# Violence in New Zealand Women's Prisons

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## Abstract

Female violence in institutional settings is a growing issue as female incarceration numbers have been persistently increasing over the past three decades in New Zealand. Women's prison violence and misconduct behaviours currently possess minimal exploration worldwide due to violent women being small in numbers until recent years, and female prisoners have posed significantly fewer problems towards correctional facilities compared to male prisoners. With evidence of New Zealand's women prison muster inflating and minimal research on women's aggressive behaviour, there is an increased importance for the current study. This explorative study evaluated the prevalence of violent behaviour and misconduct in New Zealand's three women's prisons using the Department of Correction's administrative data to examine the relationships between predictor variables and violent misconduct.

Participants included 2,038 prisoners who had been cited for 11,368 rule violations between the years 2012 and 2017, with incidents including physical violence, verbal violence, property violence, and non-violent incidents. Descriptive statistics were used to summarize demographic characteristics and distribution of the sample and data. Analysis of covariance was employed to investigate the effects of violation frequencies and gang membership on the prisoners' risk of reconviction multiplied by risk of imprisonment (RoC*RoI) scores while controlling for the effects of age as a covariate. Non-parametric tests were used where appropriate to identify the differences between groups.

The results illustrated that there were significant correlations between violation frequencies and RoC*RoI scores and that prisoners with a higher risk of reoffending had higher counts of violations. There was a significant effect of gang

membership and RoC*RoI scores on violation frequencies, as gang-affiliated prisoners were more likely to have high RoC*RoI scores as well as higher rates of violations. A significant correlation between age groups and violation frequencies was identified, demonstrating that younger prisoners were more prone to engaging in violence and misconduct compared to older prisoners. Violation frequencies differed between prisons, as one prison reported lower numbers of violations in comparison to the remaining two prisons.

This study established three key predictors of misconduct, which is a valuable contribution to the correctional literature.

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# Chapter One - Introduction

## The Problem of Prison Violence

Prisons are spaces that house people who have contravened the law; many of whom have histories of violence that will continue with them in prison and aggregation of these people has an elevated potential for violence (Schenk & Fremouw, 2012). There has been a growing number of female prisoners worldwide (Jeffries & Newbold, 2015; Weiss & Mackenzie 2010; Kruttschnitt & Gartner, 2003), resulting in an escalating problem of female violence within prisons. The current study seeks to further the understanding of female violence in New Zealand prisons by examining predictor variables that have been investigated in prior prison research across the world.

New Zealand has a total of 19 prisons, three of which house only female prisoners accounting for 7.2% of New Zealand's prison population: Arohata Prison, Auckland Region Women's Corrections Facility (ARWCF), and Christchurch Women's Prison (Department of Corrections, 2019). In New Zealand, the female prison muster across the three facilities has augmented from 310 in 2001 to 729 in 2019; an increase of more than double (Department of Corrections, 2019). With women's incarceration numbers rising, there have been notable increases in women's violent offences. According to the Annual Sentenced Prisoner Population for the latest Fiscal Years from Statistics New Zealand; in the years 2000-2001 the female conviction number was reported at 600. The nature of female crime was largely minor offences, with the most common crime being fraud and deception. Violent crime had minimal reports as acts intended to cause injury was reported as 72; homicide was reported as 9, and robbery as 30. To compare, the male conviction number at the same time was

reported as 6,612, which included high rates of violent offences with acts to cause injury as 94, homicide as 51, and robbery as 363. By 2017-2018, New Zealand females' total offences resulting in incarceration was reported as 897, an increase of approximately 49%. In 2017-2018, females' violent crime, such as acts to cause injury, had increased to 108, with homicide remaining as 9, and robbery as 39. In comparison, males' total offences resulting in incarceration was reported as 7,842 in the same time, an increase of approximately 18%, with acts to cause injury as 1,548, homicide as 54, and robbery as 351 ("Annual Sentenced Prisoner Population for the latest Fiscal Years (ANZSOC)", 2019). Overall, these statistics reflect that New Zealand men are more engaged in criminal activity, are convicted at a higher rate, and are more violent compared to women. Despite this, it is evident that female incarceration has demonstrated a greater increase compared to male incarceration over the past three decades, and that women are becoming more criminally disruptive in society than previously reported. With the growth of women's incarceration and violent offending, there is an anticipation of higher levels of violence and misconduct in prison than previously recorded.

