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EVIDENCE BASED POLICING CENTRE

UNDERSTANDING THE MOTIVATIONS OF FLEEING DRIVERS

Relationships with other offending

PERFORMANCE & RESEARCH INSIGHTS UNIT, EVIDENCE BASED POLICING CENTRE

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Purpose

This paper extends the work outlined in the Independent Police Conduct Authority and NZ Police thematic review of fleeing drivers to further examine the relationship between other offending and fleeing police. It aims to develop a clearer picture of the different types of fleeing driver events and offenders, with a particular focus on determining how recidivist offenders may differ from those that engage in this behaviour only once.

Background

The IPCA and NZ Police review was able to determine much about the characteristics of a sample of those who have fled police; however, it was outside the scope of that review to examine the motivations of these offenders. As one of eight recommendations from the report, the Evidence Based Policing Centre (EBPC) was commissioned to undertake six research tranches examining fleeing drivers' motivations for fleeing police. This report presents the results of the fifth of the six research tranches that examines previous literature, and police pursuit and offender databases to examine the wider offending behaviour of fleeing drivers.

Previous research suggests that many fleeing drivers have extensive criminal histories, with the majority unlicensed, although this information appears to be rarely known at the time they are signalled to stop. Common co-occurring offences have been shown to include:

- other driving offences (e.g. dangerous driving),
- licence breaches,
- impaired driving,
- stolen vehicles,
- other non-driving related criminal charges.

The findings of Tranche 3 of the research programme suggest avoiding punishment for other criminal offending is a key motivator for fleeing police, however the type of self-reported offending differed markedly by age and ethnicity. For example, Māori and Pasifika, and younger people reported they were more likely to be in stolen vehicles, while older offenders reported more concealing contraband and drug possession as motivators. Again, there were high levels of license breaches included across all age groups.

From a theoretical perspective, there could be differences in offending patterns (and offenders themselves) between adolescence limited and life course persistent offenders. As fleeing appears to follow a common age-crime curve, it may be possible to determine based on their wider offending patterns, whether some offenders could be expected to "age out" of this type of offending, while others may be more inclined to continue the behaviour long-term.

Method

The method used for this research tranche predominantly uses the NZ Police Fleeing Driver Notification Database to determine what the data can provide to further understand the motivations of fleeing drivers. As the previous tranches have identified that co-occurring offending is a strong motivator of fleeing behaviour, the analysis seeks to identify the common characteristics of fleeing drivers and

fleeing driver events. A cohort of recidivist offenders is also identified for comparison to the wider dataset to highlight any potential differences with this cohort. Finally, a cluster analysis is used to identify common groupings of offences and the characteristics of the offenders in these groupings. From this cluster analysis, we attempt to develop a series of profiles of different offences and offenders. Finally, other Police offence data is also analysed, both for co-occurring offending patterns, and wider criminal histories.

Key Insights

- Fleeing Driver Notifications are increasing, although it should be noted this is both due to an increase in actual events, and better recording practices (e.g. of fleeing driver events for which a pursuit is abandoned or not commenced).
- The age group of most increase in fleeing driver events is 25-34 years old, while events in other ages groups have remained constant or decreased. Young drivers across all datasets were more likely to be in a stolen vehicle.
- While many fleeing drivers do hold a current licence, the majority are either disqualified or unlicensed (where this information is recorded).
- A cluster analysis was able to group fleeing drivers into eight profiles. The first four characterised single-event fleeing drivers
    - Disqualified driver (20.88%)
    - Alcohol impaired driver (21.39%)
    - Suspicious vehicle or behaviour (10.73%)
    - Unlicensed driver (13.94%)
- The second four characterised recidivist offenders:
    - Unlicensed and stolen vehicle (7.90%)
    - Joyriders (14.64%)
    - Spotted the vehicle (6.40%)
    - Disqualified from driving and stolen vehicle (4.10%)
- Generally, recidivist offenders were younger and more likely to be in stolen vehicles. Contrary to other tranches of this research, there was some suggestion of a “thrill seeking/joyriding” group of young offenders who commit no other offences outside their manner of driving; however, this was still a small group (less than 15%).
- The types of co-occurring offending most common at the time of a fleeing driver event are often antisocial, with unlawful taking of vehicles and other driving offences common. Manner of driving is the most common reason for stopping vehicles, with driving offences more common than violent or other serious offending.
- When the offender history is examined, there is more variation in the types of offending seen from fleeing drivers. There are still high numbers of licence breaches, but the overall offending profile is more serious than that seen in the fleeing driver event.

Summary and recommendations

The findings of this report suggest that examining both the wider offending history and co-occurring offending of fleeing drivers may give insight into their motivations, and possible interventions that may assist in reducing this behaviour. Within the context of the wider Fleeing Driver Research Programme, this research was able to determine that there may be a small cohort of fleeing drivers who engage in this behaviour with intention, however for the majority their behaviour is more likely associated with a general negative relationship with police through their offending history, or due to the particular situation they find themselves at the time they are signalled to stop.

While the results suggest that there may be fleeing drivers who grow out of the behaviour, a more detailed analysis of the trajectory of young offenders over time could be done to give better support to this suggestion.

Based on the findings of this report, it is suggested that training and communications to frontline staff emphasise that while the majority of fleeing drivers have "something to hide" at the time they flee police, the seriousness of this offending is generally not as high as in their wider history. This would suggest that most fleeing drivers have contact with police through other channels, and that these other interactions may be more influential in reducing this behaviour than apprehending drivers at the time they flee. Additionally, due to these other interactions, police have more opportunity to hold these offenders to account after the fact through investigations.

1. Purpose

What is the relationship between drivers' offending and their likelihood of fleeing Police? How often do they have "something to hide" other than what police know at the outset of the pursuit? Are there individuals who would flee from any interaction with police regardless of any offending? How do the motivations and characteristics of offenders that flee on only one occasion differ from those that repeat this offending?

The current research project extends the work undertaken as part of the Independent Police Conduct Authority and New Zealand Police collaborative thematic review of fleeing drivers (IPCA, 2019) to a wider sample, and with the addition of offender perspectives both from other research tranches and the wider fleeing driver literature. In that review, it would appear that fleeing drivers often have extensive criminal offending histories; however, it is less clear whether other criminal offending is the motivation for fleeing, or whether this previous involvement with police may make offenders more likely to avoid interactions. This research aims to get a clearer picture of the different types of offenders that could include:

- Those who regularly engage in fleeing police (and only this activity)
- Those who have extensive involvement with the police and flee to avoid interaction
- Those who flee police when they have "something to hide" (both serious and low-level offending e.g. other criminal or traffic offending, driver licence breaches, driving under the influence, stolen vehicles)

Based on an analysis of fleeing driver events and what is known about those who engage in them, this paper seeks to develop profiles of the different types of offences and offenders.

2. Background

In early 2019, the Independent Police Conduct Authority (IPCA) in conjunction with New Zealand Police released a thematic review and recommendations based on a sample of fleeing driver cases in New Zealand (IPCA, 2019). This review included an examination of the characteristics of drivers who flee police. Offenders were found to be commonly young, Māori, male, often with criminal histories and traffic offending, and without a current driver licence. However, while the review was able to identify characteristics of offenders, it was outside the scope and available data to examine the motivations of these offenders for fleeing police.

As one of eight recommendations from the report, the Evidence Based Policing Centre (EBPC) was commissioned to undertake six research tranches examining fleeing drivers' motivations for fleeing police. The IPCA review called for a particular focus on young people, and alcohol and/or drug impaired drivers. This report presents the results of the fifth of the six research tranches that examines previous literature, and police pursuit and offender databases to examine the wider offending behaviour of fleeing drivers. Of particular interest is how often people who flee police have "something to hide", and whether there are some for whom this is an entrenched behaviour either as their sole offending behaviour, or as part of a wider pattern of behaviour with police.

The first research tranche that focused on young offenders (Mora & Jones, 2019) suggested there are likely to be three broad categories of motivation for offenders fleeing police:

- Situational; these are the types of motivations related to fleeing at that particular time, in those particular circumstances (e.g. being under the influence, having something to hide, fleeing the scene of a crime etc.).
- The second relates to attitudes and reactions to those pursuing them (e.g. fear of police, attitudes toward police, baiting etc.).
- The final relates to the attractions of driving in a risky manner (e.g. thrill seeking, peer influences, joyriding).

The current research will primarily focus on the first of these three categories, however, may provide some insight into how widespread each motivation may be among those who flee police.

2.1. IPCA and NZ Police report findings

The IPCA and NZ Police report examined a sample of fleeing driver events in 2017 (Authority sample of all notifiable events in the 2017 calendar year; Police sample random 10% of non-notifiable events 1 July – 31 December 2017). The criminal histories and characteristics of each sample are included in Table 1.

Table 1: IPCA NZ Police review offence history summary (IPCA, 2019)

NZ Police sample	IPCA cases
191 events	**77** events
91 identified offenders	**68** identified offenders
50% active or serious and persistent criminal offenders	**68%** active or serious and persistent criminal offenders
Median number of previous criminal convictions - **16**	Median number of previous criminal convictions - **27**
42% had burglary, robbery or dishonesty offences as most serious conviction	**60%** had burglary, robbery or dishonesty offences as most serious conviction
79% had a history of family harm involvement	**79%** had a history of family harm involvement
30% gang members or associates	**31%** gang members or associates
25% on active charges	**37%** on active charges
18% had warrant to arrest at the time of offending	**16%** had warrant to arrest at the time of offending
Median number of previous traffic offending convictions - **3**	Median number of previous traffic offending convictions - **5**
31% at least one previous failing to stop offence	**40%** at least one previous failing to stop offence
49% previously in prison	**57%** previously in prison
65% no current driving licence or disqualified/suspended from driving	**68%** no current driving licence or disqualified/suspended from driving

The IPCA/NZ Police review also examined the initial reasons for why these drivers were signalled to stop. The most common reason in both samples (around one third of each) was the manner of driving (non-

arrestable offence), followed by suspicion of criminal offending in a known event (15-20%) or suspicious vehicle behaviour. Therefore, if offenders are fleeing due to criminal activities, it appears to be rare that this was known prior to them being signalled to stop. Nevertheless, the IPCA/NZ Police review determined from this analysis that fleeing drivers are often serious offenders with extensive offending histories, rather than lower-level traffic offenders.

