

Running head: THE IMPACT OF INTERVENTION ON LEGAL RIGHTS
UNDERSTANDING

The Impact of Educational Intervention on Young People's Understanding of Legal
Rights in New Zealand

By

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Abstract

The Child and Young Persons version of the Rights Caution is read to young people to inform them of their legal rights during police arrest and questioning in New Zealand. Research to date suggests the way legal rights are currently delivered does not meet young people's developmental needs, as young people do not understand their rights. This research aimed to examine: 1) the level of legal rights understanding among young people in New Zealand; 2) the relationship between age and understanding; and 3) whether understanding can be improved with a video-based educational intervention which provided young people with legal rights knowledge. In this study a community sample of young people ($n = 99$), aged 10 to 18-years, was used. Participants were assigned to two groups; one group received an educational video which provided legal rights knowledge, while the other received the legal rights as they are currently delivered in practice with the Child and Young Persons version of the Caution. Young people's understanding of legal rights was then assessed in a semi-structured interview using the New Zealand Rights Caution Competency Questionnaire (Fortune et al., 2017). The results showed levels of understanding among this sample were low, with young people misunderstanding many parts of their legal rights. Regression analysis revealed age was a significant positive predictor of legal rights understanding, suggesting younger youth are most vulnerable to incomplete legal rights understanding. Regression analysis also revealed the educational video significantly improved young people's understanding across a variety of legal rights abilities, including their ability to remember and apply legal rights in hypothetical legal scenarios. The implications of these findings for policy and practice are discussed, alongside the need for the delivery of legal rights to address a broader range of young people's legal rights difficulties; including young people's lack of legal rights knowledge.

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The Impact of Educational Intervention on Young People's Understanding of Legal
Rights in New Zealand

Chapter One: Introduction

A Developmentally Responsive Justice System

The age-crime curve shows the highest proportion of crime is committed by young people¹, which peaks between 15 to 18-years and declines in adulthood (Loeber et al., 2012; Moffitt; 1993). New Zealand statistics show a similar pattern; almost 1,500 young people were charged in court from 2018 to 2019 (Ministry of Justice, 2019). Although this number is high, it is a conservative estimate of the actual number of crimes committed by young people in New Zealand, as most cases are dealt with by police or community, while only 20-30% of young people end up in court (Ministry of Justice, 2019). When young people encounter the justice system, they will hear legal jargon like nominated person and will be expected to interact with a lawyer they have never met before. This might be daunting and overwhelming for the average person, but for young people, it can present significant challenges. Therefore, supporting young people who encounter the justice system is crucial.

Further, young people show vulnerabilities and developmental differences to adults in a range of domains (physical, social, psychological and behavioural; Tilton et al., 2001). Young people's decision-making is one area where developmental differences are seen (Steinberg et al., 2009). The capacity to make mature decisions in the justice system is crucial, as young people face important decisions (e.g., what to say to police, how they should plead, whether they should listen to their lawyer's advice), which can influence their legal outcome. However, the capacities required for mature decision making, such as the ability to consider long-term consequences and limit impulsivity, are not fully developed

¹'Young people' refers to the age group which falls under the jurisdiction of the New Zealand youth justice system; 10 to 17-year olds (Oranga Tamariki, 1989).

until adulthood (Bryan-Hancock & Casey, 2010; Cauffman & Steinberg, 2000; Iseline et al., 2009). Additionally, young people show high reward seeking and low goal-directed behaviour, as brain regions associated with these abilities have not fully developed in young people (Collins & Lennings, 2013; Steinberg, 2010). These vulnerabilities are exacerbated further by environmental factors, as young people are less able to make mature decisions in situations where they experience stress and emotional arousal (Cohen et al., 2016; Steinberg et al., 2009). This is a problem for young people's decision-making capacity in the justice system, as young people often feel anxious and worried in this context (Grisso et al., 2003; Steinberg et al., 2009; Viljoen et al., 2005).

Vulnerabilities, such as poor decision making, disadvantage young people in the justice system. The United Nations Convention on the Rights of the Child 1989 (UNCRC; to which NZ became a signatory in 1990 and ratified in 1993) recognises these needs by outlining that young people “need special safeguards and appropriate legal protection” (UNCRC, p. 3). The large number of young people who encounter the justice system further emphasises the importance of a justice system which can respond effectively to young people's needs. For these reasons, the New Zealand youth justice system is designed to be developmentally responsive by putting protections in place for young people and with legislation that outlines “the well-being and best interests of the child or young person are the first and paramount consideration” (Oranga Tamariki, Act 1989, s4). This is reflected in youth justice in New Zealand, with one of its core principals being about rehabilitation (Lynch, 2016). However, at the same time as protecting young people, another principal of the youth justice system is to hold young people accountable for their actions². One way this is done in New Zealand is the diversion of young people in the justice system, preferring

² The third principal is that of reparation (Lynch, 2016).

police alternative action or Family Group Conferences to court appearances (Lynch, 2016; Ministry of Justice, 2019).

Legal rights are another example where New Zealand attempts to be developmentally responsive. The Rights Caution³ contains the statements which are read to people to inform them of their legal rights during police arrest and questioning (New Zealand Police, 2011). In New Zealand there is a Child and Young Person's version of the Rights Caution (hereafter referred to as the Young Person's version of the Caution), which was developed with young people's vulnerabilities in mind. In comparison to the adult version, the young person's version contains more explanation and different language and is read to those up until the age of 17-years (New Zealand Police, 2011).

Although the Young Persons version of the Caution contains seven statements, there are three core rights. One of the core rights is the right to silence, which provides young people with the choice to talk to police or say nothing. Understanding how to use this right is important because what a person says during police arrest and questioning can be used to prove whether they have committed a crime, therefore this right can protect against self-incrimination. Young people are also entitled to a lawyer before and during police questioning, with the expectation the lawyer will provide legal advice and protection, and will help young people to participate more effectively in legal processes (Hopkins, 2015; Lynch, 2016). Under the Legal Services Act (2011) young people are entitled to a lawyer for free. Further, the Oranga Tamariki Act (1989) highlights that because of young people's developmental stage, they are afforded the additional right to a nominated person. The role of the nominated person during police questioning is to support the young person and make sure

³ The Rights Caution is referred to by different names in different countries (e.g., the Miranda Warning in America). For consistency, this thesis will use Caution or legal rights regardless of country.

they understand their legal rights. Young people can nominate any adult, such as a parent or caregiver to fill this role (Oranga Tamariki Act, 1989).

Despite the intention of the New Zealand Young Person's version of the Caution, research suggests the way legal rights are currently delivered to young people does not meet their developmental needs as intended (Gaston, 2017). This thesis will explore understanding of legal rights (which includes young people's ability to define and apply the rights to legal situations; Grisso, 1980) among young people in New Zealand. The following literature review will explore this topic by first looking at the implications of young people's incomplete understanding. This review will then move onto to discuss young people's level of capacity when they are with police by providing examples of the knowledge young people lack about their legal rights, describing common assessment instruments of understanding and exploring what research suggest about young people's level of understanding. Finally, this review will discuss what has been previously done in this area to improve understanding and explore another possible solution.

What Happens When Young People Do Not Understand Their Legal Rights

When young people do not understand their rights there are implications for the young person, community and integrity of police processes. One of the consequences of incomplete understanding is seen in rights waivers; where a young person chooses not to use or exercise their legal rights (Feld, 2013). Regardless of legal rights understanding, the rates of young people using their rights are low. There is scarce research regarding police practice in New Zealand, but data from the Wellington region show only 0.5% of young people used their right to a free lawyer during police questioning (Hopkins, 2015) and other research from America suggests young people waive their rights 90% of the time (Feld, 2013). This means the majority of young people are not benefitting from the legal protection these rights are intended to offer.

Viljoen et al. (2005) examined the factors which influence young people's legal decisions in America. A strength of this study was young people were interviewed about their actual experiences of police arrest and questioning. This contributes to the ecological validity of this study, as hypothetical situations do not account for the influence of emotional factors and provide a conservative estimate of waiver decisions in comparison to real-life data (Viljoen et al., 2005). This study found understanding of legal rights was a predictor of legal decisions, and those with poorer understanding were more likely to waive their rights. This is an issue because when a young person with poor understanding waives their legal rights, they do so without understanding what the rights are about or the potential implications of this decision, which puts them at risk of poorly informed legal decisions (Weiler, 2007).

Another implication of incomplete understanding is false confession. False confessions among young people is a problem, emphasised not only in self-report data from young people, but also by professionals working in the American justice system (Kassin et al., 2018). Like waiver decisions, young people already show high rates of false confessions regardless of legal rights understanding (Goldstein et al., 2003; Viljoen et al., 2005). Research shows those aged 12 to 15-years are significantly more at risk of falsely confessing than older youths and adults (Goldstein et al., 2003; Haney-Caron et al., 2018; Viljoen et al., 2005). After interviewing young people between the ages of 14 to 17-years about their experiences with the American justice system, it was found that 35% reported they had falsely confessed to a crime which carried a severe punishment (Malloy et al., 2014).

Understanding of legal rights is a predictor of a young person's likelihood of making a false confession (Haney-Caron et al., 2018). This is because young people who do not understand their rights are more likely to waive their legal rights and talk to the police, which heightens the risk of false confession (Haney-Caron et al., 2018). False confessions are often very detailed, which makes them difficult to tell apart from true confessions (Appleby et al.,

2013). Therefore, false confessions can sway decisions on the outcome for young person in the justice system. False confessions are a problem, not only for the young people who are punished unjustly, but for the victims who do not get true justice. Further, false confessions could mean those who did commit the crime are not apprehended, which has implications for community safety.

Understanding of legal rights also has implications for the efficacy of police practice and court cases involving young people. Legislation in New Zealand outlines various criteria for the admissibility of evidence in court, including requiring police officers to explain legal rights to young people using developmentally appropriate language (Oranga Tamariki Act, 1989, s218). Although no research has examined how well this task is carried out in New Zealand, case laws suggest police officers are not always explaining legal rights to young people adequately. For example, in *R vs Z* (2008), evidence from a 14-year-old was deemed inadmissible in court because it was determined the police officer had not adequately explained the young person's right to a lawyer. International research further reinforces this, finding various issues with how legal rights delivered by police, including; the legal rights not always being read in their entirety and being read too quickly for adequate understanding to be achieved, additional explanations provided by police containing incorrect information about legal rights and the consequences of using them and explanations sometimes minimising the importance of using legal rights (Feld, 2013; McCardle et al., 2020; Sim & Lamb, 2018). Further, although police officers are required to check understanding after the Caution has been read and explain the rights further in developmentally appropriate language, research suggests they are not doing so (McCardle et al., 2020; Sim & Lamb, 2018).

The issues surrounding police explanations of legal rights raise two key points. First, if police officers fail to meet the criteria for a developmentally appropriate delivery of rights, it could mean they are unable to present the evidence in court. This could mean victims and

communities do not get justice. The goals of the youth justice system are two-fold, and while it is essential young people are protected and their needs are met within the justice system, it is also important they are held accountable for their actions (Lynch, 2016). If young people do not understand their legal rights, neither of these goals may be met. Second, there is a need for a consistent and standardised delivery of legal rights that meets young people's developmental needs and fulfils criteria for admissibility.

Young People's Capacities During Police Arrest and Questioning

Ensuring young people understand their legal rights protects against poorly informed decisions to waive legal rights, false confessions and can support the efficacy of police practice. For these reasons, research which explores young people's understanding of legal rights has practical value. Studies have used different approaches to answer questions surrounding young people's capacity to use their legal rights effectively and a variety of assessment instruments are used in this area. Some approaches focus on young people's knowledge of legal rights (e.g., Winingham & Drogin, 2018), while others focus on young people's ability to define and apply the rights in legal scenarios (e.g., Grisso, 1980). Accounting for these various legal rights abilities is a strength of research in this area, as when this information is taken together a complete and more accurate picture of young people's capacity in practice emerges. This section will outline the various abilities which are commonly examined in research and what difficulties with these abilities may mean for young people's capacity in practice.

Young People's Legal Rights Knowledge

Unfortunately, young people frequently hold incomplete and/or inaccurate knowledge (also referred to as misconceptions) about their legal rights (Winingham & Drogin, 2018). In a sample of 64 justice-involved young people in America, 83% held 10 or more misconceptions that could negatively affect their capacity in the justice system (Rogers et al.,

2014). However, even the presence of one false belief can have negative impacts on a young person's outcome when they are with police (Rogers et al., 2013a). More misconceptions among younger youth have been found (Rogers et al., 2014), with those aged 14-years holding significantly more misconceptions than those aged 16-years (Winningham et al., 2018).

To make informed decisions about legal rights, young people need to know what the nature of police questioning is (Grisso, 1981). However, young people frequently hold misconceptions about the role of police during questioning, as they are often unaware their job is to collect evidence (Grisso, 1981). This belief is more prevalent among those categorised as having low maturity, where maturity considers factors such as moral development, foresight and the ability to delay gratification (Rogers et al., 2014). These factors are not fully developed in young people (Steinberg et al., 2009; Iseline et al., 2009), which means they may not recognise the jeopardy they face when they are with police. Young people's lack of awareness is worsened further, as most do not know what they say during police questioning can be used as evidence in court (Grisso, 1981; Winningham et al., 2018). There are implications for this; if a young person does not know what they say could put them in a legally vulnerable position, they will not be likely to use their right to silence. Further, young people may be more likely to talk with police because of false beliefs that if they cooperate with police, the police will think that they are innocent or will be more lenient on them (Sharf et al., 2017).

Young people also show naïveté about the right to silence. Woolard et al. (2008) examined young people's (aged 11 to 17-years) knowledge of legal rights in America. It was found 70% correctly identified whether they had to answer police officer's questions and approximately 66% knew a person could change their mind and stop answering questions after they had started speaking. These issues were more prevalent among young people than

adults (Woolard et al., 2008), which puts young people in a worse position when they are questioned by police. Other misconceptions held by young people include; if they use their right to silence, they will be assumed guilty (Davies et al., 2011; Winningham et al., 2018) and police are able to take away their right to silence (Drogin & Rogers, 2014). These misconceptions are problematic; if a young person thinks they will get in trouble for using their right to silence or their rights can be taken away, they may be more likely to talk to police and accidentally incriminate themselves.

The right to a lawyer presents further problems for young people. Young people firstly fail to identify the role of their lawyer as legally protecting them, and secondly fail to recognise lawyers can help not only the guilty, but also the innocent (Abramovitch, et al., 1995; Grisso, 1981; Rogers et al., 2014). Difficulties are particularly common surrounding when people are entitled to a lawyer, even among adults, as only 50% of 17 to 69-year olds identified they were entitled to a lawyer both before and during police questioning (Rogers et al., 2011b). Knowing when people are allowed a lawyer is important because lawyers can provide protection at different stages throughout the legal process (Rogers et al., 2011b). In terms of the right to a free lawyer, international and New Zealand Cautions do not specify who will pay for the lawyer, which is an issue because young people's parents are usually the ones who are financially responsible (for housing and food etc.). This means young people who do not adequately understand this right may falsely believe the financial burden of the lawyer will fall on their family (Drogin & Rogers, 2014; Rogers et al., 2014).

Further, young people hold misconceptions about the right to a nominated person. Young people have difficulties with this right because it introduces legal jargon which young people lack knowledge on (Metzger et al., 2018; Rogers et al., 2008). For example, young people do not know how the presence of a nominated person can help them during questioning, with young people often falsely believing the role of parents (who often fill this

role) is to help the police (Drogin & Rogers, 2014). This false belief may stem from the disciplinary role parents have in other contexts (e.g., home and school; Drogin & Rogers, 2014). There are consequences of these false beliefs in practice; young people who have been interviewed about their experiences at police stations in America report almost half of the time, their parents were not present (Weiler, 2007). Reasons why parents were not present included; the young people were unaware they had the right to a parent being present; were unclear of the parent's role and how parents could help them when they were with police. These findings highlight how young people's lack of knowledge can put them in a legally vulnerable position.

Taken together, these studies show young people frequently hold incomplete and inaccurate knowledge of about core concepts relating to legal rights. If these misconceptions remain unaddressed in the Cautions, young people will continue to be disadvantaged because they will use false beliefs to reason about whether to waive or use their legal rights (Rogers et al., 2013a). This puts young people at risk of making poorly informed legal decisions when they are with police, which often results in rights waivers and false confession (Haney-Caron et al., 2018; Viljoen et al., 2005)

Young People's Understanding of Legal Rights

Considering the incomplete and inaccurate knowledge young people hold about their legal rights provides part of the picture on young people's capacities during police arrest and questioning. However, to get a fuller picture of young people's capacities, other assessment instruments of understanding are considered in research. It is important to have valid and reliable measures of understanding because young people are often overly confident in their level of understanding and are likely to say they understand their rights, even when they don't have a good understanding (Eastwood et al., 2015). Therefore, asking young people whether they understand their rights may not give an accurate gauge of understanding.

Most assessment instruments follow the approach outlined by Grisso (1980), who in a foundational American study, developed a new instrument called the Instrument for Assessing Understanding and Appreciation of Miranda Rights. This instrument further divided understanding into four aspects. The first aspect was vocabulary, which required participants to define key words in the Caution. The second was comprehension, which required participants to explain the rights in their own words. The third was recognition, which required participants to identify whether reworded statements hold the same meaning as the original rights. The fourth aspect was appreciation, which assessed participants understanding of the importance, function and application of the rights to legal situations. Another aspect of understanding which has been incorporated into revised versions of this instrument is cued recall, which requires participants to recall the information they remember after being read the rights (Goldstein et al., 2014). If a young person is classified as having inadequate or incomplete understanding on these instruments, it demonstrates the young person does not have the understanding required to make informed decisions about how to use their legal rights when they are with police (Grisso, 1980; Grisso, 1981). This is a strength of this scoring system, as it creates links between lab-based assessment scores and how young people would manage in a real-world questioning situation.

It is important these types of instruments account for these different aspects, because misunderstandings on one aspect can follow through and impact understanding on other aspects. For example, if a young person cannot remember or does not understand the key terms within the right, it is unlikely they will be able to define the right in its entirety (Erickson, et al., 2019; Gaston, 2017). Therefore, dividing understanding into these aspects allows young people's legal rights difficulties to be more precisely identified. Further, even if a person who is questioned by the police remembers the information and understands the words in the Caution, they may still be unable to apply these rights in practice. This is

because application of legal rights is impacted by other factors, such as developmental immaturity (e.g. ability to consider the long-term consequences of decisions; Colwell et al., 2005; Drogin & Rogers, 2014) and compliance with police officers (Goodwin-De Faria & Marinos, 2012; Kassin, et al., 2018; McLachlan et al., 2011). By considering these different aspects of understanding, these instruments move beyond surface level understanding and allow researchers to determine whether a young person would have the capacity to effectively use their rights in a real-world situation. This provides a much more meaningful gauge of understanding.

Research using these types of instruments show young people's legal rights understanding is incomplete. It is difficult to make definitive conclusions about young people's level of understanding, because understanding varies depending on the age of the young person and whether justice-involved or community samples were used (Driver & Brank, 2009; Kelley, 2015; Salseda, 2012; Zelle et al., 2015). However, in a variety of studies, using both community and justice-involved young people (aged 10 to 17-years), it seems 17 to 35% of young people demonstrate incomplete understanding in the vocabulary aspect, 19 to 30% demonstrate incomplete understanding in the comprehension aspect, and 28 to 35% demonstrate incomplete understanding on the appreciation aspect (Lieser et al., 2019; McLachlan et al., 2011; Salseda, 2012; Viljoen et al., 2007; Zelle et al., 2015). Here I reiterate that incomplete understanding on these types of instruments indicate the young person does not have the level of understanding needed to make informed decisions about their legal rights (Grisso, 1981). Therefore, this research clearly shows young people's level of understanding is an issue.

Although young people have difficulties across all aspects of understanding, research suggests appreciating the function and significance of legal rights is an area of particular difficulty for young people. Viljoen et al. (2007) found the majority of justice-involved

young people in America showed significantly poorer understanding on the appreciation aspect in comparison to the other aspects of understanding. In particular, those aged 11 to 15-years showed the greatest difficulties with this aspect, as 54% in this age group did not understand the function and importance of the right to silence (Viljoen et al., 2007). A similar pattern was reported in Zelle et al. (2015), who found that, although justice-involved young people showed difficulty defining many of the words in the Caution, they showed the greatest difficulty with appreciating the rights. These results show young people may be at a developmental stage where they do not yet have the capacity to effectively apply their rights when they are with police, indicating the need for more support in this area.

Age and Understanding of Legal Rights

Young people's level of legal rights understanding also varies depending on their age. Those aged younger than 15-years frequently fail to meet the standards for adequate understanding, while those aged 15 to 16-years tend to perform at a level that is not significantly different from adults (Grisso, 1980). Age-based patterns in understanding have been replicated in more recent research, including Strachan (2008), who found younger American youth (10 to 13-year olds) performed more poorly across all aspects of understanding than older youth (14 to 16-year olds). Even within the short period of time between 12 to 15-years, Crawford and Bull (2006) found significant improvements in Irish youths' ability to define legal words. Other research, such as Kelley (2015), has explored the relationship between age and understanding in justice-involved young people (11 to 19-years) in America, and consistent with previous literature, found understanding across all aspects improved with age. However, age and understanding did not show a simple relationship, as a steep gain in understanding was seen in the comprehension aspect between 12 to 16-years, while slower gains were seen in the vocabulary and appreciation aspects, which did not reach peak levels of understanding until adulthood (Kelley, 2015). Despite variation in the rate of

development, research consistently shows understanding across a range of aspects improves with age. However, making assumptions of a person's level of understanding based on their age alone may not always convey the complete picture of understanding. This is because the relationship between age and understanding is confounded by other variables, such as verbal intelligence (Colwell et al., 2005; Goldstein et al., 2003; Grisso, 1980).

