the social ecological system.

The research highlighted the dearth of strength-based data, or records of protective and promotive factors, in the datasets available to the researcher. Protective factors are those that reduce offending in the presence of high risk and promotive factors reduce the likelihood of offending for all young people. The datasets that are held by government departments and community service organisations tend to record deficits, potential or substantiated harms and other negative social indicators. Due to the data recorded across the service system, this study was restricted to identifying promotive or protective factors. Given that statutory authorities, such as child protection, are charged with the care and protection of at-risk children, the datasets are focused on reports of maltreatment, neglect and potential vulnerability. Under current practice, promotive or protective factors are not collected systematically. The aspects of a youth's ecology most strongly related to a reduction in contact with justice systems include the absence of known risk factors, rather than the actual strengths that acted to interrupt an offending trajectory. Consistent with Farrington et al.'s (2016) discussion regarding the inconsistencies in the definitions of protective factors, this study reflects a conceptualisation of protective factors as an absence of risk, such as 'no exposure to

ACE'. This is difficult to address because statutory government authorities and official police data is concentrated on recording indicators of risks.

Although the results generated a limited understanding of the protective factors, the key finding was that risk factors are ameliorated through the interactions of social ecological systems within a developmental framework. The factors identified as protective (such as successful transitions from primary to secondary school and family systems with resources to respond positively when police contact occurs) also highlighted the importance of an eco-developmental framework (see Section 2.3.2). Through the addition of developmental data and Victoria Police file narratives, it was possible to identify factors that interact to nullify those aspects of a youth's social ecology that are associated with risks. For example, if an individual was exposed to family violence but was engaged in education, their trajectory was more likely to be positive. The factors that were identified as protective from the quantitative analysis and case analysis were further supported by the findings derived from the perspectives of the Bass Coast frontline workers. The practice implications of this aspect of the research findings are addressed in greater detail in Section 8.5 and Chapter 9, which deals with the recommendations for practice strategies across the service system of Inner Gippsland.

8.3.3. Summary

The integration of developmental experiences and contexts of individual youths at the point of police contact has responded to the identified gaps in the literature and greatly enhanced the ability to recognise early intervention opportunities. The value of understanding the interrelationships between social ecological systems at the point of

police contact has been demonstrated through the research findings. Combining the EIT with an integrated picture of the developmental stage and context of police contact can help detect individuals who would benefit from early interventions.

The multiple data sources used in this study, consistent with research sub-question two, provide a more complex understanding of potential intervention points to inform prevention efforts. Ecological models observe that youth development occurs through dynamic and enduring interactions between an individual's characteristics and their social ecology (Allard et al., 2017; Bottrell, Armstrong & France, 2010; Bronfenbrenner & Morris, 1998). The convergence of these interacting elements is critical in the design and implementation of effective developmental prevention initiatives.

The results addressed the overarching research question because they provided those responsible for policy settings and resource allocation with local knowledge to inform practice commensurate with the needs of the Inner Gippsland community. The research findings showed that combining police data sources with records that reflect developmental experiences and protective factors allows for the instigation of individualised responses at the earliest opportunity.

8.4. Using multiple data sources to enhance early intervention

The inclusion of multiple sources of information shared across the service system has increased the robustness of the results. The integrated understanding that was gained from combining multiple data sources is critical to formulating effective and resource-efficient early intervention strategies. First, Section 8.4.1 addresses the findings that emphasise the significance of including the practice wisdom of the local

workers in Bass Coast. The deficits in data access and interoperability are detailed as key findings in this study (see Section 8.4.2). Section 8.4.3 proposes using multiple data sources to facilitate early intervention responses and avenues to incorporate protective factors.

8.4.1. *Privileged frontline workers' knowledge*

Consistent with the place-based approach of the research, this thesis privileges the expertise of frontline workers as a critical source of knowledge. The findings demonstrated that this knowledge highlighted similar factors to those identified in the analysis of police datasets and case studies of the Bass Coast cohort. This formed an additional source of information to reinforce the significance of these findings and understand the full context of at-risk youths to inform the practicality of prevention efforts. The inclusion of the practice wisdom of frontline workers who formed the Youth at Risk panel in Bass Coast gave a deeper understanding of how the interaction between factors linked to offending operated specifically in the local context. This thesis argues that through direct service delivery to youths and their families, local professionals develop knowledge that is not captured in official datasets.

Smith et al. (2017) asserted that privileging professional experiences challenges traditional forms of research data. Critical information is derived from workers' perspectives that support understanding of the complex social issues under study. To privilege the knowledge of frontline practitioners does not necessarily provide a complete understanding of the research question (Herr & Anderson, 2015). Therefore, this thesis employed multiple data sources, including the practice wisdom of workers in

Bass Coast, to develop an enhanced and integrated understanding to respond to the research questions.

The results from the survey of the Bass Coast Youth at Risk panel workers showed a considerable degree of consensus among the members. The presence of positive community connections was reported as ameliorating potential risk factors reflected in the immediate family system or through contact with the criminal justice system.

Engagement in education, a form of positive connection at the microsystemic level, was strongly endorsed as reducing the likelihood of contact with justice systems. Overall, the views of frontline workers were consistent with the research findings based on the analysis of the EIT data and the case studies, including developmental data. The factors endorsed by frontline workers were also consistent with the body of pertinent literature reviewed in Chapter 2. The perspectives of frontline workers strengthen the understanding of the full context of a youth's lived experience and demonstrate the importance of including practice wisdom in designing and implementing interventions specifically for the local context. This depth of understanding extends the utility of the quantitative data sources and can guide the implementation of prevention strategies through awareness of their practical application specific to place.

8.4.2. *Data retention, accessibility and interoperability*

The considerable degree of variability, both across and within government departments, of the information retained and access to datasets was highlighted in this project.

Pertinent data available to police and across the service delivery system is a critical factor in applying the findings of this research. Similarly, access to relevant datasets is

required to monitor and evaluate both the intended and unintended effects of prevention interventions. An aspect of this research project was embedding the researcher in the service system. Through the observations of the researcher during this study, it was evident that improvements in data access and interoperability would further enhance intervention planning. The findings related to contact with police and opportunities for early intervention highlight the importance of timely access to records, such as family violence incidents, to guide police responses.

There are several limitations regarding the quality and type of available data across all partners in the service system. To an extent, this influenced the depth of understanding derived in this project, further highlighting the importance of access to pertinent data to inform the responses of those delivering interventions. A level of familiarity with the DHHS datasets, DET and Victoria Police was required to obtain pertinent data. In part, this was overcome through access to industry supervisors on the doctoral supervision panel and the IGCYAP. Each agency coded and retained their data using a process unique to that agency, and they each used different identifiers. This added to the impost on the staff charged with the responsibility of collecting the matched data for the Bass Coast cohort. During the period for which the data was collected, there were substantive changes in the data processes and retention practices that effected the records available to the researcher, including changes from paper to digital records, reporting requirements, privacy provisions and departmental areas of responsibility.

The researcher found the greatest difficulty in gaining pertinent DET records. The department has different sets of data retained in separate locations, such as individual schools, the regional office and the state DET office. The changed boundaries for schools

in Bass Coast were significant to this study. The responsibility for Bass Coast schools changed from metropolitan Melbourne to the Gippsland region, which prevented access to historical files related to the period of data collection. This resulted in considerable difficulty obtaining the requested data and variations in the data received for each of the 10 Bass Coast youths (Stuart, personal communication, 19.11.2020).

There is a lack of access to primary health and, to a similar extent, mental health data in the service system that reflects legislated privacy provisions. The direct details regarding an individual's engagement with primary health are not included in this study, even though it could provide a salient indicator of potential vulnerability. The primary health data is also not available to inform the deliberations of the Youth at Risk panel. If present, this information is inferred from other service systems or through self-reporting from families communicated through service delivery relationships to members of the panels. Improving youth access to general practitioners has been a focus of primary health service development in Australia (Cummings & Kang, 2012; Dadich, Jarrett, Sanci, Kang & Bennett, 2013). Given that contact with a general practitioner can be an initial response to distress, this is a critical level of information that could be utilised in tailoring systemic responses to enhance outcomes. Information regarding primary health contacts would add to the integrated picture of an individual's developmental experiences. The privacy parameters of sharing primary health information are key components of why this data is not available. It would be counterproductive if this information were to be shared in decision-making if this, in turn, affected people's willingness to engage with the primary health network. Negotiating this deficit in

available data is an issue for consideration by relevant departmental senior staff members.

Importantly, the inability of the service system to easily link data across the various datasets (Victoria Police, DHHS and DET) means that youth involvement across the service system cannot be systematically tracked. Inferences about the general population or cohorts from one dataset to another are possible; however, an integrated, continuous picture of an individual's experiences across systems is restricted. Poor data interoperability affects the opportunities for developing and implementing early intervention strategies based on the findings from this study. This influences the outcomes for individual youths, their families and communities, as well as resource efficiency.

The enriched understanding gained from the multiple data sources for the Bass Coast cohort highlights the value of accessing developmental data at the point of police contact for youths who are involved in both the youth justice and child protection systems. This is consistent with recommendations in the *Crossover Kids* Reports (SAC, 2019), which stress the importance of the interoperability of datasets held by Victoria Police, youth justice and child protection.

The matching of datasets between government authorities, such as Victoria Police, DET and DHHS, also presented obstacles. The privacy provisions and ethical restraints are acknowledged and discussed further in Section 9.8. Access to shared information would provide greater capacity for early intervention and deliver support that is responsive to an integrated understanding of the full context of an individual and their family. The findings from this study underscore the value of accessing all relevant data to inform

early intervention responses. The whole of government approach (Homel, 2004; Australian Public Service Commission (n.d.) supported by state-wide policy principles would be enriched if the local service system has increased access to the full picture of an individual's lived experience.

It is important to build integrated datasets that provide pertinent information regarding youth contact with justice systems and the associated developmental factors to improve outcomes and evaluate the effectiveness of interventions. These critical aspects to enhance practice efficacy were noted by Goldfeld and Oberklaid:

To open a policy window and influence decision-making, three distinct factors need to come together at a critical time: the problem needs to be recognised (data), a potential solution needs to be identified within a policy framework (evidence-based strategies), and a political imperative needs to exist, with a potential for commitment and no severe constraints. (2005, p. 209)

Similar limitations are noted in other major reports regarding youth involvement with justice systems (Jesuit Social Services, 2013; SAC, 2016, 2019). Jesuit Social Services (2013) asserted that Victoria's data system has consistently been criticised by academics, program evaluators and the Victorian Auditor-General. The consequence of insufficient integration of statistics and program evaluation is that evidence-based policymaking is severely restricted, which reduces public accountability of policymakers. The establishment of the Crime Statistics Agency (<https://www.crimestatistics.vic.gov.au/>) a state government body that commenced public operations on 1 January 2015, has increased access to police data. This agency provides official police data on crime types and trends, group-based offender

characteristics and offending incidents by the geographical location that has utility for determining needs and assessing the effects of interventions. However, it does not link an individual's data across the service system. An integrated data source is required that is accessible at the local level in a timely fashion to capitalise fully on the data generated from the EIT in intervention planning.

8.4.3. *Incorporation of strength-based data*

The current research highlighted the value of protective factors across the social ecology to ameliorate future risk and strengthen communities. The creation of a dataset that recorded protective factors would enable indicators of risk to be balanced against strengths within the social ecology. Access to the full assessment of an individual would allow the service system to promote universally positive youth development, commensurate with the local context. As an outcome of this research, it has been recommended that the Youth at Risk panels operating in Bass Coast and Latrobe consider processes to include records that indicate the protective elements across a youth's social ecology (see Chapter 9). The ReBoot program, which draws referrals from the Latrobe Youth at Risk panel, is well placed to initiate the collection of data records that detail protective factors. If established, such databases would contribute to monitoring and assessing contexts and evaluating the outcomes from prevention initiatives. If protective factors were included in datasets, the aim of this research to translate research into practice would be fulfilled.

8.4.4. Summary

Section 8.4 highlighted that an integrated understanding of contact with police and official records needs to be delivered through timely access to all pertinent information. Accessibility to the specific data for an individual across the service system would enable responsive prevention initiatives because decision-makers would be fully informed about all the aspects of a youth's developmental history, available supports and proximate social systems that give context to recorded police contacts. However, the research has drawn attention to the deficits in the data collected and retained across the service system (see Sections 8.4.2 and 8.4.3).

In response to research sub-question three, which focused on identifying intervention opportunities, the convergence of multiple data sources informed and expanded the understanding of critical intervention points. The research results underline the importance of including the practice wisdom of frontline workers that expands an understanding of how the factors associated with youth contact with justice systems operate in the local context. Protective factors that are available to those delivering interventions, even if only represented by an absence of risk factors, would improve responses and allow for an enriched evaluation of the effects of such prevention responses.

8.5. Implications of research for practice

The overall purpose of the research collaboration (of which this doctoral study is a component) was to generate findings pertinent to the local context to inform policy and practice. Section 8.5 considers the implications of the research that effect, at a more

distal level, policy in response to reducing youth contact with justice systems, and therefore, practice at the broader level. Detailed recommendations to translate the findings into practice for the Inner Gippsland service system are covered in the practice report that forms Chapter 9.

First, the utility of the EIT to inform early intervention initiatives is considered in response to the overarching research question (see Section 8.5.1). Section 8.5.2 focusses on the systemic issues that affect policymaking, such as competing paradigms and multiple priorities in government responses to complex social issues. The aspects of the study that are intrinsically linked with the translation of the research into practice are discussed in Section 8.5.3. The features of a place-based study such as this project are canvassed in Section 8.5.5, highlighting the strength of the approach used in this research design.

8.5.1. Utility of the EIT: Research to practice

This study provided evidence to inform the ongoing development of the EIT and its utility for guiding prevention responses to enhance the application of the research findings to practice. Throughout the research project, the researcher was immersed in the service system and was able to discuss interim findings from the study (including the importance of the interaction of LEAP records and an individual's context) in forums, such as the Youth at Risk panels. The division of Victoria Police that developed and manages the delivery of the EIT as a community safety initiative has incorporated feedback from the Latrobe Youth at Risk panel's use of EIT modelling to refine the model

and enhance the responsiveness of practice. The findings from this project regarding the application of the EIT in practice have been incorporated into this process.

More broadly, during the research project, the researcher has presented findings to senior staff within the service system who have the authority to direct practice innovations. Chapter 9 includes a report that was delivered to senior departmental staff in Inner Gippsland detailing recommendations for practice innovations based on the research results. Consistent with the research to practice model of the research collaboration that instigated the project, a paper titled, *Using Victoria Police Datasets to Identify Opportunities to Prevent or Reduce Youth Offending*, which detailed the findings specific to the EIT outcomes was submitted to and accepted for publication in the journal of *Police Science* (see Chapter 7). The research has also been presented at conferences in Australia and internationally to increase opportunities for research outcomes to be disseminated to the practice and academic communities (Lancefield, 2019a; Lancefield, 2019b; Lancefield & Boddy, 2018).

The research project's results underscore the importance of the Youth at Risk panels in Latrobe and Bass Coast in delivering practice innovations. The collaborative practice of the panels utilise practice wisdom, local knowledge and shared data from the service system to build an integrated understanding of the full experience of youths and their immediate social systems. Through this partnership, the panels develop timely and individualised responses to reduce vulnerability. The Youth at Risk panels must be able to access and converge the information held by the DHHS, DET, DOJCS, community support services and Victoria Police to capitalise on the findings of the current research.

Therefore, the availability, interoperability and timely sharing of pertinent data are critical for guiding decision-making.

The Latrobe Youth at Risk panel provides a referral pathway to the ReBoot program based on the youths identified in the EIT. The findings of the current study show that the EIT is best used to flag potential vulnerability, and that prevention interventions can then be developed through the collaboration and convergence of all pertinent information. For example, when the Youth at Risk panel considers a youth who appears on the EIT as at risk of future offending, they can also draw on service system data that has been identified as salient by this study, such as the exposure to family violence, engagement in education and knowledge of the family system.

Consideration of all the factors identified in the research findings, coupled with the local knowledge of available systems, can guide early intervention initiatives. The ReBoot program presents an opportunity to establish the inclusion of protective factors in the programs data collection; information that could inform the deliberations of the Youth at Risk panels. The panels are centred on partnership practice that privilege frontline workers' knowledge that is responsive to the local context, the value of which is underlined by the findings from this research.

At the mesosystemic level, senior staff in departments and agencies need to resource and support integrated practice, such as the Youth at Risk panels. All relevant services must be present and engaged in the meetings; this requires a mandate and resourcing from senior staff. However, it is the local knowledge of and relationships between frontline workers that enrich responsiveness. There needs to be a mechanism for capturing this information so that frontline workers inform policy and practice frameworks. As a

component of partnership practice, evaluation mechanisms that are responsive to complex social issues and include practice wisdom must be established. These aspects of practice should integrate local practice wisdom with policy and facilitate the reflexive loop between research and practice. This would increase the confidence of service users and the broader community that those charged with facilitating youth development can respond efficiently and reduce vulnerabilities.

8.5.2. *Responsivity of practice innovations to the local context*

This research provides findings that will enable policymakers to quantify the costs and benefits of specific interventions and prioritise the allocation of finite resources. It is important that the resource allocation to, and design of, prevention strategies reflect the local circumstances and accurately assess the factors associated with future offending. There is a risk of net-widening (Ferrante, 2013) that adds impost to social resources and can have unintended negative consequences for youths (see Chapter 9). Rayment-McHugh (2018, p. 153) asserted that a 'knowing-before-doing' approach based on local knowledge informs the development of tailored and targeted prevention strategies. It is important to understand the full range of the potential effects of policy and practice innovations to maximise resource use and minimise adverse outcomes.

A statistical technique, such as predictive modelling, includes a degree of error in the generation of offence trajectories. The two key concerns are false positives (that is, predicting that an individual will engage in persistent offending when this is not the case) and false negatives (when an individual does engage in persistent offending and predicted trajectory failed to determine this outcome). Both can have a substantial

effect on the individual, resource allocation and outcomes in terms of broader community safety. Consistent with the research findings, this underscores the importance of integrating developmental data and local knowledge to balance the potential errors in a statistical model such as the EIT in decision-making.