Table 2 presents a summary of charges laid in the cases included in the IPCA/NZ Police review. Aside from failing to stop (for which most offenders were charged), 81-87% of offenders were charged for other driving offences as part of this event. Driver licence breaches were common (35-43%), while around one quarter were charged with impaired driving (21-26%). Vehicles used in fleeing police were stolen in around one quarter of cases (23-28%) while additional, non-driving related criminal charges were laid in around half of cases (42-59%), particularly dishonesty offences (25%).

Table 2: Charges laid following fleeing driver events in IPCA/NZ Police review (IPCA, 2019)

	NZ Police sample	IPCA cases
Failing to stop	**93%**	**88%**
Failing to stop	32%	21%
Failing to stop – 3rd or subsequent	5%	12%
Failing to stop – aggravated	54%	54%
Failing to remain stopped	2%	1%
No failing to stop charge	**7%**	**12%**
Driving charges	**81%**	**87%**
Careless driving	3%	N/A
Dangerous driving	41%	43%
Driving at a dangerous speed	2%	3%
Dangerous driving causing injury/death	1%	7%
Reckless driving	33%	18%
Reckless driving causing injury/death	2%	14%
Manslaughter	N/A	3%
No driving charge	**19%**	**13%**
Driver licence breach charges	**43%**	**35%**
Forbidden	21%	18%
Suspended	3%	N/A
Suspended – 3rd or subsequent	2%	N/A
Disqualified	5%	12%
Disqualified – 3rd or subsequent	11%	6%
No charge for driver licence breach	**57%**	**65%**
Impaired driving charge	**21%**	**26%**
Excess blood alcohol	14%	6%
Excess blood alcohol – 3rd or subsequent	2%	6%

Refuse blood	2%	6%
Refuse CIT	1%	N/A
Refuse to accompany	2%	N/A
Drug impaired driving	N/A	9%
No charge for impaired driving	**79%**	**74%**
Stolen vehicle	**23%**	**28%**
Non-driving related criminal charges	**42%**	**59%**
Dishonesty	25%	25%
Drugs	1%	7%
Drugs and dishonesty	5%	4%
Firearms and weapons	2%	7%
Assault	N/A	7%
Other	8%	7%
No criminal charge	**58%**	**41%**

Overall, there is evidence from the IPCA/NZ Police review that fleeing police may not be the only, or most serious offending of the majority of offenders; the bulk of charges laid would be related to behaviour during the fleeing driver event (e.g. dangerous driving), however driving under the influence, driver licence breaches, driving stolen vehicles and in some cases other offending could contribute to offenders failing to stop.

The IPCA/NZ Police review also categorised offenders based on the wider extent of their criminal history (p69):

- No history – drivers with no criminal charges or convictions, but may have infringements or low-level family harm incidents recorded
- Low level – includes drivers with low level charges and/or Police interactions
- Active offenders – those who are actively and regularly offending. This includes dishonesty, traffic and family harm-related offending.
- Serious and persistent offenders – similar to active offenders, but their criminal behaviour is characterised as serious – e.g. violent and/or sexual offences or high-volume dishonesty that is sustained over a period of time.

The proportions of each varied based on the sample, but overall, only 13% of offenders in both groups had no other offending. The police sample was approximately half low or no offending, while the IPCA cases showed more active or serious/persistent offending (68%).

2.2. Literature on links between failing to stop and criminal offending

The bulk of research into fleeing driver events has focussed on the analysis of pursuit databases for demographic and situational variables (e.g. age, gender, weather conditions, locations, outcomes). There has traditionally been very little known about the possible motivations of offenders fleeing police. This lack of knowledge has (understandably) meant that decision makers speculate on offender motivations (Dunham, Alpert, Kenny & Cromwell, 1998), potentially basing policies on incorrect

information. A common assumption for why people may flee police is that they do not want to be caught for other, potentially more serious, offences. This has been shown to be a common belief of police officers in the past (Falcone, Wells, & Charles, 1992).

While the bulk of research on offending has relied on official data (and therefore often police assumptions of reasons offenders flee), Dunham et al (1998) undertook one of the first studies that surveyed offenders (both who had been apprehended and those who had eluded police) to gain further information on their motivations, including the influence of their other offending. The most common reasons for fleeing given in this study were:

- 32% because they were in a stolen car
- 27% because they were driving on a suspended licence
- 27% because they were fleeing a crime scene or to avoid arrest
- 21% because they were driving under the influence of drugs or alcohol
- 21% because they were afraid of being beaten

These percentages of other offending are quite high; however, it should be noted that those surveyed by Dunham et al (1998) were all in correctional facilities so had extensive criminal records and offending worthy of incarceration. They may not have been in prison for crimes related to their fleeing of police.

The findings for driving under the influence are interesting because nearly 42% of the offenders stated they were under the influence at the time of their offending; however, this was only a reason given for fleeing for half of these offenders. While many offenders are under the influence when they flee, avoiding detection of this offending is not always the key motivation for fleeing.

Those with previous apprehensions, those who considered their possible punishment, those under the influence, and those concerned about their own safety were willing to take more risks; the latter as they were more concerned for their safety after the pursuit ended, rather than when they were on the road.

In an Australian study, Brewer and McGrath (1991) found that there was a group of offenders with a long history of other offending. The bulk of this was traffic offending (some serious), and possibly some other low-level criminal offending, but little serious offending. However, importantly for policy makers, these authors also found that those who had committed more serious crimes were also more likely to take greater risks when fleeing police.

2.3. Relationship of failing to stop with other car crimes

In a qualitative study with car crime offenders (predominantly those stealing cars), while not the focus, the subject of fleeing police was discussed (Light, Nee & Ingham, 1993). Some of those interviewed saw fleeing police as exciting and a chance to “show off” but for around a third, this was identified as the worst thing about stealing cars; it was described as an “occupational hazard”. The majority (90%) had been chased at least once. There are definitely some young people in particular who steal cars in order to drive dangerously, joyride, and impress other young people. However, few do so with the intention of gaining police attention and subsequently fleeing. Overall, most car thieves tried to drive cautiously to avoid detection; 12% thought they would be able to get away from police if identified and 7% indicated this would excite them, but less than 10% provoked pursuits (Light et al., 1993).

A number of studies have attempted to differentiate between the crash risk of illegal street racing and other related behaviours (in which the authors include "failing to stop"), compared to the risk of the drivers that are involved. Generally, it has been found that the actual behaviours carry little crash risk; however, drivers who have histories for engaging in these behaviours do have more extensive traffic infringement and crash histories than matched peers (e.g. Leal, Watson & Armstrong, 2010; Leal & Watson, 2011).

O'Connell (2006) takes a sociological approach to examine the history of joyriding (defined as the theft of a motor vehicle for temporary use), particularly focussing on the "expressive" use of a vehicle taken without consent. Through analysing media reporting from 1930-1990, O'Connell was able to demonstrate a shift over time from joyriding being an expressive crime with no instrumental motive, through to involving more alienated youth, and from the 1990s, offenders becoming "specialists" and becoming more "showy" in their behaviour. O'Connell emphasises the extent to which offenders may engage taking vehicles for purely expressive reasons, rather than the more common instrumental purposes of other lower-level crimes.

2.4. Related findings from the Fleeing Driver Research Programme

Tranche 3 of the Fleeing Driver Research programme was based around interviews with 40 New Zealanders who had fled police on at least one occasion (Cording, Gore, Westerman & Kaiwai, 2020). The majority of participants indicated that they were involved in some kind of illegal activity, or had something to conceal, at the time they were signalled to stop by police. The decision to flee was often based on the perception fleeing was worth the risk to avoid punishment for this other illegal activity (Cording et al., 2020). While a limited sample, the self-reported offending of these participants is presented in the Figure 1 and Figure 2 below[1].

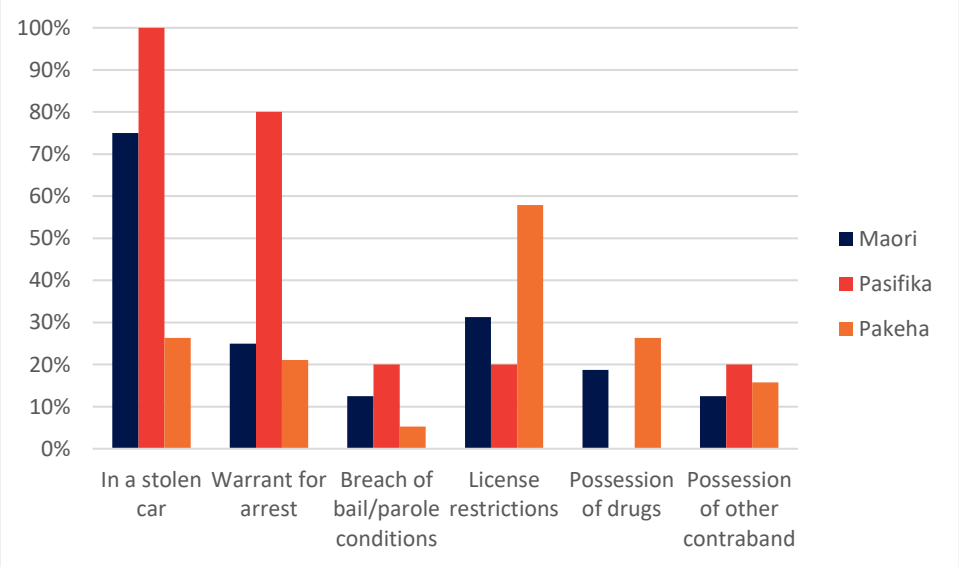

Figure 1: Self-reported offending co-occurring with failing to stop by ethnicity

[1] Sample demographics: Māori (N=16), Pasifika (N=5), Pākehā (N=19). Under 20 (N=22), 20-24 years (N=2), 25-39 years (N=13), 40 and over (N=3). Note, participants could indicate more than one type of offending.