There are four take home messages from this section. First, to obtain a complete picture of young people's capacity when they are with police, research should consider different legal rights abilities. Second, young people have incomplete understanding across multiple aspects which indicates they may not be able to make informed legal decisions when they are with police. Third, young people show more difficulties in the appreciation aspect in comparison to the other aspects of understanding, suggesting they may need support to use their rights in real-life situations. Finally, understanding of legal rights is related to age; generally younger youth have poorer understanding than older youths.

Understanding of Legal Rights in the New Zealand Context

Through international research, we can infer issues with understanding among New Zealand youth, however, New Zealand based research needs to examine this directly. This is because there are several differences between international and New Zealand contexts, including in the legislation which guides practices surrounding police questioning, in the wording and content of the Cautions and among the population (e.g., ethnicity, cultural norms, educational context). It is therefore unclear how reliably international results apply to the New Zealand context.

Although New Zealand research is limited, Gaston (2016) investigated legal rights understanding among a sample of New Zealand students (aged 10 to 16-years). This research found that young people only understood 61% of the rights contained in the Young Person's version of the Caution. There were differences in understanding across the various aspects,

with recall being the lowest (38%), followed by the appreciation (62%), vocabulary (67%), and then the comprehension aspect (69%). In contrast to international literature; no effect of age on understanding was found, but this may have been due to confounding variables such as school decile rating⁴ (Gaston, 2017). More research is therefore needed to examine the relationship between age and understanding among New Zealand young people. This study also compared young people's understanding of the Young Person's and Adult version of the Caution and found young people did not perform better when interviewed using the Young Person's version. This suggests the modifications to the Young Persons version does not meet young people's developmental needs as intended.

Further, young people in New Zealand hold inaccurate and incomplete knowledge of legal rights (Gaston, 2017). Although young people could explain what a lawyer was, they performed worse applying this right in practice, as many were unable to identify the role of the lawyer and how they should interact with their lawyer (Gaston, 2017). This is concerning; even if a young person knows what the words mean, if they are unable to apply this knowledge to real-life cases, they are less likely to benefit from the protection this right offers. Instead, young people appear to have surface level or superficial knowledge of their right to a lawyer. Another common misconception among New Zealand young people was that their lawyer worked for the police (Gaston, 2017). This misconception has implications in practice, as young people who do not know their lawyer can help them are less likely to ask for one (Viljoen et al., 2005). These New Zealand findings are consistent with international findings which, taken together, indicate the current Cautions do not adequately communicate the information young people need to make informed decisions about their rights. Efforts therefore need to be made to improve how the rights are delivered to young people.

⁴ The decile rating of a school indicates the socio-economic status of the communities which the students live in (Ministry of Education, 2019).

Reasons for Young People's Difficulties with Legal Rights

In recognition of the problems surrounding young people's understanding of legal rights, studies have investigated what difficulties young people may have with the Cautions and how these difficulties could be overcome. One solution was to shorten the Cautions, which is consistent with research showing there is too much information in the Canadian Cautions for young people's working-memory to effectively process (Eastwood et al., 2015). Further, after analysing the lengths of Cautions in America (there are several Cautions used in America), it was found some versions of the Cautions developed for young people were so long that even adult's memory, in stress-free environments, would be overwhelmed (Rogers et al., 2008). Despite this, shortening the Caution has had minimal effects on understanding in a variety of samples, including the general population, young people, and police officers (Clare et al., 1998; Eastwood & Snook, 2012). This suggests the reasons young people do not understand their rights is broader than the length of the Caution but may be related to other factors (e.g., language barriers).

Other research shows understanding of legal rights is related to intelligence (Woolard et al., 2008). Colwell et al. (2005) investigated understanding of legal rights among young people (aged 11 to 17-years) who were involved in the American justice system. Although general intelligence predicted understanding, the facet of intelligence that encompasses verbal abilities demonstrated the strongest relationship, suggesting verbal IQ is the most relevant for legal rights understanding. Other research supports this, finding verbal IQ is one of the strongest predictors of legal rights understanding, even when controlling for age (Goldstein et al., 2003; Erickson et al., 2020). This association is not surprising, as responses on assessment instruments based on the approach outlined in Grisso (1980) requires abilities associated with verbal comprehension and verbal knowledge (McLachlan et al., 2011).

Other research considers whether the language used in the Cautions is a barrier to understanding among young people. This approach is consistent with Rost and McGregor (2012), who found those with language difficulties had poorer understanding than a matched-group without language impairments. Additionally, after reviewing the reading levels of a variety of Cautions in America, a significant schism between the reading levels needed to understand the Cautions and the actual reading abilities of the young people the Cautions are delivered to was found (Rogers et al., 2008). Remarkably, some language in the Cautions required a university education to understand (Rogers et al., 2008). Analysis of the Canadian young person's version of the Caution revealed similar problems, as the Caution contained complex words which are not used in everyday language (Eastwood et al., 2015). Although Young Person's versions of the Cautions use different language to Adult versions, these results suggest the language still fails to communicate information to young people in a developmentally appropriate manner.

The language barriers of the Cautions are particularly concerning when the language difficulties among young people involved in the justice system are taken into consideration (Anderson et al., 2016). Bryan et al. (2007) reports that 66-90% of justice-involved young people have impaired language abilities, with reading levels below what is typical for their age. Similarly, almost 64% of young people involved in the justice system in New Zealand were found to have language impairments (Lount et al., 2015). This means the young people who most likely will need to use these rights in practice are the ones who will be less likely to understand them. Despite this body of research, versions of the Cautions with simplified language produce only small effects on understanding (Freedman et al., 2014; Eastwood et al., 2016). However, studies using simplified versions of the Caution have typically assessed understanding only using recall, and so it is unclear what the impact of these versions would be on the other aspects of understanding. It is clear more work is needed in this area.

Another approach explores whether improving the listenability of Cautions improves understanding (Eastwood & Snook, 2012). Theories relating to listenability outline the processing of verbal and written information is different because listening is suited for oral-based discourse while reading is better suited for literacy-based discourse (Rubin et al., 2000). Considering the listenability of the Cautions is important as under New Zealand legislation, legal rights are read to people out loud by the police (Oranga Tamariki, 1989).

Eastwood and Snook (2012) examined three listenability principals, 1) Instructions; which inform participants of what they should do with the information they are read, 2) Listing; which separates information into categories, with related pieces of information being organised together, 3) Explanation; which repeats the information contained in the Caution multiple times, but in a different manner. Among university students, the best understanding was found when participants were read a version of the Caution which incorporated all three listenability principles. Further, Cautions which incorporate listenability principals lead to better understanding than Cautions with simplified language (Eastwood et al., 2016).

Although these studies show incorporating listenability principals can improve understanding, even with listenability principals, understanding is still incomplete (e.g., recall ability improves from about 35% to 80%; Eastwood & Snook, 2012). This shows further modifications to the delivery of legal rights need to be made.

A Possible Solution: Educational Intervention

There are a wide range of factors that could explain why young people have incomplete understanding of their legal rights. However, research to date suggests previous adaptations aimed at improving understanding have had limited impact and other solutions need to be considered. Educational intervention is one solution which has been considered. Although educational interventions are varied in design, consistent across all educational interventions is they provide additional information beyond what is currently included in the

Cautions (Clomax, 2017; Davis et al., 2011; Strachan, 2008). This section will explore educational interventions as a possible solution to young people's incomplete legal rights understanding by outlining the content delivered in educational interventions, the mediums used to deliver this information, and what research suggests about the impact of these on understanding.

The additional information provided in educational interventions follows two approaches. The first focuses on outlining the importance of legal rights and how they function in practice. Wall and Furlong (1985) followed this approach by teaching students (aged 16 to 18-years) the reasons why they have legal rights. After receiving the educational intervention, students showed good understanding in the recognition aspect, but still showed difficulty defining the key terms from the Caution, suggesting interventions of this nature may not affect all aspects of understanding equally. After the educational intervention, participants were less likely to waive their rights, reported they did not wish to answer police questions without a lawyer present and correctly identified how a lawyer could help them during police questioning. Other research has found similar results, including Clomax (2017), who found an educational intervention which taught young people (aged 15 to 17-years) about the necessity and history of legal rights, improved their ability to identify the meaning of the rights and evaluate the consequences of using the rights.

From these findings, it seems outlining why legal rights are important may better equip young people to make informed decisions about how to use their legal rights in practice. This is a meaningful change, as young people show some of the lowest levels of understanding in the appreciation aspect, despite understanding in this aspect being the most crucial for young people to effectively use their rights when with police. The impact of educational intervention is promising; however, more research is needed to determine whether educational interventions can influence the use of rights in real-life cases. Rates of

real-life application of rights may differ to hypothetical situations due to situational factors which influence behaviour during police questioning, such as stress and emotional arousal (Grisso et al., 2003; Steinberg et al., 2009; Viljoen et al., 2005; Wall & Furlong, 1985).

The second approach used in educational intervention provides additional information which aims to correct legal rights misconceptions. This approach is consistent with the earlier discussion which highlighted the incomplete and inaccurate legal rights knowledge among young people is a prevalent issue that is not currently addressed in Cautions. An educational intervention which included information targeted at correcting misconceptions (e.g., if a person uses their right to silence, it cannot be used against them legally), was found to significantly improve understanding among Canadian university students (Davis et al., 2011). However, the educational intervention developed by Davis et al. (2011) delivered information in a manner that aided understanding, and so, modifications also incorporated the listenability principal which uses listing. Because of this, it is unclear whether it was the information focusing on misconceptions or the listenability principal which influenced understanding. Nevertheless, those who received the educational intervention recalled more information about their legal rights, which suggests educational interventions can make legal rights information easier to remember.

Further, Strachan (2008) followed a similar approach, by evaluating whether a legal rights education programme which corrected misconceptions (e.g., the consequences of waiving legal rights) could improve understanding among 10 to 16-year olds in America. This intervention was effective, as important improvements were seen in young people's ability to recognise the long-term consequences and risks of rights waivers. Significant improvements were also shown across the comprehension, recognition, and appreciation aspects of understanding. The 10 to 12-year old age range showed the biggest improvement in overall understanding (with an effect size of $d = 1.4$). However, improvements in overall

understanding after receiving the intervention still showed large effect sizes for both 13 to 14-year olds ($d = 1.08$) and 15 to 16-year olds ($d = 1.0$).

These findings from Strachan (2008) suggest educational interventions may be more effective for younger youths than older youths. One possible explanation for this is that younger youth have different legal rights misconceptions than older youth (Drogin & Rogers, 2014; Wittingham et al., 2018). For example, younger youth are more likely to have misconceptions about the nature of police questioning (Rogers et al., 2014). The educational intervention used in Strachan (2008) may have included information focusing on the misconceptions which tend to be held by younger youth, resulting in more improvements in younger aged groups. Alternatively, it is also possible educational interventions could have a limited impact among younger youth, as cognitive and learning abilities develop across adolescence (Colwell et al., 2005; Cowan, et al., 2011; Rogers et al., 2016; Thomason, et al., 2009; Viljoen et al., 2005). This means 10-year olds are at a different developmental stage than 18-year olds, as capacities relating to general intelligence, attention, memory, and executive functions are typically more limited in early adolescence. These developmental differences could impede the efficacy of educational intervention among younger youth.

The medium used to deliver additional information varies between studies. Rogers et al. (2013b) examined the influence of educational interventions using different lengths (long or short) and mediums (verbal or written information) on understanding. Written versions of educational interventions which corrected misconceptions, led to better recall in comparison to oral versions, and shorter educational Cautions led to better recall than longer versions. However, the medium did not differentially affect the interventions effectiveness based on length. Overall, the educational interventions used in this study did not reduce false beliefs about legal rights, which could suggest verbally delivered and written Cautions may not be the most effective mediums to deliver additional information, and other approaches should be

used. This is reinforced in other research, which have used more interactive approaches and yielded more promising results. For example, Wall and Furlong (1985) used teaching methods such as mock trials, case studies and discussions with legal professionals, and found significant improvements in understanding. Further, Clomax, (2017) also found improvements in understanding after delivering an interactive lecture which provided young people with the opportunity to ask any questions they might have about the function of their legal rights.

Alternatively, Driver and Brank (2009) used a novel approach, by examining whether young people's (aged 11 to 17-years) understanding of legal processes could be improved using an educational video. This study is important, because unlike other research in this area, participants came from both community and justice-involved environments, which makes the results more generalisable. Overall, understanding of legal processes significantly improved in both the justice-involved and community sample after watching the video. This shows educational videos can impact understanding in both community and justice-involved young people, despite differences in learning and language abilities (Anderson et al., 2016; Further et al., 2016; Lount et al., 2015). This might be because videos are more engaging and deliver information in a way that does not put a large demand on a young person's verbal abilities (Driver & Brank, 2009). However, although there was a significant improvement in understanding after viewing the video, the average improvement in understanding was small (6.4% and 6.9% for the justice-involved and community sample respectively), indicating more work is needed to further refine the design of the educational intervention.

Although these studies provide an indication of what an effective educational intervention could look like, this research base has several limitations. First, studies using educational interventions have not included the complete age range that would be considered a young person in the New Zealand youth justice system and have primarily used community

samples. This raises questions over the generalisability of these results given the relationship between age and understanding, and the higher verbal abilities among community samples in comparison to justice-involved young people. More research is needed to determine whether educational intervention could improve understanding among a younger sample and those who are more representative of youths who have committed offences in New Zealand.

Further, the pre-test/post-test design used in several of these studies meant there may have been some carry over effect of the pre-test (Clomax, 2017; Driver & Brank, 2009; Strachan, 2008; Wall & Furlong, 1985). This is a confounding variable which makes it difficult to determine whether the educational intervention improved understanding, or whether it was the effect of repeated testing. Finally, there is a paucity of research exploring the use of educational intervention, with most research instead focusing on modifying the way legal rights are delivered (e.g., by simplifying the language). This limits the conclusions that can be drawn about the effectiveness of educational interventions.

The Current Research

A key message from this literature review is that young people's understanding of legal rights is an issue that warrants attention. Although there is some research which indicates this is an issue among New Zealand youth, more research is needed to obtain a clearer picture of the level of understanding and the parts of the Caution which presents challenges for young people in New Zealand. Further, although international literature has found robust age-based patterns in understanding, this pattern has not been replicated in New Zealand based research and it is therefore unclear which groups are most vulnerable to incomplete legal rights understanding in New Zealand. In response to issues with young people's legal rights understanding, a variety of solutions have been explored in international research, finding educational intervention is a possible solution which requires further research.

The current study aims to investigate: 1) the level of legal rights understanding among young people in New Zealand; 2) the relationship between age and understanding; and 3) whether understanding can be improved with educational intervention. To examine these aims, an empirically informed educational intervention will be developed. Previous studies suggest an educational intervention which addresses misconceptions and describes the importance and function of legal rights could improve understanding. Although previous literature has used a variety of mediums to deliver additional information, this study will use an educational video consistent with Driver and Brank (2009). This medium is supported by research showing videos increase engagement among young people (Harrison, 2019), are an effective educational tool in comparison to other teaching methods (Pang, 2009), and is an appropriate medium for young people with language difficulties (Driver & Brank, 2009). Young People's understanding of legal rights in New Zealand will then be examined across a range of aspects to ensure a complete picture of young people's capacity in practice and the possible impact of the educational intervention on these capacities is obtained. A community sample of young people will be used, as it is important to obtain general population norms; if the educational intervention does not impact a community sample of young people, it is unlikely to benefit justice-involved young people who are questioned by police (Strachan, 2008).

This study will address four hypotheses. First, it was hypothesised understanding among New Zealand young people would be incomplete across the various aspects assessed (cued recall, vocabulary, comprehension, appreciation and total understanding). Second, it was hypothesised understanding would improve with age, and therefore, age would be a significant, positive predictor of understanding across the various aspects (when controlling for the effect of verbal intelligence and the possible influence of condition). Third, it was hypothesised the educational intervention would improve understanding of legal rights in

young people. Finally, it was hypothesised the educational intervention will have a different impact on younger youth in comparison to older youth, and would therefore moderate the effect of age on understanding, however, it is unclear what the nature of this moderating effect will be.

Chapter Two: Method

Design

This study used a between subject's design where participants (aged 10 to 18-years) were assigned to two conditions. Individuals in the control condition were read the New Zealand Child and Young Persons version of the Rights Caution (hereafter referred to as Young Persons version of the Caution) while those in the video condition viewed an educational legal rights video and were then read the Young Persons version of the Caution. Participant's understanding of legal rights and verbal intelligence (IQ) were then assessed.

Participants

A community sample of 10 to 18-years was used; two participants were recruited through posters, seven through snowballing, and the remaining participants came from 13 schools around New Zealand (including schools from the Wairarapa, Foxton, New Plymouth, Whanganui, Tauranga and Gisborne). Consent was obtained from 99 young people; 50 were assigned to the control condition and 49 to the video condition. The mean age of participants was not statistically different across the two conditions ($t(38) = 0.36, p = .721$), with a mean age of 15.12 years ($SD = 2.03$) in the control and 15.27 years ($SD = 2.01$) in the video condition. Verbal IQ was also not statistically different across the conditions, ($t(97) = 0.74, p = .463$), with a mean verbal IQ of 100.16 ($SD = 7.66$) in the control, and 98.35 ($SD = 11.23$) in the video condition. Other demographic information is displayed in Table 1. Participants were invited to list all ethnic groups they identified with and of the total sample, 74 (69.8%) identified as New Zealand European, 27 (25.5%) identified as Māori, and 7 (6.6%) identified

as Pasifika. Ethnic groups with fewer than five participants were placed in the “Other” category, which included 21 (19.8%) participants. This group included participants from Asia, Australia, America and South Africa. The proportion of participants from different ethnicities was not statistically different between the control and video condition, ($\chi^2(2) = 0.11, p = .946$).

Table 1*Participant Demographics*

Demographic	Control Condition		Video Condition		Total Sample	
	<i>n</i> = 50		<i>n</i> = 49		<i>n</i> = 99	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Ethnicity						
NZ European	37	74.0	37	75.5	74	69.8
Māori	14	28.0	13	26.5	27	25.5
Pasifika	4	8.0	3	6.1	7	6.6
Other	9	18.0	12	24.1	21	19.8
Gender						
Female	32	64.0	28	57.1	60	60.0
Male	18	36.0	21	42.9	39	39.4
Decile						
1 – 5	15	30.0	13	26.5	28	28.3
6 – 10	35	70.0	36	73.4	71	71.7

There were no statistical differences in gender distribution between the conditions ($\chi^2(1) = 0.49, p = .485$), with 32 (64%) females in the control condition and 28 (60%) in the video condition. As shown in Table 1, the overall sample showed a skew towards participants attending high decile schools, with 71 (71.7%) participants coming from higher decile schools (those ranging from decile 6 to 10), in comparison to 28 (28.3%) coming from lower decile schools (those ranging from decile 1 to 5). However, the proportion of participants

recruited from low and high decile schools was not significantly different between the control and video conditions, ($\chi^2(1) = 0.15, p = .702$).

Independent Variables

The first independent variable was condition; control or video condition. The second independent variable was participant's age, which was a continuous variable ranging from 10 to 18-years. This age range was selected because 10 to 17-year olds fall under the jurisdiction of youth justice in New Zealand (Oranga Tamariki, 1989). Eighteen-year olds were included in analysis to allow age-based trends to be examined.

Verbal IQ was assessed using the Kaufman Brief Intelligence Test, Second Edition (KBIT-2; Kaufman & Kaufman, 2004). The KBIT-2 was selected for use in the present study because it is a reliable and valid measure of verbal IQ in the age group used, does not need clinical training to administer and takes 15 to 25 minutes to complete (Kaufman & Kaufman, 2004). Participants verbal IQ was assessed so that it could be controlled for in analysis.

Dependent Variable

The dependent variable was participants scores on The New Zealand Rights Caution Competency Questionnaire (NZRC-CQ; Fortune et al., 2017), which assesses understanding of legal rights across six aspects; 1) Prior knowledge, 2) Cued recall, 3) Vocabulary, 4) Comprehension, 5) Appreciation, 6) Total understanding. Each aspect will be described in a later subsection. This instrument was adapted from *The Instruments for Assessing Understanding and Appreciation of Miranda Rights* (Grisso, 1980), which is a common assessment instrument of young people's understanding in America. The NZRC-CQ was adapted to suit the New Zealand context (Gaston, 2017), making it appropriate for use in the present study. Further revisions excluded the recognition aspect of understanding due to time constraints and the limited utility of the scale (e.g., it assesses similar abilities to the comprehension aspect; Grisso, 1980). The NZRC-CQ is presented in Appendix A.

Materials

The following materials formed part of the interview sessions.