Congruent with the social ecological framework, the microsystemic factors (especially those closest to the individual, such as family, and proximate in time to the behaviour of concern) have the greatest effects. The information collected in this study showed that police contact relating to engagement in offending or potential offending, such as a field contact, often occurred around the time of recorded exposure to family violence incidents. Disengagement or chronic absences from school also flag a potential disruption in the immediate social systems of an individual, which could be included in the development of prevention responses. These findings provide an opportunity for intervention if the collaborative practice relationships reflected in the Youth at Risk panels can share all the pertinent information promptly to guide their decision-making.

Prevention initiatives must be responsive to identified needs and supported by the community for whom they are developed to be effective. The use of predictive models, such as the EIT, by the Youth at Risk panels reflects certain issues that must be carefully addressed if the community is to understand and accept this as a community safety initiative. The EIT data should be shared with the service system so that their knowledge and history of engagement can be integrated into decision-making with respect to intervention. This may occur without the knowledge of the individual and their family. Strict protocols should guide this information sharing to ensure that the data is available only to those directly involved in decision-making. Further, the purpose of data sharing

should focus on the promotion of positive outcomes rather than restrictive monitoring or providing data to facilitate crime detection and increase formal justice processing. There is a range of ethical concerns in balancing individual rights, privacy and the increase in community safety that must be considered when utilising this predictive modelling (see Chapter 7).

8.5.3. *Priorities and developing policy to drive early intervention*

The research collaboration that established this study, the research design and the relevance of the results are contextualised within the exosystems and macrosystems reflecting the legislation and government policy settings. Youth contact with justice systems fits with the conceptualisation of ‘wicked problems’ (Rittel & Webber, 1973), which pose challenges to forming a well-defined statement of the problem and are resistant to a clear and agreed solution (Head, 2008a). In this sense, most major public policy problems are ‘wicked’, and addressing such problems requires acknowledgement of the socio-political context in which they manifest and how they are identified, understood and responded to in policy and practice (Crowley & Head, 2017). This thesis asserts that research cannot resolve these dilemmas solely by addressing the gaps in knowledge. This project was instigated to inform practice, and the findings are considered across the social systems in which the issue manifests. Practice innovations that are based on collaborative partnership models demand new approaches that focus on the multiple interacting factors identified through the current research as being associated with youth contact with justice systems.

In the public policy and social sciences domains that respond to complex social issues, such as at-risk youths, there is a range of interdependent factors and competing priorities in the allocation of finite social and economic resources. As detailed in Section 3.2.1 public policymaking is subject to political and bureaucratic influences, often reflected in media campaigns, which can challenge the adoption of research findings. The socio-political context interacts with local practice opportunities at the level of central policy settings, practice directions and resource allocation as detailed in Section 3.2.1. The current research findings and related practice recommendations must be considered within this overarching context.

For the findings from this study to have utility, it is critical that early intervention to support the individual and the social system in which the youth is embedded remains the aim of practice developments. The use of the Victoria Police predictive modelling tool reflects the potential for the EIT to be viewed as a punitive response to increase detection and processing of at-risk youth. However, the EIT was developed to support community safety initiatives (Victoria Police, n.d.), and the trial of the model, which formed a major component of this study, was to facilitate early intervention strategies to reduce youth contact with justice systems. The research findings support the use of the EIT to assist the service system in intervening early and reducing the risk of future offending. In the implementation of initiatives, prevention must be the driving imperative for translating this project's findings into practice, enhancing community acceptance and engagement with such practice innovations.

Similarly, the positions in Victoria Police of Youth Specialist Officers to monitor youths deemed high-risk in the community (<https://communitysafety.vic.gov.au/reducing->

[harm/](#)) were established within the government policy changes across the youth justice sector (see Chapter 1). Despite elements of this policy shift contrary to the evidence base of developmental prevention, this reflected the government's acknowledgement that youths require support and a rehabilitative response rather than punishment for criminal behaviour. The framework for implementing the resources is consistent with the research's focus on local solutions to local problems. The Youth Specialist Officer roles and duties are not centrally prescribed; rather, they can be used flexibly to address localised needs.

The findings demonstrated a clear association between the levels of offending and involvement in the child protection system, especially when an individual was placed in OHC. This association was compounded when there were multiple placements that increased the disruption of potentially protective factors, such as engagement in education and positive community connections. The adverse effects of increased contact with justice systems for individuals in residential care, care criminalisation (Cashmore, 2011; McFarlane, 2018), are related to macrosystemic aspects of practice. The related policies that determine practice in the OHC sector influence the outcomes for youths placed in state care. The protocol to guide the practice between child protection (DHHS) and Victoria Police (DHHS, 2016) is not well integrated into practice in Inner Gippsland. The findings of this study support practice innovations that resource placement providers for managing disrupted behaviours without formal police charges and involvement of the justice system. Practice innovations that stem from the research findings include improved protocols between OHC providers and police (see McFarlane et al., 2019; Victoria Legal Aid, 2016), training for residential care staff and the inclusion

of frontline staff perspectives in the development and evaluation of intervention strategies.

The legislative framework that reflects the policies developed to meet community expectations directly informs practice. Changing legislation to raise the age of criminal responsibility (National Legal Aid, 2020) can also help prevent the criminalisation of disadvantaged children, and thereby, reduce their risk of subsequent offending. The literature review (see Section 2.2) and aspects of the findings from this research (Section 5.4) have demonstrated that formal engagement with the criminal justice system, particularly early in an individual's developmental trajectory, is associated with future offending. The protective function of early police contact in specific contexts provides support for raising the age of criminal responsibility. This would reduce the likelihood of formal processing for youths under 14 years old, while allowing the positive aspects of such police contact to persist.

8.5.4. *Translation of research findings into practice*

The findings of this study clearly indicate areas for practice innovations. It is critical that practice models reflect the research findings for the benefit of investment in research to guide policy and practice to be realised. This study was instigated by the research collaboration between IGCYAP and Federation University (see Chapter 1). However, the Victoria State Government defunded the CYAP structure when their priorities changed before the research project's completion. This affected the dissemination of the results and potential implementation of findings across the service system for this project.

Section 8.5.4 focuses on the broader aspects of how research can inform practice and

identifies potential barriers. Given the time required to complete and disseminate scholarly research, the socio-political priorities and policy imperatives can shift prior to the dissemination of findings, thereby, restricting opportunities for translation of the research into practice.

The findings have shown an association between family violence and future offending, and that ongoing exposure to family violence for youths who persisted in offending indicates that the system responses at the point of initial reports have been ineffective (see Section 6.4.2). Since the data was collected for this research, there have been changes to practice in responses to family violence incidents. The Victorian Royal Commission into Family Violence (State of Victoria, 2016) made several recommendations for changes, most of which have been adopted by the state government. Since the implementation of these recommendations, practice reflects a number of the recommendations derived from the findings of this study. The family violence practice initiatives also demonstrate the critical importance of access to and sharing of relevant datasets to inform intervention decision-making, which is a central finding from the current research project.

It is critical that research findings are communicated to governments to effectively translate research into practice because funding and policy developments occur at this macrosystemic level. Research can inform policymaking by providing quality information that improves the basis for policy development and implementation, avoids costly misdirection of resources (Homel, 2017) and increases transparency when political trade-offs are conducted. Further, research provides critical information (by evaluating interventions) that must form a reciprocal loop with policymakers and funding bodies.

Evaluation results, coupled with direct observations and input from frontline workers, can be used to alter interventions and test innovations to determine whether they produce improved results.

Evidence-based policies form a key measure of government service development and delivery across a range of Western democratic societies, including the Australia Government (Productivity Commission, 2010). Griew (2010) posits the rationalist assumptions of evidence-based programs adopt the view that science can provide the singular 'right answer' to complex social problems. This effects research because it determines the 'best' type of evidence for developing policies and appropriate methodologies for obtaining data. Academic research that is focused on 'what works' forms an extensive theme in criminology; however, this position presupposes that interventions are implemented in consistent contexts. Sometimes, the qualitative aspects of how evidence-based programs are delivered, especially in the social reality of local conditions, are not considered. A realist synthesis approach contrasts this rationalist, empirical approach with a broader consideration of knowledge to inform intervention in response to complex social problems (Pawson, 2006).

This research project has used the evidence base from the literature as a component of the design alongside local data to generate findings with utility for the service system that instigated the project. The overall outcome of the project is consistent with Haskin's (2009) proposal for a broader view of evidence-based policy. This utilises a range of conceptual frameworks and methods to improve policy development and increases the accountability of those charged with decision-making.

For the study's findings to be incorporated into practice, resources must be directed to training and support for the staff responsible for delivering practice innovations.

Creating opportunities for frontline workers' knowledge to inform practice ensures the responsiveness of initiatives as they are implemented. Frontline workers are the conduit between policy and young people (Comber, 2016). Therefore, the successful translation of policy into practice is dependent on the extent to which frontline workers can enact those policy. Effective social policies require research that accounts for the pertinent views of frontline workers (Bourdieu, 2012; Comber, 2016). The current research is consistent with the literature detailed in Sections 3.2.1 and 3.2.2 that highlights the importance of partnership models of practice that include and privilege local practice wisdom. The Youth at Risk panels are based on local knowledge, and therefore, are best placed to respond to local problems. This will increase the efficacy of practice because the innovations will 'make sense' to those responsible for delivering services (Hamel et al., 2015a; Horwath & Morrison, 2011; Weaver, 2016).

8.5.5. *Place-based research studies*

The results have detailed the operation of factors related to youth at risk, service access and collective efficacy in Inner Gippsland and, more specifically, Bass Coast. This research is crucial to the design and implementation of intervention strategies that reduce the costs of youth contact with justice systems. The place-based approach of this project distinguishes it from population-based developmental prevention efforts. By focusing on local variations and social ecology, the project's results highlight problem contexts, opportunity structures and precipitating conditions that allow for practice innovations at a local level.

Understanding the factors underlying youth contact with justice systems within an eco-developmental framework provides valuable information about who, what and how to target intervention strategies effectively (Tilley, 2005; Wikstrom, 2007). This meets the overarching priority of the research collaboration and allows for prevention and intervention resources to be tailored to the contexts where they are most needed and for the effect of the programs that are responsive to the local context to be maximised.

The findings that reflect associations between police contact, developmental experiences and future offending can underpin practice innovations. Within a place-based framework, the mesosystemic elements, such as the distribution of services and access to these services for specific communities, are critical considerations. In regional areas, community support services and government departments are often centralised in the major cities, with outreach locations across the region. This means restricted access (in terms of hours of business), which affects levels of responsiveness.

The research findings indicated that mapping the services across the region and levels of demand would inform decisions to improve access. Innovative practices, such as telehealth platforms, could provide a less resource-intensive avenue for increasing access for all communities in Inner Gippsland. The co-location of services, such as the Orange Door (<https://orangedoor.vic.gov.au/>), to respond to family violence is a way to improve community access to supports at a time of high demand for those affected. The substantial effects of exposure to sexual harm on an individual's offending trajectory, shown in the Bass Coast cohort, in particular, highlights the need for greater access to support for families at the earliest identification of sexual harm. The project's results support the consideration of systemic influences, such as available services and

resources that co-exist in a specific context, to be included in the design, implementation and evaluation of interventions for reducing the costs of youth contact with criminal justice systems.

This research project has generated findings that are relevant to practice in Inner Gippsland, with an in-depth focus on Bass Coast. The concurrence of the findings from this research project with several key recommendations from major reports focused on youth contact with the criminal justice system (SAC, 2016, 2019; Jesuit Social Services, 2013) indicates that the findings have a broader application. The realist perspective and associated evaluative methodologies serve as a basis for understanding the application of findings from this study to other locations (Pawson & Tilley, 1997).

8.6. Conclusion

Chapter 8 discussed the findings related to the research question of reducing youth contact with justice systems through early intervention in Inner Gippsland. The results highlighted the critical importance of the interplay between developmental experiences, police contact and social ecological systems. The use of multiple sources of information has strengthened the weight of the findings. The strong association between ACEs and future persistent offending has delivered opportunities for practice innovations at the point of police contact.

The availability and sharing of relevant data across the service system are essential in developing responsive prevention initiatives. The incorporation of protective factors and the practice wisdom of frontline workers has been demonstrated to extend the understandings derived from police and departmental datasets. The barriers to

identifying such protective factors and the options for incorporating these into the data retained require further consideration from the senior staff, who hold responsibility for delivering practice innovations.

It is critical that practice models, such as the Youth at Risk panels, exist for the investment in research to guide policy and practice to be realised. The disestablishment of the IGCYAP before the completion of this research affected the dissemination of the results and potential implementation of the findings across the service system of this project. This highlights the overarching effects of government policy and macrosystemic priorities on practice.

The findings demonstrated the value of combining social ecological theory with developmental criminology, and the place-based approach delivered knowledge to inform practice specific to Inner Gippsland. Developmental crime prevention involves systematic efforts to strengthen the social ecology in which an individual is embedded to reduce exposure to ACE and ameliorate the effects for those exposed (Hamel & Thomsen, 2005). The findings concerning the research questions have implications for practice consistent with the developmental prevention principles. Therefore, responses to reduce youth offending and broader initiatives to improve the wellbeing and health across communities, especially those with social and economic disadvantage, can be developed by considering the results derived from this study.

The practice implications derived from this project's findings are consistent with macrosystemic level of government policy, such as the Australian Government's major investment in the national agenda for early childhood (Australian Government Task Force on Child Development, Health and Wellbeing, 2003) and the Victoria State

Government's Roadmap for Reform: Strong Families, Safe Children (the Roadmap for Reform) (DHHS, 2016b). Early intervention strategies supported through research that align with government agendas are best placed to attract resource allocation and the requisite practice frameworks for implementation.

Chapter 9 presents a report that was provided to the senior officer's group in Inner Gippsland. The report consolidates the findings that relate specifically to the operations under that group's jurisdiction and provides recommendations for practice innovations based on the research findings. To an extent, the findings and associated recommendations for practice innovations presented in Chapter 8 are reiterated in Chapter 9. However, the findings are addressed with a focus on changes in local practice, specifically for this audience. The presentation of the project's results in this way addresses the goal of translating the research into practice and responds to the priority of the Inner Gippsland service system that led to the establishment of this project.

Chapter 9. Translation of research findings to practice

This thesis originated from a research collaboration between IGCYAP and Federation University, where the service sector sought evidence to develop practice innovations to address local concerns (see Chapter 1). Chapter 9 provides a practice report written by the researcher, based on the study's findings and the researcher's experience in the local service system. The report details the evidence generated from this research study on which the service system in Inner Gippsland can base decisions for practice innovations to address the priority of reducing youth offending. The translation of research into practice is a priority of this research project. The social ecological framework underpinning this thesis provides the structure through which the research findings can be applied across local communities to address practice priorities.

The report is directed to the Inner Gippsland senior officer's group who manage the practice interventions in line with centrally developed policy and legislative requirements. A stated priority of this group (and of the IGCYAP) is the reduction of youth offending. The group includes members from the Victoria Police regional managers, DET, DOJCS and DHHS. The non-government service system is substantially funded through these government departments. Therefore, local practice innovations can be directed through the senior officer's group. Shared collaborative practice ensures an integrated response to complex social problems and are critical for the efficient and effective use of resources (see Chapter 3).

The report includes an executive summary that provides an abridged version of the key findings and the associated recommendations for practice. This is followed by an

overview of the Victoria Police EIT predictive model and the context of the research project that inform the research questions of this thesis. Then, the findings from the research are presented, followed by an in-depth discussion of the practice implications for the senior officer's group to consider when addressing vulnerable youth in Inner Gippsland.

Vulnerable youth: Local responses, informed by local knowledge

1. Executive Summary

This Report provides research findings from a trial of the Victoria Police predictive modelling, the Early Identification Tool (EIT) in Inner Gippsland which corresponds with Victoria Police Eastern Region Division 5. It is based on doctoral research conducted as a collaborative project between the Inner Gippsland Child Youth Area Partnership (IGCYAP) and Federation University Australia.

The EIT aims to identify youth at risk of persistent offending to provide an opportunity for early intervention to reduce youth contact with the justice system. The research provides an evidence base to inform practice specific to youth at risk in the Inner Gippsland community. The IGCYAP identified youth at risk within the region as a priority and therefore commissioned this doctoral research to provide local knowledge to inform an integrated response across the local service system.

1.1 Local consultation

The doctoral research project provided the researcher with exposure to and opportunity to feed into the local service system to ensure the research and its findings were grounded in the local community. Over the period of the project (2017-2020) the researcher attended the Youth at Risk Panels in both Morwell, Latrobe local government area (LGA) and Wonthaggi, Bass Coast LGA. This structure enhanced the understanding of and responsivity to local concerns. A representative from Victoria Police and from Department of Education and Training (DET) formed part of the supervision panel for the doctoral research providing feedback and clarifications where required. The writer had ongoing consultation with the Specialist Intelligence Services Division of Victoria Police responsible for the development and ongoing implementation of the EIT.

Presentation of interim results has been made to IGCYAP members and feedback sought consistent with an action research method. Seminal Reports¹ relating to youth in contact with the justice system in Victoria and academic conference presentations have also informed the current Report.

1.2 Report aims

The Report aims to inform early intervention practice opportunities in Inner Gippsland to interrupt an individual's offending trajectory. It is acknowledged that policy is set through centralised government departments and local practice must reflect broader policy settings and be consistent with legislation. To inform practice across the service system in Inner Gippsland, the research delivers evidence to assist in:

¹ Jesuit Social Services. (2013). *Thinking Outside: Alternatives to remand for children (Research Report)* Retrieved from Richmond: http://jss.org.au/wp-content/uploads/2015/10/Thinking_Outside_Research_Report_-_Final_amend_15052013.pdf.

Sentencing Advisory Council. (2016). *Reoffending by Children and Young People in Victoria*. Melbourne, Victoria, Australia: Sentencing Advisory Council.

Sentencing Advisory Council. (2019). *Crossover Kids*. Retrieved from Melbourne, Victoria, Australia.

- Identifying the factors that are relevant to vulnerability at initial contact with Police to inform practice to intervene and thereby reduce the risk of future offending behaviour;
- Using available data held across the service system to increase the capacity for integrated decision making and early intervention to reduce vulnerability; and
- Providing evidence to inform evaluation and the effectiveness of current service system responses.

Given a critical component of the practice partnerships, such as the IGCYAP, is to facilitate 'joined up' service delivery, the Senior Officers Group are well placed to facilitate service system responses that reflect an integrated, whole of Government response through collaborative practice initiatives.