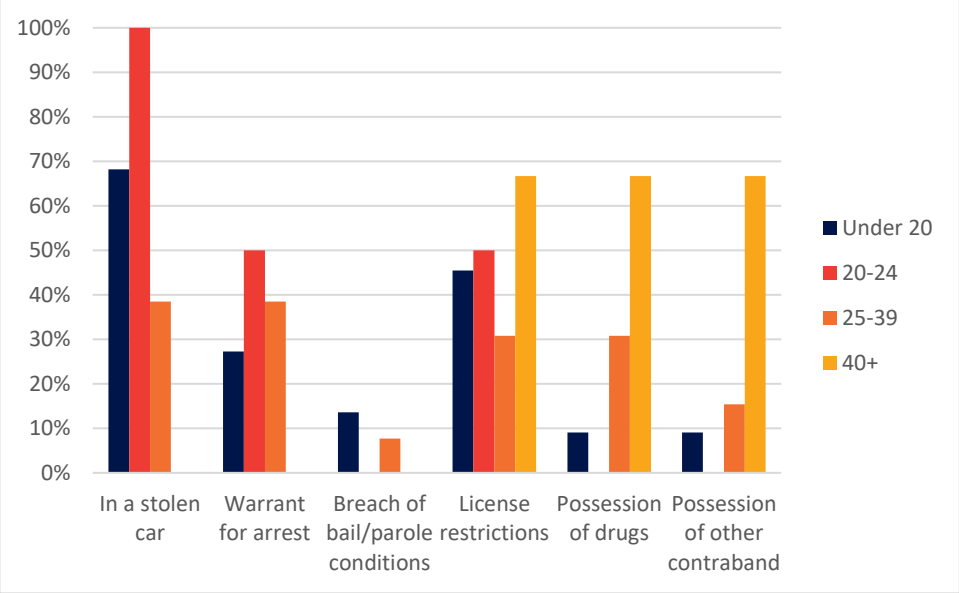

Figure 2: Self-reported offending co-occurring with failing to stop by age

Overall, there are differences by ethnicity with Māori and Pasifika, and younger people reporting they were more likely to be in stolen vehicles, while older offenders reported more concealing contraband and drug possession as motivators.

In addition to concealing offending, a number of offenders, particularly those identifying as Māori or Pasifika suggested they had had previous negative interactions with police officers, or had heard stories from those close to them that made them want to avoid further interaction with police even if they had not committed other offences (Cording et al., 2020). Therefore, while co-occurring offending was shown to be a major factor for many participants, there may still be other fleeing drivers who have not engaged in any other illegal activities.

2.5.Adolescence limited versus life course persistent offending

Criminological theories of adolescence limited versus life-course persistent offending may also provide some insight into the offending patterns of fleeing drivers. As the overall profile of this behaviour shows the commonly-seen age-crime curve in which offending increases across adolescence then peaks in early to mid-twenties, it may be possible that fleeing drivers may generally show behaviours consistent with adolescence limited offending, with a smaller cohort more life course persistent.

Adolescence Limited

Adolescence limited (AL) antisocial behaviour emerges alongside puberty when otherwise ordinary healthy adolescents experience psychological discomfort during the relatively role-less years between their biological maturation and their access to mature privileges and responsibilities; a period called the "maturity gap" (Moffitt, 1993). They experience dissatisfaction with their dependent status as a child and impatience for what they anticipate are the privileges and rights of adulthood. While young people are in this gap, it is virtually normative for them to find a delinquent lifestyle appealing, and to mimic it as a way to demonstrate autonomy from parents, win affiliation with peers, and hasten social maturation (Bukowski, Sippola & Mewcomb, 2000). However, because their pre-delinquent development was normal, most AL individuals are able to desist from crime when they age into real

adult roles, returning gradually to a more conventional lifestyle (Moffitt, 2015). An AL individual may also come to realise that their antisocial behaviour could have negative impacts on their future, and therefore decide that antisocial behaviour is no longer advantageous. The recovery of an AL individual may be delayed or completely prevented if the antisocial activities attract "snares," such as a criminal record, incarceration, addiction, or truncated education without credentials (Moffitt, 2015). Such snares can compromise the ability to make a successful transition to adulthood by limiting or denying options.

Life course persistent

In contrast, life course persistent (LCP) antisocial behaviour originates early in life. A child's risk emerges from inherited or acquired neuropsychological variation such as subtle cognitive deficits, difficult temperament, or hyperactivity (Moffitt & Caspi, 2001). These traits can then be exacerbated by environmental factors such as inadequate parenting, disrupted family bonds, and poverty. As the child ages, environmental factors can extend beyond the family to include poor relations with people such as peers and teachers. As a result, opportunities to learn prosocial skills are lost. Over the first two decades of development, interactions between the individual and the environment gradually construct a disordered personality with features of physical aggression and antisocial behaviour persisting to midlife. Antisocial behaviour infiltrates multiple adult life domains such as illegal activities, problems with employment, aggression and/or violence, or issues maintaining interpersonal relationships (Moffitt & Caspi, 2001).

Two processes were initially proposed by Moffitt (1993) that could perpetuate antisocial behaviour for LCP individuals. The first was that the individual had a limited behavioural repertoire due to lack of opportunities in their life to learn prosocial alternative behaviours. The second was that the individual became ensnared in an antisocial lifestyle due to the consequences of their antisocial behaviour (e.g. incarceration time, criminal history, early substance abuse, disengagement with education etc. can diminish the opportunities for prosocial avenues in life).

Differences in offending

In general, LCP behaviour is associated with a wide variety of offence types including more violent or victim-oriented offences, whilst AL are more associated with non-violent offences (Moffitt, 2015). However, this does not mean that AL individuals cannot engage in serious offending. In the Dunedin Multidisciplinary Longitudinal Study LCP men (about 10% of the cohort) perpetrated around 53% of violent or serious offences whilst AL men (about 26% of the cohort) perpetrated around 29% of violent or serious offences (Moffitt & Caspi, 2001). Therefore, it can be challenging to differentiate LCP and AL individuals solely based on their offending behaviour.

As part of the Dunedin Multidisciplinary Longitudinal Study, Moffitt and colleagues found that there was a small subset of males who had under controlled temperaments as three-year-olds, low intelligence (Moffitt, Caspi, Dickson, Silva, & Stanton, 1996), and had suffered family adversity and parental psychopathology. This group also demonstrated persistent antisocial behaviour problems during childhood; however, they engaged in relatively low levels of delinquency during adolescence. Further study of this group up to age 26 revealed that their pattern of antisocial behaviour was intermittent with periods of offending followed by periods of no offending.

Gender differences

The original theory (Moffitt, 1994) proposed that fewer females would become delinquent than males, and that therefore there would be a larger percentage of LCP males than LCP females. As a result, the majority of delinquent females would be AL, and would have the same causes as AL males. In the Dunedin cohort, these hypotheses were supported in that males outnumbered females in the LCP type 10:1 (possibly due to less females having the personal and environmental risk factors for LCP), and there were negligible sex differences in the AL group (Moffitt & Caspi, 2001). Additionally, AL females' antisocial behaviour was linked to the timing of each girl's puberty, delinquent peers were necessary for the onset of AL female behaviour, and that being in an intimate relationship with an offender promoted female antisocial behaviour (Caspi & Moffitt, 1991; Caspi, Lynam, Moffitt & Silva, 1993). Few other studies have examined how males and females fit into the taxonomy.

Relationship to fleeing behaviour

The literature on the two types of offenders would suggest that the motivations and offending patterns of each would differ in relation to fleeing behaviour. In the first instance, older fleeing drivers would be suggested to be life-course persistent offenders (particularly recidivists) and would therefore be likely to flee due to other offending. While the type of offending may vary, it could be expected to be more serious and potentially violent offending. Conversely, there may be younger offenders who either only engage in fleeing police (e.g. for the thrill), or in relatively more minor offending such as stealing vehicles or driving without the correct license. It would also be expected that females would be more likely to be noted in the younger demographics.

Summary

Previous research, including the IPCA/NZ Police review suggests that many fleeing drivers have extensive criminal histories, with the majority unlicensed (or disqualified). However, this information appears to be rarely known at the time fleeing drivers are signalled to stop. Where charges are later brought, in addition to failing to stop, many in the sample were charged with other driving offences, licence breaches, impaired driving, stolen vehicles, or other non-driving related criminal charges. Interestingly, past research has suggested that while many offenders are under the influence when they flee, it is often not given as a motivation for why they fled. There appears to be a common association with those involved in other car crimes and fleeing police; however importantly, while some steal cars for the purposes of joy riding, they rarely do so with the intention of gaining police attention and subsequently fleeing. The findings of Tranche 3 of this programme suggest avoiding punishment for other criminal offending is a key motivator for fleeing police, however the type of self-reported offending differed markedly by age and ethnicity. For example, Māori and Pasifika, and younger people reported they were more likely to be in stolen vehicles, while older offenders reported more concealing contraband and drug possession as motivators. Again, there were high levels of license breaches included.

From a theoretical perspective, there could be differences in offending patterns (and offenders themselves) between adolescence limited and life course persistent offenders. As fleeing appears to follow a common age-crime curve, it may be possible to determine based on their wider offending patterns, whether some offenders could be expected to "age out" of this type of offending, while others may be more inclined to continue the behaviour long-term. From a practical perspective, the type of interventions that could be applied to each of these groups would therefore differ based on what we know about these types of offenders.