Educational Video

An educational video was developed and directed by the author, in consultation with academics in the areas of law, youth justice and child development. Another Masters student narrated the video (see Appendix B). Consistent with the approaches outlined in previous research using educational intervention, the information delivered intended to address misconceptions held by young people and make young people aware of the importance and function of legal rights (e.g., Driver & Brank, 2009; Strachan, 2008). This information was gathered by conducting a literature review and drawing upon New Zealand legislation. Examples of information provided in the educational video included; the police cannot make you talk if you do not want to, the police cannot use people's decisions to remain silent against them legally, and information on the potential implications of using the right to silence. The educational video also incorporated principals which literature had identified as improving young people's understanding of legal rights, as well as general literature on information processing and learning. These included listing (Davies et al., 2011; Eastwood et al., 2016) and the use of text and video (Driver & Brank, 2009; Gass et al., 2019). For example, while the narrator was explaining each of the core rights, the right was displayed in text on the side of the screen. Short acting scenes were also included in the video, which depicted what it would look like if this right was exercised during police questioning (e.g., while the narrator was explaining the right to silence, a 20 second acting scene showed a lawyer speaking to a young person at a police station in private). The educational video was just over 3 minutes long.

The New Zealand Rights Caution Competency Questionnaire (NZRC-CQ; Fortune et al., 2017)

This assessment instrument was administered in a semi-structured interview, where six tasks were used to assess each aspect of understanding.

Prior Knowledge. The prior knowledge task assessed what participants knew about their legal rights prior to participating in this study. In this section, participants were asked to tell the interviewer everything they knew about what people's legal rights are when they are arrested or questioned by a police officer. If the participants responded they did not know, the interviewer prompted them, saying "give it your best guess". After the participant had finished speaking, the interviewer asked whether they had anything else to add. Although the Young Persons version of the Caution contains seven statements, some statements contain multiple concepts (ranging from one to five concepts; Innes & Erlam, 2018). The coding schedule focused on the concepts contained within the Caution. Responses were scored a 0 (*indicating the participant had not included that concept in their response*), or 1 (*indicating the participant had included that concept in their response*). There are 13 main concepts included in the Young Persons version of the Caution; prior knowledge scores could therefore range from 0 to 13.

Cued Recall. The cued recall task assessed participants ability to remember the legal rights after being exposed to them. This task differed depending on condition. In the control condition, participants were told they were going to be read their legal rights and then asked to say everything they could remember from what was read to them. After participants had been read the New Zealand Young Persons version of the Caution (see Appendix C), they were asked to tell the interviewer everything they could remember in any order. If the participant responded, "I don't know", the interviewer prompted "give it your best guess".

After the participants had finished telling the interviewer what they could remember, the interviewer asked whether they had anything else to add.

In the video condition, participants were told they would be shown a video and then read their legal rights and afterwards they would be asked to say everything they could remember from the video and what they had been read. Participants were shown the educational video on a portable device, and after the video had finished, were read the Young Persons version of the Caution. Following this, the task was completed in the same manner as the control condition. The scoring schedule for this section was the same as the prior knowledge task, with scores ranging from 0 to 13.

Vocabulary. The vocabulary task assessed participants ability to define each of the key words included in the Young Persons version of the Caution. The participants were shown and read 10 key words from the Young Persons version of the Caution, which were presented to participants one at a time. Participants were then asked to explain what each meant in their own words. Examples of words included “statement”, “jury” and “nominated person”. Responses were scored a 0 (*the answer demonstrated incomplete understanding or contained a misconception*), 1 (*the answer demonstrated partial understanding*) or 2 (*the answer demonstrated complete and accurate understanding*). Prompts were given following responses which did not demonstrate complete understanding (e.g., the response was unclear or needed further developing). Examples of prompts included; “do you have an example of that?”, “can you tell me more about that?”, “do you have anything else to add?”. One prompt could be given for each question; however, a second prompt could be given following “give it your best guess”. Scores in the vocabulary task could range from 0 to 20. Examples of a participant’s response and corresponding score is displayed in Table 2.

Table 2*Vocabulary Aspect Response and Scoring Example*

Question	Participant Response	Interviewer Prompt	Participant Reply	Score
“What is a lawyer?”	“Someone who defends against you for a crime or something so if you murdered someone, he’d try and defend you, say you didn’t do it or something like that.”	NA	NA	0 1 (2)

Comprehension. The comprehension task assessed participants ability to define each of the statements included in the Young Persons version of the Caution in their own words. Participants were read and shown each statement on a card, which were presented one at a time. After the interviewer had finished reading each statement, the participant was asked to explain what the statement meant in their own words. The prompting schedule for this task followed the same procedure outlined in the vocabulary task. The coding of responses from the comprehension task differed depending on the number of concepts included in each statement. Statements which contain one major concept were scored a 0 (*the answer demonstrated incomplete understanding or contained a misconception*), 1 (*the answer demonstrated partial understanding*) or 2 (*the answer demonstrated complete and accurate understanding*). Statements which contain two concepts were scored in two parts. For each concept, a score of 0 (*the answer demonstrated incomplete understanding or contained a misconception*), or 1 (*the answer demonstrated complete and accurate understanding*) was given. Statements which contain five concepts were coded in five parts. For each concept, a score of 0 (*the answer demonstrated incomplete understanding or contained a misconception*), or 0.5 (*the answer demonstrated complete and accurate understanding*) was given. An example of a statement which contains five concepts is; “Young have the right to

“speak with a lawyer and/or any person nominated by you, without delay, and in private, before deciding whether to make any statements or answer any questions” (New Zealand Police, 2011). A score of 0.5 for each of the following concepts could be given: 1) Lawyer, 2) Nominated person, 3) Speak, 4) Delay, 5) Private. This coding procedure was based on New Zealand research which identified the concepts contained in the Adult version of the Caution, which the Young Persons version is based on (Innes & Erlam, 2018) and was developed with the intention of identifying the specific difficulties young people have with comprehending their legal rights. Scores in the comprehension task could range from 0 to 14.5. An example of a response and corresponding score is displayed in Table 3.

Table 3

Comprehension Aspect Response and Scoring Example

Question	Participant Response	Interviewer Prompt	Participant Reply	Score
“You do not have to make a statement or answer any questions. What does this mean to you?”	“You have the right to remain silent. You don’t need to say anything that supposed to say or you don’t need to say anything.”	“Could you say a bit more about that?”	“you um...you um...don’t know have to answer anything or say anything or ask anything.”	0 (1) 2

Note. This is an example of a statement which contains one major concept.

Appreciation. The appreciation task assessed participants understanding of the importance and function of their legal rights, as well as their ability to apply them in hypothetical legal scenarios. Participants were shown four pictures depicting legal scenarios,

which were presented one at a time. Participants were then read a short description of what was happening in the picture. For example, one description read; “This is a picture of a girl named Jane and a police officer. They are at the police station because there has been a crime and the police officers want to talk to Jane about it”. Participants were then asked questions designed to assess their understanding of the nature of police questioning and appreciation of how their right to silence, a lawyer and a nominated person could be used in practice. The prompting schedule for this task followed the same procedure outlined in the vocabulary task. Responses were scored a 0 (*the answer demonstrated incomplete understanding or contained a misconception*), 1 (*the answer demonstrated partial understanding*) or 2 (*the answer demonstrated complete and accurate understanding*). However, the application of the right to a nominated person was scored differently because it requires understanding of two concepts: the role of the nominated person in; 1) supporting young people; and 2) helping young people understand their rights. To specify what difficulties young people had with this right, responses for each concept was scored a 0 (*the answer demonstrated incomplete understanding or contained a misconception*), or 2 (*the answer demonstrated complete and accurate understanding*). Scores in the appreciation task could range from 0 to 38. An example of a participant’s response and score is displayed in Table 4.

Table 4*Appreciation Aspect Response and Scoring Example*

Question	Participant Response	Interviewer Prompt	Participant Reply	Score
“If the judge finds out that Stephen did not to speak with the police, what difference might it make to what the judge does?”	“He could think that he’s not saying anything because he did do it so that could turn against Stephen.”	“Anything else to add there?”	“Means that he wouldn’t have much evidence to go on to prove him guilty either.”	(0) 1 2

Total Understanding. Participants total understanding score assessed their overall understanding of legal rights, and was calculated by aggregating participants scores on the cued recall, vocabulary, comprehension and appreciation tasks of the NZRC-CQ. Participants total understanding score could range from 0 to 85.5.

Kaufman Brief Intelligence Test, Second Edition (KBIT-2; Kaufman & Kaufman, 2004)

The Verbal Knowledge and Riddles subtests of the Kaufman Brief Intelligence Test, Second Edition (KBIT-2; Kaufman & Kaufman, 2004) were administered to assess participants verbal IQ. In the Verbal Knowledge subtest, participants were presented with different pictures and asked to point to the picture which showed what the word means. In the Riddles subtest participants were asked to solve riddles, with each answer being just one word. Scores on these two subtests were combined to create a standardised score of verbal IQ for each participant.

Procedure

Schools who had students between the ages of 10 to 18-years were initially contacted via telephone, where a brief description of the study was given and the opportunity was provided to ask questions. Interested schools were sent an information pamphlet which

provided further details of the research. If the school agreed to take part, consent forms were sent to the schools to be handed out to students via their teachers. If the participant agreed to take part, consent forms were asked to be returned to the school office. Additionally, ethics approval was sought for alternative methods of recruitment. These included the use of posters which were placed in community spaces and snowballing through family and friends. In these cases, consent forms were sent to the participants and their legal guardians directly, who were given the opportunity to ask any questions they might have. If the participant agreed to take part, consent forms were given to the researchers before the interview. Participants were asked to include their demographic information in the consent form.

If the participant was recruited through schools, the interview was completed individually, at the participant's school, in a quiet and private, well-lit room. The interviews were arranged during times which minimised disruption to key learning. If the participant was recruited through posters or snowballing, the interviews were completed in a public space (such as a café or at Victoria University of Wellington) in a quiet, well-lit area, at a convenient time for the participant and their legal guardian.

Ethics approval was given by the School of Psychology Human Ethics Committee under delegated authority of Victoria University of Wellington (project #27451). Written consent was obtained from all participants and if the participant was under the age of 16-years, written consent from the young person's guardian as well as written assent from the young person was obtained. To support cultural competency, at the start of the interview, researchers introduced themselves, their role, and what the research involved. This aligned with the principle of Whanaungatanga (which refers to building relationships and making connections), as it helped build rapport with participants. Participants were also told about the limits to confidentiality, and that they could take a break or stop the interview at any time without having to give a reason. Participants were then given the opportunity to ask any

questions they might have and verbal assent was obtained from participants before the interview began. Participants were also offered a karakia; a Māori prayer which invokes spiritual protection and signifies the goodwill of a gathering, at the start and end of each interview. To enhance engagement and demonstrate Manaakitanga (which refers to showing respect), participants were also given the opportunity to ask questions about their legal rights and the research process at the end of the interview. Upon completion of the interview, participants were given a debriefing pamphlet which contained further information about the purpose and aims of the research and clarified the next steps for the research (e.g., participants were told feedback posters summarising the research would be posted to schools once the results had been written up). Once debriefing was completed, each participant was given a koha as a sign of appreciation and acknowledgement of their contribution to the research.

Participants were randomly assigned to the control or video condition. The interview session was then completed in the same format for all participants; with the NZRC-CQ completed first, followed by the KBIT-2. The interviews were recorded on audio devices and response sheets were used as a back-up. To maintain confidentiality, a number was assigned to each participant and no personal identifying information was included in the audio recording or response sheet. Overall, the interviews took between 20.40 to 60.04 minutes, with an average time of 39.56 minutes ($SD = 7.33$). The average interview length in the video condition ($M = 42.45$, $SD = 5.75$) was significantly longer than the control condition ($M = 36.72$, $SD = 7.66$), $t(97) = 4.20$, $p < .001$.

The interviews were completed by the author and another Masters student, who both had experience in clinical interviewing. The interviewers familiarised themselves with the NZRC-CQ and the coding schedule so they could differentiate between responses that demonstrated complete or incomplete understanding during the interviews. Interviewers

conducted practice interviews and sought feedback from pilot participants to ensure all interviews were conducted in a consistent way and appropriate prompts were given. A meeting was then arranged with the interviewers and the thesis supervisor (a clinical psychologist with previous experience using the NZRC-CQ), where questions and concerns about the research were addressed and clarification was given to ensure all researchers were interviewing in the same way. Three interviews were conducted with the trainee interviewers supervised by the thesis supervisor, who identified areas for improvement and gave feedback. The interviewers also received training on administering the KBIT-2.

Coding and Reliability

This study adapted a version of a coding manual developed for a previous legal rights study in New Zealand (Gaston, 2017). Researchers met to discuss the manual and address any immediate questions, and then practiced coding on a randomly selected sample of the data. These codes were discussed and the coding manual was revised to clarify areas of uncertainty. This process was repeated three more times, with further revisions made to the coding manual as necessary. Two independent coders (the author and another Masters level student) coded approximately 30% of the interviews and inter-rater reliability was calculated using Cohen's Kappa. The level of agreement was $k = .65$, 95% CI [.57, .70], $p < .001$ for the vocabulary aspect, $k = .71$, 95% CI [.67, .76], $p < .001$ for the comprehension aspect, $k = .66$, 95% CI [.62, .70], $p < .001$ for the appreciation aspect, and $k = .70$, 95% CI [.68, .73], $p < .001$ for total understanding aspect. These Cohen's Kappa indicate an acceptable level of agreement was met (Frumkin & Selbom, 2013; McHugh, 2012). To ensure a fair consensus was met, all members of the coding team coded the entire data set and discrepancies were discussed until a consensus was met. Further, if consensus could not be met between the coding team, the discrepancies were discussed with a third member of the research team (the thesis supervisor who had prior experience coding responses on the NZRC-CQ). Therefore,

the final codes are the result of multiple researchers' agreement, which is a strength as it minimises bias (Syed & Nelson, 2015). Inter-rater reliability was not calculated for the prior knowledge or cued recall aspects, as these aspects involved counting the number of concepts recalled (Gaston, 2017).

Like other assessment instruments of understanding, the NZRC-CQ is based on the legal entitlements outlined in legislation. Legal rights are heterogenous in nature and therefore test scores are not be expected to show high levels of internal reliability (Frumkin & Selbom, 2013; Goldstein et al., 2011). Therefore, Cronbach's alpha was not calculated.

Data Preparation

Data preparation included addressing missing data. A small proportion (0.10%) of the data was missing, which the Little's Missing Completely at Random Test revealed was missing at random ($p = .541$). A proportion of this data was missing from the appreciation task and mean substitution was deemed the most appropriate method to address this (Parent, 2013). Further, three participants were unable to complete the KBIT-2 due to unforeseen time constraints, and because this missing data was a separate measure, a regression imputation was determined as the most appropriate method to address this (Little & Rubin, 2019). This method uses a regression equation to provide an estimate of the missing data, based on two known variables which have a linear relationship (Little & Rubin, 2019). In the current study, total understanding scores were regressed on verbal intelligence, as these variables show a positive linear relationship (Colwell et al., 2005; Erickson et al., 2020; McLachlan et al., 2011). To ensure the methods used to address the missing data provided a good estimate, all analysis was conducted with the missing values excluded and included. The results from these analyses were not noticeably different (e.g., no differences in model fit, significance

levels, confidence intervals, size of the coefficients and overall interpretations of the data were found). Therefore, the full dataset with the missing values addressed was used.

Data preparation also included converting participant's scores on each task of the NZRC-CQ to a percentage, which was then used in subsequent analysis to allow for comparisons across the different aspects of understanding. Further, dummy coded variables were created to represent each condition (0 = control, 1 = video) and interaction terms were computed; dummy code video x age and dummy code control x age.

Planned Analysis

The first part of the analysis aimed to explore the level of understanding among young people in New Zealand. This was done by presenting the mean scores across each aspect of understanding and the percent of responses demonstrating *incomplete*, *partial* and *complete understanding* on items assessed in the NZRC-CQ. The second part of the analysis aimed to examine the predictors of understanding across the various aspects. To examine this, five moderated multiple regressions were run to look at the effects of verbal IQ, age, condition and condition x age interactions on scores across each understanding aspect. Simple slopes analyses were conducted following significant interactions. If interaction terms were non-significant, they were removed from the model and multiple linear regression analyses were run to take a closer look at the main effects of verbal IQ, age and condition on understanding scores (as these variable's estimates may have been conditional on the interaction term being in the model, as interaction terms use degrees of freedom). Effect sizes for all regression analysis were calculated using Cohen's f^2 , with 0.02, 0.15, and 0.35 representing small, medium and large effect sizes respectively (Cohen, 1988).

The planned analysis included multiple testing which inflated the risk of type 1 errors (finding a statistically significant result due to chance). The Bonferroni correction can protect against this (Armstrong, 2014; Streiner & Norman, 2011) and was considered in the current

study. However, this correction was not used in this study because the correction inflates the risk of type 2 errors which could lead to important differences being ignored (Armstrong, 2014; Streiner & Norman, 2011) and is not recommended for analysis which uses multiple regression (Armstrong, 2014). Instead, significant results were interpreted with caution.

Assumption Testing

The data was entered in IBM SPSS statistics version 25 for all analysis. The data was examined to assess its suitability for the planned analysis. The following outlines the assumption testing for all multiple regressions performed: 1) The assumption of independence was met as Durban-Watson Test values were close to two, indicating a lack of autocorrelation. 2) Visual inspection of P-P plots, scatterplots and histograms revealed the assumptions of linearity, homoscedasticity and normality were met (Field, 2013; Laerd, 2019). 3) There was evidence of multicollinearity for the analyses involving moderated multiple regression, as tolerance levels were under the recommended 0.1 threshold and VIF were over the recommended value of 10 (Laerd, 2019). To address this violation, verbal IQ and age were mean centred and interaction terms using the centred values were recomputed (Field, 2013; Laerd, 2019). There was no evidence of multicollinearity for the analysis using multiple linear regression, therefore variables were not mean centred in these models. 4) There were no leverage or influential points identified in the data. However, there were studentised deleted residuals greater than ± 3 standard deviations, indicating there were outliers (Laerd, 2019). All analyses were completed with outliers included and excluded from the dataset, which revealed the outliers did not noticeably impact the results in most regression models (e.g., the significance of predictors, size of the coefficients, model fit and overall interpretations were not different). Therefore, the outliers were included in these analyses. However, in the moderated multiple regression analysis with vocabulary entered as the dependent variable, the outliers did noticeably impact the results. It was decided the most

appropriate way to handle these outliers was to remove them from the analysis (Aguinis et al., 2013; Laerd, 2019). The results with outliers included are presented in Appendix D.

Power analysis determined that 74 participants would be needed to perform multiple regression analysis with 80% power, a medium population effect size, for three independent variables (Cohen, 1992). The sample size obtained was therefore adequate for this analysis. However, a sample size of approximately 165 (Shieh, 2009) would be required for the moderated multiple regression analysis, as interactions require large statistical power (McClelland & Judd, 1993; Shieh, 2019).

Chapter Three: Results

This study had four hypotheses. First, young people in New Zealand will show incomplete understanding of their legal rights. This hypothesis will be examined in the control group only, as there is a paucity of research on what young people in New Zealand know about their legal rights and participants in the video condition were exposed to the educational intervention. Second, age will be a significant positive predictor of understanding. Third, the educational intervention will improve understanding. Fourth, it was hypothesised condition will moderate the effect of age on understanding. To address these hypotheses, the results section will be presented in two parts. The first part will address hypothesis one and three by examining the mean understanding scores for each aspect and providing examples of the common errors young people made on items in the New Zealand Rights Caution Competency Questionnaire (NZRC-CQ; Fortune et al., 2017). The second

part will address hypothesis two, three and four using multiple regression to examine the predictors of young people's scores across the various aspects of understanding.

Part One: Young People's Level of Legal Rights Understanding

The following part will first outline young people's mean scores on each aspect of the assessment and how these differed by condition.

Prior Knowledge Scores

Overall, participants knew very little about their legal rights before participating in this study. This was demonstrated by the total sample's low mean score on the prior knowledge aspect ($M = 10.72\%$, $SD = 10.41$). Mean prior knowledge scores were not statistically different for the video ($M = 11.15$, $SD = 9.81$) and control conditions ($M = 10.31$, $SD = 11.06$), $t(97) = 0.40$, $p = .691$, $d = 0.08^5$, indicating young people in both conditions had similarly low levels of legal rights knowledge at the start of the study. It was common for the young people to mention they learnt about their rights through media, with one young person saying "I've never really been taught my legal rights, I've just seen it through T.V. shows ...so I don't actually know what I can and can't do when I'm with the police officer." Another participant commented "where else would you hear it if you didn't get arrested?"