Ample research has investigated the violent behaviour and discord of male prisoners in correctional facilities, however, as female prisoners remain fewer in numbers in comparison to their male counterparts less attention has been directed on the exploration of this understudied sample. For this reason, the current study is focused on female prison violations and will play an important role in contributing to the understanding of women's behaviour in prison, assisting New Zealand's Department of Corrections' comprehension of their growing demographic.

**The Female Prison Population**

Although there is little research on female incarceration, it is evident that the New Zealand female prison muster has been increasing over the past three decades (Newbold, 2007; Jeffries & Newbold, 2015). In 2013, the New Zealand female prisoner count was 513 and increased to 800 by 2017; an approximate 56% growth, shown in Figure 1 (Department of Corrections, 2019).

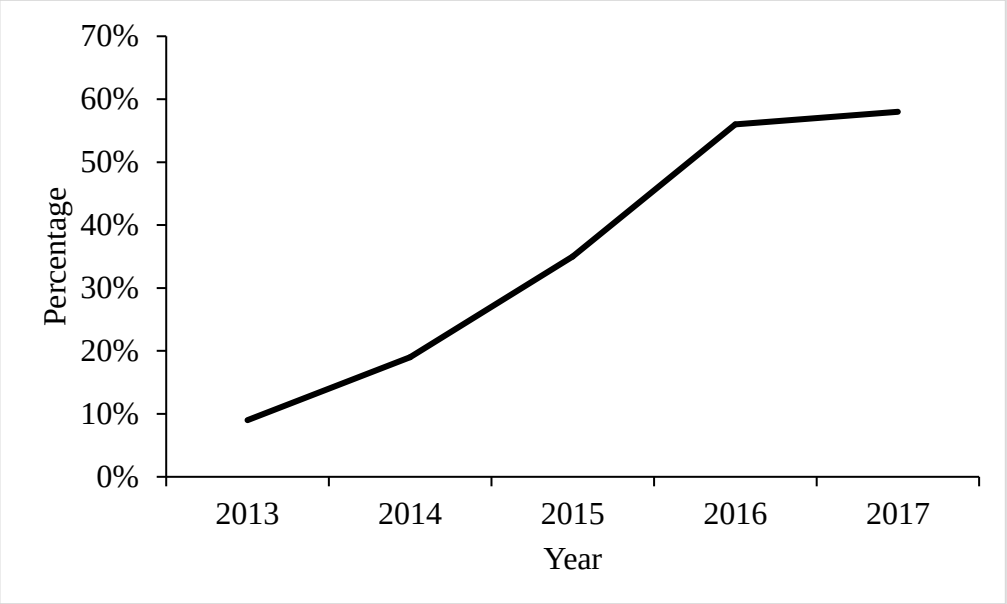


*Figure 1.* Percentage increase of New Zealand female incarceration numbers from the years 2013 to 2017 (Department of Corrections, 2019).

The upward trend in female prisoner numbers has been recognized in other female populations across the world. Before the 1980s, female incarceration numbers in the United States did not exceed 10 per 100,000 (Kruttschnitt & Gartner, 2003), however, between 2001 and 2012 the female incarceration count increased from 159,431 prisoners to 200,000 (Jeffries & Newbold, 2015). Currently, similar to New Zealand, women account for about 7% of the United States prison population. In the United States, 36% of those women are convicted of violent crimes (Reidy & Sorensen, 2018). Countries with smaller prison

populations also experienced a progression in female imprisonment, as the United Kingdom observed a development from 1,577 female prisoners in the year 2000 to 4,300 prisoners by 2012. Likewise, Australia reported a female incarceration count of 1,505 in 2001, which later expanded to 2,199 in 2012 (Jeffries & Newbold, 2015).

Gelb (2003) examined official prison data between 1995 and 2002 to find that not only had female imprisonment rates increased rapidly in comparison to male imprisonment, but that there had been an increase in the volume of women imprisoned for violent offences, particularly robbery, homicide, and assault. In New Zealand, Jeffries & Newbold (2015) revealed that between 2006 and 2012, females committing homicide accounted for 24.4% of the increase in incarceration, acts intended to result in injury accounted for 18.6%, and robbery for 12.8%.