3. Method

The method used for this research tranche predominantly uses the Fleeing Driver Notification Database to determine what the data can provide to further understand the motivations of fleeing drivers. As the previous tranches have identified that co-occurring offending is a strong motivator of fleeing behaviour, the analysis seeks to identify the common characteristics of fleeing drivers and fleeing driver events. Further analysis of other Police offence data is also included.

A cohort of recidivist offenders is also identified for comparison to the wider dataset to highlight any potential differences with this cohort. Finally, a cluster analysis is used to identify common groupings of offences and the characteristics of the offenders in these groupings. From this cluster analysis, we attempt to develop a series of profiles of different offences and offenders.

The following key research questions form the basis of the analysis:

1) What (if any) other offending have fleeing drivers been either suspected of, or found to be engaged in at the time they fled police?
2) What (if any) other offending have fleeing drivers engaged in in the past, prior to their fleeing police?
3) How does the pattern of offending differ between young fleeing drivers and older age groups?
4) What is the relationship between fleeing driver behaviour and other car crimes?
5) How common are traffic and licensing-related offences for fleeing drivers compared to serious criminal offending?

Fleeing Driver Notification Database

The New Zealand Police Fleeing Driver Notification Database contains data collected from notification forms completed by staff for the review of fleeing driver events. It includes any available information on the offender, the vehicle, and any decisions made by staff such as the use of tyre deflation devices, as well as an overall narrative of the event. The database includes both fleeing driver events that eventuate in a pursuit, and those where a decision was made not to pursue.

The database therefore has a mixed level of detail available on individual offenders; where offenders are apprehended through a pursuit, or subsequent investigation, there will be more detail available than where they were not identified. All records in the database between 1 January 2013 and 05 May 2020 were collected, providing 25, 747 events records with differing levels of detail for this analysis. Figure 3 shows the percentage of fleeing driver events in the notification database where an offender can be linked to a NIA file, compared to the percentage where no driver has been linked.

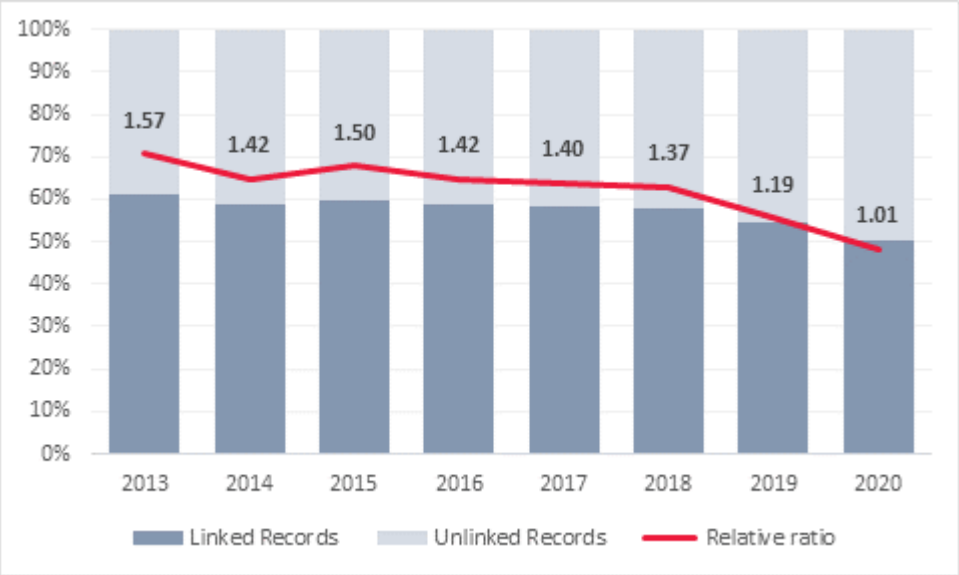

Figure 3. Relative ratio of NIA linked records to non-NIA linked records

As the principal focus of the analysis was the characteristics of fleeing driver events (as opposed to the outcomes) it was informed by data relating to individual drivers and event circumstances.[2]

Additional analysis of Police offence data

In addition to the of the Fleeing Driver Notification Database, information from additional NZ Police databases was conducted to determine relationships between pursuit events and other offending. This analysis focussed on recorded offences co-occurring with recorded failing to stop and pursuit offences.

Information retrieved from additional NZ Police databases was sourced from SAS Visual Analytics (SAS-VA). This information extended to that available in National Intelligence Application (NIA) linked data occurrence and proceeding data tables. Details of individuals associated with fleeing driver offence codes were extracted from these data sources[3]. Note that these data sources differ in purposes. For example, linked data will count fleeing driver events that are linked to drivers; these are a subset of all fleeing driver events that occur. It is, therefore, expected that there will be differences in counts between the various data sources.

To determine crime co-occurrence with fleeing driver events, the offence histories for drivers that appeared in the Fleeing Driver Notification database were also extracted using SAS VIYA. Details were extracted from the 'offence_demogr_cds' table and matched to drivers and records matched using person identifiers[4].

[2]Variables retrieved include, but are not limited to person identifier keys, event identifier keys, offender licence status, age, ethnicity, police district in which the fleeing driver event was initiated, and reasons for attempting to stop the driver.

[3] B110, B111, B108, B193 B195, B196, B221, B223, B224, B225, B228, B229, 3584, 3593, 7465, B148, K508, 'PURS'

[4]Only offences for which evidential sufficiency was attained were retrieved. Information extracted included, offence codes, offence descriptions, date the offence occurred, offender date of birth, district in which the offence occurred, offender ethnicity and the ANZSOC divisions and subdivisions for each offence that was linked to a fleeing driver.

Development of recidivist offender cohort

Records were also grouped using person identifier keys to gauge the number of fleeing driver events each person was recorded to have engaged in between 01 January 2013 and 05 May 2020. This analysis formed a subset of the overall database, but a total of 9,426 pursuit notifications were able to be included, consisting of 5,882 unique offenders, with offenders able to be classified as "one off" or recidivist offenders.

The data loss for this analysis is explained by a large proportion of records in the Fleeing Driver Notification Database not capturing person identifiers (due to drivers not being identified), or not being accurately recorded (primarily due to records saved in scientific notation in the database).

Cluster analysis

A cluster analysis procedure was conducted utilising person level data available in the Fleeing Driver Notification Database to determine if there were any patterns among drivers and their behaviour. This type of exploratory latent variable analysis is used to derive key profiles within the data by grouping the dataset according to patterns that exist in how variables in the dataset coalesce.

The cluster analysis here is used to determine profiles of drivers that attempted evading police and potential circumstances surrounding the event that could have influenced their decision making. As such, information relating to the outcomes of pursuit events were not retained for the purposes of this analysis. Note also, it was not within the scope of this analysis to recode qualitative commentary to inform this analysis.

What is cluster analysis?

Cluster analysis is used across many fields and disciplines. It is probably most well-recognised for its use in market research and customer analysis. For example, market researchers may use cluster analysis to determine which items in a weekly shop are most often bought together. With this information stores may tailor their store layouts and shelves to minimise the distance between those that are most often bought together, like the ingredients to bake a cake or make a Mexican inspired dinner.

Person-level information that informed the cluster analysis included, but was not limited to:

- Year in which the fleeing driver event occurred
- Licence Status
- Age Group
- Ethnicity
- Sex
- District wherein pursuit was initiated
- Reason Stopped[5]
- Alcohol and drug impaired driving suspected.
- Vehicle type

[5] Inter-reliability of the 'Reason Stopped' appeared low. This means it was inconstantly misunderstood (based on qualitative commentary available) whether this variable captured the reason for intending to stop a driver or the reasons for abandoning a pursuit.

The cluster analysis was run using RStudio, an integrated R Software Statistical Package development environment. Owing to the text-field nature of the data a series of 'kmodes' cluster analyses were conducted using the "klaR" package.

Crime Co-occurrence

Indicator variables were derived to determine (1) days on which pursuit or failing to stop event had occurred, (2) where 'other crimes' occurred on the same day as a pursuit or failing to stop event. Frequency counts of pursuit co-occurring crimes were conducted.

4. Results

Snapshot of the Pursuit Notification Database (2013-2019)

The number of notifications reflected in the Fleeing Driver Notifications Database have increased gradually each year since 2013 (see Figure 4). This is in part owing to improvements in event recording practices which mean both pursuit events, abandoned events, and events where no pursuit was initiated are reflected in the notifications database. As a result of this change in record practices, there is much better capture of pursuit events. Offender specific details, however, may be less well captured.

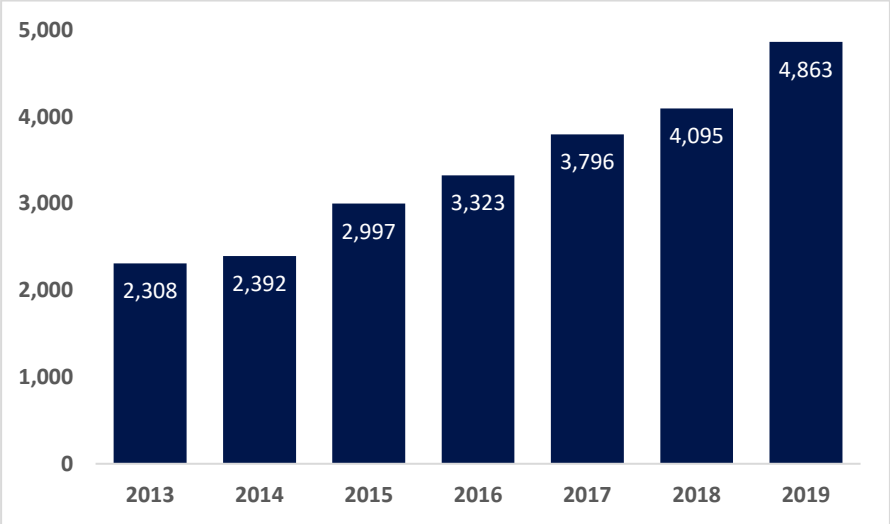

Figure 4: Number of Fleeing Driver Notifications by Year (2013-2019)

Figure 5 (below) shows that the relative proportion of fleeing drivers at different age groups has remained relatively stable since 2013, with the exception of drivers 25-34 who have shown a marginal increase. There has also been a significant increase in the number of notifications for which no driver age is recorded from 38.86% in 2013 to 45.67% in 2019; this may be a reflection of increases in abandonment rates, as well as fleeing driver events for which no pursuit was initiated.