1.3 The study group

The project included data pertaining to 57 youth from Inner Gippsland identified on the EIT in 2005. Victoria Police records for the 57 youth from an individual's first record in the Police database to the end of the data collection period (2018) informed findings. The second stage of the research collected developmental history from Department of Health and Human Services (DHHS) and detail of education participation from DET for 10 of the youth from the study group who resided in the Bass Coast LGA. Narratives from Victoria Police file notes for these youth was also collected. The final stage of the research was a survey of local professionals in Bass Coast to include local workers' practice wisdom. The case analysis of this sub-group of 10 young people coupled with survey responses provided a deeper understanding of the lived experience of the Bass Coast cohort and assisted in the identification of potential intervention points.

1.4 Key research findings

This section summarises the main findings from the research project, and the recommendations for practice innovations based on these findings. The full detail of the research findings that underpin the Report's recommendations for practice are provided in the Practice Implications section of this Report.

1.4.1 Early intervention opportunities

Literature indicates that the younger an individual is at first contact with police the greater the probability of future offending. Therefore, identifying potential vulnerability at the earliest point is critical in the delivery of prevention efforts. The research identified a number of findings that indicate opportunities for early intervention:

- The police predictive model and data sets provided information on factors that increase and ameliorate the likelihood of youth contact with the criminal justice system. In particular the findings that related to youth whose offending was less than predicted by the EIT, indicate protective factors within specific contexts. Application of this knowledge allows for early intervention to reduce vulnerability for at-risk youth.
- For the Inner Gippsland cohort, it was found that for a sub-group of youth, contact with Police when the individual was under 12 years of age was a protective factor. In the context of positive family and community support systems, responses at the point of police contact can form an opportunity to reduce the likelihood of future offending.
- The research created a variable to reflect adverse childhood experience (ACE) that combined those reports from the police data set that reflected vulnerability. This

indicator was linked to persistent, serious offending in the Inner Gippsland youth sample. This data can guide intervention decisions at the earliest point of contact with police or other service system partners facilitating prevention efforts.

- The incorporation of additional data detailing aspects of developmental history from DHHS and DET with the Victoria Police data enhanced decision making for early intervention to interrupt a potential offending trajectory. Indicators of vulnerability such as; absence from school, residential instability, contact with police in the community, service system disengagement or episodes of service ending, and reports to child protection bodies, should be available to Youth at Risk Panels so that intervention planning can consider the full context of the individual to facilitate responsive, timely support strategies.
- Exposure to sexual harm or engaging in harmful sexual behaviour especially in early childhood impacted adversely on individuals and their family system.

1.4.2 Protective and risk factors

Criminological research is often focused on risk factors that exacerbate vulnerability and these are commonly individual and to a lesser extent familial characteristics. The design of this project aimed to identify both protective and promotive factors that operate systemically as well as at the individual level. Protective factors buffer vulnerable youth from risk, such as community engagement in sport and promotive factors are those strengths that promote positive outcomes, such as well-resourced specific youth specific services. Programs such as the Wonthaggi Pathways and Transition Support program (WPATS) are examples of interventions that build capacity to increase engagement in positive social structures such as education. The findings relating to protective factors are:

- The protective factors that interrupted an offending trajectory included: stability in residence, participation in education, connection to pro-social family, and the presence of positive community connections,
- Outcomes are enhanced when early intervention, such as at initial contact with police, focuses on protective along with risk factors.
- Engagement with support services increased when there is a recognition of strengths.
- Building on strengths across the community and within individuals and families has universal benefits in the community of focus.

Those factors that represent significant risk in the body of literature, such as exposure to family violence, were present in the current study. The critical finding was that understanding the context of the exposure to risk factors and the developmental history of the individual allows a more effective response to reduce vulnerability for future offending. Findings in respect to risk include:

- Exposure to family violence is associated with youth offending and a strong indicator of vulnerability.
- There is a clear association between youth offending and a history of adverse childhood experiences.
- Placement in Out of Home Care (OHC) can increase an individual's level of contact with the criminal justice system and future offending, as well as disrupt protective factors

(referred to as 'care criminalisation'). There should be a focus on protocols across the service system to support practice when youth in OHC interact with Police.

- Sexual harm, especially when this occurred as an infant, led to substantial adverse outcomes. There is scope for early intervention to strengthen support to families at the time such concerns are raised.

1.4.3 Collaborative practice

Integrated practice across the service system allows for the most efficient and timely delivery of prevention resources. The research project showed clear evidence of the advantages of practice partnerships. Findings in relation to this theme are:

- An integrated service response enables interventions focused across the social systems of a community, such as neighbourhood amenities and access to education, rather than a focus solely on individual characteristics.
- Timeliness and integration of the service system in responding to vulnerability enhances opportunities for positive outcomes.
- Place-based responses that recognise the service systems available in a specific location and privilege local frontline workers' knowledge increase positive outcomes.
- Greater flexibility in design and delivery of interventions in a specific location (e.g. the ReBoot program) increases responsiveness to local conditions.
- Partnership practice models, such as the Youth at Risk Panels, supported by evidence-based policy, are well placed to facilitate early intervention initiatives.
- Practice must be respectful of the community as well as conform to privacy guidelines and legislation. Effective collaborative practice must engage the community for whom intervention efforts are designed.

1.4.5 Data systems

To support collaborative practice access to relevant data to inform decision making in a timely and responsive form is critical. The research project highlighted the impact of gaps in the current siloed data systems, including the following findings:

- Access to and integration of information across the service system is an important factor in decision making. The practice of Youth of Risk Panels to an extent has increased access to data across the service system while adhering to privacy legislation. Data interoperability across the service system will increase capacity to respond early and efficiently to enhance outcomes.
- Access to relevant data sets is critical in enhancing the service system's ability to understand the full context of an individual and to identify intervention points. Those risk and protective factors, from available data sets, identified by this research if readily available to those delivering interventions can assist in targeting prevention efforts.
- Evaluation and monitoring mechanisms must be responsive to the dynamic nature of service delivery in a complex social system to provide useful information to refine responses and assess impact of interventions.
- It is critical that changes to practice are monitored and evaluated using responsive evaluation frameworks specific to the local context.

1.5 Recommendations

Based on the above findings, this report makes the following recommendations:

Recommendation 1: That police review responses to youth at the point of initial contact to respond to factors shown in the research study associated with future offending. The decision to refer an individual to support services should consider the family context, availability of positive community connections and the individual's exposure to adverse childhood experiences such as family violence, child abuse and being the victim of an offence as a child.

Recommendation 2: That the Senior Officers Group direct attention to the development of practice in the residential care sector that reduces the criminalisation of youth placed in residential units because of them displaying problematic behaviour. This would require strengthening the collaboration between Victoria Police and the residential care providers under the oversight of DHHS as well as skill development of residential care workers.

Recommendation 3: Embed a partnership model in current practice with the following key elements; a common agenda, shared measurement systems, mutually reinforcing activities, continuous communication, and a strong lead agency.

Recommendation 4: That the Senior Officers Group disseminate the findings of this research and the practice strategies derived from the Group's considerations to frontline workers to assist in their formulation of responses to youth at risk and vulnerable families.

Recommendation 5: Undertake mapping of the service system across Inner Gippsland to inform the system's capacity to respond to and address the needs of at risk youth within local communities.

Recommendation 6: That the distribution of services and access is realigned based on identified need and workforce capacity. Innovative ways to facilitate access such as partnership approaches and telehealth mechanisms may serve to address gaps in service delivery capacity and equity of access.

Recommendation 7: That the Senior Officers Group support participation in the Youth at Risk Panels to ensure that all key members attend and contribute information in the interests of vulnerable families and community safety.

Recommendation 8: That the protective factors identified are integrated into the deliberations of the Youth at Risk Panels. Further, that the liaison between Victoria Police's Unit responsible for the EIT and the Youth at Risk Panels be supported to further enhance the utility of the EIT in local practice.

Recommendation 9: That the ReBoot Program incorporate strength-based factors identified in the research project, such as engagement in education and presence of positive family support, in their tracking of youth referred to the program and evaluation processes.

Recommendation 10: That the Senior Officers Group direct resources to increase the interoperability of data sets held across the service system. Action is required to facilitate timely access to pertinent data to aid in integrated decision making for at risk youth. It is critical that indicators of vulnerability such as exposure to family violence, absence from school, reports to Child Protection, housing instability, Field Contact reports are available to bodies such as the Youth at Risk Panels to allow for early intervention. In particular,

effort is directed to resolve current obstacles in local access to pertinent DET data, such as suspension and expulsion records, to allow for responsive integrated interventions.

Recommendation 11: That there be a focus on creation of opportunities for the service system's frontline workers' knowledge to be incorporated in design, implementation and evaluation of prevention programs.

Recommendation 12: That the Senior Officers' Group ensure that practice innovations and current early intervention initiatives are resourced to monitor and evaluate outcomes and impacts across the service system and community.

Recommendation 13: That consideration be given to resourcing family support services to increase the service options when concerns of sexual harm of a child are raised. Increased resources and support at a time of increased demand on families will strengthen the family system and reduce the immediate and subsequent negative impacts.

Recommendation 14: That collaborative practice innovations adhere to privacy and legislative requirements while enabling decision-making that is both responsive and timely.

3. Context of the Research Project

The research project was designed to generate an evidence base to inform policy and practice for youth at risk in Inner Gippsland. The project arose from the research collaboration between the Inner Gippsland Child Youth Area Partnership (IGCYAP) and Federation University and was initiated to address the priority of the IGCYAP of youth at risk of engagement in offending behaviour.

In the context of the Roadmap to Reform² initiative the Victorian Government's South Division Multi-Agency Partnership Executive group has a priority project focused on developing a shared 'youth at risk' framework and an outcome measures policy. To facilitate 'joined up' service delivery the multi-agency group is developing a framework based on those factors that are indicative of youth vulnerability to improve intervention efforts. The research project provides an evidence base to support these initiatives in Inner Gippsland.

The IGCYAP with approval from both the Children's Services Coordination Board and Deputy Commissioner Specialist Operations and Deputy Commissioner Regional Operations, Victoria Police committed to trial the EIT developed by Victoria Police. The trial of the EIT provides an important opportunity to contribute to the literature in the field of prediction and prevention of youth contact with the criminal justice system. To date, the tool has not been exposed to external academic attention. It forms a new initiative of Victoria Police to utilise current data sets to contribute to the service system's capacity to effectively respond to vulnerable youth.

The research combined government and service agencies data in a detailed case analysis to generate local solutions to local issues. The case analysis pertains to the Bass Coast LGA in Inner Gippsland and Eastern District 5, the Victorian Police region in which the EIT has been approved for trial.

3.1 The Early Identification Tool (EIT)

Victoria Police Executive Command as well as the internal Privacy Unit endorsed the EIT to be piloted in a number of areas with a local Children and Youth Area Partnership (CYAP). The purpose of the trial was to test the use of the tool and associated processes prior to further roll out. Testing the established processes in a practical environment ensured that the processes and governance structures are validated and improved prior to broader implementation. The Victoria Police region of ED5 (equivalent to the DHHS and DET Inner Gippsland Area) formed one of the trial areas.

The EIT was developed by Victoria Police to influence and support partner agencies to:

- Prevent young people from entering or continuing contact with the criminal justice system;
- Improve pro-social outcomes for at risk young people;
- Reduce overrepresentation of youth as recidivist offenders; and
- Provide an evidence-based assessment of risk to more effectively engage and influence partner agencies.

² Department of Health and Human Services. (2016). *Roadmap for Reform: Strong families, safe children*. Melbourne: Victorian Government Retrieved from <http://www.strongfamiliesafechildren.vic.gov.au/15641/documents/48196>.

The operationalisation of the EIT in informing practice forms the central component of this research project. The predictive model provides the service system with current data on the likelihood an individual will progress to future offending. In the framework of early intervention this information can be utilised by the service system to proactively consider options to intervene to interrupt a projected trajectory of offending at the earliest opportunity. The benefits of systemic interventions are broader than the individual, as strengthening communities and social systems has flow on benefits for the local community and is an efficient use of social and economic resources.

4. Why this Research?

Early intervention to address factors that place young people at risk of contact with the criminal justice system reduces potential negative impacts for the young person, their family and the community in which they live³. Prevention strategies address a serious societal problem and it is critical to target efforts at the earliest opportunity and at key developmental transition points. Systemic early intervention focused on vulnerability that facilitates positive development provides societal and economic benefits across the community and service system.

The utility of the EIT is a key element of this project and the current study contributes significantly to the literature in the field of youth pre-offending and offending. In the bulk of previous research examining offending trajectories, cohorts studied were identified by formal contact with the criminal justice system and the research predicted re-offending.⁴ The EIT predictive modelling differs in that data prior to such formal contact or onset of offending is utilised in generating the predicted trajectories. The EIT has yet to be studied in an applied context or as the focus of scholarly examination. This project provides a significant opportunity to contribute to the community safety agenda of Victoria Police⁵ and develop an evidence base to develop service innovations in Inner Gippsland specifically.

Early intervention strategies are a critical aspect of the current study. Through focusing attention on youth who do not follow the trajectory as predicted by the EIT, knowledge to identify early intervention opportunities and structural elements of the community that can be strengthened for positive change have been generated. This research expands current knowledge by identifying the gains of matching police data with that service system partners. A richer understanding of salient risk and protective factors and key intervention points is gained through the case analysis of both police and service system data.

The project adopted a place-based approach, consistent with the aims of CYAPs to generate local solutions to local concerns. The research has produced evidence to develop place-based

³ Freiberg, K. & Homel, R. (2011). Preventing the onset of offending. In A. Stewart, T. Allard, & S. Dennison (Eds.), *Evidence Based Policy and Practice in Youth Justice* (pp. 82-99). Sydney: The Federation Press.

⁴ Assink, M., van der Put, C. E. & Stams, G. J. J. M. (2014). The development and validation of an actuarial risk assessment tool for the prediction of first-time offending. *International journal of offender therapy and comparative criminology*, 60(7), 847-864. doi:10.1177/0306624X14558204; Sutherland, P. & Millstead, M. (2016). *Patterns of Recorded Offending Behaviour Amongst Young Victorian Offenders*. Melbourne: Crime Statistics Agency Victoria Retrieved from <https://www.crimestatistics.vic.gov.au/research-and-evaluation/publications/youth-crime>.

⁵ Victoria Police. (2012-2015). *BluePrint*. Retrieved from <http://www.police.vic.gov.au/annualreports/ebooks/2014/files/assets/basic-html/page8.html>.

interventions and bridge the practice-research gap, as discussed by Anastas⁶. The research findings are both applicable to the local service context and responsive to the needs of the local community of Inner Gippsland with an in-depth focus on Bass Coast. This project also supports the work of the Youth at Risk Panels in Inner Gippsland.

4.1 Questions answered by the research

How can the Victoria Police Early Identification Tool be used to reduce young people's contact with the criminal justice system?

Three sub-questions emerge to form the basis of the research designed to answer the central question:

(1) What are the factors, both risk and protective, that are associated with an offending trajectory, as predicted by modelling based in police data sets?

The project aimed to identify the factors that both increase and ameliorate risk of youth contact with the criminal justice system through a retrospective analysis of youth in Inner Gippsland identified on the EIT.

(2) How can developmental data from DHHS, DET and Victoria Police file narratives contribute to improved understanding of these factors?

Youth offending is best understood within the developmental framework of adolescence and the social ecology within which the young person operates. This research utilised data from service partners in the IGCYAP to enhance understanding of the factors that relate to youth contact with the criminal justice system.

(3) What are the critical factors and intervention points in a young person's social ecology that reduce young people's contact with the criminal justice system?

5. The Research Data

Data collection and analysis occurred in stages to build understanding of those factors that served to interrupt a predicted offending trajectory. Multiple and distinct methods were employed to provide the relevant information to address the research questions.

Table 1: Research stages and data collection

STAGE	ACTIVITY	METHOD	SOURCE
Stage 1	Identification of factors that support and interrupt youth's trajectory of contact with the criminal justice system in the Inner Gippsland region.	Retrospective longitudinal study of youth in Inner Gippsland identified on the EIT (2005)	EIT, Victoria Police

⁶ Anastas, J. W. (2014). The science of social work and its relationship to social work practice. *Research on Social Work Practice*, 24(5), 571-580. doi:10.1177/1049731513511335.

Stage 2	Establish cohort of youth identified on the EIT who reside in the Bass Coast LGA. Link with service contact information to augment understanding of the factors derived from the Stage 2	Case Study analysis of Bass Coast cohort from EIT matching data from IGCYAP agencies	EIT, Victoria Police DET, DHHHS
Stage 3	Establish workers' perception of the importance of the factors identified in previous Stages as they operate across the Bass Coast social ecology	Online anonymous survey rating the importance of the factors related to youth's contact with the criminal justice system	Survey responses from Bass Coast Youth at Risk Panel members

5.1 Inner Gippsland cohort

The first stage of data collection provided a broad picture of the youth identified on the EIT in Inner Gippsland.

In Stage 1 a total of 57 youth at risk of further offending, were identified on the EIT in 2005. For the sample of 57 youth the following data from Victoria Police LEAP database was provided to the researcher:

- Date of and offence type for which the individual was recorded as an offender;
- Missing Person (MP) reports and age at the time of the report;
- A record of the individual being listed as the victim of an offence against the person when aged under 18 years (CV) and age at time of report;
- A record of the individual being listed as the victim of a sexual offence when aged under 18 years (CSA) and age at time of report;
- Family Violence (FV) Reports where the individual has been recorded as either the perpetrator or affected family member and age at the time of the FV incident;
- Field Contact (FC): where an individual has contact with Police in public and a record of the contact is made by the Police and age at the time of the report; and
- Demographics at the point of identification in 2005 (age, gender).

Victoria Police developed the criminal seriousness index (CSI) a numerical value based on the quantity and seriousness of offending, drawing on a similar Canadian model⁷. Statistical

⁷ Wallace, M., Turner, J., Matarazzo, A., & Babyak, C. (2009) 'Measuring Crime in Canada: Introducing the crime Severity Index and Improvements to Uniform Crime Reporting Survey', Canadian Centre for Justice Studies.

modelling from the existing Victoria Police data set provides an individual's predicted CSI at age 21 years. This process provides information so that early intervention can be considered for youth for whom there is the greatest potential of serious, persistent offending. For the 57 youth in the study group, the current CSI and the predicted CSI at age 21 years at the point of identification was provided.