Young People's Mean Understanding Scores Across the Aspects

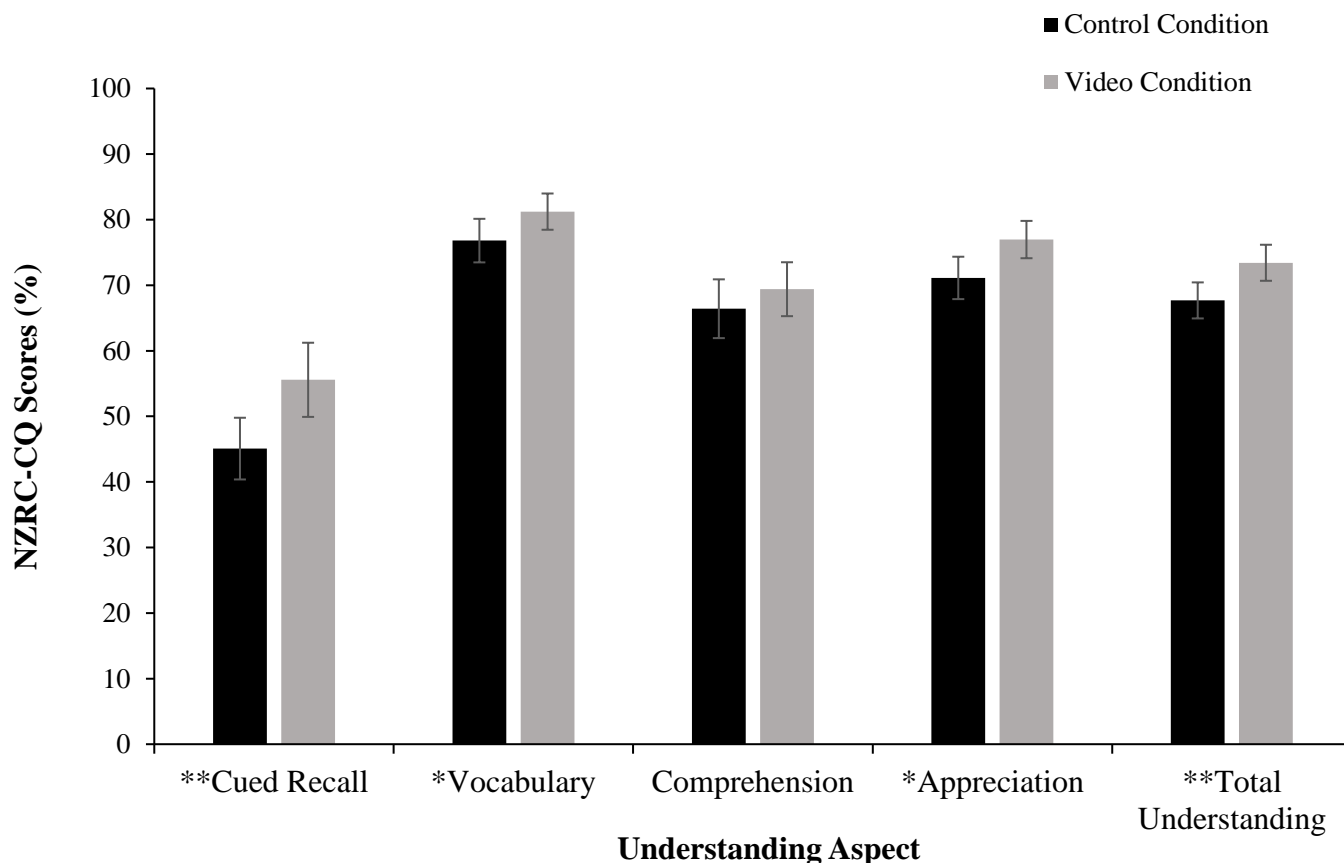
Independent samples t-tests were conducted to compare the mean understanding scores between the control and video conditions (see Figure 1). First, a statistically significant difference was found in scores in the cued recall aspect, indicating those in the video condition ($M = 55.57$, $SD = 18.60$) had significantly higher scores than those in the control condition ($M = 45.08$, $SD = 17.24$), $t(97) = 2.91$, $p = .004$, $d = 0.59$. Second, a statistically significant difference was found in vocabulary scores, indicating those in the video condition ($M = 81.22$,

⁵ Cohen's d is a measure of effect size, where $d = 0.2$, 0.5 and 0.8 represent small, medium and large effect sizes respectively (Cohen, 1988).

$SD = 9.87$) had significantly higher scores than those in the control condition ($M = 76.80$, $SD = 11.98$), $t(97) = 2.00$, $p = .048$, $d = 0.41$. Third, a non-significant difference was found in comprehension scores, indicating those in the video condition ($M = 69.39$, $SD = 14.91$) had similar scores to those in the control condition ($M = 66.41$, $SD = 16.17$), $t(97) = 0.95$, $p = .344$, $d = 0.19$. Fourth, a statistically significant difference in scores in the appreciation aspect was found, indicating those in the video condition ($M = 76.96$, $SD = 12.76$) had significantly higher scores than those in the control condition ($M = 71.11$, $SD = 11.67$), $t(19) = 2.38$, $p = .019$, $d = 0.48$. Finally, a statistically significant difference in scores in the total understanding aspect was found, indicating those in the video condition ($M = 73.42$, $SD = 9.63$) had significantly higher scores than the control condition ($M = 67.68$, $SD = 9.91$), $t(97) = 2.92$, $p = .004$, $d = 0.59$. As expected, these results show those in the video condition had better understanding than those in the control condition across most aspects, however, mean levels of understanding in both conditions were still incomplete.

Figure 1

Mean Scores for Each Aspect of Understanding Compared Between Conditions.



Note. Sig * $p < .05$. ** $p < .01$. *** $p < .001$.

Young People's Legal Rights Conceptual Errors

The concepts young people had difficulties with will now be outlined to provide an indication of what parts of the Caution were most challenging for young people. No statistical analysis of group differences between conditions was undertaken for this part, as this would involve multiple testing which would increase the risk of type 1 errors.

Conceptual Errors in Cued Recall. Most young people recalled core concepts; the right to remain silent was recalled by 96% and 98% in the control and video condition respectively and the right to lawyer was recalled by 72% and 79.6% in the control and video

condition respectively. Conversely, young people had difficulty recalling more specific details, including the right to speak to a lawyer “without delay” (recalled by only 8% and 10.2% in the control and video condition respectively) and “in private” (recalled by 20% and 26.5% in the control and video condition respectively). Although more young people in the video condition recalled the right to a nominated person “before” questioning (46% in the control condition and 71% recalled in the video condition), and “during” questioning (32% recalled in the control, compared to 63.3% in the video condition), recall rates were still low in the video condition. Further, fewer young people in the video than the control condition recalled that what they said could be used as evidence (49% and 76% recall respectively), illustrating an area where the video did not aid young people’s memory. These results are displayed in Table 5.

Table 5*Percent of Concepts Missed and Recalled for Each Condition*

Concept	Missed (%)		Recalled (%)	
	Control	Video	Control	Video
Right to Silence	4	2	96	98
Stop speaking	62	46.9	38	53.1
Evidence	24	51	76	49
Lawyer (before)	28	20.4	72	79.6
Nominated Person (before)	54	28.6	46	71.4
Without delay	92	89.8	8	10.2
In Private	80	73.5	20	26.5
Before deciding	58	34.7	42	65.3
Lawyer (during)	56	44.9	44	55.1
Nominated Person (during)	68	36.7	32	63.3
While Answering	64	44.9	36	55.1
Police Provide	60	59.2	40	40.8
Free Lawyer	64	44.9	36	55.1

Conceptual Errors in Vocabulary. Conceptual errors were also noted on many of the key terms that appear in the Caution (see Table 6). Young people struggled to understand core concepts, such as what “having a right” meant (48% and 38.8% demonstrated complete understanding in the control and video condition respectively). It was also common for young people to confuse legal words with other words, such as confusing “jury”, with “judge”, and this is demonstrated in one young person’s definition of jury; “something like a judge, I don’t

know...something to do with court and stuff?”, and in other responses which confused the role of the jury with the role of witnesses.

Table 6

Conceptual Understanding of Vocabulary Items for Each Condition

Concept	Incomplete understanding (%)		Partial understanding (%)		Complete understanding (%)	
	Control	Video	Control	Video	Control	Video
Right	18	12.2	34	49	48	38.8
Statement	6	2	52	65.3	42	32.7
Recorded	4	2	36	26.5	60	71.4
Evidence	2	0	34	32.7	64	67.3
Judge	8	4.1	20	8.2	72	87.8
Jury	20	26.5	32	16.3	48	57.1
Lawyer	2	2	12	10.2	86	87.8
Delay	2	0	22	22.4	76	77.6
In private	0	0	10	8.2	90	91.8
Nominated Person	14	0	60	38.8	26	61.2

As shown in Table 6, young people had difficulties defining “nominated person”, however, levels of understanding varied depending on condition, with those in the video condition demonstrating more complete levels of understanding than those in the control condition (61.2% and 26% respectively). Young people in the video condition often incorporated additional information from the video in their responses; for example one young person said “a person you nominate to support you and someone you think can uphold your rights or help you talk to the police if you are nervous”, which demonstrates a good

understanding of how a nominated can help during police questioning, an area which young people otherwise struggled with. Alternatively, young people in both conditions demonstrated good understanding on terms which are more commonly used in everyday language, such as “private” (90% of control and 91.8% of video conditions demonstrated complete understanding), and “delay” (76% of the control and 77.6% of the video condition demonstrated complete understanding).

Conceptual Errors in Comprehension. Table 7 displays participants level of understanding on each item assessed in the comprehension aspect (with the concept assessed in each item displayed in the left-hand column). These results show that, although the right to silence had a high recall rate, a large percent of young people showed incomplete understanding of this right in the comprehension aspect. It was common for young people to hold misconceptions about this right, with a young person in the control condition explaining the right to silence meant, “you have to be quiet”, while another said “while the police are talking to you, you have to just be quiet so they can talk and you can have a chance to talk after.” Other participants failed to recognise the permanence of the right to silence, saying things like “I guess at a certain point you kind of just have to talk”. These examples illustrate the more common misconceptions young people in this sample had about their legal rights.

Item C5 contains five concepts (“the right to speak with a lawyer and/or any person nominated by you, without delay and in private”) and young people did not comprehend many of them; 72% in the control and 79.5% in the video condition did not understand they could have a lawyer “without delay”. Further, 54% in the control and 38.8% in the video condition did not understand what their right to a lawyer meant and commonly showed misconceptions about this concept, with one young person saying, “because the police have to know, so then the lawyer can pass it onto the police.”

Table 7*Conceptual Understanding of Comprehension Items for Each Condition*

Concept	Item Number	Incomplete understanding (%)		Partial understanding (%)		Complete understanding (%)	
		Control	Video	Control	Video	Control	Video
Silence	C1	14	6.1	18	6.1	68	87.8
Statement/Answer	C2	8	6.1	18	16.3	74	77.6
Stop answering	C3	30	12.2	8	10.2	62	77.6
Recorded	C4(a)	54	65.3	-	-	46	34.7
Evidence	C4(b)	8	24.5	-	-	92	75.5
Lawyer (before)	C5(a)	54	38.8	-	-	46	61.2
Nominated Person (before)	C5(b)	52	61.2	-	-	48	38.8
Delay	C5(c)	72	79.5	-	-	28	24.5
In Private	C5(d)	70	79.6	-	-	30	20.4
Speak to	C5(e)	42	32.7	-	-	58	67.3
Lawyer/Nominated person	C6(a)	82	75.5	-	-	18	24.5
While	C6(b)	14	8.2	-	-	86	91.8
Free lawyer	C7	4	4.1	28	36.7	68	59.2

Note. Items C4 to C6 were scored differently because more concepts are contained within these rights; the scoring schedule meant participants could only demonstrate incomplete or complete understanding on these items.

When referring to their “right to a free lawyer”, where only 68% of the control and 59.2% of the video condition demonstrated complete understanding, one participant in the

control condition commented, “for me it doesn’t really give a lot of information. Because, a lot of this doesn’t really give a lot of information, it kind of seems twisted”. Notably, there were concepts where young people in the video condition demonstrated poorer understanding than those in the control condition; including that “statements can be recorded” (46% of control and 34.7% of the video condition demonstrated complete understanding) and “used as evidence in court” (92% of control and 75.5% of video demonstrated complete understanding). This indicates there were concepts which were not adequately addressed in the educational video. These results are displayed in Table 7.

Conceptual Errors in Appreciation. Table 8 displays participants understanding of each item in the appreciation task (see Appendix A for the items included in the NZRC-CQ). Participants demonstrated a good understanding on some items which assessed their appreciation of the nature of police questioning, such as A1 (“why do you think the police officer wants to talk to Jane?”), where 98% of the control and 95.9% of the video condition demonstrated complete understanding. However, on other items which also assessed understanding of the nature of police questioning, such as A11 (“what might the police do with the information once they have it?”), participants showed poorer understanding (55.1% in the video and 60% of the control condition demonstrated complete understanding). A similar pattern was shown in participants appreciation of the right to silence; one young person commented the right to silence meant “you don’t have to talk if you don’t want to talk...at any time”. However, on another item, the same young person replied that the police “could they like hold her or arrest her?” if she remained silent. These examples illustrate young people are not able to consistently apply legal rights.

Another area of difficulty for young people was shown in A17 (“will the judge treat you differently if you choose to remain silent?”), where only 14% of the control and 34.5% of the video condition demonstrated complete understanding. Young people often had false

beliefs about this item, with one young person saying, “It might alter the judge’s decision on whether or not he’s guilty and it could potentially lead to his lawyer and Stephen looking really bad”. Another young person said “Does she have the right to remain silent or does she get arrested for affecting a police investigation...I heard it on Shortland Street [NZ television show] or something”, which highlights the role the media plays in young people’s misconceptions. It was common for young people to hold other false beliefs about the right to silence, including the belief that this right is not important if a person is innocent, with young people saying things like; “well, I mean, if she is innocent then she doesn’t have anything to be afraid about so why would she remain silent?”.

As shown in Table 8, one item directly assessed participants ability to apply the right to a nominated person. It seems young people tended to understand a nominated person can support them during police questioning (15a), but didn’t understand a nominated person can also help them understand their rights (15b). Instead, young people had other ideas about the role of the nominated person, including that they were there to “tell her off” and to “tell her to do something if she doesn’t want to do it and she has to”.

Table 8*Conceptual Understanding of Appreciation Items for Each Condition*

Concept	Item Number	Incomplete		Partial		Complete	
		Understanding (%)		Understanding (%)		Understanding (%)	
		Control	Video	Control	Video	Control	Video
Appreciation of the nature of police questioning	A1	2	0	0	4.1	98	95.9
	A2	4	0	4	6.1	94	93.9
	A3	4	2	38	42.9	58	55.1
	A11	10	6.1	30	26.5	60	67.3
Appreciation of the right to silence	A4	10	4.1	6	6.1	84	89.8
	A5	56	24.5	50	32.7	24	42.9
	A6	4	4.1	28	20.4	68	75.5
	A12	14	6.1	12	6.1	74	87.8
	A13	32	18.4	14	22.4	54	59.2
	A14	30	26.5	20	12.2	50	61.2
	A17	74	40.8	12	24.5	14	34.7
Appreciation of the right to a lawyer	A7	0	2	12	6.1	88	91.8
	A8	18	10.2	20	26.5	62	63.3
	A9	2	6.1	2	12.2	96	81.6
	A10	18	22.4	40	22.4	42	55.1
	A16	2	8.2	26	18.4	72	73.5
	A18	16	10.2	16	18.4	68	71.4
	A19	36	34.7	20	16.3	44	49
Appreciation of the right to a nominated person	A15(a)	26	16.3	-	-	74	83.7
	A15(b)	92	81.6	-	-	8	18.4

Note. Item A15 was scored differently because two concepts are included within this right; the scoring schedule meant participants could only demonstrate incomplete or complete understanding on this item.

The items are numbered by the order in which they appeared in the interview.

Part Two: Predictors of NZRC-CQ Scores

The following section will report on the moderated multiple regression used to examine age x condition interactions and the multiple linear regression used to examine the main effects of age and condition on understanding (when controlling for verbal intelligence). The analysis for each aspect of understanding will be presented in turn.

Predictors of Cued Recall Scores

To examine the interaction between age x condition on cued recall scores, a model was run with cued recall as the dependent variable (DV) and verbal IQ, age, condition and condition x age interactions as the independent variables (IVs). Using the enter method a significant regression equation was found ($F(4, 94) = 5.10, p = .001$, Cohen's $f^2 = .22$), with the model accounting for 18% of the variance in participants cued recall scores (i.e. $R^2 = .18$), with an $R^2_{Adjusted}$ of .14. In this model, the condition x age interaction was not a statistically significant predictor. These results suggest the effect of age on understanding was the same for both conditions, which did not support the hypothesis. Age was found to be a non-significant predictor of cued recall scores, however, verbal IQ and condition each made a unique and statistically significant contribution to this model (see Table 9).

To further examine the predictors of cued recall scores, the age x condition interaction term removed and another model was run with verbal IQ, age and condition as the IVs and cued recall scores as the DV (see Table 10). Using the enter method, a significant regression equation was found, $R^2 = .18, F(3, 95) = 6.87, p < .001$, Cohen's $f^2 = 0.22$. This model accounted for 18% of the variance in participants cued recall scores ($R^2_{Adjusted} = .15$), representing a medium effect size. In contrast to the previous model, age was a significant positive predictor of cued recall scores in this model (this could be due to the differences in power and degrees of freedom between the regression models), while verbal IQ and condition remained unique and statistically significant, positive predictors of cued recall scores. These

findings show those with higher IQ, who were older, and who viewed the video, had better understanding in the cued recall aspect. These results supported the hypotheses. As shown in Table 10, the standardised coefficients indicate condition was the most important predictor of cued recall scores, followed by verbal IQ and then age.

Predictors of Vocabulary Scores

The next analysis used moderated multiple regression, with vocabulary scores entered as the DV, and verbal IQ, age, condition and condition x age interactions as the IVs. Two outliers were removed from this analysis, due to their influence on interpretations (the analysis with outliers included is presented in Appendix D). A significant regression equation was found, ($F(4, 90) = 4.33, p = .003$, Cohen's $f^2 = 0.19$) with an R^2 of .16, ($R^2_{Adjusted} = .12$). As shown in Table 9, the interaction between age x condition was non-significant in this model, which did not support the hypotheses. However, verbal IQ, age and condition were statistically significant and positive predictors in this model.

The interaction term was removed from this model to further explore the main effects of verbal IQ, age and condition on scores in the vocabulary aspect. Using the enter method, a significant regression equation was found, $R^2 = .18, F(3, 95) = 6.90, p < .001$, Cohen's $f^2 = 0.22$. This model accounted for 18% of the variance in participants vocabulary scores (with an $R^2_{Adjusted} = .15$), representing a medium effect size. There were no noticeable differences in the size or significance of the coefficients in this model predicting vocabulary scores when the interaction term was removed; as shown in Table 10, verbal IQ, age and condition were unique and statistically significant, positive predictors of vocabulary scores. These results suggest those with higher verbal IQ, who were older, and who viewed the video, had better understanding in the vocabulary aspect. These results supported the hypotheses. The standardised coefficients demonstrate age was the most important predictor in this model, followed by verbal IQ and then condition.

Table 9*Summary of Predictors of Models Exploring Interaction Effects*

Variable	Cued Recall Scores					Vocabulary Scores (excluding outliers)				
	<i>B</i> [95% <i>CI</i>]	<i>SE B</i>	<i>t</i>	β	<i>p</i>	<i>B</i> [95% <i>CI</i>]	<i>SE B</i>	<i>t</i>	β	<i>p</i>
Constant	44.86 [40.02, 49.70]	2.44	18.40	-	< .001	77.39 [74.82, 79.97]	1.30	59.68	-	< .001
Verbal IQ (centred)	0.42 [0.12, 0.72]	0.15	2.82	.15	.006	0.26 [0.97, 0.41]	0.08	3.22	.32	.002
Age (centred)	2.27 [-0.22, 4.77]	1.26	1.81	.25	.073	2.92 [0.89, 3.70]	0.71	3.24	.45	.002
DC Condition	10.92 [4.03, 17.81]	3.47	3.15	.30	.002	4.69 [1.02, 8.35]	1.85	2.54	.24	.013
Condition x Age (centred)	0.13 [-3.32, 3.57]	1.74	0.07	1.74	.942	-1.68 [-3.57, 0.21]	0.95	-1.77	-.24	.080
Variable	Appreciation Scores					Total Understanding Scores				
	<i>B</i> [95% <i>CI</i>]	<i>SE B</i>	<i>t</i>	β	<i>p</i>	<i>B</i> [95% <i>CI</i>]	<i>SE B</i>	<i>t</i>	β	<i>p</i>
Constant	70.94 [67.89, 73.99]	1.54	46.18	-	.001	67.57 [65.23, 69.91]	1.18	57.29	-	.001
Verbal IQ (centred)	0.41 [0.22, 0.59]	0.10	4.28	.40	.001	0.36 [0.21, 0.50]	0.07	4.90	.43	.001
Age (centred)	2.75 [1.18, 4.32]	0.79	3.48	.44	.001	2.86 [1.65, 4.06]	0.61	4.71	.57	.001
DC Condition	6.22 [1.88, 10.56]	2.19	2.85	.25	.005	6.06 [2.73, 9.40]	1.68	3.61	.30	.001
Condition x Age (centred)	-0.42 [-2.59, 1.76]	1.09	-0.38	-.05	.705	-1.30 [-2.97, 0.36]	0.84	-1.55	-.18	.124

Note. DC = dummy code; *B* = unstandardised regression coefficient; *CI* = confidence interval; *SE B* = Standard error of the coefficient; β = standardised coefficient.