Female prisoners have been subject to minimal empirical studies worldwide, and recent statistics emphasise the urgency to investigate and learn more about this understudied population (Schenk & Fremouw, 2012). There is evidence that the sex differences in violent offending have been in decline for the past two decades, as women's offences have become more frequent and more aggressive within this time (Cauffman, Farruggia & Goldweber, 2008).

The current study is important for several reasons; evidently, there is a demand for research on women's criminality and prison behaviour as female prison populations have considerably increased and consequently prison misconduct rates are anticipated to follow. There is an abundance of research on men's violence in prison, and research suggests that there are critical differences between the violent prison behaviour committed by men and women (Sorensen &

Cunningham, 2010; DeLisi, 2003), therefore, research is needed to better understand women's prison violence. Research on female prisoners in New Zealand is exceptionally limited and this project will be contributing to the Department of Corrections Journal where it can be accessible to the general public.

**Defining Violent Behaviour**

Interpersonal violence is defined as the use of physical force that is intended to result in physical pain, suffering, or death to another person. This definition implies that the victim is motivated to evade the violent act and that the perpetrator is using violence to achieve an outcome (Anderson & Bushman, 2002). Forms of non-physical violence can include threats (verbal violence), acts causing damage to property (property violence), and acts that have the potential to be violent, such as the possession of a weapon (Schenk & Fremouw, 2012).

Violence is a physical form of aggression that has historically been used as an adaptive function for survival, reproduction, and the attainment of other objectives such as money (Buss & Shackelford, 1997; Archer, 2009).

A key theory of aggression was developed by Bandura (1978); the social learning theory of aggression. This theory proposed that people are not born with aggressive behaviours but that they must learn them. The social learning theory suggests that people learn aggression through observational learning of models (i.e., parents, peers) which enables the development of patterns of behaviour without gradual learning through trial and error. Once aggressive patterns of behaviour are learned, they are maintained through reinforcement (being rewarded for the behaviour) (Anderson & Bushman, 2002; Bandura, 1978).

Another key theory of why humans aggress is the frustration-aggression hypothesis. The frustration-aggression hypothesis is a theory that was proposed by Dollard, Miller, Doob, Mowrer, and Sears in 1939, suggesting that aggression is always caused by frustration, as frustration was the outcome of something/someone blocking a person's efforts to attain a goal. This theory was later developed by Berkowitz (1989), who proposed that aggression could potentially be a learned behaviour as people could use instrumental aggression (aggression intended to achieve a goal) if they believed their act of aggression would benefit them in other ways, other than inflicting injury on the other person. Dollard and his colleagues assumed that the aim of aggression was to cause harm, however, the modification from Berkowitz (1989) supported the notion that the use of aggression was more complex than causing harm, and that it could be used to attain other objectives, such as social status, territory, or money. Although this theory was widely accepted for many years, increasing evidence has revealed that the theory had limited explanatory value, and further mounting evidence has supported that aggression does not depend on a source of frustration (Bandura, 1978).

## Chapter Two – Risk Factors of Crime and Violence

"Risk" is a concept that describes deviations from the norm, misfortune or events that have the potential for danger, assuming that human responsibility can prevent such events. The concept of risk and its meaning has transformed over several centuries; in the pre-modern period, risk excluded the possibility of human responsibility, such as an act of God or a natural event, therefore, risk excluded human fault. By the eighteenth century, with the rise of rational thinking and scientific exploration, risk became a notion of probability, enabling the possibility for prediction and further prevention. Today, in the twenty-first century, risk is commonly used as a term to describe an undesirable possibility in everyday life, such as the risk of having a car accident while driving in a rainstorm. Although there is an array of contexts that can employ the concept of risk, the context of crime and violence refers to risk as an "at-risk" population, that is, individuals with an increased probability of undesirable behaviour as an outcome of abstract factors, such as demographic and other characteristics (Lupton, 2013).