For the purpose of the current study a new factor, adverse childhood experience (ACE), was created by the researcher. This included: the number of Missing Person and Family Violence incidents/reports recorded when the individual was under 15 years; Field Contact reports when the individual was under 10 years; and the total number of Child Victim reports.

5.2 Bass Coast cohort

To understand the themes from the study group more deeply, consideration of developmental data and the context of Police contact was undertaken for a sub-group of ten youth from the total study population.

Developmental history data from DHHS and DET for 10 youth (8 male, 2 female), who resided in the Bass Coast LGA, was collected as well as the narrative from Victoria Police file notes. The de-identified data collected by the respective Departments provided all official history on file from birth to 2018. Data for those 10 youth in the Bass Coast LGA further to that collected for the total Inner Gippsland cohort included;

- Narrative file notes from Victoria Police of all contact with the youth;
- Criminal history of parents, siblings;
- Youth Justice history;
- Substantiated Child Protection reports;
- Out of home care placement history;
- Disability status;
- Public Housing history;
- School enrolments both primary and secondary;
- Expulsions, suspensions;
- Absence data;
- Support services engaged; and
- Mental Health history⁸.

Case analysis of this sub-group of ten youth was undertaken to identify key themes to enhance the understanding of potential intervention points

⁸ Note this was notation in files in respect to the youth, and on occasion their family members. This is not formal diagnosis; it may represent a notation of a mental health admission.

6. Results from the research

A retrospective longitudinal analysis of the 57 Inner Gippsland youth, 50 male (88%) and 7 (12%) female, identified on the EIT in 2005 was undertaken. All were engaged in youth offending, with a diverse range of offence types. Of the 57 youth, seven had no adult offences recorded in the period of data collection.

In the group of seven youth who had no adult offences, four of these cases had no family violence reports and of the other three, the number of reports were well below that of the average (8.58) in the total sample. Similarly, four of these youth had no child victim reports. For all the cases with no adult offences, the age of onset of offending ranged from seven to eleven years. In the majority of cases that had substantial adult offending the age of onset was older, ranging from 12 to 16 year. For those with adult offending the offences were, in the main, property offences.

6.1 Age at onset of offending

For the total sample of Inner Gippsland youth the youngest individual listed as an offender against an offending incident was 5 years of age, the oldest was 16 years and the sample average was 11 years old. The EIT data records the age an individual when first listed as an offender against an offending incident. This record includes cases where the individual was not formally charged nor had a finding made in Court. This may be due to the person being under the age of criminal responsibility or there being insufficient information to proceed to charge and then proceed to court, or police exercising discretion. The age at which an individual first engages in offending behaviour is linked, in the literature, with the likelihood of further offending. An early onset of offending increased the likelihood of future offending.

From the total sample of 57 youth, 11 were significantly below the level of predicted offending at age 21 years. Of this sub-group all were first listed as an offender at or below 11 years of age. This result, which is contrary to that documented in the body of literature, suggests that there may be a protective factor in police contact for these youth. In the vast majority of previous research on prediction of future offending the youth studied were identified at a point of formal youth justice contact ranging from formal caution or diversion to incarceration. This differs from the EIT record that lists an individual as an offender prior to formal processing and contact with the Youth Justice system. This difference may contribute to the findings in the current study that shows that early onset of offending in some cases does not result in future, persistent offending. These findings and associated practice implications are discussed in more detail in the Practice Implications section of this Report.

There was a second cluster of youth aged 12 years and older (n=12) who had above the median number of youth offences (29) and adult offences (17) as recorded in total study group. This finding, again discussed in detail later in this Report, identifies a group of youth for whom early intervention can have significant benefit in reducing the costs of youth contact with the justice system.

The following provides a typical case (**Mark**) from the total study group.



Mark

A typical youth from the total sample

Mark was 11 years of age when he was first recorded as an offender in the Victoria Police database. He continued to offend into early adulthood and has 29 youth offences and 17 adult offences. He was reported as a Missing Person on one occasion at age 13 years. His first Field contact was at age 13 and there were eight further contacts up to early adulthood.

Mark was exposed to family violence; his initial exposure was at age 15 years and he has been recorded as involved in family violence on five more occasions. He has had adverse childhood experiences that are related to his offending, increasing the likelihood of this occurring.

The nexus between exposure to family violence and youth offending as demonstrated in the scholarly literature⁹ was present in the Inner Gippsland cohort. The number of family violence reports positively correlated with the age when first listed as an offender, total number of adult offences, and the number of adult offences against the person. The association between adult offences against the person and level of family violence may reflect that exposure to violence is related to a greater propensity to engage in violence as an adult. The number of family violence reports was higher for those youth who were younger at the first family violence report. For this group there was sustained exposure to family violence and the finding suggests the lack of positive outcomes from the initial report of family violence.


6.2 Offending trajectory

The total sample was considered in respect to those who at age 21 years their actual recorded offending was below that as predicted (Below group) and those whose actual offending was above that as predicted (Above group). From the sample of 57 youth, there were 33 youth who fell in the 'Below' group and 24 youth in the 'Above' group.

The difference between the actual and predicted level of offending at age 21 years in some cases was minimal and therefore may not reflect a true difference. To try and understand those factors associated with a true difference in actual as compared to predicted levels of offending, it was decided to further define the sample through groupings that represent those cases statistically significantly below and above the predicted trajectory. This division formed the sub-group of cases Statistically Above (n=8) and Statistically Below (n=11).

⁹ Hurren, E., Stewart, A., & Dennison, S. (2017). Transitions and turning points revisited: A replication to explore child maltreatment and youth offending links within and across Australian cohorts. *Child Abuse & Neglect*, 65, 24-36. doi:10.1016/j.chiabu.2017.01.002; Malvaso, C. G., Delfabbro, P. H., & Day, A. (2017). The child protection and juvenile justice nexus in Australia: A longitudinal examination of the relationship between maltreatment and offending. *Child Abuse & Neglect*, 64, 32-46. doi:10.1016/j.chiabu.2016.11.028.

Below is a typical case where the CSI over the study period was statistically below that predicted (**Tony**) and a typical case showing a youth whose CSI was statistically above that predicted (**John**).



Tony

A youth whose actual offending was well below that predicted

Tony was 9 years of age when he was first recorded as an offender in the Victoria Police database. His youth offending was minimal and mainly property offences. He ceased offending by adulthood. He had minimal Police contact; he was reported as a Missing Person on one occasion at age 11 years. His first Field contact was at age 12.5 years of age with one other Field Contact.

Tony was not exposed to family violence or adverse experiences when a child. His exposure to family violence was when he was above 18 years of age.

The 'Below' group is characterised by early contact with police either as first listed as an offender, first Missing Person report, and/or first Field Contact report. This indicates for those youth whose engagement in offending behaviour was lower than predicted that the contact they did have with police perhaps formed a protective factor.

For those youth below the predicted level of offending there was a noted absence of adverse childhood experiences potentially suggesting a positive family system.



John

A youth whose actual offending was well above that predicted

John had an early onset of offending that persisted into adulthood. He was 12 years old when first listed as an offender and he engaged in a relatively high level of both youth and adult offending. His youth and adult offending was diverse across offence types.

John's first and only Missing Person report was at age 13 years. He was 13.5 years of age when he had his first Field Contact with Police and up to early adulthood he had a further 20 Field Contact reports.

John was impacted by adverse childhood experiences and he was 5 years of age when first recorded as a child victim. Exposure to and engagement in family violence was substantial for John and this commenced when he was 13 years old. John experienced sexual assault as a child and this impacted significantly on him. His adverse childhood experiences and age of victimisation were linked to his considerable engagement in youth and adult offending.

For the Above group the median number of Field Contact (19.5), Child Victim (1.5) and Adverse Childhood Experience (2.5) reports were greater than the medians of the total group. This demonstrates a high level of involvement with statutory agencies. The median age of first listed adverse childhood experience was 5 years of age compared to the total study group where the median age was 11.5 years. This demonstrates for those youth with offending above that as predicted that the exposure to negative childhood events commenced early in life and persisted over their childhood and adolescence. There is a clear association between exposure to family violence and adverse childhood experiences and offending. In the youth whose level of offending was above that predicted at age 21 years this association was strongest.

For those in the Above group there was a clear association between the number of youth offences and adverse childhood experience reports. This is consistent with the empirical literature that highlights the nexus between childhood trauma and later offending.

6.3 Key themes from the Bass Coast cohort

As noted above, the study also gathered data on a sub-group of ten youth from the Bass Coast, in order to understand the themes from the study group more deeply.

There was some difficulty in obtaining full file histories in particular for education. On the data available for the ten cases:

- The age at first listed as an offender ranged from 10 to 16 years.
- Half of the cohort had Child Protection histories.
- Four youth had out-of-home care placements.
- Nine of the ten youth had contact with Youth Justice.

- Seven attended multiple primary and secondary schools.
- Eight of the youth had exposure to family violence either as the affected person or as the person who engaged in the behaviour.

The Bass Coast cohort reflected individuals who ceased engagement in offending behaviour as an adolescent, those who commenced offending in later adolescence, and those who persisted offending into adulthood. These groupings are consistent with the established body of literature meaning that the Bass Coast cohort, although a small number of youth, reflects established taxonomies of youth offending. Similar to the total sample, youth with family support, demonstrated by attendance at Police interviews and lodging Missing Person reports, were more likely to have a level of offending below that as predicted on the EIT.

The nexus between exposure to family violence in childhood and future engagement in family violence with offending was clear. Adverse childhood experiences were linked to future offending. Placement in OHC was a common feature in those youth with Child Protection reports.

Key protective factors demonstrated in the Bass Coast cohort included:

- Stability in education, especially minimal changes in primary schools attended;
- Successful transition to secondary school;
- Completion of secondary education;
- Presence of a supportive, prosocial family system;
- Engagement with community, such as sporting activities;
- Youth Justice involvement in the main was protective as this disrupted the predicted offending trajectory.

Key factors that exacerbated risk demonstrated in this cohort included:

- Disrupted education due to family mobility, or multiple placements in OHC;
- Multiple reports to Child Protection;
- Exposure to or engagement in sexually harmful behaviour, especially when this occurred under the age of 5 years;
- Risk of future offending increased the older the individual was at the point of the first report to Child Protection;
- Placement in OHC, especially multiple placements over a wide area of the region, was disruptive to developmental progress and linked to offending.

6.4 Perspectives of frontline workers

To inform the research the practice wisdom of those workers involved in the Bass Coast Youth at Risk Panel was sought. Members of the panel were offered the opportunity to complete an online anonymous survey. Participants were asked to rate factors they thought increased or decreased risk of a young person's involvement in justice systems. Twenty-one workers out of an email list of thirty- three responded although some respondents did not answer every

question. Overall, the results were consistent with the body of literature detailing risk and protective factors for youth.

A majority of workers (14 of 21) thought that police contact at an early age (under 14 years) increased risk. Being charged with an offence (15 of 21), family members with a criminal history (16 of 21) and being listed as a Missing Person (11 of 21) were seen as factors that increased risk. Contact with police in a public place, such as Field Contacts split opinions as to whether this decreased or increased the level of risk. Placement on a Youth Justice Order was seen as increasing risk (14 of 21). Although not as strongly related, if the Order included a condition to engage in intervention programs, this was rated as increasing the risk of future offending (9 of 21).

Engagement and stability in education rated as a protective factor. A successful transition from primary to secondary school was strongly endorsed (17 of 21) as protective, as was parental support for education (17 of 21) and engagement with school support services (16 of 21).

Exposure to family violence (19 of 21) and childhood abuse (19 of 21) was strongly endorsed as indicative of increased risk. Placement on a Child Protection Order was seen as both a risk (14 of 22) and a protective factor (4 of 21) across the responses. Placement in OHC was seen as exacerbating risk of contact with the criminal justice system (16 of 12). Eleven of the 21 respondents endorsed receiving support from community service organisations as reducing risk.

Community factors such as; exposure to crime in the local neighbourhood (16 of 22), socio-economic disadvantage (18 of 21), residential instability (15 of 21), and living in Public Housing (12 of 21) were all endorsed as increasing risk by the workers.

The differences of opinion as to the impact of certain factors on the level of risk may well reflect the context and individual circumstances related to each factor. The worker's role in the service system and therefore their lived experience with youth at risk may have also been a component of their opinions as to what formed a risk or protective factor.

7. Youth at Risk Taskforce

The Inner Gippsland Senior Officers Group and the IGCYAP formed a Youth at Risk Taskforce to reduce the number of young people at risk of entering the justice system. The Taskforce's purpose is to support early intervention and service coordination, for individual young people, to prevent a pathway into repeat criminal offending. The aims of the taskforce included:

- To better understand how the families of youth at risk have interacted with the service system;
- to respond in a way that builds protective factors that are strengths based;
- to facilitate more targeted responses;
- to ensure partnerships approaches;
- to identify critical service system interactions; and
- to identify early intervention opportunities to respond differently to families.

The Youth at Risk Taskforce undertook a case analysis of four families of youth identified on the EIT as at risk of future offending¹⁰. The following provides a summary of the key themes identified by the Taskforce. This data is consistent with the findings from the current study adding weight to the findings and implications for practice in Inner Gippsland.

7.1 Family violence

Of the five individuals or four families (one set of twins) that were mapped, the most overwhelming common thread was the presence of family violence throughout the life of the child. There was often an increase in recorded school absences at the times of family violence reports.

Of note is the increase in formal family violence reports after the implementation of the Code of Practice for the Investigation of Family Violence implemented by the Victorian Police in 2004. This led to significant reforms in family violence reporting and integrated work across agencies. Post 2006 there was a significant increase in the correlation between Victoria Police family violence reports and Child Protection notifications.

7.2 Contact with Child Protection

Between the four families, there were 93 child protection notifications and all children had contact with child protection (CP) in the first year of their life. For two children there was a notification to CP prior to their birth. All families had intermittently engaged with the ChildFIRST.

All families had some involvement with ChildFirst and varying degrees of more intensive family support services. Over the period of support it was apparent that families were relatively stable with an absence of CP reports, and regular school attendance. When the period of intensive support ended there was an escalation in a range of issues, such as the youth engaging in offending, family violence reports, and CP notifications.

All cases noted issues around 'engagement' with families. Often cases were closed for reasons such as 'family won't engage with supports' or 'family did not attend scheduled appointments at the office'.¹¹ However clearly there was evidence that when the family is connected to support services the protective factors for young people can be strengthened.

All five children were the victim of an assault or multiple assaults (recorded in police data as a child victim). Other significant life events included; death of a parent, family members or significant figures; and parents who have been or still were incarcerated at the time of the case analysis.

7.3 Housing

Two of the four families were in long term public housing. Information from public housing casefiles indicated that; there were issues related to neighbourhood disputes directly connected to the behaviours of the children, and children moving schools due to homelessness and housing changes, triggering school disengagement.

¹⁰ Youth at Risk Taskforce, 2017, EIT Discussion Paper.

¹¹ Randall, M. (2019) Factors influencing engagement with voluntary family services. Inner Gippsland Children and Youth Learning Exchange Podcast. <https://federation.edu.au/connect/partnerships/business-partnerships/our-partnerships/children-and-youth-area-partnerships>.

7.4 Education

Similar issues with educational data were present for the Taskforce analysis as in the research project's Bass Coast case analysis in that this data was more difficult to extract. Overwhelmingly engagement at primary school was a strong protective factor for children and families. There were connections between escalation of absences, significant life events and increases in offending behaviour. It was noted that for many of the youth, transition to high school was a significant point of vulnerability.

7.5 Offending

There was a clear connection between family violence and CP reports and an individual engaging in offending behaviour. The recorded offending often occurred on the day of a family violence incident, or just prior or soon thereafter. This suggests that youth vulnerability and risk of offending often co-occurs with exposure to family violence. This temporal association provides a potential intervention point to reduce the likelihood of youth offending. There was a history of criminality in all the families and all of the cases examined had a parent who had been incarcerated.

8. Practice Implications

The translation of the findings from this research to practice is a central focus of the overall study design. This section presents practice recommendations drawn from the key findings, supported by the work of the Youth at Risk Taskforce, for the consideration of the Senior Officers Group. It is acknowledged that the Senior Officers Group are bound by central policy and legislation. The recommendations provided are to operationalise policy in Inner Gippsland to address the priority of enhancing early intervention opportunities to reduce youth contact with the criminal justice system.

8.1 Strengthen current Police response at initial contact and utilise findings to inform response

Findings identified that early onset of offending was not necessarily a flag for future persistent offending. This contrasts with the association between age of onset of engagement in offending behaviour and level of future offending as described in the relevant literature¹².

Results from this study demonstrate that the key differences between those youth who did not offend as predicted and the total sample is the age at which initial contact with police occurred. This finding of initial contact with Police at an early age and not engaging in the level of serious offending as predicted provides potential early intervention opportunities.

Contact with police whether through investigation of responsibility for an offending incident, being reported as a Missing Person or a Field Contact in early adolescence or younger may provide an opportunity for preventative intervention. It is important that the context of the

¹² Dennison, S. M. (2011). Developmental and life course criminology-Theories, research and policy implications. In A. Stewart, T. Allard, & S. Dennison (Eds.), *Evidence Based Policy and Practice in Youth Justice* (pp. 46-62). Sydney: Federation Press; Piquero, A. (2008). Taking stock of developmental trajectories of criminal activity over the life course. In A. Liberman (Ed.), *The Long View of Crime: A Synthesis of Longitudinal Research* (1st ed., pp. 23-78). New York: Springer-Verlag.

police contact is taken into consideration both from a developmental perspective as well as situational factors specific to place.

Missing Person and Field Contact reports need to be considered with respect to context and the developmental stage of the youth. An individual may leave their home for a range of reasons; often when younger, youth are escaping from potential harm while later adolescents may be rejecting of the authority of their care-givers or motivated to connect with peers.

The recording of a Missing Person report reflects that someone is concerned about the youth and therefore makes a report. This may reflect the presence of a supportive prosocial system. If the youth is placed in OHC then policy and procedure requires a Missing Person report is made after a specified period of absence from placement.