Table 10*Summary of Predictors of Models Exploring Main Effects*

Variable	Cued Recall Scores					Vocabulary Scores				
	<i>B</i> [95% <i>CI</i>]	<i>SE B</i>	<i>t</i>	β	<i>p</i>	<i>B</i> [95% <i>CI</i>]	<i>SE B</i>	<i>t</i>	β	<i>p</i>
Constant	-32.65 [-78.80, 13.50]	23.24	-1.41		.163	22.62 [-5.06, 50.30]	13.94	1.62		.108
Verbal IQ	0.42 [0.13, 0.72]	0.15	2.84	.28	.006	0.24 [0.07, 0.42]	0.09	2.13	.27	.008
Age	2.34 [0.54, 4.13]	0.90	2.59	.25	.011	1.98 [0.90, 3.05]	0.54	3.64	.36	<.001
DC Condition	10.92 [4.07, 17.78]	3.45	3.17	.30	.002	4.58 [0.47, 8.69]	2.07	2.21	.21	.029
Variable	Appreciation Scores					Total Understanding Scores				
	<i>B</i> [95% <i>CI</i>]	<i>SE B</i>	<i>t</i>	β	<i>p</i>	<i>B</i> [95% <i>CI</i>]	<i>SE B</i>	<i>t</i>	β	<i>p</i>
Constant	-7.72 [-36.82, 21.38]	14.66	-0.53		.600	-0.77 [-23.38, 21.84]	11.39	-0.07		.946
Verbal IQ	0.40 [0.22, 0.59]	0.09	4.29	.39	<.001	0.35 [0.21, 0.50]	0.07	4.79	0.42	<.001
Age	2.54 [1.41, 3.67]	0.57	4.46	.41	<.001	2.21 [1.33, 3.09]	0.44	4.99	0.44	<.001
DC Condition	6.22 [1.90, 10.54]	2.18	2.86	.25	.005	6.05 [2.69, 9.41]	1.69	3.58	.30	.001

Note. DC = dummy code; *B* = unstandardised regression coefficient; *CI* = confidence interval; *SE B* = Standard error of the coefficient; β = standardised coefficient.

Predictors of Comprehension Scores

A moderated multiple regression was run with comprehension scores as the DV, and verbal IQ, age, condition and condition x age interaction as the IVs. Using the enter method, a significant regression equation was found ($F(4, 94) = 3.37, p = .013, \text{Cohen's } f^2 = .15$). This model accounted for 13% of the variance in comprehension scores ($R^2_{\text{Adjusted}} = .09$), representing a small effect size. Verbal IQ and the condition x age interaction made a unique and statistically significant contribution to this model predicting scores in the comprehension aspect. While there was a significant main effect of age and a non-significant effect of condition on comprehension scores, the significant interaction between these two variables indicate the effect of these variables on comprehension scores were dependent on each other. These results supported the hypotheses. The nature of this interaction will be unpacked below. The regression coefficients, intercept and confidence intervals are presented in Table 11.

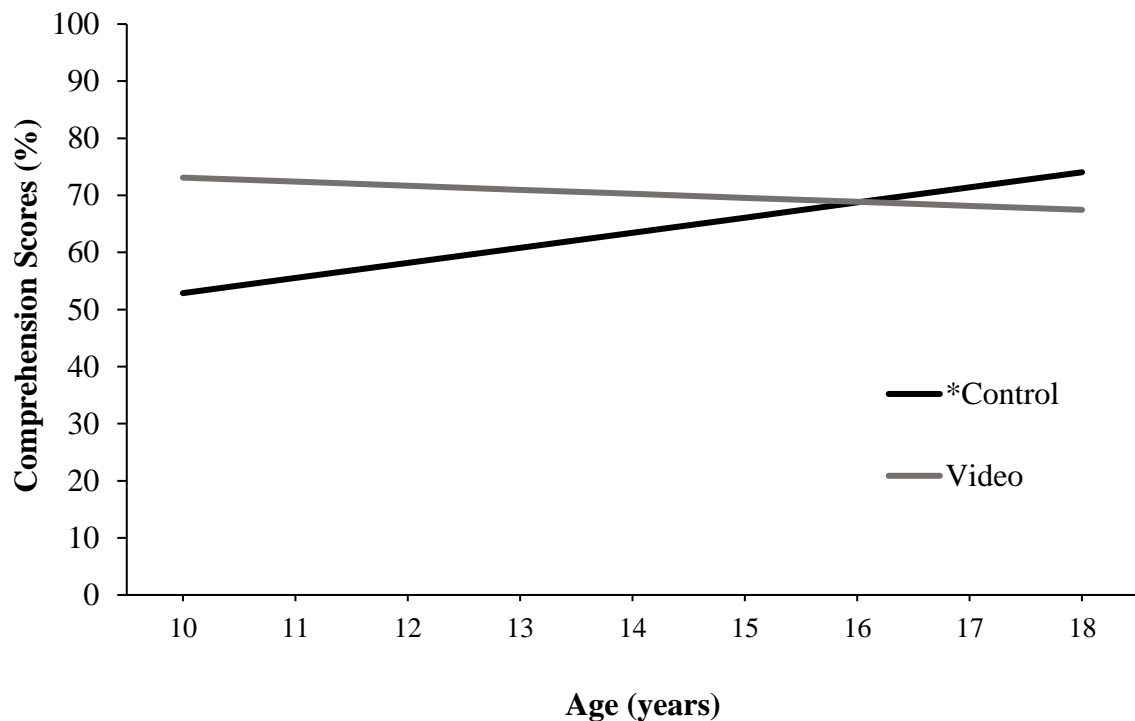
Table 11

Summary of Model Predictors of Comprehension Scores

Variable	<i>B</i> [95% CI]	<i>SE B</i>	<i>t</i>	β	<i>p</i>
Constant	66.38 [9.67, 61.81]	13.14	31.55	-	<.001
Verbal IQ (centred)	0.31 [0.05, 0.57]	0.13	2.38	.13	.019
Age (centred)	3.31 [1.16, 5.46]	1.08	3.05	.43	.003
DC Condition	3.31 [-2.63, 9.26]	2.30	1.11	.11	.271
DC Condition x Age (centred)	-3.54 [-6.51, -0.57]	1.50	-2.36	-1.50	.020

Note. DC = dummy code; *B* = unstandardised regression coefficient; CI = confidence interval; *SE B* = Standard error of the coefficient; β = standardised coefficient.

Simple slopes analysis was used to examine the nature of the moderating effect of condition on the association between age and understanding in the comprehension aspect. As shown in Figure 2, there was a non-significant association between age and scores in the comprehension aspect for those who were in the video condition, $B = -0.23$, $SE = 1.09$, $t = -0.21$, $p = .832$, 95% CI [-2.9, 1.93] and a statistically significant, positive association between age and scores in the comprehension task for those who were in the control condition, $B = 3.31$, $SE = 1.08$, $t = 3.05$, $p = .003$, 95% CI [1.16, 5.46]. Furthermore, pairwise comparisons of the estimated marginal means of comprehension scores at different ages revealed younger youth (aged 10-years) in the control condition scored significantly poorer than those in the video condition ($F(1, 95) = 5.64$, $p = .020$). However, older youth (aged 18 years) in the control condition did not have significantly different comprehension scores than those in the video condition ($F(1, 95) = 1.56$, $p = .215$). These findings suggest the educational video significantly improved younger youths understanding of legal rights in the comprehension aspect, but not older youths.

Figure 2*The Relationship between Age and Comprehension Scores for Each Condition*

Note. * $p < .05$. ** $p < .01$. *** $p < .001$

Predictors of Appreciation Scores

A moderated multiple regression was run with appreciation scores as the DV, and verbal IQ, age, condition and condition x age interactions as the IVs. Using the enter method, a significant regression equation was found ($F(4, 94) = 9.11, p < .001$, Cohen's $f^2 = .43$), with an R^2 of .28 ($R^2_{Adjusted} = .25$). The condition x age interaction, was not a significant predictor in this model, which did not support our hypothesis. Alternatively, verbal IQ, age, and condition, each made a statistically significant and unique contribution to the prediction of appreciation scores (see Table 9).

The interaction term was removed from this model, and verbal IQ, age and condition were used to predict scores in the appreciation aspect. Using the enter method, a significant regression equation was found, $F(3, 95) = 12.21, p < .001$, Cohen's $f^2 = 0.39$. This model

accounted for 28% of the variance in appreciation scores ($R^2_{Adjusted} = .26$), representing a large effect size. As expected, verbal IQ, age and condition, were significant, positive predictors of appreciation scores. As shown in Table 10, having higher IQ, being older, and viewing the video were all predictive of better understanding in the appreciation aspect. Age was the most important predictor in this model, followed by verbal IQ and then condition.

Predictors of Total Understanding Scores

A final moderated multiple regression was run with total understanding as the DV and verbal IQ, age, condition and condition x age interactions as the IVs. Using the enter method, a significant regression equation was found ($F(4, 94) = 12.84, p < .001$, Cohen's $f^2 = .54$), with an R^2 of .35 ($R^2_{Adjusted}$ was .33), representing a large effect size. The interaction between age x condition was not significant in this model, which did not support the hypothesis. However, verbal IQ, age and condition each made a statistically significant and unique contribution to this model predicting scores in the total understanding aspect (see Table 9).

The non-significant interaction term was removed from the model, and using the enter method, a significant regression equation was found, $F(3, 95) = 16.08, p < .001$, Cohen's $f^2 = 0.52$. This model accounted for 34% of the variance in total understanding scores ($R^2_{Adjusted} = .32$), representing a large effect size. As in the previous model, verbal IQ, age and condition were unique and statistically significant, positive predictors of total understanding scores. These results demonstrate having higher verbal IQ, being older and viewing the video were all predictive of having better total understanding scores. These results supported our hypotheses. The standardised coefficients revealed age was the most important predictor in this model, followed by verbal IQ and then condition. These results are displayed in Table 10.

Summary

In summary, the findings from part one of this section have shown that, as hypothesised, young people in the control condition had low levels of legal rights

understanding and had difficulties with many concepts contained within the Rights Caution. While young people in the video condition continued to show conceptual misunderstandings, they demonstrated more complete understanding than the control group. Taken together, the second part of the results section has shown understanding improves with age (when controlling for verbal IQ) and the educational video significantly improved understanding across a range of aspects. These results supported the second and third hypothesis. However, as previously noted in the method chapter, no corrections for multiple testing were made in analyses, which increased the risk of finding statistically significant results due to chance (type 1 error). Further, condition was found to moderate the effect of understanding in the comprehension aspect. The finding of a significant condition x age interaction, despite an underpowered sample, emphasises the strength of this effect

Chapter 4: Discussion

When legal rights are not effectively communicated to young people, it can put them in a legally vulnerable position during police arrest and questioning. This study investigated whether young people in New Zealand can be better supported to understand their legal rights through a video-based educational intervention. The following subsections will outline the findings relating to each of the four hypotheses and discuss how these findings fit with wider literature in this area. The implications of this research for policy and practice in New Zealand will then be considered. Finally, this chapter will highlight the limitations and strengths of this study and provide suggestions for future research.

Hypothesis One: Young People's Understanding of Their Rights

The first aim of this study was to examine whether young people in New Zealand understand their legal rights and provide insight into the common difficulties young people have with legal rights. It is important to understand what young people already know about legal rights without intervention, as there is scarce research on this issue in New Zealand. As

such, this hypothesis was examined in the control group only, as participant's in the video condition had been exposed to the educational intervention.

Mean levels of understanding across the various aspects assessed in the New Zealand Rights Caution Competency Questionnaire (NZRC-CQ; Fortune et al., 2017) were examined, and in support of the first hypothesis, revealed understanding of legal rights to be incomplete within this sample of New Zealand young people. Even those with the greatest levels of understanding failed to achieve full understanding; with young people on average understanding 45% of the rights in the cued recall aspect, 77% in the vocabulary aspect, 66% in the comprehension, 71% in the appreciation. In total, young people understood about 68% of their legal rights. These findings are consistent with international research which has administered similar assessment instruments and observed comparable levels of understanding to the present study (e.g., Lierser et al., 2019; Salseda, 2012; Viljoen et al., 2007). Although it is positive that young people seem to understand most of their rights, concerning they may not understand over 30% of their rights. This indicates they would not have the level of understanding needed to make informed decisions about their legal rights in practice (Grisso, 1980).

Participants demonstrated the poorest understanding in the cued recall aspect, with participants remembering less than half of the information presented in the Caution on average. This finding closely resembles the results from international research using community (Eastwood et al., 2016; Eastwood et al., 2015) and justice-involved young people (Rogers et al., 2016). These similarities were found despite differences in content between American and New Zealand Cautions and the differences in language abilities between community and justice-involved samples (Anderson et al., 2016), indicating young people as a group consistently have difficulty remembering their legal rights. This is not surprising, as working memory is limited (Cowan 2010). Specifically, landmark research by Miller (1956)

found the capacity of memory is limited to five to nine pieces of information. The amount of information in the New Zealand Young Persons version of the Caution far exceeds this, as there are seven statements which can contain multiple concepts, and this is likely to overwhelm young people's memory capacity.

Further, young people in this study showed a variety of misunderstandings which could impact their capacity to make informed decisions about their legal rights when they are with police. For example, a large proportion of young people provided inadequate definitions of legal words such as 'jury'. This is problematic. If a young person does not understand the role of the jury in deciding legal outcomes, young people may not recognise the potential jeopardy they face when they are with police and may make decisions about their rights without fully appreciating the consequences of their choices. Consistent with this, Zelle et al. (2015) found 11 to 19-year olds involved in the justice system struggled to define many of the key words in the American Caution and often confused the roles of professionals who work in the justice system. This further reinforces the idea that young people lack the knowledge required to understand the complex legal words found in Cautions. Given these difficulties with legal terminology, it is not surprising young people in the present study showed further difficulties in the comprehension aspect. In this aspect, for example, young people did not understand their statements could be recorded and they were entitled to both a lawyer and nominated person before and during police questioning. Misunderstandings like these have been identified in international literature (Grisso, 1981; Rogers et al., 2011b; Winningham et al., 2018), demonstrating how young people's difficulties with legal rights is a widespread issue, with similar misconceptions shown among American and New Zealand young people. Young people's knowledge about legal rights is influenced by the media (Driver & Brank, 2009; Rogers et al., 2014; Strachan, 2008) and New Zealand young people are frequently exposed to American media. This could account for the similarities in

misconceptions observed between samples in both countries. As there is no formal legal rights education delivered in New Zealand schools, young people are unlikely to be exposed to their legal rights except for the often-inaccurate information they see on television (Rogers et al., 2014; Strachan, 2008).

In the appreciation section, young people's difficulties applying their legal rights were wide ranging and related to many concepts within the Caution. Consistent with previous literature, this points to the universality of young people's difficulties with legal rights (Lierser et al., 2019; Salseda, 2012; Strachan, 2008; Zelle et al., 2015). Although young people could frequently recall their right to silence (over 90%), they performed poorly when applying this right, particularly on items where pressure was applied (e.g., on the item asking them what Kiri should do if the police tell her she must tell them what happened). This illustrates young people may have a superficial or surface level understanding of legal rights and, consistent with international research, struggle to utilise them in situations where they face pressure to comply when police are present (Goodwin-De Faria & Marinos, 2012; McLachlan et al., 2011; Steinberg et al., 2009).

Although the appreciation aspect presented difficulties for young people, this was not the aspect where young people performed the poorest in the current study. This is at odds with research using samples of justice-involved young people in America, which has shown young people have particular difficulty appreciating what their rights mean in practice (Viljoen et al., 2007; Zelle et al., 2015). These inconsistencies could be accounted for by the differences in samples used. The studies by Viljoen et al. (2007) and Zelle et al. (2015) used samples of young people already in the justice system, suggesting the appreciation aspect may present more difficulties for justice-involved young people than those from the community. Zelle et al. (2015) explains the appreciation task is particularly challenging because it requires additional abilities than the other aspects of understanding, such as the

ability to consider long-term consequences and appraise risks (this issue will be discussed in more detail in later subsections). Young people who encounter the justice system show greater difficulties with these abilities (Cauffman et al., 2007), which adversely impacts their performance in the appreciation aspect, more so than those from the community. Given these broader developmental issues, it may be unreasonable to expect these young people to understand their legal rights as they are currently delivered in the New Zealand Caution, emphasising the need for more support in this area.

The current results are partially consistent with previous New Zealand based research, which also examined young people's understanding of legal rights among a community sample (aged 10 to 16 years), and found levels of understanding which ranged from 38% in the cued recall aspect to 69% in the comprehension aspect (Gaston, 2017). These results show understanding among New Zealand young people is incomplete, however, the levels of understanding in the present study were higher than the similar study conducted by Gaston (2017). This could be accounted for by the differences in age ranges used; the present study included older youths who may show higher levels of understanding (Crawford and Bull, 2006; Grisso, 1980; Kelley, 2015; Strachan, 2008). Nevertheless, the level of understanding is still low, suggesting that, consistent with other New Zealand and international literature, young people continue to show difficulties understanding their legal rights.

Hypothesis Two: Age and Understanding

The second aim of this study was to examine the relationship between age and understanding among New Zealand young people (when controlling for the effect of verbal IQ). As hypothesised, age was a statistically significant and positive predictor of understanding across the cued recall, vocabulary, appreciation and total understanding aspects, and while there was no overall main effect of age in the comprehension aspect, age was found to have a significant positive relationship with understanding among those in the

control condition. These findings indicate the younger the participant was, the less they understood about their legal rights.

International studies have found that understanding of legal rights, across a range of aspects, increases with age (Eastwood et al., 2016; Freedman et al., 2014; Kelley, 2015; Salseda, 2012; Viljoen et al., 2007; Zelle et al., 2015). Research has also shown those under the age of 15-years are most at risk of incomplete legal rights understanding (Crawford & Bull, 2006; Grisso, 1980; Strachan, 2008; Viljoen et al., 2007). These age-based patterns have been replicated in community and justice-involved samples, in diverse groups of young people, using a variety of international Cautions. The consistency of these results speaks to the reliability and validity of this finding. The results from the present study provide more support for this, and further highlight age-based patterns in understanding are significant even when changes in verbal IQ with age are taken into account (Colwell et al., 2005; Salseda, 2012). The influence of age on understanding had not been found among New Zealand young people in previous research. Therefore, the present study makes a valuable contribution - this New Zealand based research is needed as factors such as cultural norms, educational context, policies and police practice differ between New Zealand and international settings.

There are various explanations for these age-based patterns in understanding (beyond the role that verbal intelligence plays). The following sections will outline the role that developmental and cognitive factors, and memory may play in young people's understanding across different ages.

Developmental Factors

Age-based trends in understanding mimic the progression of developmental factors in young people and such factors also play a role in young people's understanding of legal rights, particularly in the appreciation aspect (Sharf et al., 2017). This is supported by Colwell et al. (2005), who found factors which develop in young people, such as identity,

self-reliance, internal control and autonomy positively predicted understanding in the appreciation aspect. Further, typical appreciation items (e.g., “If the police officer tells Kiri that she has to tell them what happened, what should Kiri do next?”), requires young people to not only know the consequences of using their rights, but to also evaluate, appraise and reason about the risks and long terms consequences associated with the decision to speak or remain silent. However, younger youth’s (those under the age of about 15-years) abilities in relation to tasks such as considering long-term consequences, risk appraisal and engaging in goal-directed behaviours are less developed than older youths (Bryan-Hancock & Casey, 2010; Cauffman & Steinberg, 2000; Collins & Lennings, 2013; Iseline et al., 2009; Grisso et al., 2003; Steinberg, 2010). This means that although young people as a group are vulnerable in this area, younger youths’ developmental differences mean they are the most disadvantaged. Therefore, understanding of legal rights appears to be in part related to developmental factors.

Cognitive Factors

Another explanation for age-based trends in understanding relates to cognitive factors, such as reasoning, attention and other executive functions, which develop with age and also play a role in understanding of legal rights (Erickson et al., 2019; Goldstein et al., 2003; Grisso, 1980; Rogers et al., 2016). Further, although verbal IQ is the most relevant facet of intelligence for understanding, general intelligence is also a predictor (Colwell et al., 2005), and was not controlled for in the current study. However, there is debate over the relevance of cognitive factors in real-life cases of police questioning. Viljoen et al. (2005) found cognitive abilities were not predictive of legal decisions or legal rights understanding in real-life cases involving young people. This may be because there is high emotional arousal in questioning situations and immediate decisions are often required, which takes less of a toll on cognitive resources in comparison to other contexts, which allow for more time

and deliberation (Cohen et al., 2016; Viljoen et al., 2005). Cognitive resources may therefore play a role in age-based patterns of understanding in some contexts, but not in others.

Memory Capacity

Consistent with expectations, age-based patterns in understanding were also found in the cued recall aspect. The cued recall aspect of understanding relies on different abilities than other aspects of understanding, because of its dependency on memory (Erickson et al., 2019; Davies et al., 2011). The results from the current study suggest the abilities needed to recall legal rights develop with age. This is supported by research showing age-based patterns in verbal working memory and visual working memory; finding these capacities develop across adolescence and into adulthood (Cowan, et al., 2011; Thomason, et al., 2009; Yang et al., 2015). Theories surrounding the development of working memory show as people get older, they are better able to focus on relevant information and ignore irrelevant information, which means memory capacity becomes less overwhelmed and “cluttered” (Cowan, et al., 2011). Other theories suggest that as people get older (up until the age of about 19-years), they engage in more rehearsal and are therefore better able to encode information (Cowan, et al., 2011). These theories provide possible explanations for why recall ability improved with age in the present study, suggesting as youths got older, they may have been better able to utilise strategies to help them remember their rights. However, although age-based patterns were evident, all young people in this study demonstrated difficulty recalling their rights. This suggests the amount of information young people were exposed to overwhelmed their memory capacity, regardless of age.

Hypothesis Three: The Impact of Educational Intervention

The third aim of this study was to examine the impact of an educational video on legal rights understanding. In support of the third hypothesis, it was found those who viewed the video had significantly higher mean scores on all aspects of understanding than those in the

control condition, except for comprehension. Further analysis found the educational video was a statistically significant and positive predictor of understanding in the cued recall, vocabulary, appreciation, and total understanding aspects, when controlling for the effects of age and verbal IQ. These findings show the educational video improved young people's understanding in these aspects, which provided more support of the third hypothesis. These results will be discussed in relation to cued recall, vocabulary and appreciation, and a discussion of the results relating to comprehension will follow in the subsection relating to hypothesis four.