Risk factors are attributes (with biological, psychological, or social origins) that are associated with an increased likelihood of negative outcomes involved with risk (Bonta & Andrews, 2016). Risk assessment is a method that identifies risk factors, primarily researched in correctional spaces with adult male offenders with the expectation that the findings will generalize with females and youth (Muirhead, Fortune & Polaschek, 2018). Risk factors are an important area of criminal psychology as recognizing risk can help to prevent negative outcomes, such as violent and/or criminal behaviour. Research on risk factors has enabled the formation of interventions to target potentially changeable factors, which can reduce violent and/or criminal behaviour (Polaschek & Yesberg, 2017; Kroner,

Polaschek, Serin & Skeem, 2019). This section discusses the different risk factors (individual and social) that have been found to increase the likelihood of violent and/or criminal behaviour, while exploring theories of attachment, and social influences including the family unit, peers, and community.

With the rise of female offending, scholars have debated that males and females share similar risk factors for criminal and violent offending (Bonta & Andrews, 2016). It is evident that there are several risk factors that affect both sexes (e.g., age, lack of empathy, substance abuse), and risk factors that tend to be more prevalent for females (e.g., child abuse, mental illness) (Van Voorhis, Wright, Salisbury & Bauman, 2010). Identifying potential risk factors associated with violence helps to predict, prevent, and reduce criminal offending. Risk factors are typically observed as being either present or absent, and are either dynamic (e.g., social relations, substance abuse), or static (e.g., sex, ethnicity, criminal history). Static risk factors are historical and therefore unchangeable, whereas dynamic risk factors have the potential for change thus amenable to intervention (Farrington & Loeber, 2012; Leschied, Chiodo, Nowicki & Rodger, 2008; Bonta & Andrews, 2016).

**Individual Risk Factors**

Individual risk factors involve demographic, psychological, and behavioural characteristics. For example, age and sex are the most common risk factors of crime as young people have higher levels of criminal and violent behaviour compared to older people, and males are more frequently involved in crime and violence compared to females (Cullen & Wilcox, 2013). Polaschek and Yesberg (2017) suggest that younger people are more likely to be influenced by

criminal peers compared to older people, and are more likely to have poorer affect regulation compared to older people.

Childhood abuse/neglect has various detrimental effects on an individual's psychological well-being, and several researchers have highlighted a connection between abuse and the likelihood of women's violence and criminal offending (Babcock, Miller & Siard, 2003; Browne, Miller & Maguin, 1999; Batchelor, 2005; Swan, Gambone, Caldwell, Sullivan & Snow, 2008). This risk factor is far more prominent for females as males tend to experience abuse to a lesser extent compared to females (McClellan, Farabee & Crouch, 1997). Abuse is an individual risk factor that intersects with the social risk factor domain as abused children are exposed to the modelling of violent behaviour from parents, siblings, and/or peers (Pepler & Rubin, 2013).

Research suggests that female offenders are more likely to have mental health needs compared to male offenders, and the common disorders associated with female offenders include depression, posttraumatic stress disorder, anxiety, and self-injurious behaviours (Van Voorhis, Wright, Salisbury & Bauman, 2010; Salisbury, Van Voorhis & Spiropoulos, 2009). Likewise, mental illness is also correlated with both men's and women's use of violence (Arseneault, Moffitt, Caspi, Taylor & Silva, 2000; Van Dorn, Volavka & Johnson, 2012; Dixon, Howie & Starling, 2004).

It is not surprising that an empathy deficit is linked to the development of antisocial behaviours and other externalizing behaviours such as aggression (Jolliffe & Farrington, 2004; Broidy, Cauffman, Espelage, Mazerolle & Piquero, 2003). Empathy is the ability to understand another person's emotional state, and failure to contemplate the consequences of one's behaviour against another. A

lack of empathy is a significant risk factor for both male and female violence (Jolliffe & Farrington, 2007) and offending (Broidy, Cauffman, Espelage, Mazerolle & Piquero, 2003).

There is no evidence to support sex differences in regard to substance abuse, which is a behavioural risk factor for both criminal offending and violence (Boles & Miotto, 2003). Violence is not an inevitable outcome of substance abuse, but rather an outcome of environmental and situational contexts that increase the likelihood of violence that can be further increased by the abuse of substances (Boles & Miotto, 2003; Baskin-Sommers & Sommers, 2006). Many researchers have illustrated that substance abuse can be a contributing factor to both violence (Duke, Smith, Oberleitner, Westphal & McKee, 2018; Van Dorn, Volavka & Johnson, 2012) and criminal offending (Dixon, Howie & Starling, 2004). Overall, the individual risk factors described above are strong predictors of the use of violence by women, particularly childhood experiences of abuse, and these factors play a vital role in risk assessment.