In terms of Field Contact reports, a nine-year-old child on the street at 1am may reflect the lack of capable guardianship in the home or an unsafe environment from which the individual wants to escape. Responses to this scenario may result in further investigation of the family situation of the child, reports to child protection agencies or other community support services. This reflects a different context to three 14-year-old youth found in school grounds on a Saturday afternoon. Responses to this scenario may include greater security at the school, increased police attention and development of positive recreational activities for youth in the local community. Each context requires a different response to reduce potential vulnerability or engagement in offending behaviour. Police attending an incident or following up a report and then the subsequent action taken involves discretion at the operational level. Consideration of the context of a report and the developmental stage of the individual form factors of note, in making decisions as to appropriate action.

The results show that there are two distinct sub-groups reflected in the study group. One sub-group is characterised by early onset of offending or police contact through Missing Person or Field Contact reports that results in persistent, serious offending. The other subgroup is characterised by the same early police contact however this contact presents as a protective factor, in that the predicted offending trajectory did not occur. It may be for those whose actual offending is below that as predicted positive social systems, such as family or school, function as a protective factor. When police contact occurs, these prosocial factors are activated and therefore ameliorate the risk of future contact with the justice system. For those youth with a disrupted family system and exposure to adverse childhood experiences, when earlier contact with Police occurs then future persistent, offending is likely.

Findings demonstrated that for youth with exposure to negative childhood experiences there was a link to offences committed against the person. This may reflect acting out behaviours due to childhood harm and exposure to violence in the home. Diversion from the criminal justice system at the earliest opportunity to therapeutic services, such as in the case of Therapeutic Treatment Orders for youth who engage in harmful sexual behaviour, is best placed to respond to these youth.

Therefore, the action taken by Police at the point of contact needs to be responsive to the circumstances of the individual and the local context. It is important that responses do not change for those youth who did not continue to offend. The inclusion of youth in programs, who

do not require intervention, referred to as 'net-widening'¹³, drains resources. Findings suggest that the police response needs to consider the combination of factors as presented in the specific situation. For a number of youth in the study who had *early* exposure to police by Field Contacts, through attendance at family violence incidents, and as the subject of childhood victimisation, the police contact formed a protective factor as offending did not progress as predicted.

For those youth who do not offend as predicted as noted above it appears that positive supports are activated through the individual having contact with police. This can result in increased safe guarding practices and reduce potential risk of further contact with justice authorities. Given this cohort of youth also had less exposure to family violence and childhood victimisation it is more likely these youth are from 'pro-social' family systems. In the instance of police involvement, a form of re-integrative shaming¹⁴ may be operating. Re-integrative shaming is when families act to address the reasons that police contact occurred. This activation of positive support, along with Police procedures, contributes to the interruption of a potential offending trajectory for these youth.

In the case of a positive family system police contact, such as a Field Contact or Missing Person report, or even an interview in relation to an offending incident, may buffer the individual from the risk of future contact with justice systems. A similar tool that sought to identify those variables prior to engagement in offending that were most strongly associated with future delinquency has been developed in the Netherlands¹⁵. The findings from the current study may be utilised by police to inform decision making at the earliest point of contact, similar to the tool to predict onset of delinquency developed in the Netherlands. In the case, that a youth has a family system that is positive and able to access community resources to support future positive development then no further action above current practice may be necessary. It is for the cohort of youth with substantial exposure to family violence and/or childhood victimisation that referrals to support services can reduce the potential for future engagement in offending.

The ACE variable created in this research is useful to tease apart these two subgroups to guide intervention responses. This variable is the sum of the number of Missing Person and Family Violence reports recorded when the individual was under 15 years; Field Contact reports when the individual was under 10 years; and the total number of Child Victim reports. This data is readily available to Police and given the link of adverse childhood experience to risk of future offending it presents as a useful guide to decision making.

Recommendation 1: That police review responses to youth at the point of initial contact to respond to factors associated with future offending. The decision to refer an individual to support services should consider the family context, availability of positive community connections and the individual's exposure to adverse childhood experiences such as family violence, child abuse and being the victim of an offence as a child.

¹³ Ferrante, A. M. (2013). Assessing gender and ethnic differences in developmental trajectories of offending. *Australian & New Zealand Journal of Criminology*, 46(3), 379-402.
doi:10.1177/0004865813490948.

¹⁴ Braithwaite, J. (1989). *Crime, shame, and reintegration*. Cambridge: Cambridge University Press.

¹⁵ Assink et al (2014).

The following case example demonstrates the need to deliver responses at the earliest opportunity with consideration of circumstances and the developmental stage of the youth involved.



Robbie

A case showing possible opportunities for early intervention

Robbie is 14 years old and lives with his Mum and two younger siblings. The family has been exposed to family violence over a considerable period and Robbie's father is no longer a part of the family. Robbie disengaged from school and spent most of his time in the community with peers. There was informal contact between Robbie and Police on the street. His Mum was struggling with supporting and the discipline of Robbie. At times, he displayed aggressive behaviour towards her that exposed his siblings to further family violence affecting their presentation at school.

Robbie engaged in developmentally expected offending with the peers with whom he was spending the majority of his time. He was charged and bailed with a condition that he reside at home between certain hours. However, this condition resulted in increased time in the family home potentially increasing the conflict between Robbie and his mother, and exacerbating the impact on his siblings.

Police charged with enforcing the Bail conditions regularly visited the home. This supported Mum in parenting Robbie, and increased her sense of confidence and safety to a degree.

In this scenario, the balance between increased time in the home and therefore the greater likelihood of conflict within the family, and the preventative structure of the Bail condition that reduced Robbie's contact with negative peers and opportunities to offend requires consideration. It is possible that earlier interventions to support the family at a number of prior service contacts; at the time of the original family violence incident, when Robbie disengaged from school or at the point of contact with police in the community prior to Robbie offending may have driven more positive outcomes.

Placement in OHC, especially residential care, was identified as a risk factor for future offending in part because this contact led to increased contact with police. The Thinking Outside Report¹⁶ asserts that reforms should be explored in the protocols for dealing with the problematic behaviour of children in residential care, in particular around the involvement of police and the pressing of charges. Recently there has been some work to develop protocols between providers of residential care and police in Inner Gippsland, however more work in this space is indicated. The development of responses that reduce 'care criminalisation' could assist in reducing youth

¹⁶ Jesuit Social Services. (2013). *Thinking Outside: Alternatives to remand for children (Research Report)* Retrieved from Richmond: http://jss.org.au/wp-content/uploads/2015/10/Thinking_Outside_Research_Report_Final_amend_15052013.pdf.

contact with the criminal justice system and potentially facilitate a more positive relationship between youth and police.

Recommendation 2: That the Senior Officers Group direct attention to the development of practice in the residential care sector that reduces the criminalisation of youth placed in residential units because of them displaying problematic behaviour. This would require strengthening the collaboration between Victoria Police and the residential care providers under the oversight of DHHS as well as skill development of residential care workers.

8.2 Support for practice partnerships

This research shows that integrated responses in a timely manner enhance the outcomes for individuals, their families and the wider community. Consistent with the premise of the Youth at Risk Taskforce, practice partnerships allow for the full context of youth at risk to be explicated and tailor-made responses delivered. The Senior Officers Group is well placed to address obstacles to integrated practice such as data collection/sharing, competing agency priorities, and short-term impact reporting measures, and so move towards the goal of 'joined up' service delivery. The critical nature of collaboration requires all members of the partnership to actively participate, act in accordance with agreed goals and to enact change to practice. Effective collaborative practice will overcome the limitations of singular agency approaches to developmental crime prevention initiatives.

An exemplar of an evidence-based program targeted at reducing youth crime and implemented in Australia is Communities that Care (CTC), a comprehensive, community-wide risk-focused prevention strategy based in predictors of health and behaviour problem. Adapted and implemented nationally in Australia through the Centre for Adolescent Health at the Royal Children's Hospital in Victoria, evaluation of the large trial of Communities That Care in the Mornington Peninsula Shire is showing indications of positive outcomes¹⁷.

¹⁷ (see https://www.rch.org.au/cah/research/Communities_that_Care_Australia).

The following example drawn from the analysis of the Youth at Risk Taskforce demonstrates how the service system could respond differently to deliver better outcomes for all.



Billy

A case where an earlier integrated response could enhance outcomes

Billy was identified on the EIT as at risk of future youth offending. Developmental data held by DHHS and DET and the Police file narrative showed the following circumstances that led up to Billy's contact with police.

Billy was in the later years of primary school. His attendance at school was good and the engagement in education presented as a protective factor. Billy's Mum struggled with mental health concerns and related substance abuse. She had disengaged from her support services and was struggling to meet her rental payments. The family was evicted from private rental and entered emergency housing in the same town, however the location of the emergency housing and subsequent public housing meant that Billy was no longer able to independently get to his original school. Mum was not able to transport Billy to school and so his attendance deteriorated. His disengagement from school can be directly attributed to the move to emergency housing.

Billy therefore no longer had the positive support system that school provided and this led to increased general community access and exposure to peers who were also not engaged in school. Billy's first contact with Police occurred in this context and offending began shortly after.

In terms of integrated service involvement and resource allocation, financial resources directed to maintaining Billy's family in their original home would have reduced the social and economic costs post eviction. This would also have maintained the protective factor of engagement in education. The use of resources also could have been reduced as maintaining the original residence would have been more cost effective than the resources directed to rehousing the family and the costs associated with the subsequent school disengagement and police contact.

Billy's case also demonstrates the importance of early intervention and timeliness of responses. An opportunity to support the family when Billy's mother disengaged from her support network may have reduced later social and economic costs for Billy, his family and the service system. The ability to share information across the service system at a local level and flexibility in response from the service system in addressing vulnerability can increase the likelihood of positive outcomes. If the education system could utilise absence data to focus initiatives to maintain engagement in school at the earliest indicator of vulnerability, further adverse outcomes may be ameliorated. This would be particularly pertinent at the critical transition from primary to secondary education.

The need to intervene early and respond flexibly to the individual context for each young person is highlighted in this case scenario. The response when all services are operating independently

of each other resulted in adverse outcomes. The research findings have highlighted the importance of Child Protection notifications, exposure to family violence, participation in education and stability in residence. These indicators can be used as flags for early intervention to stabilise vulnerable families reducing the future contact with the criminal justice system. Again, the findings from the research project support using Police data reflected in the ACE variable to access readily available information on which to guide decision making.

It is also noteworthy that many families when engaged in support services, such as ChildFirst, were better able to manage challenges. The maximum service period could be made more flexible to ensure changes and stability were embedded to increase the strengths in the family. Given the majority of at risk youth have siblings then supporting the family system presents as a cost effective pathway to enhance positive outcomes beyond the individual.

Recommendation 3: Embed a partnership model in current practice with the following key elements; a common agenda, shared measurement systems, mutually reinforcing activities, continuous communication, and a strong lead agency.

Recommendation 4: That the Senior Officers Group disseminate the findings of this research and the practice strategies derived from the Group's considerations to frontline workers to assist in their formulation of responses to youth at risk and vulnerable families.

8.3 Partnership flexibility in responses specific to location

The development of interventions relevant to the local practice situation are likely to be more meaningful than state wide 'roll-out' of programs that does not take the local context in to account.¹⁸ The spatial and temporal distribution of youth offending shows it occurs in concentrated, specific locations rather than being randomly distributed. Data shows that most youth commit crimes in their own neighbourhood¹⁹ therefore the primary focus for prevention efforts should be local.

The findings of this research indicate that early intervention to promote positive youth development and address the risks of offending enhances outcomes across the community. Recommendations for early intervention in disadvantaged communities were at the forefront of the Protecting Victoria's Vulnerable Children Inquiry.²⁰ The Report highlighted the importance of local, area-based family services in providing evidence-based early intervention to reduce the onset of offending. Also recommended was that frontline workers in family support programs be given the resources and training to recognise and respond to the child, family and environmental factors associated with risk of offending by children. This research provides information that can be incorporated in the practice of the local service system.

Entrenched, intergenerational disadvantage intrinsic to some communities, such as Latrobe, has been met with a siloed service system that is not always equipped to respond to crisis and

¹⁸ Shlonsky, A., & Benbenishty, R. (2014). From evidence to outcomes in child welfare. In A. Shlonsky & R. Benbenishty (Eds) *From Evidence to Outcomes in Child Welfare: An International Reader* (pp2-23). New York: Oxford University Press.

¹⁹ Allard, T. (2011). Indigenous young people and the justice system: Establishing an evidence base. In A. Stewart, T. Allard, & S. Dennison (Eds.), *Evidence Based Policy and Practice in Youth Justice* (pp. 28-45). Sydney: The Federation Press.

²⁰ Cummins, P., Scott, D., & Scales, B. (2012). Report of the Protecting Victoria's Vulnerable Children Inquiry. Melbourne: Department of Premier and Cabinet. Available at <http://www.childprotectioninquiry.vic.gov.au/report-pvvc-inquiry.html>.

complexity. In an influential report from the Centre for Community Child Health²¹, a place-based approach addresses the collective problems of families and communities at a local level, usually involving a focus on community strengthening. Place-based approaches allow for a focus on the social and physical environments as a component of prevention efforts rather than on individual youth and to a lesser extent their families' problem. The Centre's Report contends that successful place-based interventions invest in the capacity building of their community, by providing maximum opportunities for communities to participate, lead and own the intervention.

The availability and access to community services varies across the LGAs in Inner Gippsland. Many organisations are based centrally in Latrobe and operate outreach locations across the other LGAs. This means that services may only operate on certain days in individual LGAs which restricts accessibility for those communities. The geography of Inner Gippsland means that families reliant on public transport or even with their own transport can face challenges in accessing service locations within opening times. This level of demand and distribution of support services also impacts on timeliness of responses and delivery of relevant interventions. The demand of the workforce to cover the communities across Inner Gippsland impacts the level of contact workers can have with vulnerable families and at risk youth.

Recommendation 5: Undertake mapping of the service system across Inner Gippsland to inform the system's capacity to respond to and address the needs of at risk youth within local communities.

Recommendation 6: That the distribution of services and access is realigned based on identified need and workforce capacity. Innovative ways to facilitate access such as partnership approaches and telehealth mechanisms may serve to address gaps in service delivery capacity and equity of access.

8.4 Youth at Risk Panels

Youth at Risk Panels were established in Latrobe and Bass Coast to respond to vulnerability in a timely manner through data sharing and understanding local context. Core members of the panels include:

- Victoria Police
- Department of Education and Training
- Department of Health and Human Services (Child Protection, Disability, Public Housing)
- Department of Justice and Community Safety (Youth Justice, Community Correctional Services)
- Anglicare Victoria

Other service partners can also attend the panels on an as needs basis when a particular issue has relevance. For example, the Bass Coast Shire was involved in the Bass Coast Panel in the early stages due to community concerns in relation to vulnerable youth accessing public spaces.

²¹ Centre for Community Child Health (2018). Place-based collective impact: an Australian response to childhood vulnerability, Policy Brief Number 30. Murdoch Children's Research Institute/The Royal Children's Hospital, Parkville, Victoria. <https://doi.org/10.25374/MCRI.6444395>.

Information is shared under the Children Legislation Amendment (Information Sharing) Bill 2017 that seeks to protect vulnerable children by simplifying and improving information sharing arrangements. A Deed of Confidentiality specific to discussions at the Youth at risk Panels is signed by all in attendance.

The findings from this research support the importance of Youth at Risk Panels specific to the local context. The Youth at Risk Panel in Latrobe has also contributed to the ongoing refinement of the EIT through a feedback loop with Victoria Police. This reciprocal relationship has led to the EIT generating data that has greater utility to the local context and enables tracking of youth that have been the focus of the Panel's consideration. The EIT pilot in Inner Gippsland has allowed the model to be more responsive to local needs to enhance outcomes. The variables on the EIT interaction with data sets held by DHHS and DET has also facilitated a deeper understanding of potential risk, protective and promotive factors, thereby enabling the service system to tailor responses at the earliest opportunity. The operation of Youth at Risk Panels reflects the findings from this research in terms of the importance of data sharing, early intervention opportunities across the systems in which youth are embedded and utilisation of local practice wisdom.

Recommendation 7: That the Senior Officers Group support participation in the Youth at Risk Panels to ensure that all key members are required to attend and contribute information in the interests of vulnerable families and community safety.

Recommendation 8: That the protective factors identified are integrated into the deliberations of the Youth at Risk Panels. Further, that the liaison between Victoria Police's Unit responsible for the EIT and the Youth at Risk Panels be supported to further enhance the utility of the EIT in local practice.

8.5 The ReBoot Program

The Latrobe Youth at Risk Panel forms a referral source for the ReBoot program that reflects a range of the elements in effective developmental prevention programs. The ReBoot program is a place-based initiative incorporating developmental prevention principles applied across the social systems in which the individual is embedded. ReBoot is funded by the Victorian Government *Youth Crime Prevention Grants* program to work towards local, collaborative service innovations to address the specific IGYP's priority of young people at risk of entering the justice system. ReBoot was developed through a co-design process²² that involved the local community generating issues of importance and creating potential solutions that match community needs and which are responsive to that specific context. The community led program draws referrals from the Latrobe Youth at Risk Panel where the community agencies' contact with and knowledge of vulnerable youth can be utilised effectively to enhance prevention activities.

The ReBoot initiative understands the local context, service providers' strategies, policies and interventions and so can be responsive to the local needs and enable collective responses. The positive involvement of families and at risk youth through ReBoot will improve the view of local services as more relevant and valuable to those families. The improved service system will lead to better wrap-around support delivered to the community including those at risk youth

²² Cabaj, M., & Weaver, L. (2016). An evolving framework for community change. *Collective Impact 3.0*, Community Change Series 2016, Tamarack Institute 1-14.

identified through the EIT, recognising that support for youth at risk requires innovation in service delivery.

The findings from this research project that have identified factors related to youth contact with justice systems can be utilised to inform decision making and provide progress indicators for the ReBoot program. As noted, current data systems tend to focus on risk and indicators of vulnerability rather than strength. The current research has identified a number of strength-based factors such as: early contact with police in the context of positive family systems; successful transition from primary to secondary school; engagement with early intervention family supports; and the presence of positive community connections to interrupt a potential offending trajectory. ReBoot is well placed to record these strength-based factors in the monitoring and ongoing evaluation process of the program. Again, this data can form a component of the reflexive loop with Youth at Risk Panels and the use of the EIT as a referral pathway.

Recommendation 9: That the ReBoot Program incorporate strength-based factors identified in the research project, such as engagement in education and presence of positive family support, in their tracking of youth referred to the program and evaluation processes.