Cued recall

The present study found the educational video improved understanding in the cued recall aspect. This finding is consistent with Davies et al. (2011), who found recall rates significantly improved among university students who received an educational intervention which addressed misconceptions. These studies provide evidence educational interventions can make legal rights easier to remember, in both university students and young people. Both the present study and Davies et al. (2011) incorporated an additional listenability principal in the interventions, which was listing. Listing separates information into discrete categories and informs people of how many categories there are (Eastwood et al., 2012). Organising information in this manner reduces the demand on working memory as it helps information to be more easily retrieved (Portrat et al., 2016; Thalmann et al., 2019). This could account for the improvements in memory observed.

Another possible explanation for the effect of the educational intervention on understanding in the cued recall aspect was that young people in the video condition were exposed to the rights twice (in the educational video and when the Caution was read), whereas young people in the control condition were only exposed once. General learning research provides evidence that repeated exposure to information aids learning (Bromage &

Mayer, 1986; Congleton & Rajaram, 2011). Conversely, research on legal rights suggests being read the Cautions on multiple occasions does not lead to better understanding across any of the various aspects (Grisso, 1981; Kidd & Sullivan, 2014; Rogers et al., 2013b; Winningham, et al., 2018; Zelle et al., 2015). Therefore, it is unclear whether this would have had an impact, signifying the need for more research on this issue.

Vocabulary

The educational video also significantly improved understanding in the vocabulary aspect. This finding is consistent with previous literature which has shown young people, from both community and justice-involved samples, are better able to define legal words after receiving educational interventions (Driver & Brank, 2009; Strachan, 2008). These results are reassuring; they suggest young people can be taught the meaning of complex legal terms, which is an area young people typically struggle with (Eastwood et al., 2015; Metzger et al., 2018). However, Wall and Furlong (1985) suggest there may be limits to improvements in the vocabulary aspect, as young people who received an educational intervention still lacked the knowledge required to understand the key terms in the American Caution. This means the content included in educational interventions need to be carefully considered. The improvements in the present study suggest the content included in the video successfully targeted some of young people's difficulties with legal terminology, however, because these improvements were small and young people continued to show conceptual misunderstandings, there may have been other areas which the video failed to address.

Appreciation

This study found promising results in the appreciation aspect, where the educational video significantly improved understanding. This finding is consistent with research showing young people who receive educational interventions have better understanding of how to use their rights in hypothetical legal scenarios and were less likely to waive their rights (Davies et

al., 2011; Strachan, 2008; Wall & Furlong, 1985). Previous research has typically used an interactive medium (e.g., role plays and lectures) to deliver additional information to young people (Clomax, 2017; Strachan, 2008; War & Furlong, 1985) and the results from the present study provide evidence that similar results can be achieved with a video.

Although the mediums used to deliver information differed across studies, consistent across interventions is they taught young people about the importance and function of legal rights and provided additional information to address misconceptions. It seems providing information of this nature may help young people to better understand how legal rights can be applied in legal scenarios. These results are reassuring, as young people show developmental vulnerabilities in skills relating to decision-making which impacts their performance in this aspect and, as previously discussed, this is especially a problem for younger youth and those who are involved in the justice system (Bryan-Hancock & Casey, 2010; Cauffman & Steinberg, 2000; Collins & Lennings, 2013; Iseline et al., 2009; Sharf et al., 2017; Steinberg, 2010). Despite these inherent vulnerabilities, the current study, alongside previous literature, show understanding could still be improved. Other developmental research reinforces this, showing that providing information about the risks and consequences of legal decisions can support young people to make more mature decisions (Steinberg et al., 2009). These findings suggest that young people need to understand the importance and protection legal rights can offer to effectively use their rights. As it stands, this message may not be as effectively communicated in current Cautions in comparison to educational interventions.

Summary

The above discussion suggests legal rights understanding and legal rights knowledge should not be considered as separate, unrelated capacities, but rather legal rights knowledge facilitates understanding of legal rights. Additionally, these results provide further evidence that young people are not given the opportunity to learn about their legal rights in everyday

life. This is supported by the findings from the prior knowledge section in the current study, where young people only knew about 10% of their legal rights before being exposed to them. This is an issue because the way legal rights are currently delivered in New Zealand does not adequately address this lack of knowledge, resulting in a disconnect between what information young people need to make informed decisions about their legal rights and the information which is communicated to them in practice. The significant improvements for those who viewed the educational video indicate interventions which provide legal rights information may be one way to bridge this gap.

Hypothesis Four: Moderating Effects

A significant interaction between condition x age was only found for the comprehension aspect, suggesting condition moderated the effect of age on understanding only in this aspect, indicating partial support for the fourth hypothesis. Follow up analysis revealed the educational video significantly improved understanding among younger youth (those aged 10-years), but not among older youth (those aged 18-years) in the comprehension aspect.

Although, Strachan (2008) did not directly examine interaction effects, this study showed younger youth (aged 10 to 12-years old) demonstrated more improvements in understanding after receiving educational intervention than older youths (aged 13 to 16-year old), which resembles the results from the comprehension aspect in the current study. These consistencies were found despite the differences in mediums used to deliver the intervention, as Strachan (2008) used an interactive approach consisting of legal rights discussions and role-plays, while the current study used a video. Interactive approaches are often considered to be more developmentally appropriate for younger youth (aged 10 to 12-years), because they offer more opportunities for rehearsal and memory consolidation (Strachan, 2008).

However, the current study shows video-based educational interventions may be another developmentally responsive way to teach younger youths the meaning of their legal rights.

These results are surprising, as between 10 to 18-years there is marked developmental change, meaning 10-year olds are likely to show cognitive and developmental differences which may impede learning in comparison to those who are 18-years old (Bryan-Hancock & Casey, 2010; Cauffman & Steinberg, 2000; Colwell et al., 2005; Iseline et al., 2009).

However, there are a variety of explanations for why the educational intervention in the current study improved comprehension in younger youth but not older youth. For example, the information delivered may have been more useful for younger youth and targeted their lack of knowledge more effectively, which may have brought them up to a level of understanding comparable to older youths. This explanation is supported by research showing younger youths often hold different misconceptions than older youth (Driver & Brank, 2009; Rogers et al., 2014; Winningham et al., 2018). Alternatively, the information included in the educational video may not have been as helpful for older youths or addressed their lack of knowledge to the same degree.

A different pattern was found in the other aspects of understanding, as condition did not moderate the effect of age on understanding in the cued recall, vocabulary, appreciation or total understanding aspects. These findings suggest the educational intervention improved understanding across all ages in these aspects, indicating educational intervention may be appropriate for the entire age range which falls under the jurisdiction of youth justice in New Zealand. However, only tentative conclusions can be drawn based on these findings, as this study was underpowered, meaning significant interaction effects may not have been detected. More research is needed on this issue using a larger sample size.

Educational Intervention: Room for Improvements

Overall, this study has provided further evidence educational videos may be an effective tool for addressing incomplete legal rights understanding, however, it is important to acknowledge young people who viewed the video still failed to reach ideal levels of understanding across all aspects. This issue has been identified in other research, including Wall and Furlong (1985), where young people continued to show difficulties defining key rights after educational intervention. Further, Driver and Brank (2009) found improvements in understanding, but this was only an increase in understanding scores of about 7%. Gaps in knowledge therefore still exist even after intervention.

As previously noted, the reason for this in the present study may have been because the information presented did not target the meaning of the rights effectively or lacked important information. Analysis of the individual item errors across each aspect of understanding showed there were several items where young people in the video condition performed worse than the control condition (e.g., statements from young people can be recorded, statements can be used in courts and police can provide a free lawyer). These examples outline content areas which future educational videos should focus on.

Further, misconceptions are difficult to change. Strachan (2008) encountered this issue, as misconceptions continued to persist even after disconfirming information was presented through educational intervention. Unfortunately, misconceptions about legal rights are influenced by the messages young people receive, through outlets such as the media (Driver & Brank, 2009; Rogers et al., 2014; Strachan, 2008). Media portrayals of legal processes and legal rights can reinforce young people's false beliefs about their legal rights (Strachan, 2008). For example, young people hear the message they should do as authorities say, resulting in young people believing that complying with authority will result in the best outcome. Further, the false belief that the right to silence is not needed if you are innocent

may reflect a just-world belief that nothing bad will happen to if you have not done anything wrong (Sharf et al., 2017). This reinforcement results in entrenched false beliefs about legal rights which then act as heuristics young people use to make decisions when with police (Rogers et al., 2013a; Strachan, 2008). However, as false beliefs about legal rights can be so entrenched due to constant reinforcement, they become resistant to change even when disconfirming evidence is presented (Strachan, 2008). Therefore, misconceptions are likely to continue to persist even after educational intervention, as was the case in the present study.

In addition to the issues surrounding young people's false beliefs about legal rights, young people's difficulties with legal rights are likely due to a variety of factors which are broader than legal rights knowledge alone. As previously discussed, young people have developmental vulnerabilities in decision-making and cognitive abilities which play a role in young people's understanding of legal rights (Colwell et al., 2005; Iseline et al., 2009; Steinberg, 2010). Such factors are inherent to a young person's developmental stage and progress naturally over time, and are therefore difficult to change with intervention. However, there are other factors which can be addressed. As discussed in the introduction, previous research has shown young people are adversely impacted by the language, length and listenability of the Cautions. Such difficulties are likely to continue to adversely impact understanding even after educational intervention. Therefore, modifications to the delivery of legal rights may need to address a broader range of difficulties for more improvements to be shown.

Implications for Policy and Practice in New Zealand

A key theme throughout this thesis is the importance of considering the various ways young person's capacities can be impacted when they are with police. These include: young people's developmental vulnerabilities; the inaccurate and incomplete knowledge young people hold about legal rights; their difficulties remembering, explaining and applying legal

rights; and issues with compliance. Additionally, young people's capacities when engaging with police can be impacted by other factors, including; past trauma (Gluckman, 2020; Jun et al., 2018), mental health (Holman et al., 2018; Kubiak et al., 2019), and intergenerational crime families (Wolfe et al., 2017). With such an array of issues impacting young people, it is not surprising young people are at risk of making poorly informed legal decisions (Rogers et al., 2014; Sharf et al., 2017; Winningham et al., 2018; Kelley, 2015; Zelle et al., 2015).

Considering these various issues is important because it provides a more complete picture of young people's capacities and identifies the range of barriers which disadvantage young people when they are with police. Therefore, there are multiple places where a developmentally appropriate response is needed in policy and practice. Additionally, this study provides further evidence that, although legal rights present difficulties for young people as a single group, younger youths are most vulnerable. Therefore, police practice and policy should recognise the differences within this group and tailor responses accordingly to uphold their obligations under the Oranga Tamariki Act (1989) and UNCRC, and protect the wellbeing of all young people in New Zealand.

There are several ways young people's vulnerabilities could be responded to in practice. Almost forty years ago Grisso (1980) concluded young people's decisions about legal rights should be made in the presence of a lawyer, and the current study shows this conclusion is still relevant today. Young people would benefit from the protection a lawyer can offer and this is particularly true for younger youth, as a lawyer can help young people understand the complex and confusing nature of the justice system and provide legal guidance (Hopkins, 2015; Lynch, 2008). Further, police practice surrounding arrest and questioning is another place where appropriate responses to young people's legal rights difficulties are required. Legislation in New Zealand states police are required to use developmentally appropriate language when delivering legal rights, and although more

research is needed to determine what happens in practice in New Zealand, international research raises concerns over this issue. Analysis of police records in England and police self-reports in America, show police are not always aware of young people's developmental vulnerabilities and potential difficulties understanding their legal rights (Patry et al., 2017; Sim & Lamb, 2018; Meyer & Reppucci, 2007). To effectively respond to young people's needs requires police to be aware of young people's limited capacities in these areas and how they can best respond to ensure understanding – something few police are trained in.

Additionally, young people could also be supported with a developmentally responsive delivery of legal rights. Consistent with this aim, the New Zealand Young Persons version of the Caution was designed with young people's developmental vulnerabilities in mind, as it contains different language and more explanation than the adult version (New Zealand Police, 2011). The results from the present study support these aims and the importance of considering how best to support and protect young people who are arrested and questioned by police. However, these results also highlight the way this is currently being implemented is not working to the extent it was intended to; the Young Person's version of the Caution is not understood by the young people it was developed for. Further revisions are therefore needed to better communicate legal rights to young people in New Zealand.

International research has primarily focused on modifying the way information in the Caution is delivered (e.g., simplifying the language), and although some improvements have occurred using these approaches, these have been small. Similarly, legislation in New Zealand focuses almost exclusively on the use of developmentally appropriate language in the delivery of rights (Oranga Tamaki, 1989). This is not to say an emphasis on language is unimportant or not supported by research; however, the evidence suggests the complexity of language is only one difficulty faced by young people, and a broader approach is subsequently needed. Following this, the current study explored another approach which is

rarely considered in research or accounted for in legislation; the delivery of additional legal rights knowledge through educational intervention. This study found educational intervention shows promise as an effective tool, potentially enabling a more developmentally appropriate response to young people's difficulties with legal rights. However, the implementation of this approach should not exclude others, as previously discussed; it is likely there are a variety of explanations for young people's difficulties with legal rights understanding (Eastwood et al., 2015; Erickson et al., 2019; Goldstein et al., 2003). The current study instead indicates that a broader approach is needed to overcome these issues, and one part of this approach which has previously been overlooked is the focus on young people's legal rights knowledge. A delivery of rights which incorporates this knowledge may help young people in New Zealand to make more informed decisions about their legal rights.

Another issue which is often overlooked in research is how modifications to the delivery of rights impacts on different age groups. In this study, moderating effects were evident in the comprehension aspect, as the educational intervention improved comprehension of legal rights only among younger youths. There are implications of this finding for practice. The current study, alongside international research, shows younger youth need the most support to understand their rights. The findings from the current study provide important evidence educational interventions can teach younger youth about their rights. However, although it is a positive educational intervention is effective for the age group which is most vulnerable to incomplete understanding, older youths, and even some adults, still fail to reach the criteria for adequate understanding (Grisso, 1981; Woolard et al., 2008). Therefore, it is also important improvements are made in older aged youths. The findings from the current study suggest that improving comprehension of legal rights across such a wide range of ages may be difficult with one intervention. As such, the use of multiple educational interventions, designed for different ages, may need to be explored.

A variety of mediums have been used to deliver additional information in educational interventions, with interactive approaches and educational videos being the most effective (Clomax, 2017; Driver & Brank, 2009; Rogers et al., 2012; Wall & Furlong, 1985). However, in addition to the efficacy of these interventions, it is also important to consider the practicalities. Legal rights are delivered to young people upon arrest (Oranga Tamariki, 1989), meaning they are likely to be delivered in a variety of locations. Given this, videos are appropriate for practice because they can be easily shown on a portable device. Further, a video format allows for a consistent and standardised delivery of the rights, which is unlikely to be achieved in more interactive approaches where young people may receive different information depending on what questions are asked. Finally, as mentioned in the introduction chapter of this thesis, there are various issues with police explanation of rights (e.g., not checking young people have understood the rights effectively, delivering the rights too quickly, and explanations which include inaccurate information; Feld, 2013; McCardle et al., 2020; Sim & Lamb, 2018). An educational video does not rely so heavily on these explanations; but instead can deliver this information in a standardised format before or after the Young Persons version of the Caution has been read. Therefore, educational videos have the potential to address issues in young people's understanding in a practical way.

Evident throughout various stages of the New Zealand youth justice system is an emphasis on promoting the active and meaningful involvement of young people in the legal proceedings that involve them (Oranga Tamariki, 1989). Therefore, a developmentally responsible justice system needs to find the balance between protecting young people due to their developmental vulnerabilities, while allowing them the autonomy to make decisions about legal matters that involve them (Henning, 2012). The use of educational videos is consistent with this philosophy. For young people to be active participants in processes surrounding police arrest and questioning, the justice system needs to equip young people

with the knowledge required to understand legal rights, which would therefore promote young people's active involvement by facilitating their ability to make informed decisions (Viljoen et al., 2005). Thus, if a young person decides to waive their legal rights, they do so while understanding the consequences of this decision. Educational intervention may be one way to promote the balance between protecting young people, while supporting them to make mature decisions in the legal processes that involve them.

Limitations and Strengths

Limitations

Confounding Variables. By design, the educational video used in the current study incorporated several learning principles, such as the use of listing, video and text. Therefore, it is unclear whether the effect of the educational intervention on understanding was a result of the additional information as well as the learning principals which were incorporated. This limits the conclusions which can be drawn from this study. Further, the additional information delivered in this intervention followed two approaches; one which provided additional information pertaining to the function and significance of the rights, and the second which delivered additional information that aimed to correct common misconceptions held by young people. Further research is needed to tease apart which of these principals were most effective in creating change. For example, a variety of educational interventions which utilise each of the different principals separately could be developed and their effect on understanding assessed. Such research could provide more specific insights into the difficulties young people have with their legal rights and how these may be overcome.

Ecological Validity. Although the present study indicates there are problems with legal rights understanding among young people, the extent of the problem is underestimated in this research, as it, like most research in this area, was conducted in best case scenarios, in non-emotional environments (primarily in quiet rooms at school; Abramovitch, et al., 1995;

Drogin & Rogers, 2014; Kelley, 2015). Levels of understanding are likely to be worse in a real-world situation, due to situational factors which can adversely impact understanding in actual cases of police questioning, such as stress, emotional arousal and being under the influence of drugs (Cohen et al., 2016; Rogers et al., 2011a; Steinberg et al., 2009; Viljoen et al., 2005; Viljoen et al., 2007). Further, in the present study young people were asked to recall information about their rights immediately after they were exposed to the rights. This is not reflective of practice, where police questioning takes place over longer periods (Clearly, 2014; Feld, 2013), meaning young people must remember their rights for longer, which puts a larger demand on memory (Barrouillet et al., 2009). These limitations raise concerns over the generalisability of these results to real-life situations of police questioning and the efficacy of educational intervention in actual cases of police questioning.

This study also used a community sample of New Zealand students, who may not be representative of young people who are involved in the justice system, who are known to have higher levels of language and communication difficulties (Anderson et al., 2016; Bryan et al., 2006). These factors raise concerns over the generalisability of these results to the wider population of young people in New Zealand and to those who most likely will need to use these rights in practice. However, this limitation also highlights the important messages that can be drawn from the study, showing that, even in best-case scenarios, legal rights understanding is an issue. This emphasises the magnitude of this problem in real-life - youth who have committed offences and who are being questioned by police are vulnerable to not understanding their legal rights.

Finally, it is important to acknowledge the over-representation of Māori and Pasifika in youth offending statistics in New Zealand. Māori made up 59% of the young people charged in court between 2019 and 2020, while Pasifika made up 8% (Ministry of Justice, 2020). Unfortunately, the current sample was not representative of the youth justice

population in New Zealand in terms of ethnicity. Future research which targets a more representative sample of the youth justice population is therefore needed. This would provide important insight; as cultural protocols and practice (Elers, 2020) and past experiences of marginalisation (Varghese et al., 2019) influence interactions and engagement with police, and are therefore relevant factors to consider for legal rights understanding.

Strengths

Contribution. The design of this study addressed several limitations identified in previous literature. First, the entire age range that qualifies as a young person in the New Zealand justice system was used in this study, making the results generalisable as young people's varying levels of developmental vulnerabilities were captured. Second, this study used a control group, rather than a pre-test post-test design, which reduces the potential carry over effect from multiple testing. These results clearly show improvements in understanding were due to the educational intervention, rather than repeated testing. Third, although this study did not use a matched design, the random nature of allocation meant no significant differences were seen between the control and video conditions on key demographic variables (e.g., decile, age and gender), which again, more clearly shows improvements were due to the educational intervention.

Quality of Data. Another strength of this study was the quality of data obtained from the young people. This community sample was recruited from a variety of locations from around New Zealand (e.g., Whanganui, New Plymouth, Gisborne, Wellington) which speaks to the generalisability of the data, which, as previously discussed, was lacking in other areas. Further, the NZRC-CQ asks young people to respond verbally, which means young people's responses are not limited by closed-ended or survey style formats, providing a more accurate gauge of young people's levels of understanding. Additionally, this style of assessment incorporates questions which resemble how police are recommended to check young people's

understanding in practice (i.e. following the delivery of each right, police are directed to ask the young person to explain in their own words what the rights mean to them; New Zealand Police, 2011). Therefore, these results provide an indication of the responses and levels of understanding police may encounter when they arrest and question young people, which contributes to the ecological validity of this study.

Future research

This study has identified many leads which could be followed up in future research. Specifically, more research is needed to determine which parts of the educational intervention impacted understanding. Next, research should examine how interventions can be improved by including information to target young people's lack of knowledge which the present intervention failed to address and accounting for young people's wider difficulties with legal rights. Further, this study has focused on the use of an educational intervention in practice and has emphasised the importance of a medium which allows for the practical delivery of legal rights information. Future research could investigate whether delivering an intervention, which similarly addresses young people's lack of legal knowledge, can work in the classroom context. Such an intervention would not be as constrained by short time limits and could therefore take longer to fully explain the legal rights and could incorporate an interactive learning component, which although not appropriate in some contexts, may allow young people to rehearse and consolidate their learning (Strachan, 2008; Vermunt, 1996). Additionally, as previously discussed, young people hold entrenched false beliefs about their legal rights and the evidence suggests false beliefs are unlikely to be changed when disconfirming evidence is presented on just one occasion (Strachan, 2008), as was the case in the present study. If an educational intervention is incorporated into a classroom curriculum, it would allow the opportunity for young people's false beliefs to be challenged more effectively and over a longer period, which may increase the likelihood of change (Vermunt,

1996). Therefore, an intervention of this nature may provide a more long-term solution, and would mean that if a young person is arrested or questioned by police, they will have a better knowledge base from which to make informed decisions about their rights.