**Social Risk Factors**

The following section discusses the relevance of attachment theory to future violent and/or criminal behaviours, and highlights how some types of attachment are more likely to result in future violent and/or criminal behaviours compared to others. Attachment theory provides an insight into a child's potential for either healthy or dysfunctional social connections during their journey through childhood and into adulthood. Also, the section discusses the influence of the family unit and its attitudes towards crime and violence. The influence of peers is

also discussed, and how negative environments can lead to a higher likelihood of both experiencing and using violence.

**Attachment theory.** Attachment theory, originally developed by Bowlby, attempts to explain the dynamics of interpersonal relationships, beginning with the quality of caregiver-child interactions and the attachment behaviours that are formed with the attachment figure (Belsky, 2002; Ogilvie, Newman, Todd & Peck, 2014).

Two insecure attachment styles have been associated with a higher risk of both perpetration and victimisation of violence for both males and females; ambivalent and disorganized attachment (Doumas, Pearson, Elgin & McKinley, 2008). Ambivalent attachment can develop when the attachment figure is unpredictable and inconsistent with their availability to the child's distress. This attachment style typically causes high levels of attachment behaviour from the child to receive attention from the parent, and consequently, less exploratory behaviours. A child with ambivalent attachment often develops a negative self-image, and the belief that they are unlovable can encourage insecure intimate relationships in adulthood that appear to be "good enough" when they might be dysfunctional or violent (West & George, 1999).

Disorganized attachment can develop when the child has experienced abuse or disrupted affective communication from an attachment figure, often causing a hostile expectation of the world and negative thoughts of self and others (Waldinger, Schulz, Barsky & Ahern, 2006). Due to the nature of the way disorganized attachment is developed, this attachment style has an increased

likelihood of early trauma, resulting in a strong association with the use of violence in later life (Ogilvie, Newman, Todd & Peck, 2014).

**Family styles and peers.** Family styles are a key risk factor for violent and/or criminal behaviour as families characterized by abuse and other manifestations of dysfunction are consistently predictive of this behaviour (Easteal, 2001). The family unit largely determines the child's attitudes towards criminal behaviour by either encouraging crime (e.g., law-rejecting attitudes, family criminality, or antisocial conduct) or discouraging crime (e.g., modelling law-abiding attitudes, correct supervision). Similarly, the family unit regulates the child's attitudes towards violent behaviour (e.g., violence acceptance/disapproval, modelling violence/nonviolence) (Derzon, 2010; Farrington, 1989).

Research on childhood and adolescent antisocial and violent behaviours tends to focus on the quality of peer relations. Peer social rejection plays a role in the development of delinquent behaviours, as children tend to separate from peers who exhibit low self-control and aggression. Rejected children experience few positive peer social interactions and the absence of positive peers often influences the interaction with other rejected and deviant peers, leading to delinquent peer activities (Chapple, 2005; Deptula & Cohen, 2004; Farrington & Loeber, 2012). It is clear that individual and social risk factors play a significant role in the prediction of violent behaviour, and that the accumulation of various factors can increase the likelihood of perpetrating violence.

## The Context of Female Violence

This section identifies women's forms, functions, and motivations of violence, as well as recognizing the potential predisposing, precipitating, and perpetuating factors of women's violent behaviour. This information is important for understanding why women may use violence in prison once incarcerated, as identifying a women's risk may help to prevent this behaviour (Bonta & Andrews, 2016).

In recent years, reports have revealed that women are perpetrating violence to a larger degree than previously observed (Frieze, 2005; Ward & Muldoon, 2007). Scholars tend to agree that when women use violence it is often in the private domain towards a family member, friend, or intimate partner, whereas men tend to use violence on strangers more than on people they know (Pollock, Mullings & Crouch, 2006; McKeown, 2010; Ben-David, 1993; Kruttschnitt, Gartner & Ferraro, 2002; Swan & Snow, 2006). There is also a marked difference in the type of violence that is used by men and women. The impact of minor violence typically results in minor or minimal injury, while moderate and major violence has the potential for severe injury (Harer & Langan, 2001; Archer, 2002; Seamans, Rubin & Stabb, 2007; Hamberger, 2005). Women often use minor violence such as slapping, throwing something, and kicking, whereas men typically use moderate or major violence such as choking/strangling, or beating up the victim (Archer, 2000).