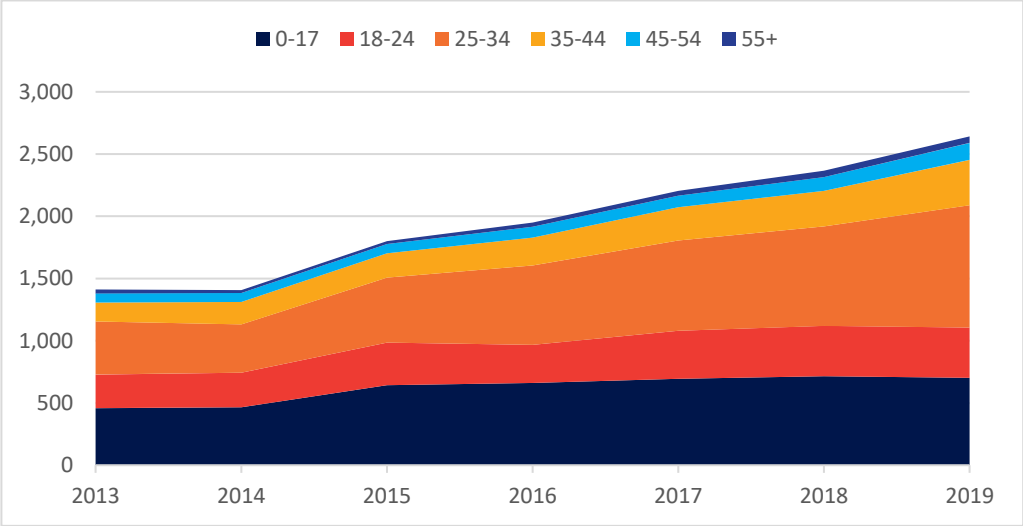

Figure 5: Changes in the volume of fleeing driver notifications by age group over time

Figure 6 (below) shows that the largest fleeing driver age cohorts are drivers aged 0-17 and 25-34 years of age. However, the percentage of fleeing drivers aged under 25 has shown a gradual decrease over this period.

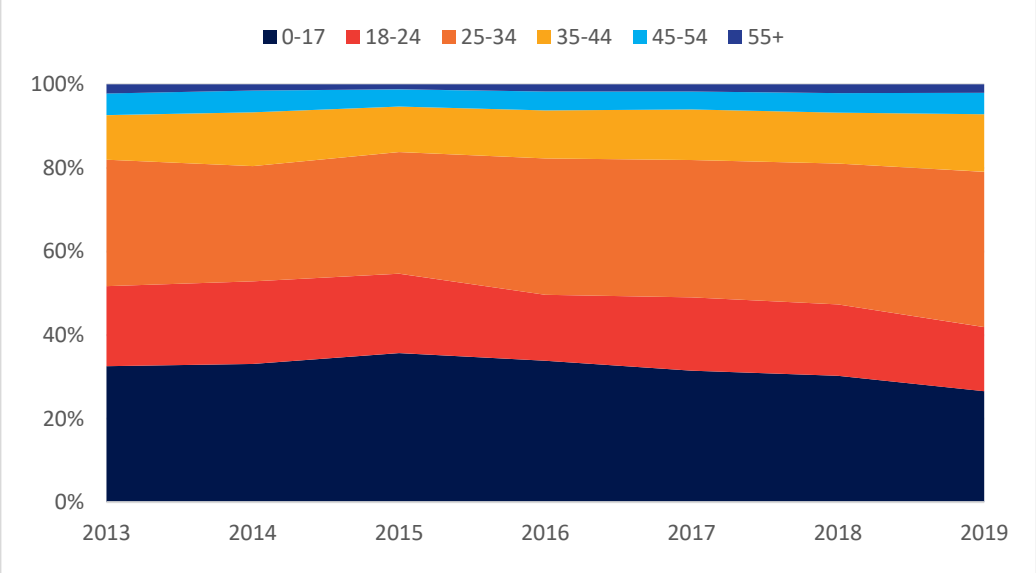

Figure 6: Changes in the proportion of fleeing driver notifications by age over time.

Previous tranches of the programme, and past research have suggested licence status breaches may influence decision making to flee. In almost half of fleeing driver notifications, driver licence status is not recorded (as the offender is not identified), however, Figure 7 shows the proportion distribution of those recorded between 2013 and 2019. While many fleeing drivers do hold a current licence, between them disqualified or unlicensed drivers make up the majority. Other statuses include: 'cancelled', 'expired', 'inactive', 'limited', 'requalify', 'revoked' and 'voluntary surrender'.

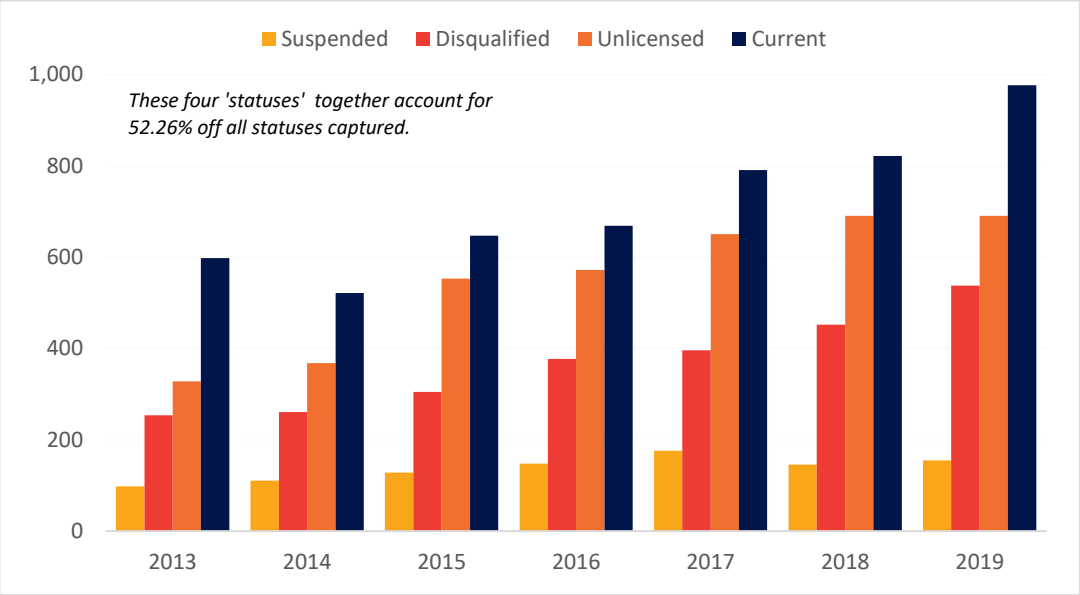

Figure 7: Primary driver licence statuses captured each year between (2013 and 2019)

Comparison of NZ Police Data sources

Owing to the varying administrative purposes, recording practices and capture systems associated with each data source, the volume of pursuit and failing to stop events differed significantly between incidence, notification, proceeding and NIA data.

	2019-20	2018-19	2017-18	2016-17	2015-16
Incidents	7,618	6,883	6,078	5,910	5,077
NIA Links	3,897	3,365	3,087	3,050	2,597
Proceedings	330	230	224	205	203
Fleeing Driver	4,588	4,450	3,830	3,629	3,060

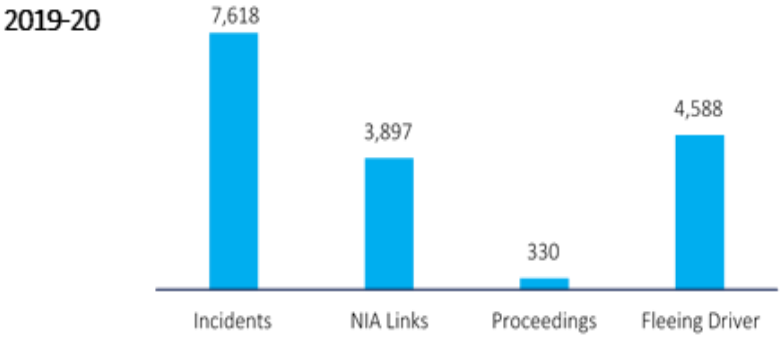

Figure 8: Comparison of Fleeing Driver Events between various NZ Police Data Sources

Across all databases the volume of fleeing driver events were seen to increase over the study period (Figure 8). This suggests that while recording practices now require better capture of all events where a driver fails to stop, pursuit abandonments, the occurrence of pursuit events, people engaging in

pursuits, or identifying drivers that flee may have also increased. Across the Incidents (50.04%), NIA Links (50.06%) and Fleeing Driver Notification (49.93%) Databases, the increase in volumes compared to volumes captured between 2015/2016 and the present were consistent.

When considered by age groups, there are differences between the proportion of youth and young adult drivers between the Fleeing Driver Notifications, Proceedings and NIA Link Databases. Between the NIA Links and proceeding data youth, and young adult drivers account for 43% and 46% of fleeing drivers. These groups are underrepresented within the Fleeing Driver Notifications database and together only account for as much as 25% of the data (Figure 9).