Conclusion

Young people are disadvantaged in the justice system due to their developmental stage, and therefore face a variety of challenges throughout various stages of legal processes (Grisso et al., 2003; Steinberg et al., 2009). The New Zealand youth justice system is designed to respond to young people's developmental needs (Lynch, 2008) and this thesis has focused on how well this need is met in relation to young people's understanding of their legal rights. Ensuring young people achieve adequate levels of legal rights understanding is important, as it can help young people to protect themselves from poorly informed decisions to waive their rights and falsely confession (Goldstein et al., 2003; Haney-Caron et al., 2018; Viljoen et al., 2007). Further, when young people understand their legal rights it supports the integrity of justice processes by ensuring statements are obtained from young people in a legal manner (Oranga Tamariki, 1989).

Despite the importance of legal rights understanding, young people have widespread difficulties which pertains to multiple parts of the Young Person version of the Caution. The primary aim of this study was to investigate whether young people can be better supported to understand their legal rights. This thesis has taken a novel approach to addressing young people's lack of legal rights knowledge. The current study found an educational intervention significantly improved young people's understanding across several aspects, however, young people still demonstrated issues with their legal rights understanding after receiving the intervention. Although other approaches may be needed to address the broader issues young people have with their legal rights, this study has shown educational interventions, which

provide additional information, could be at least part of the solution to addressing this important justice issue.

References

- Abramovitch, R., Peterson-Badali, M., & Rohan, M. (1995). Young people's understanding and assertion of their rights to silence and legal counsel. *Canadian Journal of Criminology*, 37(1), 1-18. <https://search.proquest.com/docview/618657452?accountid=14782>
- Aguinis, H., Gottfredson, R. K., & Joo, H. (2013). Best-practice recommendations for defining, identifying, and handling outliers. *Organizational Research Methods*, 16(2), 270-301. <http://dx.doi.org.helicon.vuw.ac.nz/10.1177/1094428112470848>
- Anderson, S. A. S., Hawes, D. J., & Snow, P. C. (2016). Language impairments among youth offenders: A systematic review. *Children and Youth Services Review*, 65, 195-203. <http://dx.doi.org/10.1016/j.childyouth.2016.04.004>
- Appleby, S. C., Hasel, L. E., & Kassin, S. M. (2013). Police-induced confessions: An empirical analysis of their content and impact. *Psychology, Crime & Law*, 19(2), 111-128. <http://dx.doi.org.helicon.vuw.ac.nz/10.1080/1068316X.2011.613389>
- Armstrong, R. A. (2014). When to use the Bonferroni correction. *Ophthalmic & Physiological Optics: The Journal of the British College of Ophthalmic Opticians*, 34(5), 502-508. <http://dx.doi.org/10.1111/opo.12131>
- Barrouillet, P., Portrat, S., Vergauwe, E., Diependaele, K., & Camos, V. (2011). Further evidence for temporal decay in working memory: Reply to Lewandowsky and Oberauer (2009). *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 37(5), 1302-1317. <http://dx.doi.org.helicon.vuw.ac.nz/10.1037/a0022933>
- Bryan, K., Freer, J., & Furlong, C. (2007). Language and communication difficulties in juvenile offenders. *International Journal of Language & Communication Disorders*, 42(5), 505-520. <http://dx.doi.org/10.1080/13682820601053977>

- Bryan-Hancock, C., & Casey, S. (2010). Psychological maturity of at-risk juveniles, young adults and adults: Implications for the justice system. *Psychiatry, Psychology and Law*, 17(1), 57-69. <http://dx.doi.org.helicon.vuw.ac.nz/10.1080/13218710903268006>
- Cauffman, E., & Steinberg, L. (2000). (Im)maturity of judgment in adolescence: Why adolescents may be less culpable than adults. *Behavioral Sciences & the Law*, 18(6), 741-760. <http://dx.doi.org.helicon.vuw.ac.nz/10.1002/bsl.416>
- Cauffman, E., Piquero, A. R., Kimonis, E., Steinberg, L., Chassin, L., & Fagan, J. (2007). Legal, individual, and environmental predictors of court disposition in a sample of serious adolescent offenders. *Law and Human Behavior*, 31(6), 519-535. <http://dx.doi.org/10.1007/s10979-006-9076-2>.
- Clare, I. C. H., Gudjonsson, G. H., & Harari, P. M. (1998). Understanding the current police caution (England and Wales). *Journal of Community and Applied Social Psychology*, 8(5), 323-329. <https://search.proquest.com/docview/57415910?accountid=14782>
- Cleary, H. M. D. (2014). Police interviewing and interrogation of juvenile suspects: A descriptive examination of actual cases. *Law and Human Behavior*, 38(3), 271-282. <http://dx.doi.org.helicon.vuw.ac.nz/10.1037/lhb0000070>
- Clomax, T. D. (2017). *The effects of education on Miranda rights comprehension in juveniles* (Publication No. 10255178) [Doctoral dissertation, The Chicago School of Professional Psychology]. ProQuest Dissertations & Theses Global.
- Cohen, A. O., Breiner, K., Steinberg, L., Bonnie, R. J., Scott, E. S., Taylor-Thompson, K., Rudolph, M. D., Chein, J., Richeson, J. A., Heller, A. S., Silverman, M. R., Dellarco, D. V., Fair, D. D., Galvan, A., & Casey, B. J. (2016). When is an adolescent an adult? Assessing cognitive control in emotional and non-emotional contexts. *Psychological Science*, 27(4), 549-562. <http://dx.doi.org.helicon.vuw.ac.nz/10.1177/0956797615627625>

- Cohen, J (1988). *Statistical Power Analysis for the Behavioural Sciences* (2nd ed.). Lawrence Erlbaum Associates.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*(1), 155-159.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1037/0033-2909.112.1.155>
- Collins, E., & Lennings, C. (2013). Coming of age: Legal and psychological implications related to juvenile vulnerability and incarceration. *Psychiatry, Psychology and Law*, *20*(6), 824-833.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1080/13218719.2012.739935>
- Colwell, L. H., Cruise, K. R., Guy, L. S., McCoy, W. K., Fernandez, K., & Ross, H. H. (2005). The influence of psychosocial maturity on male juvenile offenders' comprehension and understanding of the Miranda warning. *Journal of the American Academy of Psychiatry and the Law*, *33*(4), 444-454. <http://jaapl.org/content/jaapl/33/4/444.full.pdf>
- Congleton, A. R., & Rajaram, S. (2011). The influence of learning methods on collaboration: Prior repeated retrieval enhances retrieval organization, abolishes collaborative inhibition, and promotes post-collaborative memory. *Journal of Experimental Psychology: General*, *140*(4), 535-551. <http://dx.doi.org.helicon.vuw.ac.nz/10.1037/a0024308>
- Cowan, N. (2010). The magical mystery four: How is working memory capacity limited, and why? *Current Directions in Psychological Science*, *19*(1), 51-57.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1177/0963721409359277>
- Cowan, N., AuBuchon, A. M., Gilchrist, A. L., Ricker, T. J., & Saults, J. S. (2011). Age differences in visual working memory capacity: Not based on encoding limitations. *Developmental Science*, *14*(5), 1066–1074. <https://doi.org/10.1111/j.1467-7687.2011.01060.x>
- Crawford, E., & Bull, R. (2006). Teenagers' difficulties with key words regarding the criminal court process. *Psychology, Crime & Law*, *12*(6), 653-667.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1080/10236190500489970>

- Davis, K., Fitzsimmons, C. L., & Moore, T. E. (2011). Improving the comprehensibility of a Canadian police caution on the right to silence. *Journal of Police and Criminal Psychology, 26*(2), 87-99. <http://dx.doi.org.helicon.vuw.ac.nz/10.1007/s11896-011-9086-y>
- Driver, C., & Brank, E. M. (2009). Juveniles' knowledge of the court process: Results from instruction from an electronic source. *Behavioral Sciences & the Law, 27*(4), 627-642. <http://dx.doi.org.helicon.vuw.ac.nz/10.1002/bsl.881>
- Drogin, E. Y., & Rogers, R. (2014). Juveniles and Miranda: Current research and the need to reform how children are advised of their rights. *Criminal Justice, 29*(4), 13-21. <https://heinonline.org/HOL/Page?handle=hein.journals/cjust29&id=179&collection=journals&index=>
- Eastwood, J., & Snook, B. (2012). The effect of listenability factors on the comprehension of police cautions. *Law and Human Behavior, 36*(3), 177-183. <http://dx.doi.org.helicon.vuw.ac.nz/10.1037/h0093955>
- Eastwood, J., Snook, B., & Luther, K. (2015). Measuring the reading complexity and oral comprehension of Canadian youth waiver forms. *Crime & Delinquency, 61*(6), 798-828. <http://dx.doi.org.helicon.vuw.ac.nz/10.1177/0011128712453689>
- Eastwood, J., Snook, B., Luther, K., & Freedman, S. (2016). Engineering comprehensible youth interrogation rights. *New Criminal Law Review, 19*(1), 42-62. <http://www.ucpress.edu/journals.php?p=reprints>
- Elers, S. (2012). Police interactions with Maori: A contributing factor in disproportionate crime statistics. *Australasian Policing, 4*(2), 40 - 41. <https://search.informit.com.au/documentSummary;dn=174034507566464;res=IELHSS>

- Erickson, S. L., Salekin, K. L., Johnson, L. N., & Doran, S. C. (2020). The predictive power of intelligence: Miranda abilities of individuals with intellectual disability. *Law and Human Behavior, 44*(1), 60-70. <http://dx.doi.org.helicon.vuw.ac.nz/10.1037/lhb0000356>
- Feld, B. C. (2013). Behind closed doors: What really happens when cops question kids. *Cornell Journal of Law and Public Policy, 23*, 395-462.
https://scholarship.law.umn.edu/faculty_articles
- Field, A. (2013). *Discovering statistics using SPSS* (4th ed.). Sage.
- Fortune, C., Brown, B., & Gaston, F. (2017). *New Zealand Rights Caution Competency Questionnaire (NZRC-CQ)*. Wellington, New Zealand: Victoria University of Wellington.
- Freedman, S., Eastwood, J., Snook, B., & Luther, K. (2014). Safeguarding youth interrogation rights: The effect of grade level and reading complexity of youth waiver forms on the comprehension of legal rights. *Applied Cognitive Psychology, 28*(3), 427-431.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1002/acp.3001>
- Frumkin, I. B., & Sellbom, M. (2013). Miranda rights comprehension instruments: A critical review. *Assessment, 20*(5), 545-554.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1177/1073191113481054>
- Gass, S., Winke, P., Isbell, D. R., & Ahn, J. (2019). How captions help people learn languages: A working-memory, eye-tracking study. *Language Learning and Technology, 23*(2), 84-104.
<https://doi.org/10125/44684>
- Gaston, F. (2017). *Young People's Comprehension of the Rights Caution in New Zealand* [Master's thesis, Victoria University of Wellington]. Research Archive.
<https://researcharchive.vuw.ac.nz/xmlui/handle/10063/6453>
- Gluckman, P. (2020). What were they thinking? A discussion paper on brain and behaviour in relation to the justice system in New Zealand. Office of the Prime Minister's chief science advisor. <https://apo.org.au/sites/default/files/resource-files/2020-01/aponid274051.pdf>

- Goldstein, N. E. S., Condie, L. O., Kalbeitzer, R., Osman, D., & Geier, J. L. (2003). Juvenile offenders' Miranda rights comprehension and self-reported likelihood of offering false confessions. *Assessment, 10*(4), 359-369.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1177/1073191103259535>
- Goldstein, N. E. S., Romaine, C. L. R., Zelle, H., Kalbeitzer, R., Mesiarik, C., & Wolbransky, M. (2011). Psychometric properties of the Miranda rights comprehension instruments with a juvenile justice sample. *Assessment, 18*(4), 428-441.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1177/1073191111400280>
- Goodwin, C. (2009). *An examination of how youth understand their rights during the criminal process* (Publication No. 305167479) [Master's thesis, Brock University]. ProQuest Dissertations & Theses Global.
- Goodwin-De Faria, C., & Marinos, V. (2012). Youth understanding & assertion of legal rights: Examining the roles of age and power. *The International Journal of Children's Rights, 20*(3), 343-364. <https://doi.org/10.1163/157181812X652607>
- Grisso, T. (1980). Juveniles capacity to waive Miranda rights: An empirical analysis. *California Law Review, 68* (6), 1134-1166. <https://www.jstor.org/stable/3480263>
- Grisso, T. (1981). *Juveniles Waiver of Rights*. Springer.
- Grisso, T., Steinberg, L., Woolard, J., Cauffman, E., Scott, E., Graham, S., Lexcen, F., Reppucci, N., & Schwartz, R. (2003). Juveniles' competence to stand trial: A comparison of adolescents' and adults' capacities as trial defendants. *Law and Human Behavior, 27*(4), 333-363.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1023/A:1024065015717>
- Haney-Caron, E., Goldstein, N. E. S., & Mesiarik, C. (2018). Self-perceived likelihood of false confession: A comparison of justice-involved juveniles and adults. *Criminal Justice and Behavior, 45*(12), 1955-1976.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1177/0093854818799806>

- Harrison, T. (2019). How distance education students perceive the impact of teaching videos on their learning. *Open Learning: The Journal of Open and Distance Learning*, 35, 1- 17.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1080/02680513.2019.1702518>
- Henning, K. (2012). Juvenile justice after *Graham v. Florida*: Keeping due process, autonomy, and paternalism in balance. *Washington University Journal of Law and Policy*, 38, 17-52.
<https://heinonline.org/HOL/Page?handle=hein.journals/wajlp38&id=19&collection=journals&index=Holman>, G., O'Brien, A. J., & Thom, K. (2018). Police and mental health responses to mental health crisis in the Waikato region of New Zealand. *International Journal of Mental Health Nursing*, 27(5), 1411-1419.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1111/inm.12440>
- Hopkins (2015). *Diverted from counsel: Filling the rights gap in New Zealand's youth justice model*. Fulbright New Zealand.
- Innes, B., & Erlam, R. (2018). Did he understand his rights? Assessing the comprehensibility of police cautions in New Zealand. *International Journal of Speech, Language & the Law*, 25(1). <https://doi.org/10.1558/ijssl.32748>
Instruments (MRCI). Professional Resource Pres.
- Iselin, A. R., DeCoster, J., & Salekin, R. T. (2009). Maturity in adolescent and young adult offenders: The role of cognitive control. *Law and Human Behavior*, 33(6), 455-469.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1007/s10979-008-9160-x>Jun, H., Nam, B., Fedina, L., Smith, M. E., Schiffman, J., Link, B., & DeVylder, J. E. (2018). Paranoid beliefs and realistic expectations of victimization: Data from the survey of police-public encounters. *Schizophrenia Research*, 199, 326-332.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1016/j.schres.2018.02.046>

- Kassin, S. M., Redlich, A. D., Alceste, F., & Luke, T. J. (2018). On the general acceptance of confessions research: Opinions of the scientific community. *American Psychologist, 73*(1), 63-80. <http://dx.doi.org.helicon.vuw.ac.nz/10.1037/amp0000141>
- Kaufman, A., & Kaufman, N. (2004). *Kaufman Brief Intelligence Test, Second Edition (KBIT-2)*. Pearson.
- Kelley, S. L. (2015). *Addressing relative criteria for Miranda waivers: A comparison of juvenile justice youths' and adult offenders' understanding and appreciation of the rights to silence and legal counsel during police interrogations* (Publication No. AAI3636992) [Doctoral dissertation, Drexel University]. ProQuest Dissertations and Theses Global.
- Kidd, G., & Sullivan, K. (2014). Awareness and comprehension of the right to silence in Queensland, Australia. *Journal of Tropical Psychology, 4*(5), 1-8.
http://journals.cambridge.org/abstract_S1838990214000052
- Kubiak, S., Shamrova, D., & Comartin, E. (2019). Enhancing knowledge of adolescent mental health among law enforcement: Implementing youth-focused crisis intervention team training. *Evaluation and Program Planning, 73*, 44-52.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1016/j.evalprogplan.2018.11.006>
- Laerd Statistics. (2019). *Moderated multiple regression using SPSS*. Lared Statistics.
<https://statistics.leurd.com/>
- Legal Services Act, No. 4 (2011).
<http://www.legislation.govt.nz/act/public/2011/0004/latest/whole.html>
- Lieser, A., Van der Voort., D., & Spaulding, T. (2019). You have the right to remain silent: The ability of adolescent with developmental language disorder to understand their legal rights. *Journal of Communication Disorders, 82*, 1-13.
<https://doi.org/10.1016/j.jcomdis.2019.105920>

- Little, R. J., & Rubin, D. B. (2019). *Statistical analysis with missing data* (3rd ed.). John Wiley & Sons.
- Loeber, R., Menting, B., Lynam, D. R., Moffitt, T. E., Stouthamer-Loeber, M., Stallings, R., Farrington, D., & Pardini, D. (2012). Findings from the Pittsburgh youth study: Cognitive impulsivity and intelligence as predictors of the age–crime curve. *Journal of the American Academy of Child & Adolescent Psychiatry*, *51*(11), 1136-1149.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1016/j.jaac.2012.08.019>
- Lount, S., Purdy, S., & Hand, L. (2015). Hearing, auditory processing, and language skills of male youth offenders and remandees in youth justice residences in New Zealand. *Journal of Speech, Language and Hearing Research*, *60*, 121-15. http://doi.org/10.1044/2016_JSLHR-L-15-0131
- Lynch, N. (2016). *Youth justice in New Zealand* (2nd ed.). Thomas Reuters.
- Malloy, L. C., Shulman, E. P., & Cauffman, E. (2014). Interrogations, confessions, and guilty pleas among serious adolescent offenders. *Law and Human Behavior*, *38*(2), 181-193.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1037/lhb0000065>
- McCardle, M., Luther, K., & Snook, B. (2020). Examining the administration of youth interrogations rights: A field study of Canadian police practices. *Youth Justice*, *1*, 1-22.
<https://doi.org/10.1177/1473225420902841>
- McClelland, G. H., & Judd, C. M. (1993). Statistical difficulties of detecting interactions and moderator effects. *Psychological Bulletin*, *114*(2), 376-390.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1037/0033-2909.114.2.376>
- McHugh, M. L. (2012). Interrater reliability: The kappa statistic. *Biochemia medica*, *22*(3), 276-282.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3900052/>

- McLachlan, K., Roesch, R., & Douglas, K. S. (2011). Examining the role of interrogative suggestibility in Miranda rights comprehension in adolescents. *Law and Human Behavior, 35*(3), 165-177. <http://dx.doi.org.helicon.vuw.ac.nz/10.1007/s10979-009-9198-4>
- Metzger, N., Savaii, K., Mckee, A., & Kedge, S. (2018). *Youth voices about youth justice*. Talking Trouble New Zealand. <https://talkingtroublenz.org/presentations-publications/youth-voices-about-youth-justice/>
- Meyer, J. R., & Reppucci, N. D. (2007). Police practices and perceptions regarding juvenile interrogation and interrogative suggestibility. *Behavioral Sciences & the Law, 25*(6), 757-780. <http://dx.doi.org.helicon.vuw.ac.nz/10.1002/bsl.774>
- Miller, G. A. (1956). The magical number seven, plus or minus two: Some limits on our capacity for processing information. *Psychological Review, 63*(2), 81-97. <http://dx.doi.org.helicon.vuw.ac.nz/10.1037/h0043158>
- Ministry of Education (2019). *School deciles*. <https://www.education.govt.nz/school/funding-and-financials/resourcing/operational-funding/school-decile-ratings/>
- Ministry of Justice. (2019). *Children and young people in court*. <https://www.justice.govt.nz/assets/Documents/Publications/32n83u-Children-and-young-people-data-notes-and-trends-dec2019-v1.0.pdf.pdf>
- Ministry of Justice (2020). *Youth justice*. <https://youthcourt.govt.nz/youth-justice/youth-justice-statistics/>
- Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review, 100*(4), 674-701. <http://dx.doi.org/10.1037/0033-295X.100.4.674>
- New Zealand Police. (2011, August). *Multilingual Rights Caution*. <http://www.police.govt.nz/about-us/publication/multilingual-rights-caution>

Oranga Tamariki Act, No. 24. (1989).

<http://www.legislation.govt.nz/act/public/1989/0024/latest/DLM147088.html>

Pang, K. (2009). Video-driven multimedia, web-based training in the corporate sector: Pedagogical equivalence and component effectiveness. *International Review of Research in Open and Distance Learning*, 10(3), 1-14. <http://www.irrodl.org/index.php/irrodl/article/view/629>

Parent, M. C. (2013). Handling item-level missing data: Simpler is just as good. *The Counseling Psychologist*, 41(4), 568-600.

<http://dx.doi.org.helicon.vuw.ac.nz/10.1177/0011000012445176>

Patry, M. W., Connors, C. J., Adams-Quackenbush, N., & Smith, S. M. (2017). When both sides are mistaken: Layperson and legal professionals' misconceptions of Canadian suspects' legal rights upon arrest. *Journal of Police and Criminal Psychology*, 32(1), 56-65.