## Functions of Violence

It is reasonable that women's motivations for violence are associated with the avoidance of victimisation as women are more commonly victims of violence

(Swan, Gambone, Caldwell, Sullivan & Snow, 2008). The single most frequently reported drive for women's violence is self-defence, particularly in an intimate partner setting (Stuart, Moore, Hellmuth, Ramsey & Kahler, 2006; Hamberger & Guse, 2005; Leisring, 2012). The definition of self-defence evidently varies across research, for example, Swan & Snow (2003) used two items to measure self-defence; the frequency in which violence is used to defend themselves from their partner, and the frequency in which violence is used to get their partner to stop striking. This measurement is problematic as there can be confusion when distinguishing between the two frequencies, thus an unreliable measurement. Flemke & Allen (2008) recognized self-defence as using violence in response to their partner's verbal abuse and striking their partner after their partner used violence first. The women in Flemke and Allen's (2008) study that used violence as self-defence for verbal abuse admit that it was a response to the anger that they had felt because of their partner's words. This is a troublesome measurement of self-defence, as a violent response to a non-violent encounter would more appropriately fit the definition of retaliation. A widely accepted definition of self-defence is the reasonable use of violence to avoid immediate physical danger (Babcock, Miller & Siard, 2003), whereas the definition of retaliation is recognized as a response to provocation or retribution for previous unwanted behaviour (Flemke & Allen, 2008). Flynn and Graham (2010) suggest that retaliation extends beyond self-defence because it includes an element of revenge while self-defence is framed around the avoidance of physical threat. Due to the complexity of the functions of interpersonal violence, self-defence and retaliation tend to overlap among violence research (Bair-Merritt et al., 2010). Similarly, Ben-David (1993) argued that it is virtually impossible to differentiate between

*defensive* female violence and *offensive* female violence in an intimate partner episode. Police officers are more likely to report from an intimate partner incident that the woman was the victim because of the notion that men have an inherent physical ability to invoke more damage on a woman than a woman could on a man (Ben-David, 1993). Women may perceive themselves as the "real" victim in violent altercations with men because of this, causing women to misconstrue the nature of their violent behaviour. For example, Dobash and Dobash (2004) found that women who were violent toward their partners out of reactive anger often interpreted and reported their actions as self-defence. Despite their actions being more consistent with the definition of retaliation, perhaps the women believed that their violence was self-defence because of a man's physical capacity to cause more harm, regardless of whether the woman had initiated the violence or not.

Other common incentives for using violence is to gain power and control (Babcock, Miller & Siard, 2003). Some scholars have suggested that women may use violence in attempt to reclaim the power and control that was lost in their experiences of victimisation as compensation (Finkelhor & Browne, 1985) because women who use violence tend to be victims of violent or sexual victimisation (Batchelor, 2005; Browne, Miller & Maguin, 1999). Others have suggested that the struggle for mutual control in an intimate relationship or partners exerting control over them provoked them to use violence to prove that they cannot be dominated or victimised (Seamans, Rubin & Stabb, 2007; Babcock, Miller & Siard, 2003; Frieze, 2005).

## Conditions of Violence

The following section explains the circumstances in which violent behaviour has been found to develop, beginning with childhood experiences of family social interactions and the influence negative environments can have on a growing child. Individual conditions are also discussed, including poor emotional regulation, mental illness, and substance abuse issues, and how these features of an individual might increase the likelihood of using violent behaviour.

**Childhood victimisation, family dysfunction, and learned violence.** The quality of the family unit is important as it guides the child's understanding of acceptable attitudes and behaviours (Maccoby, 2000). An individual who is reared in a violent family environment is at a greater risk of demonstrating the behaviours that they have witnessed or experienced in the home (Mihalic & Elliot, 1997; Abbassi & Aslinia, 2010). Experiencing violence in a home environment can teach a child that the use of violence is a legitimate and effective means of achieving goals and solving problems (Mihalic & Elliot, 1997; McCloskey, Figueredo & Koss, 1995; Sternberg et al., 1993). Parents that expose their children to violence in a home environment are also more likely to support aggressive behaviour, predisposing the child to use aggressive behaviour as an adult (Pepler & Rubin, 2013).