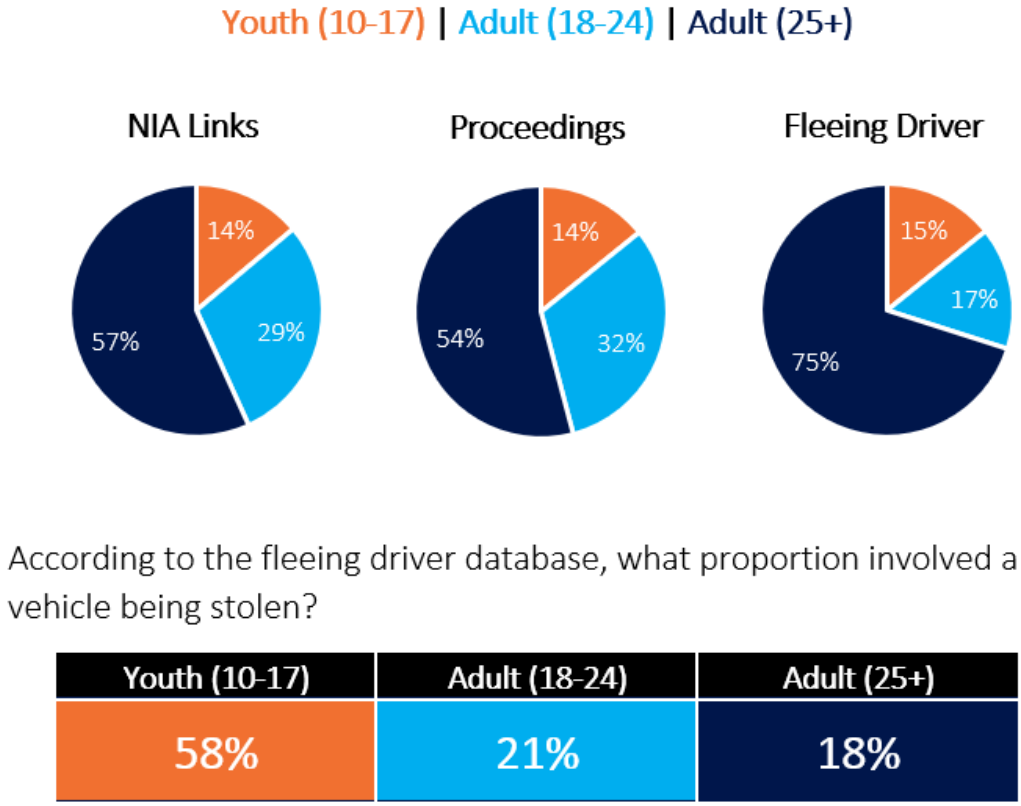

Figure 9: Differences in the age group rates between NIA, Proceeding and the Fleeing Driver Notifications Database

Profiles of fleeing driver events and those who flee from police.

Two different cluster analysis models were considered based on the results of the analysis; a six-cluster model and an eight-cluster model. The eight-cluster analysis model was determined to provide the best profiles of the Fleeing Driver Notifications database. Researchers determined this by comparing the results between the series of cluster models produced, specifically, (1) which variables appeared in the profiles, (2) in what combination they occurred in relation to other variables to determine what distinctions would have most practical application for the research question. The key difference between the two models was that the eight-cluster identified youth-specific profiles that the six-cluster

did not; given the emphasis of the research programme on younger drivers, and based on feedback from the research advisory group this was therefore the model preferred and presented here.

Four of the eight clusters related to profiles of single event fleeing drivers (Table 3), while the other four characterised recidivist fleeing driver profiles (Table 4).

Table 3: Single Fleeing Driver Event Profiles

	Disqualified driver profile (20.88%)	Alcohol impaired profile (21.39%)	Suspicious vehicle or behaviour profile (10.73%)	Unlicensed driver profile (13.94%)
Profile description	Events where a pursuit was engaged due to manner of driving and the driver was found to be disqualified from driving	Profile characterises events where a pursuit is engaged for suspected drinking driving	Pursuit event initiated due to detection of suspicious behaviour or a suspicious vehicle	Characterises an event where a pursuit was engaged due to manner of driving and the driver was found to be unlicensed
Age groups	25-34 years (63.84%)	18-24 years (28.84%) 35-44 years (30.06%)	18-24 years (27.00%) 25-34 years (35.41%)	0-17 years (27.63%) 18-24 years (28.84%) 25-34 years (26.26%)
Circumstances[6]	No suspicious circumstances[7]	Alcohol impaired driving suspected (55.46%)	No suspicious circumstances	No suspicious circumstances
Licence Status	Disqualified from driving (68.70%)	Currently licensed (71.43%)	Currently licensed (81.11%)	Unlicensed (67.58%)
Ethnicity[8]	Māori (65.60%)	Māori (56.30%) Pākehā (33.98%)	Māori (56.18%) Pākehā (30.17%)	Māori (59.44%) Pākehā (31.43%)
Reasons[9]	Manner of driving	Manner of driving Suspected drink driver	Manner of driving Suspicious vehicle behaviour	Manner of driving

The multiple pursuit clusters tended to characterise young drivers, and stolen vehicles were more common. Complementing the findings from the comparative analysis between databases, 58% of youth evaded police with stolen vehicles (Figure 9).

[6]Circumstances related to the whether or not there was a suspicion of alcohol or drug impaired driving, the offender was known, or the vehicle was likely stolen.

[7]No suspicious circumstances refer to where the profiles highlight that there was no suspicion of alcohol or drug impaired driving, the offender was likely not known to police, and the vehicle was likely not stolen.

[8]Note, while ethnicity is not recorded in over half of the data, where ethnicity information is available Māori, Pākehā and Pacific Island 'ethnicity groups' are predominately captured.

[9]Reasons related to the 'Reasons Stopped' field and identify the reasons for why police endeavoured to pull over the driver. Categories included, but are not limited to, avoid checkpoints, manner of driving, recognising a persons or vehicle of interest, conducting a routine breath test or licence and registration check, or suspected impaired driving and suspicious activity

Table 4: Recidivist Fleeing Driver Event Profiles

	Unlicensed and stolen vehicle (7.90%)	'Thrill seekers' (14.64%)	'Spotted the vehicle' (6.40%)	Disqualified from driving and stolen vehicle. (4.10%)
Profile Description	Characterises pursuit of a youth driver, later found to be unlicensed, subsequent to a vehicle being stolen.	Profile characterises young adults pursued for manner of driving offences.	Between this profile and profile one the primary differences is the reason for pursuit. In this instance, the vehicle was recognised rather than the driver being recognised or behaviour raising suspicion.	This provides a second profile of young adults who engage in multiple pursuits. Is similar to the 'unlicensed and stolen vehicle' with primary differences of licence status (later found to be disqualified) and ethnicity.
Age groups	0-17 years	18-24 years	0-17 years	18-24 years
Circumstances	Vehicle stolen (88.74%)	No suspicious circumstances	Vehicle stolen (77.76%)	Vehicle stolen (84.38%)
Licence Status	Unlicensed (64.08%)	Currently licensed (64.57%)	Unlicensed (69.52%)	Disqualified from driving (64.06%)
Ethnicity	Māori (73.19%)	Pākehā (66.67%)	Māori (75.29%)	Pākehā (65.89%)
Reasons	Suspected of criminal offending	Manner of driving	Recognised vehicle of interest	Suspect of criminal offending

It is important to recognise that individuals who have been identified for fleeing police in only one event may have actually evaded police multiple times. There is very little ability during a fleeing driver event to determine who the driver of the vehicle is. Offender identifications can be made as result of police investigations of pursuit events where officers decided to not pursue a driver or to abandon pursuit. The Fleeing Driver Notifications Database may not always record the outcomes or details subsequent to such investigations. As a result, there may be individuals who have fewer fleeing driver notifications recorded against them than the true number of events fleeing driver events they have engaged in.

Fleeing Driver Events and co-occurring offences

The comparative analysis of data sources and cluster analysis highlights specific patterns of offending that occur in relation to fleeing driver events. Specifically, we see stolen vehicles appear within a large number of youth related pursuit events (Figure 9), particularly for recidivist fleeing drivers. The cluster analysis highlights that while recidivist fleeing drivers occur less frequently in the data, they tend to be more common for youth and young adult drivers (under 25 years of age). Stolen vehicles appeared more frequently in multiple pursuit data profiles compared to single events.

A final crime co-occurrence analysis was undertaken to provide more context around other factors that may serve as motivations to flee police. For example, are offenders motivated to avoid interactions with police based on their criminal history, even if this is offending unrelated to failing to stop. The findings of this analysis are presented below.

Offence histories for 5,882 fleeing drivers were retrieved from the Fleeing Driver Notification database. In total, 237,899 offences were retrieved. For each offender, indicator variables were derived to determine (1) failing to stop events, and (2) events that occurred on the same date as a pursuit event.

Is there any other offending fleeing drivers have found to be engaged in at the time they fled police?

The full offence history dataset was limited to crimes that co-occurred with a fleeing driver event. In total, there were 40,800 offences that co-occurred with fleeing driver events. Fleeing driver offences accounted for only 30% of the total offences recorded; the remaining 28,667 offences were linked to the same driver and occurred on the same day. Note that the data was limited to only those offences for which there was sufficient evidence to link the offences to the driver.

Table 5 (below), presents the 20 offences that most often co-occurred with fleeing driver events. These 20 offences account for 70.45% of the crimes that co-occurred with fleeing driver events. Half of the offences presented in Table 5 are related to traffic and vehicle regulatory breaches (highlighted), while the other half (not highlighted) include motor vehicle theft, bail breaches, resisting police, drug charges, carrying contraband, with some dishonesty and violent offending. Consistent with international literature, much of the offending seen to co-occur with fleeing driver events characterise general offending associated with general anti-social behaviours.