<http://dx.doi.org.helicon.vuw.ac.nz/10.1007/s11896-016-9198-5>

Portrat, S., Guida, A., Phénix, T., & Lemaire, B. (2016). Promoting the experimental dialogue between working memory and chunking: Behavioral data and simulation. *Memory & Cognition*, 44(3), 420-434. <http://dx.doi.org.helicon.vuw.ac.nz/10.3758/s13421-015-0572-9>

R v Z [2008] 3 NZLR 342

Rogers, R., Fiduccia, C. E., Drogin, E. Y., Steadham, J. A., Clark, John W., I,II, & Cramer, R. J. (2013a). General knowledge and misknowledge of Miranda rights: Are effective Miranda advisements still necessary? *Psychology, Public Policy, and Law*, 19(4), 432-442.

<http://dx.doi.org.helicon.vuw.ac.nz/10.1037/a0033964>

Rogers, R., Fiduccia, C. E., Robinson, E. V., Steadham, J. A., & Drogin, E. Y. (2013b). Investigating the effects of repeated Miranda warnings: Do they perform a curative function on common Miranda misconceptions? *Behavioral Sciences & the Law*, 31(4), 397-410.

<http://dx.doi.org.helicon.vuw.ac.nz/10.1002/bsl.2071>

- Rogers, R., Gillard, N. D., Wooley, C. N., & Fiduccia, C. E. (2011a). Decrements in Miranda abilities: An investigation of situational effects via a mock-crime paradigm. *Law and Human Behavior, 35*(5), 392-401. <http://dx.doi.org.helicon.vuw.ac.nz/10.1007/s10979-010-9248-y>
- Rogers, R., Hazelwood, L. L., Sewell, K. W., Shuman, D. W., & Blackwood, H. L. (2008). The comprehensibility and content of juvenile Miranda warnings. *Psychology, Public Policy, and Law, 14*(1), 63-87. <http://dx.doi.org.helicon.vuw.ac.nz/10.1037/a0013102>
- Rogers, R., Rogstad, J. E., Steadham, J. A., & Drogin, E. Y. (2011b). In plain English: Avoiding recognized problems with Miranda miscomprehension. *Psychology, Public Policy, and Law, 17*(2), 264-285. <http://dx.doi.org.helicon.vuw.ac.nz/10.1037/a0022508>
- Rogers, R., Steadham, J. A., Carter, R. M., Henry, S. A., Drogin, E. Y., & Robinson, E. V. (2016). An examination of juveniles' Miranda abilities: Investigating differences in Miranda recall and reasoning. *Behavioral Sciences & the Law, 34*(4), 515-538. <http://dx.doi.org.helicon.vuw.ac.nz/10.1002/bsl.2243>
- Rogers, R., Steadham, J. A., Fiduccia, C. E., Drogin, E. Y., & Robinson, E. V. (2014). Mired in Miranda misconceptions: A study of legally involved juveniles at different levels of psychosocial maturity. *Behavioral Sciences & the Law, 32*(1), 104-120. <http://dx.doi.org.helicon.vuw.ac.nz/10.1002/bsl.2099>
- Rost, G. C., & McGregor, K. K. (2012). Miranda rights comprehension in young adults with specific language impairment. *American Journal of Speech-Language Pathology, 21*(2), 101-108. [http://dx.doi.org.helicon.vuw.ac.nz/10.1044/1058-0360\(2011/10-0094\)](http://dx.doi.org.helicon.vuw.ac.nz/10.1044/1058-0360(2011/10-0094))
- Rubin, D. L., Hafer, T., & Arata, K. (2000). Reading and listening to oral-based versus literate-based discourse. *Communication Education, 49*(2), 121-133. <http://dx.doi.org.helicon.vuw.ac.nz/10.1080/03634520009379200>
- Salseda, L. (2012). *Evaluating the role of the relationship between age and verbal IQ in Miranda rights comprehension in typically developing adolescents* (Publication No. 3506000)

[Doctoral dissertation, Alliant International University]. ProQuest Dissertations & Theses Global.

Sharf, A. J., Rogers, R., & Williams, M. M. (2017). Reasoning your way out of Miranda rights: How juvenile detainees relinquish their fifth amendment protections. *Translational Issues in Psychological Science*, 3(2), 121-130.

<http://dx.doi.org.helicon.vuw.ac.nz/10.1037/tps0000118>

Shieh, G. (2009). Detecting interaction effects in moderated multiple regression with continuous variables power and sample size considerations. *Organizational Research Methods*, 12(3), 510-528. <http://dx.doi.org.helicon.vuw.ac.nz/10.1177/1094428108320370>

Shieh, G. (2019). Effect size, statistical power, and sample size for assessing interactions between categorical and continuous variables. *British Journal of Mathematical and Statistical Psychology*, 72(1), 136-154. <http://dx.doi.org.helicon.vuw.ac.nz/10.1111/bmsp.12147>

Sim, M. P. Y., & Lamb, M. E. (2018). An analysis of how the police 'caution' is presented to juvenile suspects in England. *Psychology, Crime & Law*, 24(8), 851-872.

<http://dx.doi.org.helicon.vuw.ac.nz/10.1080/1068316X.2018.1442449>

Steinberg, L. (2010). A dual systems model of adolescent risk-taking. *Developmental Psychobiology*, 52(3), 216-224.

<https://search.proquest.com/docview/622186539?accountid=14782>

Steinberg, L., Cauffman, E., Woolard, J., Graham, S., & Banich, M. (2009). Are adolescents less mature than adults? Minors' access to abortion, the juvenile death penalty, and the alleged APA "flip-flop." *American Psychologist*, 64(7), 583-594.

<http://dx.doi.org.helicon.vuw.ac.nz/10.1037/a0014763>

Strachan, M. K. (2008). *The development of a theory-based, Miranda rights educational curriculum: Are there cognitive developmental limitations to legal learning?* (Publication No. 3327275)

[Doctoral dissertation, Drexel University]. ProQuest Dissertations & Theses Global.

- Streiner, D. L., & Norman, G. R. (2011). Correction for multiple testing: Is there a resolution? *Chest*, *140*(1), 16-18. <http://dx.doi.org/10.1378/chest.11-0523>
- Syed, M., & Nelson, S. C. (2015). Guidelines for establishing reliability when coding narrative data. *Emerging Adulthood*, *3*(6), 375-387.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1177/2167696815587648>
- Thalman, M., Souza, A. S., & Oberauer, K. (2019). How does chunking help working memory? *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *45*(1), 37-55. <http://dx.doi.org.helicon.vuw.ac.nz/10.1037/xlm000057>
- Thomason, M. E., Race, E., Burrows, B., Whitfield-Gabrieli, S., Glover, G. H., & Gabrieli, J. D. E. (2009). Development of spatial and verbal working memory capacity in the human brain. *Journal of Cognitive Neuroscience*, *21*(2), 316-332.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1162/jocn.2008.21028>
- Tilton-Weaver, L., Vitunski, E. T., & Galambos, N. L. (2001). Five images of maturity in adolescence: What does "grown up" mean? *Journal of Adolescence*, *24*(2), 143-158.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1006/jado.2000.0381>
- United Nations Convention on the Rights of the Child, November 20, 1989.
<https://www.unicef.org.uk/what-we-do/un-convention-child-rights/>
- Varghese, F. P., Israel, T., Seymour, G., Becker Herbst, R., Suarez, L. G., & Hargons, C. (2019). Injustice in the justice system: Reforming inequities for true "justice for all". *The Counseling Psychologist*, *47*(5), 682-740.
<http://dx.doi.org.helicon.vuw.ac.nz/10.1177/0011000019892329>
- Vermunt, J. D. (1996). Metacognitive, cognitive and affective aspects of learning styles and strategies: A phenomenographic analysis. *Higher Education*, *31*(1), 25-50. <https://search-proquest-com.helicon.vuw.ac.nz/docview/38920079?accountid=14782>

- Viljoen, J. L., Klaver, J., & Roesch, R. (2005). Legal decisions of preadolescent and adolescent defendants: Predictors of confessions, pleas, communication with attorneys, and appeals. *Law and Human Behavior, 29*(3), 253-277. <http://dx.doi.org.helicon.vuw.ac.nz/10.1007/s10979-005-3613-2>
- Viljoen, J. L., Zapf, P. A., & Roesch, R. (2007). Adjudicative competence and comprehension of Miranda rights in adolescent defendants: A comparison of legal standards. *Behavioral Sciences & the Law, 25*(1), 1-19. <http://dx.doi.org.helicon.vuw.ac.nz/10.1002/bsl.714>
- Wall, S. M., & Furlong, M. (1985). Comprehension of Miranda rights by urban adolescents with law-related education. *Psychological Reports, 56*(2), 359-372. <http://dx.doi.org.helicon.vuw.ac.nz/10.2466/pr0.1985.56.2.359>
- Weiler, N. (2007). *Parents' involvement in youth justice proceedings from the perspective of parents and youth* (Publication No. MR27474) [Master's thesis, University of Toronto]. ProQuest Dissertations & Theses Global.
- Winningham, D. B., Rogers, R., & Drogin, E. Y. (2018). Miranda misconceptions of criminal detainees: Differences based on age groups and prior arrests. *The International Journal of Forensic Mental Health, 17*(1), 13-24. <http://dx.doi.org.helicon.vuw.ac.nz/10.1080/14999013.2017.1405125>
- Wolfe, S. E., McLean, K., & Pratt, T. C. (2017). I learned it by watching you: Legal socialization and the intergenerational transmission of legitimacy attitudes. *British Journal of Criminology, 57*(5), 1123-1143. <https://search-proquest-com.helicon.vuw.ac.nz/docview/1973985626?accountid=14782>
- Woolard, J. L., Cleary, H. M. D., Harvell, S. A. S., & Chen, R. (2008). Examining adolescents' and their parents' conceptual and practical knowledge of police interrogation: A family dyad approach. *Journal of Youth and Adolescence, 37*(6), 685-698. <http://dx.doi.org.helicon.vuw.ac.nz/10.1007/s10964-008-9288-5>

Yang, Z., Jutagir, D. R., Koyama, M. S., Craddock, R. C., Yan, C., Shehzad, Z., Castellanos, F. X.,

Martino, A. D., & Milham, M. P. (2015). Intrinsic brain indices of verbal working memory capacity in children and adolescents. *Developmental Cognitive Neuroscience, 15*, 67-82.

<http://dx.doi.org.helicon.vuw.ac.nz/10.1016/j.dcn.2015.07.007>

Zelle, H., Romaine, C. L. R., & Goldstein, N. E. S. (2015). Juveniles' Miranda comprehension:

Understanding, appreciation, and totality of circumstances factors. *Law and Human*

Behavior, 39(3), 281-293. <http://dx.doi.org.helicon.vuw.ac.nz/10.1037/lhb0000116>

Appendices

Appendix A: The New Zealand Rights Caution Competency Questionnaire

NB: Check that student still consents to take part in research

“Firstly, I would just like to explain that we are using the same questions for students aged 10-18 years old, so we would expect that you might find some of the questions quite difficult, and others not so difficult, you don’t need to worry about this though. You may have seen on TV at some point when a police officer is talking to someone, they first read them their rights, In New Zealand we have a version of this called the Rights Caution, and this is what I want to talk with you about today. If you don’t understand something, or didn’t hear what I said, please tell me and I will say it again for you. Also, a lot of the questions are very similar with just one or two differences, so you might like to ask me to repeat some questions to make sure that you hear what the differences are”

Prior Knowledge Aspect:

“Firstly, I would like you tell me everything you know about what your rights are when you are being arrested, detained, or questioned by a police officer. Do you understand what it is that I would like you to do”?

Cued Recall Aspect:

Instruction condition: “Now I am going to show you a quick video and then I am going to read you the rights caution. After I have read it, I would like you to tell me everything that you can remember about what I said. Do you understand what it is that I would like you to do”?

Control condition: “Now I am going to read you the rights caution, after I have read it I would like you to tell me everything that you can remember about what I said. Do you understand what it is that I would like you to do”?

Read them the youth version of the rights caution aloud.

“Now tell me everything that you can remember from what I just read; it can be in any order.”

Vocabulary Aspect:

“Now I am going to read you some words and show them to you on these cards. I would like you to tell me in your own words what they mean. Do you understand what it is that I would like you to do”?

Questions:

- What does having a right mean?
- What is a statement?
- What does recorded mean?
- What does evidence mean?
- What is a judge?
- What is a jury?
- What is a lawyer?
- What does delay mean?
- What does in private mean?
- What is a nominated person?

Comprehension Aspect:

“Now I am going to read through the Rights one sentence at a time, they are also on these cards. After I read each Right, I want you to explain to me in your own words what it means to you. Do you understand what it is that I would like you to do”?

Questions:

C1- You have the right to remain silent. What does this mean to you?

C2- You do not have to make a statement or answer any questions. What does this mean to you?

C3- If you agree to make a statement and/or answer any questions you can change your mind and stop at any time. What does this mean to you?

C4- Anything you say will be recorded and may be given in evidence in court- this means if you are taken to court for a crime, what you say to me may be retold to the judge or jury. What does this mean to you?

C5- You have the right to speak with a lawyer and/or any person nominated by you without delay and in private before deciding whether to make any statement or answer any questions. What does this mean to you?

C6- You have the right to have your lawyer and/or nominated person with you while you make any statement or answer any questions. What does this mean to you?

C7- Police have a list of lawyers you may speak to for free. What this mean to you?

Appreciation Aspect:

“Now I am going to show you pictures with different people in them. I am then going to ask you some questions about what you think might be happening in the pictures. Do you understand what it is that I would like you to do”?

Questions:

“This is a picture of a girl named Jane, and a police officer. They are at the police station because there has been a crime, and the police officer wants to talk to Jane about it”.

A1- Why do you think the police officer wants to talk to Jane?

A2- What do you think they are hoping to learn from asking her questions?

A3- What are some things that the police officer might do with what Jane tells them?

A4- Can the police officer do anything if Jane chooses not to talk to them?

- (If yes) What can the police officer do if Jane chooses not to talk to them?

– (If no) Why can't the police officer do anything if Jane chooses not to talk to them?

A5- What could happen if Jane chooses not to talk to the police officer?

“Here is a different picture of a boy named Stephen, Stephen is also at the police station. The police have told Stephen that they think he has stolen from a clothing shop. Stephen has not talked to the police, but is speaking to a lawyer who is the other person in the picture with Stephen”.

A6- What is the role of Stephen's lawyer at the police station?

A7- What will Stephen's lawyer want to know?

A8- Why do you think his lawyer will want to know this?

A9- What do you think is the best thing for Stephen to do while he is talking with his lawyer?

A10- The lawyer asks Stephen to tell him what happened. Why do you think the lawyer said this?

“Here is another picture of a girl named Kiri who has been taken to the police station to be questioned, Kiri's mother has also come to the police station with her. Kiri's neighbour has said that Kiri stole some money from them, but the police don't have any evidence as no one saw her do it. Kiri knows that she doesn't have to talk to the police officer, and she is trying to decide if she should or not”.

A11- If Kiri decides to talk to the police officer about what happened, what might the police officer do with the information that Kiri tells them?

A12- If Kiri decides that she doesn't want to talk to the police, can the police officer do anything about this?

- (If yes) What are some of the things that the police officer can do if Kiri chooses not to talk to them?

- (If no) Why can't the police officer do anything if Kiri chooses not to talk to them?

A13- If the police officer tells Kiri that she has to tell them what happened, what should Kiri do next?

A14- If Kiri starts to talk to the police, but then changes her mind and decides to stop talking to them, what should the police do next?

A15-What is the role of Kiri's mother at the police station?

"This is Stephen 1 week later in court. Stephen's dad is at court with him, along with Stephen's lawyer, and a judge".

A16- What is the main job of Stephen's lawyer in the court?

A17- If the judge finds out that Stephen did not to speak with the police, what difference might it make to what the judge does?

A18- Stephen has told his lawyer he was there but didn't steal the clothing, his friend did. The lawyer said he thinks it's a good idea for Stephen to tell the judge this, but Stephen doesn't want to get his friend in trouble. Do you think Stephen should listen to his lawyer? Why?

A19- Stephen's dad disagrees with his lawyer. He thinks Stephen is just as responsible as his friend, as Stephen was there and knew his friend was stealing the clothing. Should Stephen listen to his dad or lawyer? Why?

Appendix B: Educational Video Script

Narrator: The New Zealand Rights Caution contains the information that is read to people when they are arrested or questioned by police. The Rights Caution tells people what their legal rights are. These legal rights are important because they protect people and help them to make good decisions when they are questioned by police. There are three main rights. The first is; ‘you have the right to remain silent’ at any time while you are with the police.

(“You have the right to remain silent” in text shown on screen)

Narrator: This means that it is your choice whether you talk to the police or whether you say nothing. The police may talk to you to collect information to find out whether someone has broken the law. You don’t have to tell the police anything, because it could get you into more trouble. If you speak to the police, what you say can be used as evidence. If you go to court, the judge or the jury will hear what you told the police, and then decide whether someone has broken the law. What you say can also be used if your case is dealt with just by police or at a meeting called a family group conference. If you have already started telling the police something, it is ok to change your mind. You can choose to be silent at any time.

If you decide that you do not want to talk to the police or answer their questions, you will not get into trouble for this. People will not think that you are guilty if you choose to be silent. It is your choice whether you talk to the police or whether you say nothing.

Narrator: The second is “you have the right to have a lawyer with you”.

(“You have the right to have lawyer” shown in text on screen)

Narrator: A lawyer is an adult who is trained in the law. You can get a lawyer straight away. You can speak to a lawyer without the police there before you are questioned. You can also have a lawyer with you if you talk to the police. The police have a list of lawyers who will help you for free. This will not cost you or your family any money.

Narrator: The legal system can be confusing for people. It is important that you have a lawyer to help you understand what is happening. Your lawyer is there to give you

information and advice so that you can make good legal decisions. They are the best person to help you decide whether you should talk to the police or whether you should remain silent. They can help you whether you have done something wrong or not. Your lawyer will work for you. They do not work for the police or your parents. If you decide that you want to speak to a lawyer, you will not get into trouble for this, because you have the right to have a lawyer.

Narrator: The third is “you have the right to have a nominated person with you” when you are with police.

(“You have the right to a nominated person” shown in text on screen)

Narrator: A nominated person is the person that you choose to support you. You can choose any adult, such as a parent, caregiver, teacher or sports coach. If you can’t think of someone, or get in touch with them, the police will give you a list of people who can be your nominated person. These people will help you; they do not work for the police. You can speak to your nominated person without the police there, and you can have them with you if you talk to the police. You should choose someone who you think will understand your rights and can help you protect them. You can have both a nominated person and a lawyer help you before, and while, you talk to the police. It is your choice.

Appendix C: The New Zealand Child and Young Persons version of the Caution (New Zealand Police, 2011)

1. You have the right to remain silent.
2. You do not have to make any statement or answer any questions.
3. If you agree to make any statement and/or answer any questions you can change your mind and stop at any time.
4. Anything you say will be recorded and may be given in evidence in court – this means if you are taken to court for [offense] what you say to me may be retold to the judge or jury.
5. You have the right to speak with a lawyer and/or any person nominated by you without delay and in private before deciding whether to make any statement or answer any questions.
6. You have the right to have your lawyer and/or nominated person with you while you make any statement or answer any questions.
7. Police have a list of lawyers you may speak to for free.

Appendix D: Regression Analysis with Outliers Included**Table 12***Summary of Model Predictors of Vocabulary Scores with Outliers Included (n = 99)*

Variable	<i>B</i> [95% CI]	<i>SE B</i>	<i>t</i>	β	<i>p</i>	f^2	R^2
Constant	76.80 [73.97, 79.63]	1.42	53.94	-	<.001		
Verbal IQ (centred)	0.25 [0.08, 0.43]	.09	2.89	.28	.005		
Age (Centred)	3.12 [1.67, 4.58]	.73	4.26	.56	<.001		
DC Condition	4.60 [0.57, 8.62]	2.03	2.27	.21	.026		
DC Condition x Age (centred)	-2.30 [-4.31, -0.29]	1.01	-2.27	-.29	.026		
Model Statistics						0.28	0.22

Note. $R^2_{Adjusted} = .19$. DC = dummy code; *B* = unstandardised regression coefficient; *SE B* = Standard error of the coefficient; β = standardised coefficient; CI = confidence interval; f^2 = measure of effect size.

A moderated multiple regression was conducted with vocabulary scores as the dependent variable and verbal IQ, age, condition and condition x age interactions as the independent variables. Two outliers were identified in this analysis. As shown in Table 12, with the outliers included in this analysis, the condition x age interaction makes a significant contribution to the prediction of vocabulary scores. However, with the outliers removed from analysis, the interaction term does not make a significant contribution to this model. Because of the smaller than expected sample size for the analysis involving interactions, even small numbers of outliers can have a larger effect on the data.

The results with outliers included in this analysis suggest the effect of age on vocabulary scores was different for the control and video condition. Simple slopes analysis

found there was a non-significant relationship between age and understanding in the vocabulary aspect for those in the video condition, $B = 0.82$, $SE = 0.74$, $t = 1.12$, $p = .265$, 95% CI [-0.64, 2.28]. However, a statistically significant and positive relationship between age and understanding was found in the control condition $B = 3.12$, $SE = 0.73$, $t = 4.26$, $p = .001$, 95% CI [1.67, 4.58]. More research, using a larger sample size, is needed to obtain a clearer picture of whether condition moderates the effect age on understanding in the vocabulary aspect.