8.6 Integration of data systems and timeliness of responses

Comprehensive and reliable data provides an evidence base through which factors associated with youth contact with the justice system in Inner Gippsland can be identified to facilitate decision-making and inform prevention efforts. It also allows for the evaluation of responses for a better understanding of whether the system as a whole, as well as particular interventions, are achieving their intended outcomes. The workings of the Youth at Risk Panels and the current research has highlighted the need to access data held across the service system in a timely way to better integrate and coordinate services.

The core data held by government departments that reflects developmental history, current circumstances and detail of the broader social systems that surround individual youth is critical in delivering integrated services. The databases, especially in DET, are spread across a number of sites such as individual schools, regional offices and the central state office that restricts local staffs' ability to collect and use this information in a timely manner. Changes to data collection and storage over time has meant that access to pertinent data can be lost impacting on the use of these records in research and evaluation projects.

The recent Crossover Kids Report and previous Reports looking at vulnerable youth have highlighted the critical importance of the capacity to link data across various youth data sets, such as Victoria Police, Children's Court, DOJCS, DHHS and DET. In the absence of integrated data children and young people's involvement across the justice system cannot be systematically tracked. Inferences can be made about the general population or cohorts from one data set to another, but an integrated, continuous picture of an individual's experience across the system is not readily available.

Recommendation 10: That the Senior Officers Group direct resources to increase the interoperability of data sets held across the service system. Action is required to facilitate timely access to pertinent data to aid in integrated decision making for at risk youth. It is critical that indicators of vulnerability such as exposure to family violence, absence from school, reports to Child Protection, housing instability, Field Contact reports are available to bodies such as the Youth at Risk Panels to allow for early intervention. In particular, effort is directed to resolve current obstacles in local access to pertinent DET data, such as suspension and expulsion records, to allow for responsive integrated interventions.

8.7 Privilege the knowledge of frontline workers

There are often significant discrepancies between policy and practice at the frontline of service delivery. For successful implementation of prevention programs those involved in designing interventions would gain from time in the field and in consultation with frontline workers. This would allow greater understanding of the work environment and the context in which the initiatives are to be delivered thereby enhancing efficacy.

Locally established partnerships can implement and monitor the evidence-based interventions to allow flexibility. Direct service can be adjusted in response to community concerns, practice wisdom from frontline workers and other pragmatic factors specific to the local context. The Youth at Risk Panels, especially that operating in Bass Coast draw substantially on the local knowledge of frontline workers in developing responses. It is often frontline workers who observe or are aware of the early indicators of vulnerability, demonstrated in the findings of this research. The integration of this information across the service system allows for potential adverse consequences to be addressed and support initiatives to be put in place at the earliest opportunity.

The results from the survey of workers who attend the Bass Coast Youth at Risk Panel demonstrate the complexities that contribute to understanding how certain factors that impact on youth contact with justice systems. The current research acknowledges and reinforces the critical role of frontline staff in place-based service initiatives.²³

Recommendation 11: That there be a focus on creation of opportunities for frontline workers' knowledge to be incorporated in design, implementation and evaluation of prevention programs.

8.8 Evaluation of outcomes

Place-based initiatives involve complex interacting systems within a specific context and are therefore difficult to evaluate in the traditional sense. The adoption of alternative evaluation methodologies that are best suited to the specific initiative form a critical component in assessment of developmental prevention initiatives.

Evaluation and monitoring frameworks of place-based program delivery are critical to funding bodies and policy makers. The development of systems that respond to issues such as: program fidelity; identification of a community's needs; and the provision of adequate resources, form a

²³ McRae, L. (2019). Engaging kids in decisions about their care. Inner Gippsland Children and Youth Learning Exchange Podcast. <https://federation.edu.au/connect/partnerships/business-partnerships/our-partnerships/children-and-youth-area-partnerships>.

crucial component of place-based developmental prevention programs. One such framework for evaluating program delivery is the CREATE model, being a mnemonic for Collaborative; Relationships-driven; Early in the pathway; Accountable; Training focused; and Evidence-driven.²⁴ Evaluation methodologies that can provide detail of program impact and outcomes required by funding bodies to inform practice and future research are vital factors in the delivery of place-based developmental crime prevention initiatives.

This research will support the work of Youth at Risk Panels, through the provision of a framework to monitor and evaluate the intervention efforts being undertaken. Realist Evaluation²⁵ presents as best placed to detail the contextual factors, crime prevention mechanisms and outcomes both intended and unintended, as they operate in the local context, such as Bass Coast. Realist evaluation methods through detailing causal mechanisms, contexts and outcomes, can assist in answering questions concerning whether interventions can be effectively replicated or are suited to a specific location.

Recommendation 12: That the Senior Officers' Group ensure that practice innovations and current early intervention initiatives are resourced to monitor and evaluate outcomes and impacts across the service system and community.

8.9 Service system response to the sexual harm of children.

In the study's Inner Gippsland cohort, 13 of the youth had a recorded report of sexual assault. The youngest age at first report being 2 years with 3 years of age being the most common age for first recorded report of sexual assault. Although there are insufficient cases of sexual assault on which to draw robust recommendations it was clear that the impact was significant for the youth, their family and the service system. Four of the eight youth whose offending was statistically higher than predicted had at least one report of childhood sexual assault, suggesting an association between future adverse outcomes and sexual harm.

The Bass Coast case analysis also showed the impact of sexual harm. For the majority of cases in the cohort of 10 there was file notations indicating allegations of sexual harm or that the youth engaged in harmful sexual behaviours over the period of childhood and/or adolescence. In the majority most of the notations did not result in substantiated reports of sexual assault or harmful behaviour, consistent with literature on the official reporting of sexual harm. The level of sexual harm was increased when OHC placements were also a feature of the young person's developmental history. In most cases this resulted in a change of placement and therefore disruption to education and community connections. Given the nexus between placement in OHC, especially instability in placements and future offending, if supports can be extended to stabilise the youth at these times future adverse outcomes may be reduced. Safety of the individual and those with whom s/he interacts must always be a priority, as well as following legislation, policy and practice directions.

Common practice is for referrals to a sexual assault service, such as Gippsland Centre Against Sexual Assault (GCASA), to be lodged when concern of sexual harm is present. Often, if the child is under five years of age, individual clinical engagement is restricted with the focus centred on the care givers or family system. Again, taking a developmental and social systems perspective it

²⁴ Homel, R., Freiberg, K., & Branch, S. (2015). CREATE-ing capacity to take developmental crime prevention to scale: A community-based approach within a national framework. *Australian and New Zealand Journal of Criminology*, 48(3), 367-385. doi:10.1177/0004865815589826.

²⁵ Pawson, R. & Tilley, N. (1997). *Realistic Evaluation*. London: SAGE.

may be beneficial to consider further support to the system in which the individual is embedded. Currently GCASA has a family support worker, experienced in the dynamics of sexual harm across the family/care giver system to offer this wider form of support. Concern of sexual harm impacts across the social systems of an individual increasing the demand and level of stress of the very system that can provide support to the primary individual of concern. The capacity of the GCASA service means it is unable to provide such support to all referred children, youth and their families, however the model could be utilised across the broader service system where family support services operate. The distribution of support services within Inner Gippsland impacts on access, familiarity and therefore confidence in the service for families. At a time of crisis, such as an incident of sexual harm, access and confidence in a service is a factor in engagement. The distribution of GCASA's services in Inner Gippsland is centred on Latrobe, with outreach locations in other LGAs reflecting restricted access and increasing the impost on families to attend the service at a time of considerable stress. Bass Coast Health also operate a sexual assault service that could be included in discussions of extended support.

Recommendation 13: That consideration be given to resourcing family support services to increase the service options when concerns of sexual harm of a child are raised. Increased resources and support at a time of increased demand on families will strengthen the family system and reduce the immediate and subsequent negative impacts.

9. Ethical Considerations

There are ethical considerations if police database information is to be shared with other government authorities and community service agencies. La Fors-Owczynick²⁶ asserts that 'protecting' children from risk justifies prevention efforts, however when these interventions contravene privacy and other rights there arises a tension between the 'best interests' of the child compared with public safety.

In predictive modelling, there are limitations both in predictive validity and the scope of data in which the models are based. Falsely identifying a young person at risk or the converse can have both resource and ethical implications. Erroneous decisions to refer youth for intervention have implications for the individual, their family as well as the effective use of limited economic and social resources (Berk, 2019).²⁷ There are ethical considerations in relation to the impact of a false positive, when an individual is deemed at risk when in actuality they do not progress to offending. There is potential that stigmatisation of youth identified as likely to persist in offending can have subsequent adverse effects on well-being and behaviour. Similarly a false negative, when a youth likely to offend is not identified, represents a cost to the individual, society and resources due to impact of the offending across the social ecology.

A range of youth justice reforms in the 1980's in Australia increased the number of youth involved in the youth justice system and increased levels of offending of those already engaged

²⁶ La Fors-Owczynick, K. (2015). Minor protection or major injustice? – Children's rights and digital preventions directed at youth in the Dutch justice system. *Computer Law & Security Review: The International Journal of Technology Law and Practice*, 31(5), 651-667. doi:10.1016/j.clsr.2015.07.003.

²⁷ Berk, R. A. (2019). *Machine Learning Risk Assessments in Criminal Justice Settings*. Cham: Springer International Publishing : Imprint: Springer.

with youth justice²⁸. 'Net widening' can be an unintended outcome of some reforms making it critical to consider the potential consequences of specific policy and related intervention programs across context as well as on sub-groups within the overall target population.

Despite these limitations it is asserted that the findings of the current research do have relevance for understanding those factors that relate to youth contact with justice systems in Inner Gippsland and that this may foster opportunities for early intervention to reduce such contact, to enhance community safety, and positive youth development. The practice of the Youth at Risk Panels conforms to current information sharing protocols and the discussions of members reflect respectful consideration of community members' privacy. These aspects of practice must be supported and maintained through practice innovations.

Recommendation 14: That collaborative practice innovations adhere to privacy and legislative requirements while enabling decision-making that is both responsive and timely.

10. In Conclusion

This Report provides detail of findings from the doctoral research project addressing the IGCYAP priority of early intervention to reduce youth contact with justice systems. Findings also inform the trial of the EIT and how this Victoria Police community safety initiative can be effectively utilised by the service system in Inner Gippsland. The research provides an evidence base to inform practice specific to youth at risk in the Inner Gippsland community.

The findings and associated recommendations for practice innovations highlight the importance of consideration of the local context in understanding those factors that relate youth at risk. The developmental stage of the individual and the social systems in which the individual is embedded must also be considered in the design and implementation of early intervention efforts. This systemic framework specific to the local community enhances outcomes for all and provides multiple points of intervention.

The Senior Officers Group is best placed to drive innovation and support current practice initiatives for youth at risk. The research specific to place provides information to ensure local solutions to local problems are effectively and efficiently resourced and evaluated. Collaborative practice is reliant on the participation of all the service system, engagement with the community and commitment to the shared vision of early intervention to reduce vulnerability.

²⁸ Ferrante, A. M. (2013). Assessing gender and ethnic differences in developmental trajectories of offending. *Australian & New Zealand Journal of Criminology*, 46(3), 379-402. doi:10.1177/0004865813490948.

Chapter 10. Conclusion

10.1 Introduction

This thesis aimed to identify the factors associated with youth contact with justice systems to inform early intervention policy and practice within a place-based approach.

The application of the EIT in practice and the input of this knowledge to existing scholarship on predictive modelling were central to this project. This thesis has demonstrated how combining the use of the EIT with developmental data can help identify the factors associated with future offending and intervention opportunities.

The project focused on bridging the gap between research and practice and considered the effects of the broader social ecological systems in designing and implementing developmental prevention initiatives. The research collaboration between academia and the IGCYAP situated the researcher within the service system. This reflexive process delivered an enriched understanding of the interim findings and further informed recommendations for practice innovations.

The outcomes of the study within a place-based framework provided critical insights into opportunities for facilitating local developmental prevention responses. The thesis has contributed new knowledge on how to deliver effective place-based early intervention. At the level of theoretical knowledge, the convergence of social ecological theory and developmental criminology has contributed substantially to understanding the factors related to youth contact with justice systems and early intervention opportunities.

10.2 Key findings

The overall research question guiding the study considered how the EIT could be applied to guide early intervention efforts and reduce youth contact with justice systems. This was supported by three sub-questions. The first of these considered how police data could be used to identify both risk and protective factors associated with an offending trajectory. The second research sub-question asked how contextualising the police records with developmental data could improve the understanding of the factors associated with young people at risk of contact with the criminal justice system. The final research sub-question related to identifying the critical factors and intervention points across an individual's social ecology that could reduce their contact with the criminal justice system. Section 10.2 considers the significance of the study's key findings as they relate to the research questions.

10.2.1 Utility of the EIT to reduce youth contact with justice systems

A central finding of this thesis, which responds to the overarching research question, is that it is the interactions between police records, such as the age of onset and exposure to family violence, which generates an understanding of the trajectory of potential offending. No single factor, such as the early onset of offending, can be used to predict youth offending. The findings from the EIT trial indicated the complex interactions underpinning youth contact with justice systems and that these stem from numerous factors across the social ecology, such as age at (and context of) police contact. Therefore, these factors must be considered in an integrated way to facilitate early intervention responses. This builds on the work of Ringland et al. (2015), Sutherland and Millstead (2016), Whitten et al. (2017, 2020). Predictive models, such as the EIT, provide

government departments, such as the DHHS and DET, and non-government community organisations with data upon which considerations of responses to prevent or reduce future engagement with the criminal justice system can be instigated.

10.2.2 Research sub-question one: Interrupting an offending trajectory

In response to the sub-question focused on police datasets for informing prevention opportunities, the findings have provided a new understanding of the association between the age of onset of offending and the likelihood of future persistent offending. This study found that early onset does not necessarily lead to the progression of offending for youths with a supportive immediate social system. This finding contrasts with prior literature, which has identified the early onset of offending as an established risk factor for future engagement in offending and adverse outcomes (Dennison, 2011). By considering the interaction of age of onset with other aspects of the social ecology, for example, child victimisation, family systems and the context of police contact, this research delivers new insights into the onset, persistence and desistence of youth offending. The findings highlight the importance of considering the interaction between multiple factors in conjunction with predictive modelling to inform early intervention strategies.

10.2.3 Research sub-question two: Augmenting police records with developmental data

The study found that there was a clear benefit of including developmental data to enhance the understanding of an offending trajectory. The nexus between ACEs and youth offending was clear from the research findings, demonstrating an opportunity to

use such data to inform and assist with the predictive modelling of an offending trajectory. Augmenting police datasets with developmental history from the DHHS and DET data contextualised contact with the police within a developmental perspective, allowing for nuanced decision-making regarding early intervention.

An analysis of 10 youths from Bass Coast highlighted the interplay between developmental experiences and youth contact with justice systems (see Chapter 6 and Appendix 3). The placement of individuals in OHC is predicated on care and protection; however, there are often unintended negative consequences that can exacerbate vulnerabilities. Care criminalisation (McFarlane, 2018) results when policy and procedures in the OHC system, especially in residential units, lead to increased contact of youths with justice agencies. Changes at multiple levels across the service system are required to address these concerns, including changes in practice, resourcing and training. See the work of McFarlane et al. (2019) and Victoria Legal Aid (2016) for discussions about the protocols between police and the out-of-home sector. This thesis makes recommendations to address the implementation of the findings in the Inner Gippsland service system (see Chapter 9 and Section 10.4).

10.2.4 Research sub-question three: Early intervention at the point of police contact

This study has delivered results that identify intervention opportunities through informing responses of police at the point of contact. The results demonstrated that police responses when interacting with individuals (irrespective of the form of contact) have the potential to reduce future contact with police and engagement in offending. These findings are consistent with and extend the work of Whitten et al. (2020) because

the dataset also includes youths exposed to, rather than recorded solely as the primary victim of, family violence. This has strengthened the results from this research that showed a positive correlation between family violence records and future youth offending. Police play an important role in the outcomes for youths through their formal and informal interactions with them as offenders, vulnerable persons, victims and in community contexts. A significant finding of this study is the potential for police contact to form a protective factor, demonstrating the critical role police play in early intervention.

The findings have also generated specific knowledge about the types of records available through police databases (such as LEAP) that are useful for predicting future offending. By summing specific LEAP records, the researcher developed a specific indicator, the ACE variable, which correlates with future offending. The ACE variable allows police to use existing LEAP records to guide their discretionary responses at the point of contact with youths who may be at risk of future persistent offending.

10.2.5 Identifying protective factors

The project sought to shift from a focus on risk-based factors to including protective factors consistently across the research questions because they address how data can inform an understanding of the factors that reduce youth contact with justice systems. As outlined in Section 2.2.3, there is variation in the literature regarding the definition of protective factors; however, Farrington et al. (2016) noted that interaction effects were significant in locating protective factors. The study's findings have highlighted the importance of the interaction between factors for understanding youth contact with

justice systems; however, identifying the factors that interrupted an offending trajectory produced less robust understandings than those that were associated with persistent offending.

The protective factors demonstrated through this research mostly reflected the absence or converse of a risk factor, rather than the presence of a specific strength or interactive protective element. By considering multiple data sources, the current research allowed for interactive protective factors to be ascertained. The findings regarding positive outcomes for youths who had early contact with police and a supportive family system demonstrated a protective interaction. However, for those youth who did not progress to the predicted level of recorded offending, these supportive microsystems were inferred through the absence or minimal records of ACEs. Engagement in education and residential stability were shown to reduce the likelihood of youth contact with justice systems. These factors were the converse of a factor shown to be positively correlated with future offending, such as disengagement from education or multiple placements in OHC. The key findings related to the importance of the interactions between the aspects of an individual's social ecology; however, identifying the discrete interactions between the protective factors was somewhat problematic (see Section 10.2.1).

This study has highlighted that the data held by government human services concentrate on the risk and deficits pertaining to youths, thus, limiting the identification and understanding of protective elements across the social ecology. This aspect of the study's data and broader issues of access to current datasets is revisited in Sections 10.4.2 and 10.5.1.

10.3 New insights

The incorporation of developmental criminology and social ecological theory in this thesis has enabled new insights into the factors associated with youth contact with justice systems. These frameworks account for the complexity of how the contextual factors and interacting systems affect outcomes and provide multiple points of intervention. The adoption of an eco-developmental model has facilitated the integration of previously disparate areas of study to provide robust support for the research findings and their applicability to delivering services. The framework adopted in this research has facilitated new insights that add to the knowledge base and provide opportunities for practice developments that are theoretically based and developmentally and ecologically attuned. Section 10.3 focuses on how the research results have contributed knowledge and generated insights to inform practice to reduce youth contact with justice systems.