Table 5: Crimes that co-occurred with fleeing driver events

Rank	Offence Code Descriptions	Count
1	D201 - Driving In A Dangerous Manner	4,711
2	D101 - Reckless Driving	2,853
3	L230 - Drove While Disqualified 3rd Or Subsequent	2,083
4	B184 - Unlicensed Driver Failed To Comply With Prohibition	1,705
5	4211 - Unlawful Takes Motor Vehicles (Motor Cars/Trucks Etc)	1,487
6	7191 - Failure To Answer District Court Bail	973
7	L201 - Driving While Disqualified	822
8	3514 - Resist Police	710
9	5985 - Possess/Uses Utensils Methamphetamine / Amphetamine	580
10	A518 - Breath alcohol level over 400 mcgs per litre of breath	577
11	1756 - Possess Offensive Weapon (Other)	474
12	A530 - Drove With Exs Breath Alcohol 3rd Or Subsequent	453
13	5951 - Procure/Possess Methamphetamine And Amphetamine	449
14	L143 - Drove while licence suspended or revoked	449
15	3252 - Procure/Possess Cannabis Plant	422
16	B203 - Failed to stop or ascertain injury - non-injury crash	324
17	4417 - Receives Property (Over $1,000)	310
18	1493 - Assault Person with Blunt Instrument	286
19	6851 - Unlawfully Carry/Possess Firearm/Restricted Weapon/Explosives	280
20	5127 - Wilful Damage	248

What is the relationship between fleeing driver behaviour and other car crimes?

At the time of a fleeing driver event, 1786 co-occurring unlawful taking of a vehicle (or similar) offences were recorded.

Table 6 presents the manner of driving and driver licensure offences, as these frequently occur with fleeing driver events. The majority of co-occurring offences were the result of manner of driving or driver licensing related offending. There were, however, two alcohol-related categories (*Driving with an excess breath alcohol limit of over 400mgs per litre of breath* and *driving with excess breath alcohol third or subsequent events)* and these characterised high impairment by alcohol at the time they evaded police. When considered in the context of the 'alcohol impaired' cluster profile, drivers with such levels of intoxication may be evading police out of fear of the consequences for being apprehended with such high levels of impairment.

When investigating only those car related crimes that co-occurred with pursuit events (Table 6), manner of driving related offences are more prevalent (highlighted). Of the 15,345 vehicle, traffic and licensing related fleeing driver event crime co-occurrences, half are related to manner of driving offences.

Table 6: Prevalence of co-occurring vehicle, driving and traffic related offending of drivers that engaged in fleeing driver events

Rank	Offence Code Descriptions	Count
1	D201 - Driving In A Dangerous Manner	4,711
2	D101 - Reckless Driving	2,853
3	L230 - Drove While Disqualified 3rd Or Subsequent	2,083
4	B184 - Unlicensed Driver Failed To Comply With Prohibition	1,705
5	L201 - Driving While Disqualified	822
6	A518 - Breath alcohol level over 400 mcgs per litre of breath	577
7	A530 - Drove With Exs Breath Alcohol 3rd Or Subsequent	453
8	L143 - Drove while licence suspended or revoked	449
9	B203 - Failed to stop or ascertain injury - non-injury crash	324
10	L232 - Drove While Suspended/Revoked 3rd Or Subsequent	247
11	D502 - Careless Driving	244
12	D301 - Driving At A Dangerous Speed	224
13	D351 - Operated A Motor Vehicle Causing Sustained Loss Of Traction	156
14	A323 - Driving With Excess Blood Alcohol Content	104
15	A330 - Drove With Excs Blood Alcohol 3rd Or Subsequent	84
16	D104 - Recklessly caused injury	68
17	D206 - Drove dangerously causing injury	62
18	B109 - Person on a Road Failed to Give Name and Address on Demand	61
19	L144 - Drove without appropriate driver licence	59
20	A521 - Person under-20's breath contained alcohol - over 150 mcg	59

How common are traffic and licensing-related offences for fleeing drivers compared to serious criminal offending?

Table 7 below presents the relative counts of traffic and licensing related (highlighted) and other offences that co-occurred with fleeing driver events. As can be seen in the table, driving related offences, vehicle thefts and breaches of procedures and community orders are the most common co-occurring offence types; violent and drug related crimes are considerably less common.

Table 7: Traffic and regulatory that co-occurs with fleeing driver events.

Rank	Offence Descriptions	Count of Offences
1	Dangerous or Negligent Operation of a Vehicle	8,554
2	Driving Licence Offences	5,394
3	Motor Vehicle Theft and Related Offences	2,015
4	Regulatory Driving Offences	1,980
5	Offences Against Justice Procedures	1,582
6	Breach of Community-Based Order	1,233
7	Assault	1,190
8	Regulated Weapons/Explosives Offences	1,145
9	Possess and/or Use Illicit Drugs	975
10	Other Illicit Drug Offences	794
11	Unlawful Entry With Intent/Burglary, Break and Enter	524
12	Disorderly Conduct	481
13	Theft (Except Motor Vehicles)	462
14	Property Damage	401
15	Receive or Handle Proceeds of Crime	383
16	Deal or Traffic in Illicit Drugs	233
17	Breach of Custodial Order Offences	213
18	Harassment and Threatening Behaviour	150
19	Other Dangerous or Negligent Acts Endangering Persons	132
20	Robbery	120

Criminal histories of fleeing drivers

In addition to co-occurring offending, the wider criminal histories of fleeing drivers are examined in this section. The purpose of this analysis is to determine if wider engagement with police may play a part in motivating offenders, and whether offenders may have serious criminal histories, but perhaps not engaging in these activities at the same time as their fleeing behaviour.

What other offending have fleeing drivers engaged in in the past, prior to their fleeing police?

In addition to their co-occurring offending, the wider criminal histories of fleeing driver offenders are presented in Table 8. A substantial volume of the other criminal offending of fleeing drivers appears to be driving or licensing related, however there is more variation in other criminal offending than that which occurs at the time of their failing to stop for police.

Table 8: Prevalence of all other criminal offending of drivers that engaged in fleeing driver events

Rank	Offence Descriptions	Count of Offences
1	7191 - Failure To Answer District Court Bail	9,575
2	4211 - Unlawful Takes Motor Vehicles (Motor Cars/Trucks Etc)	8,336
3	L230 - Drove While Disqualified 3rd Or Subsequent	8,100
4	4322 - Shoplifts (Est Val Under $500)	8,073
5	5127 - Wilful Damage	6,818
6	B184 - Unlicensed Driver Failed To Comply With Prohibition	6,627
7	D201 - Driving In A Dangerous Manner	5,672
8	4373 - Theft (under $500)	5,429
9	B110 - Failed to stop when followed by red/blue flashing lights	5,216
10	6D - Bail Breach	5,083
11	1543 - Male Assaults Female (Manually)	4,801
12	L201 - Driving While Disqualified	4,585
13	4417 - Receives Property (Over $1,000)	3,775
14	4571 - Take/Obtain/Use Doc for Pecuniary Advantage	3,718
15	3252 - Procure/Possess Cannabis Plant	3,716
16	3852 - Contravenes Protection Order (No Firearm)	3,695
17	4122 - Burgles (Other Property) ($500-$5000) By Day	3,348
18	1756 - Possess Offensive Weapon (Other)	3,175
19	A518 - Breath alcohol level over 400 mcgs per litre of breath	3,078
20	3536 - Disorderly Behaviour S4 S/offences Act	2,977

What other traffic-related offending have fleeing drivers engaged in in the past, prior to their fleeing police?

Complete offence histories were limited to relevant driving, licensing, vehicle regulatory and traffic regulatory ANZSOC subdivisions[10]. The same was done for crimes that co-occurred with fleeing driver events.

Licence-related offending (L-series offences) was the most prevalent among the offence histories of drivers that engaged in fleeing driver events (highlighted). Together, L-series related offending accounted for 6 of the 20 most common related offences. This amounted to 24, 054 offences, half of all car related offences. Additionally, manner of driving (D-series) and alcohol-impaired driving (A-series) related offences contributed 11, 883 and 6, 581 offences, respectively. In total, the 20 most prevalent car related offences accounted for 92% of vehicle-related offences that occurred among the histories of drivers who attempted to evade police.

[10] Relevant ANZSOC divisions include: 'Driving Licence Offences', 'Dangerous and Negligent Operation of a Motor Vehicle', 'Manslaughter and Driving Causing Death', 'Regulatory Driving Offences', 'Vehicle Registration and Roadworthiness' and 'Traffic and Vehicle Regulatory Offences not further defined (n.f.d)'

Table 9: Prevalence of vehicle, driving and traffic related offending histories of drivers that engaged in fleeing driver events

Rank	Offence Code Descriptions	Count
1	L230 - Drove While Disqualified 3rd Or Subsequent	8,100
2	B184 - Unlicensed Driver Failed To Comply With Prohibition	6,627
3	D201 - Driving In A Dangerous Manner	5,672
4	L201 - Driving While Disqualified	4,585
5	A518 - Breath alcohol level over 400 mcgs per litre of breath	3,078
6	L143 - Drove while licence suspended or revoked	2,944
7	D101 - Reckless Driving	2,874
8	D502 - Careless Driving	1,955
9	A530 - Drove With Exs Breath Alcohol 3rd Or Subsequent	1,905
10	L232 - Drove While Suspended/Revoked 3rd Or Subsequent	1,211
11	D351 - Operated A Motor Vehicle Causing Sustained Loss Of Traction	951
12	A519 - Person Und 20 Yr Exceed Breath Alc Lim	560
13	B203 - Failed to stop or ascertain injury - non-injury crash	533
14	A323 - Driving With Excess Blood Alcohol Content	460
15	D301 - Driving At A Dangerous Speed	431
16	L504 - Learner Driver Unaccompanied	356
17	A330 - Drove With Excs Blood Alcohol 3rd Or Subsequent	340
18	A521 - Person under-20's breath contained alcohol - over 150 mcg	238
19	B109 - Person on a Road Failed to Give Name and Address on Demand	234
20	L114 - Failing To Produce Driver's Licence	231

How common are traffic and licensing-related offences compared to serious criminal offending in fleeing driver histories?

Table 10 below presents the relative counts of traffic and licensing related (highlighted) and other offences that occurred in the criminal histories of fleeing drivers. As can be seen in the table, driving related offences, and vehicle thefts feature strongly, however more serious and violent offending such as assaults, burglary, weapons and drugs offences are more common than at the time of failing to stop for police.

Table 10: Other crimes that have ever been committed by drivers who have engaged in fleeing driver events.

Rank	ANSOC Divisions	Count
1	Driving Licence Offences	23,990
2	Regulatory Driving Offences	20,324
3	Assault	19,971
4	Motor Vehicle Theft and Related Offences	17,340
5	Theft (Except Motor Vehicles)	17,050
6	Unlawful Entry With Intent/Burglary, Break and Enter	15,598
7	Dangerous or Negligent Operation of a Vehicle	12,980
8	Breach of Community-Based Order	11,901
9	Disorderly Conduct	11,299
10	Property Damage	10,453
11	Regulated Weapons/Explosives Offences	8,007
12	Offences Against Justice Procedures	7,786
13	Obtain Benefit By Deception	7,505
14	Possess and/or Use Illicit Drugs	6,906
15	Receive or Handle Proceeds of Crime	6,619
16	Other Illicit Drug Offences	5,221
17	Harassment and Threatening Behaviour	4,702
18	Deal or Traffic in Illicit Drugs	4,525
19	Breach of Violence and Non-Violence Restraining Orders	4,436
20	Robbery	2,595

Summary

Through the analysis of police datasets, it was found that the types of co-occurring offending most common at the time of a fleeing driver event is often antisocial, with unlawful taking of vehicles and other driving offences common. Manner of driving is the most common reason for stopping vehicles, with driving offences more common than violent or other serious offending. However, when the offender history is examined, there is more variation in the types of offending seen from fleeing drivers. There are still high numbers of licence breaches, but the overall offending profile is more serious than that seen in the fleeing driver event.

The cluster analysis was able to differentiate profiles of recidivist and single event fleeing drivers; generally, recidivist offenders were younger and more likely to be in stolen vehicles. However, contrary to other tranches of this research, there was some suggestion of a "thrill seeking" group of young offenders who commit no other offences outside their manner of driving.

5. Conclusions

The overall purpose of this research tranche was to gain a better understanding of how other offending may impact decision making and motivations for fleeing police. The IPCA/NZ Police review conducted similar analyses on a sample of fleeing driver cases that suggests co-occurring offending and criminal histories may play a part in motivating fleeing driver behaviour.

As outlined in the first section, in Tranche 1 of the Fleeing Driver Research Programme, Mora and Jones (2019) examined how the literature on young people and their driving behaviour and attitudes to police could explain their motivations to flee police. While this work was focussed on young people, it was however suggested that similar motivations may apply across all fleeing driver demographics. These motivations broadly fell into the following three categories:

- Situational; these are the types of motivations related to fleeing at that particular time, in those particular circumstances (e.g. being under the influence, having something to hide, fleeing the scene of a crime etc.).
- The second relates to attitudes and reactions to those pursuing them (e.g. fear of police, attitudes toward police, baiting etc.). Offenders in this category would show a *willingness* to engage in fleeing behaviour.
- The final relates to the attractions of driving in a risky manner (e.g. thrill seeking, peer influences, joyriding). Offenders in this category would show an *intention* to engage in fleeing behaviour.

It could therefore be expected that fleeing drivers from each of these categories would show quite different co-occurring or historic offending patterns. For example, those under the influence or with contraband in the vehicle would likely fall into the "situational group", those with extensive other offending may be more in the second category, while those engaging only in fleeing behaviour (or possibly other risky driving) would represent that latter.

The IPCA/NZ Police review suggested that involvement in other criminal activities is not often known when police signal a vehicle to stop, however co-occurring offending included other driving offences (possibly in some cases as a consequence of a pursuit, as well as prior), driver licence breaches, impaired driving, stolen vehicles, and in around half of cases, non-driving related criminal charges. Only a very small number of drivers in the sample had no other offending.

Previous research on other car crimes (Lee et al., 1993) suggests that there appear to be some offenders who steal vehicles and may engage in dangerous driving and joyriding, but that the vast majority would rather avoid police attention than engage in fleeing. Cording et al (2020) found similar results in a New Zealand context, where participants who stole vehicles suggested that should they be signalled to stop, they never would, but they do their best not to come to police attention. These findings would suggest that at least those stealing vehicles would fit more in the "willingness" than "intention" category proposed by Mora and Jones (2019).

There have been very few studies that have collected primary data from offenders as to why they flee police. Dunham et al (1998) interviewed incarcerated offenders, for which the majority gave some kind of criminal offending as their motivation. However, it should be noted, that just because a driver has committed another offence, this may not be their primary motivation for fleeing. For example, many in Dunham's sample were intoxicated at the time they fled, but few gave this as the *reason* they fled.

Similar to the results of Cording et al. (2020), there was a focus on avoiding punishment, but also a more general willingness to take action to avoid interaction with police shown by most offenders.

Within the wider fleeing driver population, there appear to be differences between cohorts in their offending, and therefore probably their motivation for fleeing. For example, Cording et al (2020) found that younger and Māori /Pasifika fleeing drivers were more likely to be in stolen vehicles, while older fleeing drivers were more likely to be trying to hide drug or other contraband possession. Criminological theory would also suggest that patterns of offending would likely differ by age, particularly for offenders that fit a more "adolescence limited" versus "life course persistent" pattern of offending. The overall age distribution of fleeing police would suggest a cohort of fleeing drivers that "age out" of the behaviour.

Fleeing Driver Profiles

Just over a third of the overall sample were classified into the profiles of recidivist offenders, the largest group of which were described as "thrill seekers" (14.64%). The majority of this group are currently licensed and have been signalled to stop for their manner of driving. The remaining three recidivist profiles centre around stolen vehicles; the "unlicensed and stolen vehicle" and "spotted the vehicle" are very similar in profile (young, Māori, unlicensed) but the reason for stopping differentiate between suspicion of the offender and recognition of the vehicle. The final recidivist profile is slightly older, pākehā, and more often disqualified from driving. The most common difference between recidivist fleeing drivers and those identified on one occasion is that the vehicle is commonly stolen, with the exception of the 'thrill-seeking' group. This group is generally licensed and not suspected of any criminal offending; they are generally signalled to stop for their driving behaviour. This group may be more indicative of those who may seek to engage in a pursuit (show intention), or at least are not fleeing due to having something to hide. It should be noted that there may still be fleeing drivers within other profiles that engage in seeking pursuits, for example while stealing vehicles, but it is not as easy to distinguish these offenders from others with something to hide.

Tranche 3 (Cording et al., 2020) found no indication of this behaviour in the sample interviewed, however this may be due to it representing less than 15% of the population studied here. This cohort may not particularly be seeking a pursuit, however they regularly engage in behaviour that may lead to one, in the absence of any other offending, so may appear to police staff to be inciting a pursuit. Interestingly, this group is a slightly older demographic than may have been expected (18-24 rather than adolescent).

Single pursuit event profiles tended to characterise older age groups more than the multiple pursuits profiles. The most notable single pursuit profile was the "alcohol impaired driving" profile; within the recidivist pursuit profiles there were no suspected impaired driving events suggesting that a recurring alcohol impaired driving pattern of pursuits may not exist within the notifications data. More interrogation of offender histories would be required to determine if such drivers had previous histories of alcohol impaired driving, but this profile would suggest that these offenders would fit in the "situational" category proposed by Mora and Jones (2019), in which case, knowledge and fear of consequences for their behaviours could be a factor motivating their intent to evade police. The types of impaired driving offences seen in the data would support this as many were at the higher end of offending that could lead to serious legal sanctions.

In comparison to recidivist fleeing driver events which reflected a younger driver demographic (under 18), single fleeing driver events typically reflected young adults (18-24 years of age). While it is possible that this may support the hypothesis younger drivers 'grow out' of fleeing driver behaviours, the pattern cannot necessarily be disentangled from recent improvements in recording practice. It could simply be symptomatic of the fact that recording practices have recently improved and sufficient time has not passed to determine whether youth drivers in New Zealand grow out of fleeing driver offending.

Finally, there were two additional single pursuit profiles that were largely the same in terms of why they were signalled to stop (manner of driving) but were different in their demographic and licensing profile. One group was older, and commonly disqualified from driving (disqualified driver profile) while the other was younger (although still included some older drivers) and commonly unlicensed (unlicensed driver profile). Both are possibly motivated by their licence status; however, they may be qualitatively different in their motivations and relationship with police. For example, disqualified drivers have a history with police and are flouting previous punishment, while unlicensed drivers may be lacking support to gain a licence; therefore, interventions with each would be different.

Summary and recommendations

The findings of this report suggest that examining both the wider offending history and co-occurring offending of fleeing drivers may give insight into their motivations, and possible interventions that may assist in reducing this behaviour. Within the context of the wider Fleeing Driver Research Programme, this research was able to determine that there may be a small cohort of fleeing drivers who engage in this behaviour with intention, however the majority will be due to a general negative relationship with police through their offending history, or due to the particular situation they find themselves at the time they are signalled to stop.

While the results suggest that there may be fleeing drivers who grow out of the behaviour, a more detailed analysis of the trajectory of young offenders over time could be done to give better support to this suggestion.

Based on the findings of this report, it is suggested that training and communications to frontline staff emphasise that while the majority of fleeing drivers have "something to hide" at the time they flee police, the seriousness of this offending is generally not as high as in their wider history. This would suggest that most fleeing drivers have contact with police through other channels, and that these other interactions may be more influential in reducing this behaviour than apprehending drivers at the time they flee. Additionally, due to these other interactions, police have more opportunity to hold these offenders to account after the fact through investigations.

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