10.3.1 Applying predictive modelling in practice

The EIT trial provided new insights into the utility of the model for practice and the broader field of predictive modelling. By integrating the EIT specifically within the local context of Bass Coast and the service system of Inner Gippsland, the study has contributed to new knowledge in the delivery of place-based early interventions. The research design of integrating developmental data and social ecological context with police datasets has generated knowledge that adds to the understanding of the effect of developmental factors on engagement in offending behaviour.

This EIT had not previously been the focus of academic research. Therefore, the current project extended the knowledge with respect to the utility of predictive models to guide prevention responses. The inclusion of developmental data to enhance an understanding of the factors associated with predicted offending trajectories has addressed a gap in the research that was noted by Sutherland and Millsteed (2016) and Ringland et al. (2015). This study's inclusion of the developmental data and police file narratives has also extended the knowledge regarding the importance of the eco-developmental context of youth contact with police to inform intervention efforts.

The unique aspect of the data underpinning the EIT predictive model has contributed to the insights delivered by this study. The inclusion of records when an individual is listed as an offender prior to formal processing in the criminal justice system is a distinguishing feature of the EIT. The literature relating to predictive modelling is predominately based on populations with formal youth justice system involvement (see Chapters 2 and 7). The study's findings that confirmed taxonomic groupings consistent with those in the literature further strengthen the utility of the EIT for informing prevention responses. The current study's results have extended opportunities for early intervention due to the EIT's inclusion of individuals prior to formal justice system processing.

10.3.2 Factors associated with persistent offending

This study's divergence from the substantive literature that links early onset of offending to persistence (See Section 2.2.1) has created new knowledge to guide police responses at the point of contact. The findings relating to early onset of offending show that it does not necessarily indicate persistent, future offending. There is a significant

association in the literature (Dennison, 2011; Piquero, 2008; SAC, 2016) between early onset of offending and an increased likelihood of ongoing involvement with justice systems. The contributions from this study have provided new insight into the importance of understanding the eco-developmental context of early onset of offending for predicting the likelihood of persistent offending. Contact with police at a young age, irrespective of the reason, has also been shown as a potential opportunity to reduce future adverse outcomes.

The ACE variable created in this study reflects the complexity of developmental experiences across maturation, particularly at developmental transitions, as influencing future outcomes. The findings that show a strong association between ACEs and future offending have delivered a better understanding of the nexus between engagement in offending behaviour and developmental experiences that are reflective of vulnerability, such as exposure to family violence, childhood victimisation and inadequate guardianship. By presenting new insights into the youth at risk of serious persistent offending, the study's results have shown that the picture is more complex than prior research has suggested.

10.3.3 The role of place

A distinguishing feature of this project was that the findings relating to reducing youth contact with justice systems were responsive to place, generating new knowledge for practice innovations in Inner Gippsland and focusing on the Bass Coast community. The study has detailed the complex issue of youth contact with justice systems as it operates within the local context. This project has extended the scholarship in place-based

research by including the practice wisdom of local professionals and integrating local factors into the interpretation of the results. The application of a social ecological framework has provided new insights regarding the importance of the social structural features of an individual's social ecology. The application of a broad conceptualisation of place (see Section 3.3) has deepened the findings and extended the literature base. The specific features of a community, which differ greatly between urban, regional and remote locations, must be reflected in the design and delivery of developmental prevention programs. Locating the results within a detailed knowledge of the social ecology of Bass Coast has delivered original evidence to inform early intervention practice and policy.

10.4 Implications for practice

The translation of research findings into policy and practice to reduce youth contact with justice systems was a key component of this project. Chapter 9, which incorporated a report to the Inner Gippsland senior officer's group, provided 14 recommendations for practice innovations. Broadly, the recommendations covered the integration of the findings into policing, facilitating partnership practice, privileging the practice wisdom of frontline workers, enhancing access to pertinent data and delivering the requisite resources to support changes to service responses.

This emphasis on research translation stemmed from the initiation of doctoral research by the research collaboration between IGCYAP and Federation University and the researcher's motivation to generate knowledge to inform practice and improve outcomes for youths and their communities. There is a challenge for researchers to

develop new thinking about the complexity of social concerns, to effectively inform solutions and gain community acceptance of shared strategies and processes (Prior & Mason, 2010). The challenges of translating the research into practice are detailed in Sections 3.2 and 8.5. The overarching implications of the issues identified in this project are detailed in Section 10.4.

10.4.1 Influences on translating research into practice

The research project was delivered within the placed-based framework of the CYAPs. There is substantial evidence demonstrating the clear differences between the needs and service system capacities across localities. Therefore, a localised response to complex social concerns, so-called wicked problems, is best placed to deliver responsive outcomes (Boaz & Pawson, 2005). Despite government policies that have been delivered through the *Roadmap to Reform* (DHHS, 2016b), such as CYAPs, the shift to local solutions to local problems is not always fully supported by government structures and political imperatives.

During this project, the variations of political imperatives affected the translation of the findings into practice in several ways. The Victoria State Government dismantled the CYAP structure prior to the completion of the research projects that were funded under the research collaboration. This affected the findings that needed to be considered in an integrated manner and the efficiency of resource allocation for implementing practice innovations in a coordinated way. Government responses and departmental responsibilities shifted during this project (see Section 1.4.1). Youth justice was placed within the Department of Justice and Regulation (now the DOJCS) from the DHHS,

reflecting a shift in the overarching paradigm from welfare to justice. When governments adopt guiding frameworks for youth justice policy and practice, such as relying on evidence-based policies, they can still reject existing bodies of knowledge that are associated with a previously dominant policy setting. Such socio-political imperatives directly affect policy formulations and practice models.

Legislation also affects policy and practice opportunities and reflects the socio-political context. The consideration of the legislation relating to the age of criminal responsibility across Australian jurisdictions by the Australian Council of Attorneys-General (Australian Human Rights Commission, 2020) highlighted the intersection between exosystemic and macrosystemic factors and the associated policy and practice opportunities. Political structures, such as state and federal governments, terms of governments and the associated budget cycles affect service delivery at the local level (Raitman, 2019). The socio-political context that directly influences practice often conflicts with the time required for research-based designs, implementation and evaluation of programs to address complex social issues, such as youth contact with justice systems. This thesis asserts that this further affects the translation of research findings into policy and practice models.

Political imperatives sometimes override policies based on research evidence, risking a greater disconnect between the research community and policy bodies. The structure of this doctoral project, which involved the researcher being situated in the service system and the inclusion of industry supervisors in the supervision panel, facilitated the goal of translating this knowledge into active practice. Research collaborations bridge this gap,

thereby, increasing avenues for effective developmental prevention initiatives and the efficient allocation of finite resources.

The policy and practice recommendations derived from this study (see Chapter 9) provide an evidence base for the service system responsive to the context of Inner Gippsland. The broader social ecological systems that interact with the frontline delivery of prevention efforts must be addressed if the insights from this study are to be integrated effectively into practice.

10.4.2 Implementation of the recommendations

It is acknowledged that resource allocation is required to implement the findings from this study and facilitate early intervention. The premises of justice reinvestment, as discussed in Section 3.3.4, provide a sound argument for resource diversion to early intervention. The utility of the EIT in formulating early intervention opportunities for youth at risk of persistent offending has been demonstrated and supports such allocation of resources. An assessment and mapping of resources across the Inner Gippsland service system need to be undertaken to deliver the study's findings. This process is required for the successful instigation of practice innovations and to ensure these can be sustained.

The siloed government structure restricts access to relevant information across the service system responsible for the delivery of prevention initiatives. The information on which decision-making is based must be readily available to ensure that those charged with delivering such initiatives in their community can formulate effective responses. The research project highlighted the difficulties of accessing and sharing relevant data to

inform intervention decisions promptly. There is a dearth of data sources that reflect the protective factors or strengths in the individual and their social systems (see Section 10.2.5). To capitalise on the findings from this study, incorporating a wider set of factors across the service system's databases to reflect the protective factors is strongly encouraged.

The results from this research have highlighted the value of collaborative practice, greater interoperability of datasets, enhanced procedures for the interactions between police and the service system and an improved synergy between research and practice. Introducing major changes poses a range of challenges across all levels of the social ecology and is best supported through consistent legislation and a body responsible for coordinating, developing and maintaining best practice and workforce training. The Victoria State Government's family violence strategy, which resulted from the Victorian Royal Commission into Family Violence (State of Victoria, 2016), is an example of a whole of government approach to a complex social issue. For the findings from this project to result in sustainable practice innovations, the implementation of the Victoria State Government's family violence strategy provides a useful guide to the processes that are required to facilitate this outcome.

10.4.3 Evaluation mechanisms

This project has generated a knowledge base for implementing early intervention strategies to reduce youth contact with justice systems. It is critical for the efficacy and sustainability of such practice innovations that evaluation mechanisms are a part of the design and implementation of interventions. Griew (2010, p. 251) argued that 'while

commitment to evaluation has improved, evaluation is still often left to the end of the policymaking process, and we too rarely engage practitioners in the development and assessment of evaluation outcomes. The way that intervention strategies operate locally is often not part of evaluation frameworks. The current study demonstrated the value of including the perspectives of frontline workers. Approaches, such as realist evaluations (Pawson & Tilley, 1997), for evaluating developmental prevention interventions for youth offending provide methodologies that recognise the need to incorporate the context as a dynamic element when assessing outcomes. For this project's findings to truly improve service delivery, ongoing responsive evaluation processes must inform ongoing practice innovations.

10.4.4 Ethical considerations

The recommendations for practice innovations derived from this study highlighted the importance of data sharing across the service system. The sharing of data across service system partners is relatively new, and, in 2017, there was a macrosystem change through the enactment of the *Victorian Data Sharing Act 2017* (Vic) to allow data sharing for the purposes of protecting vulnerable individuals. The use of the EIT and LEAP records by Youth at Risk panels is bound by this legislation and a deed of confidentiality that was signed by all the panel members.

The tensions created by balancing privacy rights with the provision of services to ameliorate vulnerabilities require careful consideration. The transparency in these processes must be addressed, and governance systems must be established to oversee the sharing of official police data and children's developmental history if community

support is to be gained for using the EIT and data sharing across the service system as a community safety initiative.

10.5 Strengths and limitations

Like any study, this thesis had both strengths and limitations. The data sources available to the research created strengths and challenges. Aspects of the research design influenced the validity of the findings. Finally, the place-based nature of this project warrants consideration regarding the degree of generalisability of the findings for other practice contexts. Previous chapters in this thesis (see Section 4.7.3 and Section 8.5.5) have addressed these aspects of the project in detail. Section 10.5 acknowledges the wider implications of these strengths and limitations in the contribution of this study to knowledge and the application of its findings to practice.

10.5.1 Data sources

The trial of the EIT and access to this data was an asset for this study. The challenges associated with accessing sensitive police data sources were balanced by the advantages of the availability of the EIT and associated LEAP records. The model had not been previously exposed to such academic scrutiny, which provided a significant opportunity to contribute to the knowledge base in the application of predictive modelling as an early intervention strategy.

A strength of the study was the use of multiple data sources, which allowed a greater understanding of the research problem and strengthened the findings across each stage of the data collection and analyses. Quantitative data provided signposts to instances

where deeper exploration, based on additional data integrating developmental contexts, illuminated the statistical findings. However, the absence of primary health and mental health data in this study was a limitation. The inclusion of health data, within binding privacy and ethical use parameters, would enhance the understanding of an individual's life context and further inform early intervention. The potential effect on privacy and community members' willingness to engage with health agencies must be considered if this addition to the data sharing were to occur.

Linking departmental datasets, such as education, child protection, police, youth justice and housing, posed a challenge in ensuring the confidentiality of the information, avoiding potential identification of individual youths and the resource impost required to achieve the matching of the data. Nevertheless, this process did allow for a fuller picture of an individual's developmental experiences, adding weight to the findings that were derived from police data and extending the knowledge base in respect to the influence of developmental experiences.

Official police data may underestimate the true extent of youth contact with justice systems. The government department datasets utilised in this study only included individuals with formal contact with the DHHS and those engaged in the state education system. The inclusion of data regarding youth's self-reporting of engagement in offending behaviours may increase an understanding of the prevalence of youth offending. The potential discrepancies between self-reports and official records require additional investigation in future research. The findings in this study that were generated from substantiated reports of child abuse may not be directly translatable for individuals who have had ACEs but do not have formal system contacts recorded.

The reliance on official data sources was also a limitation of this study. Official data may not reflect the full extent of youth engagement in offending. Reliance on official data, as was the case for the substantive data sources used in this thesis, may emphasise some factors and obscure others. An advantage of official data sources is that they are directly available to those engaged in delivering interventions. A further advantage of official data is that the youths at risk are known, and therefore, accessible for intervention efforts. However, the social ecological framework and place-based approach of this study also broaden the intervention opportunities for promoting benefits across the community so that the individuals who may be at risk but are not included in official datasets may also gain from systemic prevention efforts.

10.5.2 Research design

The sample size and retrospective design presented strengths and limitations for the findings. The sample size relates to the weight that can be attributed to the findings. The complex process of matching the data for the Bass Coast youths involved considerable time and resources that restricted the number of youths for whom this process could be applied and the extent of the data collected from the departmental databases. The sample size restricted the results from the quantitative analysis; however, at the same time, the qualitative data incorporated into the Bass Coast case analysis was rich and strengthened the findings despite the sample size.

The retrospective design adopted by this study allowed an examination of the influence of the key developmental transitions of adolescence and their interplay with future offending. This feature of the research design reflected the theoretical framework of

developmental criminology that was central to this thesis. The EIT predictions of an individual's future level of offending enabled timely and cost-effective temporal examination of the predicted trajectories. The retrospective design, delivered through the ability of the EIT to generate predictions at any point in time, provided the opportunity to compare the actual with the predicted level offending at 21 years old for the Inner Gippsland sample. This aspect of the design formed a significant strength of the study.

However, a limitation was that during data collection, several factors that could not be accounted for in the research design and data analysis were likely to have affected the data sources and, therefore, the findings. Policing practices, especially in response to family violence incidents, changed after the Victorian Royal Commission into Family Violence (State of Victoria, 2016). In general, policing varies over time and geographical location with concentrations on specific neighbourhoods, types of crime and the use of discretion. Diversionary options also increased during data collection, resulting in increased strategies to reduce youths' formal criminal justice system involvement. These changes affected the consistency of the records used in the research and, therefore, may have interacted with the robustness of the findings, such as those relating to exposure to family violence.

10.5.3 Place-based approach

While the place-based nature of this study may limit the applicability of the findings to other contexts, its strength is that it facilitates interventions that are responsive to the contexts in which the issues arise. The study was also strengthened because the findings

were specific to youth contact with justice systems in Inner Gippsland. Furthermore, the study met the aim of addressing the priority of the IGCYAP to provide local solutions to local problems.

The generalisation and transferability of findings to other contexts are important in fully utilising the results from this study and contributing to scholarship. For practitioners, a primary concern is which interventions are going to be most effective for addressing local concerns and improving outcomes across the local community. At the level of policymaking, cost efficiency and meeting the government's priorities are key drivers for prevention initiatives. This research project has provided findings that are applicable to both the Inner Gippsland service system and the wider field of developmental prevention. The research project has demonstrated the ability of the EIT to deliver data in a way that facilitates the service system that is adopting innovative practice to respond to at-risk youths.

The realist stance adopted in this thesis has facilitated the understanding and applicability of the research findings across contexts, balancing the limitations of the place-based focus. The context-specific nature of this research may not be directly transferable to other sites or related social problems; however, the results can inform overarching prevention models and information regarding how the outcomes are applicable to other places, social issues and contexts. The concurrence of this study's findings and recommendations with practice innovations contained in significant youth justice sector reports (SAC, 2016; 2019) and instigated prior to the completion of the study, indicates the validity and generalisability of the project's key results.

10.6 Directions for future research

The current study has revealed several valuable areas for future research to build on the developmental prevention literature and extend the findings from this project. The consideration of a framework to assist police with accessing relevant records to guide their responses at the point of contact in routine policing is a potential focus for future study. The development of a tool similar to that of Assink et al. (2014) would further enhance the application of predictive modelling to practice.

Research with a specific focus on the interactions between police and the OHC sector is also suggested. The issue of care criminalisation (McFarlane, 2018) must be addressed to reduce youth contact with justice systems, highlighting this issue as a focus for ongoing research. Such research evidence would enhance the outcomes for all and allow for the findings from this study to be extended into the field of policing.

The paucity of data that identifies the strengths and protective factors in official datasets warrants consideration. Research that addresses the processes for including such data and making it available to those responsible for delivering intervention strategies would enhance the utility of predictive models to inform intervention initiatives. Attention to health data accessibility in an ethical manner is also indicated.

The research findings suggest that including self-report data for examining the level and nature of youth contact with justice systems bears further investigation. Despite the ethical challenges of including the voices of young people, this could enrich understandings of the lived experiences of youths, their families and the broader community.

Further study to develop evaluation frameworks for examining the effect of place-based, collaborative practice is critical. Ongoing evaluation mechanisms must be included for the effects of projects, such as this study, to be fully realised. Frameworks are needed that provide feedback loops between research and practice. This would further support the effective operation of partnership practice models, such as the Youth at Risk panels, for delivering evidence-informed innovations and enhancing outcomes.

Finally, to address the limitations associated with this place-based project, further research is needed to examine early intervention responses for reducing youth contact with justice systems facilitated by applying the EIT in other communities. Larger scale research across several localities to examine the overarching research question of this study and compare the findings would extend the knowledge that is generalisable beyond the scope of this study.

10.7 Concluding remarks

This thesis had multiple goals. First, the main research question was to extend existing research regarding those factors associated with youth engagement with justice systems. The application of the EIT in practice provided an understanding of these factors through a consideration of the dimensions and historical context of LEAP records. The findings from this study have successfully illustrated the complex and heterogeneous nature of youth contact with justice systems and the critical importance of the interaction between these factors, as indicated by developmental criminology and social ecological theory.

The findings provided a valuable contribution to the current literature on developmental prevention. The synergy with major reports responding to youth contact with justice systems in Victoria (e.g., *Crossover Kids* (SAC, 2019), *Reoffending by Children and Young People in Victoria* (SAC, 2016) and *Thinking Outside* (Jesuit Social Services, 2013)) indicates opportunities for the broader application of this study than solely within the Inner Gippsland context. The findings identified that there are opportunities for early intervention at the point of contact with police and that such opportunities can be maximised when the police, DHHS, DET and non-government community organisations have access to and can share data that details the immediate social systems of the individual and incorporates both risk and protective factors.

The central finding that early onset of offending behaviour is not necessarily a flag for future persistent, serious offending challenges the existing body of literature. This research has shown that, rather than only considering the presence of a single factor in association with contact with justice systems, it is the interactions between multiple factors within a developmental perspective that can more fully inform an understanding of a youth's vulnerability to future offending and deliver effective prevention responses.

The study clearly demonstrates the links between ACEs and youth offending. Most importantly, future research efforts regarding the nexus between youth contact with justice systems and ACEs must consider the interactions between these factors across developmental stages. A complex conceptualisation of youth contact with justice systems has the potential to identify appropriate prevention and intervention strategies for improving the outcomes for individual youths, their families and the community and enabling the effective use of finite social and economic resources.

Additionally, the findings have important implications for policy and practice across multiple domains. The most significant of these relates to closing the gap between the research findings, policy formulations and practice innovations. Improvement in the accessibility and interoperability of data to enable responsive, timely decision-making is critical. Processes for retaining information that focuses on protective factors across the service system are needed to shift from a risk-based perspective and facilitate greater community engagement. A social ecological framework provides an understanding of the effects of the socio-political context that underpins government priorities and resource allocation. Further, this provides multiple opportunities to manipulate social structural factors and their interactions to increase points for early intervention.

Finally, this thesis has addressed the goal of translating this research into practice in a range of ways. The instigation of the doctoral study through a research collaboration between the Inner Gippsland service system and a university located in the region, the inclusion of industry supervisors on the supervision panel and embedding the researcher in the service system has narrowed the gap between research and practice. The delivery of this project, structure of the thesis and application of the findings at the point of service delivery has met the researcher's motivation to contribute to practice that benefits the local community. The findings have been disseminated within the academic and research communities and to senior staff and frontline workers in community service organisations. The feedback loop between the Youth at Risk panels and Victoria Police has allowed the application of the EIT as a community safety initiative to be informed by practice wisdom and the findings of this study.

Appendices

Appendix 1. Victoria Police: Approval of application to the Research Coordinating Committee



VICTORIA POLICE

Policing Innovation and Research Unit
Corporate Strategy and Operational Improvement Department

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15 March 2018

Ms Kay Lancefield
School of Arts, Humanities and Social
Sciences,
Federation University Australia
Gippsland Campus
Northways Rd
Churchill VIC 3842

Dear Ms Lancefield,

Re: Application to the Research Coordinating Committee for RCC 845 Early Intervention to reduce young people's contact with the criminal justice system.

I write to advise you that the Victoria Police Research Coordinating Committee (RCC) has approved your request to undertake the above research involving Victoria Police. The approval is based on the conditions agreed to in email correspondence of 2 March 2018.

This approval is conditional on:

- Evidence of approval from an external HREC and
- The Research Organisation signing a Research Agreement outlining the conditions governing the conduct of research involving Victoria Police.

You will need to ensure the completion of the Research Agreement and return it to Victoria Police before the research can commence. The Research Agreement will be forwarded to you electronically in due course.

If you have any queries or require further clarification please contact the RCC Secretariat on the contact details above.

Yours sincerely,

Dr David Ballek
Secretariat, Research Coordinating Committee

Appendix 2. Survey Questions

My name is Kay Lancefield. I am a Federation University Australia doctoral candidate within the Inner Gippsland Child and Youth Area Partnership (IGCYAP) Research Collaboration.

I am inviting you to participate in this PhD project as it provides an opportunity to share your practice wisdom related to your work with young people in the Bass Coast local government area (LGA).

Click on the attached link to view the ethics approved Plain Language Statement that provides further detail of the project.

/upload/surveys/754664/files/PLIS140218.doc
(/upload/surveys/754664/files/PLIS140218.doc)

As an attendee of meetings of the Wonthaggi Youth Hot Spot, I have used the group email address to request your participation in this survey.

I am inviting all members of the Wonthaggi Youth Hot Spot collaboration to contribute to the research. Participation requires the completion of an anonymous online survey where you will be asked to consider and rate a range of factors that relate to the potential level of contact a young person has with the criminal justice system.

Completion of the survey will take between 10 to 20 minutes.

Begin this survey by clicking the blue “Next” button located in the footer.

There are four questions in this survey.

Q.1. Education

Previous research indicates that the following factors may increase or decrease the risk of a young person coming into contact with the criminal justice system. Using your professional experience, please rate the degree to which you think the following factors might increase or decrease this risk.

Please choose the appropriate response for each item:

	Significantly decrease	Somewhat decrease	Little or no impact	Somewhat increase	Significantly increase
Regular school attendance					
Academic achievement					
Parental support for education					
Successful transition from primary to secondary school					
Receiving support services in school					
Frequently changing schools					

Q.2. Family

Previous research indicates that the following factors may increase or decrease the risk of a young person coming into contact with the criminal justice system. Using your professional experience, please rate the degree to which you think the following factors might increase or decrease this risk.

Please choose the appropriate response for each item:

	Significantly decrease	Somewhat decrease	Little or no impact	Somewhat increase	Significantly increase
Positive peer connections					
Exposure to family violence					
Experience of child abuse					

Placement in out-of-home care					
Family receiving services from community agencies					
Strong positive family bonds					
Being placed on a child protection order					
Socio-economic disadvantage in the young person's community					
Living in public housing/frequent change of address					

Q.3. Justice

Previous research indicates that the following factors may increase or decrease the risk of a young person coming into contact with the criminal justice system. Using your professional experience, please rate the degree to which you think the following factors might increase or decrease this risk.

Please choose the appropriate response for each item:

	Significantly decrease	Somewhat decrease	Little or no impact	Somewhat increase	Significantly increase
Contact with police in public space					
Being charged with an offence					
Family members with criminal history					
Exposure to crime in local neighbourhood					
Being listed as a missing person					

First contact with police under 14 years old					
Being placed on a youth justice order					
Receiving intervention under a condition of a youth justice order					

Q.4 Other

Please note any other factors on the basis of your professional experience that **decrease** the risk of a young person coming into contact with the criminal justice system.

Please write your answer here:

Please note:

Responses are limited to 100 characters.

Thank you for your participation—It is most appreciated.

Submit your survey.

Thank you for completing this survey.

Appendix 3. Bass Coast cohort case studies

Adolescent limited = no adult offences

Low = below the median for youth and adult offences

High = above/at the median for youth and adult offences

Desisting = above the median for youth offences and below the median for adult offences

Later developing = below the median for youth offences and above the median for adult offences

Bass Coast cohort case study: Paul

High: age of onset = 11; total youth offences = 72; total adult offences = 64

Paul, who was included in the Bass Coast cohort from 15 years old, was local to Bass Coast and the records indicated that he lived with his family and had no DHHS involvement as a youth.

Paul was first listed as an offender at 11 years old, and his early offending pattern involved peers (three of whom were within the Bass Coast cohort). His parents were present when the police interviewed him as a youth, and his father was noted to have said, 'he's always bored, we have no control'. Paul's offending behaviour continued into adulthood. He was recorded predominantly for property offences, with Paul listed as an offender for a sexual offence (2008) involving a 15-year-old female when both were intoxicated in public, and Paul stayed with the female to 'look after her' after other peers had moved on. The level of Paul's offending at 21 years old was substantially above the predicted level.

Paul was placed on two youth justice orders and breached an order once. There were no intervention conditions recorded on the orders.

There were 34 field contact reports; the first was when Paul was 15 years old. The police records noted that he was often found loitering near an area of police interest in both Wonthaggi and Morwell with peers. The police data indicated that Paul was a victim of an offence against the person when under 18 years old on two occasions, the first of which occurred at 15 years old. It is likely that these involved conflict with peers. Paul had no missing person reports.

No family criminality was noted, other than an incident of family violence involving Paul's parents, in which alcohol consumption was noted.

The police notes indicated that Paul had multiple family violence reports (eight LEAP records), with the initial report occurring at 17 years old, most of which took place as an

adult with a girlfriend and a child. There was involvement from Bass Coast Health and child protection during 2007 because it was deemed that his partner's pregnancy was 'high-risk'.

The DET data indicated that Paul attended one primary and one secondary school, both in Bass Coast. Year 9 was recorded as his final year of enrolment.

Paul's engagement in offending reflects early onset, persistence to adulthood and mainly property offences. There were no child protection substantiated reports; however, the police data of child victim reports suggest potential peer behaviour that resulted in Paul being a victim of an offence. Paul had engaged in family violence within his adult intimate relationship.

Bass Coast cohort case study: Tom

Late Developing: age of onset = 12; total youth offences = 20; total adult offences = 53

Tom (15 years old) had a family local to Bass Coast. Before residing in Bass Coast, the family lived in western Victoria, and Tom had an ongoing connection to this area through his grandmother. Tom did not have any recorded contact as a child with the DHHS.

Tom was initially listed as an offender at 12 years old for minor delinquent behaviour committed with his brother. He continued engaging in offending behaviour throughout his adolescence, mainly with peers (some of whom were also included in the Bass Coast cohort). Tom had ongoing offending behaviour as an adult, and his offending was above the level predicted at 21 years old.

Tom completed one youth justice order and successfully completed an intervention condition of the order.

Tom had 20 field contact reports, most as an adult; at the first field contact record, Tom was 17 years old. All reports presented as related to potential criminal activity.

There was no recorded parental criminality.

There was one missing person record at 14 years old, which was made by his parents, who expressed that perhaps it was 'attention seeking' behaviour. Tom was located in a nearby town later on the same day.

All 15 family violence reports related to Tom when he was over 18 years old with both his partner of three years and his parents. Often, alcohol was a component of the behaviour. He was not listed as an affected family member in the family violence reports.

There was limited information about Tom's participation in education. Over his secondary schooling, three secondary schools were noted, two of which were local to Gippsland, and the third was in the western division, where his grandmother resided.

The police data indicated that when Tom was 21 years old, he was involved in a car accident that affected his ability to maintain employment; there was also substance use noted. Tom presented as transient since leaving Bass Coast in late-adolescence, with the connection to his extended family consistent and, despite family violence, the maintenance of his relationship with his parents and a partner.

Tom had an early onset of offending that persisted into adulthood. His offending was relatively minor and involved property, drug and public order offences. There was no record of ACEs.

Bass Coast cohort case study: Steve

Low: age of onset = 10; total youth offences = 28; total adult offences = 16

Steve was from a family of Bass Coast origin. The large family (11 siblings and seven step-siblings) was highly mobile, with many involved in the criminal justice system.

There were two substantiated reports to child protection before 2005, the first when Steve was 8 years and 3 months old. The police data did not include Steve as a child victim.

Steve was first listed as an offender at 10 years old for harmful sexual behaviour within the family; these offences were later struck out. At 16 years old, he was listed as an offender for an incident that involved minor delinquency with peers. His offending pattern was consistent over his late-adolescence and persisted into adulthood. His offending at 21 years old was above the predicted level.

Steve served two youth justice orders, and there was a referral for intervention; however, this was not completed. He was imprisoned as an adult and received adult community correction orders.

Steve's first recorded field contact was at 17 years old when he was with peers, and he had seven subsequent reports continuing as an adult. There were no missing person reports.

Steve had multiple family violence reports (nine in total), starting from the age of 12 years and persisting until the age of 20 years. The police data included an attendance at a family violence incident involving Steve's partner of five years.

The DET data noted that Steve attended four primary schools, three of which were in Bass Coast and the others were in the adjacent LGA, South Gippsland. He attended two secondary schools, one in Bass Coast and the other in the same town he attended primary school in South Gippsland. Steve was often absent from school during his

primary and secondary education, and he left school at 14 years old to start an apprenticeship. There was an application for support submitted by one of the primary schools that he attended, which cited an intellectual disability, poor attendance and family dysfunction.

The key feature of Steve's case presented as a high degree of mobility in both his family of origin and for Steve individually. It was noted in the police data that, at 16 years old, he was transient across the Gippsland region. Steve had initial police contact at 11 years old; however, a consistent pattern of offending was not recorded until late-adolescence and his offending, mainly minor property offences, persisted into adulthood.

Bass Coast cohort case study: Simon

Low: age of onset = 13; total youth offences = 17; total adult offences = 7

Simon's family was local to Bass Coast, and his mother remained a key support for him. There was no record with the DHHS or record of child victim reports in the police data.

Simon was listed as an offender at 13 years old for sexual harm with a similar age child who was staying in his home; however, this was later struck out. The next time Simon was listed as an offender, he was 15 years old, and his youth offences were mainly property offences. Simon had seven adult offences, and there were no adult offences since he turned 22 years old. His criminal involvement at 21 years old was below the predicted level.

There was no record of parental criminality.

Simon was placed on one youth justice order and successfully completed intervention as a condition of the order.

Simon's 12 field contact records were mainly as an adult; however, his first field contact record was at 16 years old, his only field contact as a youth. The records suggested possible involvement in drug use. There was one missing person report made by his mother when he was 16 years old. When he was located two days later, the police noted that he had no friends, was facing court and his parents had recently separated.

There was a family violence order between his parents, suggesting that Simon was exposed to family violence at 8 years old. There were three family violence records for Simon as an adult; one listed Simon as the AFM when he was 27 years old, with the initial report at 21 years old. The police notation indicated that these were related to verbal conflicts with his mother, which concerned quitting employment and drug use.

The available data from the DET was limited and showed attendance at two secondary schools, both in metropolitan Melbourne, with attendance in years 10 and 12.

Simon's pattern of offending reflects later onset. His parent's separation was potentially a key experience in his engagement in offending and possibly related to drug use.

Bass Coast cohort case study: Ann

Low: age of onset = 14; total youth offences = 9; total adult offences = 5

Ann lived with her family of origin in Bass Coast until her parents separated. She then lived mainly with her father in an adjacent area, while her mother remained in Bass Coast.

Ann had three substantiated reports to child protection, DHHS; the first of which was when she was 12 years and 8 months old, and the last when she was 14 years and 6 months old. The police data recorded nine child victim reports; the first at 13 years old. There were four OHC placements over 12 months from 14 to 15 years old, including two residential care placements. The notations indicated that Ann frequently ran away while living with her father. She was vulnerable to sexual exploitation, and the records indicated potential sexual harm when she was in OHC. The police notes included her father's comments that 'she deliberately got pregnant to spite her parents'.

Ann was first listed as an offender at 14 years old. Her youth offending involved minor property offence and ceased at 15 years old. Ann was listed as an offender at 20 years old, with five offending incidents over 12 months. There were no listed adult offending incidents after the age of 20 years. Her offending at 21 years old was well below the predicted level.

The first missing person report was made by her father when she was 14 years old, and there were 27 missing person reports between then and when she was 16 years old. Ann had seven recorded field contacts; the first was at 13 years old, and the rest were during the year of her adult offending when she was 20 years old. The police notations suggested that the field contact reports may have related to sex work on the street and related substance use.

There was no record of parental criminality or violence within the family home.

Ann did not have any youth justice involvement.

It presented that, as an adolescent, Ann was on the street and, therefore, vulnerable to sexual exploitation. There were two reports of Ann as the affected family member of family violence at 15 years old, with a further seven family violence records into adulthood. There were also multiple reports of sexual assault dating from 13 to 15 years old. The police noted that Ann maintained a relationship with an older male, with four children from the relationship. The male served a period of imprisonment for CSA, of which Ann was listed as the victim. The ongoing family violence reports appear to stem from this relationship.

The available DET data showed that Ann attended three secondary schools, the first in Bass Coast at Year 7, followed by two further enrolments: one in the area in which her father resided and the other in an ungraded educational program in the outer Melbourne area.

Ann's engagement in offending presented as minor and mostly related to vulnerability when on the street, which was chronologically related to her parent's separation. Her exposure to ACEs seems to have originated from her running away during her early-adolescence and then sexual exploitation when at risk. The placement in OHC may have exacerbated her exposure to risks.

Bass Coast cohort case study: Max

High: age of onset = 16; total youth offences = 54; total adult offences = 24

Max lived with his family in Bass Coast. There was no formal DHHS record for Max as a youth. The police records indicated that Max was a victim of an offence against the person when under 18 years old on one occasion when he was 16 years old.

Max was first listed as an offender at 16 years old, and most of his youth offending involved motor vehicle offences with peers, some of whom were included in the Bass Coast cohort. There was a gap between Max being listed as an offender from the age of 17 to 24 years. Max's adult offending continued consistently until the end of data collection when he was 27 years old. At 21 years old, his offending was equal to the predicted level.

There was a record of his father being engaged in minor offending and an older brother with an offending history. Based on all the data sources, there were multiple reports of exposure to family violence during Max's childhood, the first pertaining to Max when he was 8 years old. The police records in LEAP showed 21 family violence records, the first at 16 years old. His father harmed his mother and siblings, and the police file narratives recorded Max's older brother for committing family violence against Max.

Max had nine field contact reports; the first was at 16 years old, and they mostly noted that Max was present with peers and siblings. The field contact reports continued into adulthood. There were no missing person reports.

Max was placed on and completed two youth justice orders.

There were 18 family violence reports as an adult, with four reports listing Max as the AFM. Most presented as stemming from exposure to family conflict and arguments over substance use. Max had multiple family violence incidents relating to his relationship, from which there were two children. At the time of data collection, there were DHHS orders restricting Max's contact with the children.

The only available DET record indicated that Max was enrolled at a Bass Coast secondary college for Year 10 (2005).

Max's offending commenced in late-adolescence and persisted in adulthood. He had exposure to family violence as a child and ongoing family conflict and criminality. Max engaged in abusive behaviour in his adult relationship, and substance use was present.

Glossary

DOJCS	The Department of Justice and Community Safety was previously the Department of Justice and Regulation: https://www.premier.vic.gov.au/building-stronger-and-more-secure-youth-justice-system .
Persistent youth	Youths who continue to engage in offending throughout adolescence and into adulthood.
Youths	Individuals aged between 10 and 17 years.
Youth at Risk panel	A collaboration between the Victoria State Government and community services agencies. The panel aims to support early intervention and coordination for individual young people to prevent pathways into youth offending.

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