A growing concern for New Zealand is childhood abuse, as New Zealand is ranked as having the third-highest rate of deaths from abuse for young children (Marie, Fergusson & Boden, 2009). Results from a study of 2,000 New Zealand children aged nine to 13 years old revealed that 63% of the sample had directly experienced physical violence from another person (Carroll-Lind, Chapman &

Raskauskas, 2011). Similarly, a New Zealand birth cohort study of over 100 children revealed that 78% of the sample had experienced regular physical punishment from a parent (Marie, Fergusson & Boden, 2009). The level of children's exposure to violence in New Zealand is exceptionally high, and these statistics reveal how vulnerable New Zealand children are to victimisation and learned violence.

Childhood victimisation is a distinctive predictive factor for becoming a violent adult. Babcock, Miller & Siard (2003) distributed questionnaires to 52 violent women who had been referred to a treatment agency. The sample was clustered into two categories; women who were violent with their partner only (PO) and women who used general violence (GV). General violence was defined as physical aggression towards friends, strangers, police officers, and intimate partners, whereas partner-only violence was limited to an intimate relationship context. The women from both categories had experienced high levels of childhood abuse, as 70% of the GV women and almost 59% of the PO women had experienced sexual abuse, and approximately 47% of the GV women and 35% of the PO women experienced physical abuse. This study found that within one year, the GV women were more frequently physically and psychologically abusive towards others in comparison to the PO women, and caused more injury to their partners compared to the PO women (Babcock, Miller & Siard, 2003). These findings suggest that childhood victimisation is an important risk factor for women's use of violence, and that childhood victimisation does not only increase the likelihood of perpetrating violence in adulthood but also contribute to other interpersonal problems.

**Emotional dysregulation.** Negative emotions and anger expression are characteristics of poor emotion regulation, and poor emotion regulation is recognized as a strong contributor to violent perpetration (Stuart, Moore, Hellmuth, Ramsey & Kahler, 2006). A basic definition of emotion regulation is that it is the ability to process, evaluate, and modify emotions and respond appropriately to situational stresses (Keenan, 2006). Emotional dysregulation is when an individual has difficulty processing, evaluating, and modifying their emotions and thus responding inappropriately to environmental stresses (Keenan, 2006; Aldao, Nolen-Hoeksema & Schweizer, 2010). Emotional arousal is directly influenced and shaped by the child's caregivers; children who have been raised in aversive environments that involve abuse, social isolation, and/or poverty often have difficulty processing and managing their emotions, increasing their risk of behavioural problems and future psychological disorders (Keenan, 2006; Maughan & Cicchetti, 2002).

There has been confirmation of the relationship between emotion dysregulation and violence by many studies. Shields and Cicchetti (1998) described adaptive regulation as the ability to observe and modify one's affective arousal, for example, the stimulation of emotions such as anger, fear, or joy. Shields and Cicchetti (1998) found that children exposed to maltreatment were less likely to have adaptive regulation and increased rates of aggression, especially those who were physically abused. Chang, Schwartz, Dodge and McBride-Chang (2003) similarly found a significant correlation between harsh parenting, such as physical violence, and affected emotion regulation, which mediated aggression.

**Mental illness and substance abuse.** Given that a large proportion of violent women have abuse histories, many of these women suffer from conditions that are associated with trauma such as depression, anxiety, posttraumatic stress disorder, and substance abuse/dependence (Foa, Cascardi, Zoellner & Feeny, 2000; Stevens et al., 2013). Substance abuse/dependence is often a strategy to cope with memories or experiences of trauma and typically comorbid with psychological disorders (Nestor, 2002).

There is a high prevalence of psychological conditions among women who use violence, as demonstrated by Dowd, Leisring and Rosenbaum (2005) who found in their sample of 107 aggressive women that 67% had depression and 67% had substance abuse problems. Cascardi, Langhinrichsen and Vivian (1992) similarly found that women who used violence against their husbands scored significantly higher on depression compared to women who did not use violence.

Arseneault, Moffitt, Caspi, Taylor and Silva (2000) conducted a cohort study with 961 young adults from New Zealand; just over half of the sample was male. The individuals were enlisted in 1972-3 at the age of three, with follow-up interviews occurring every two years until the age of 21 when the study concluded. Within the 12 months before the final interview, 33 males and six females involved in the study were convicted for 107 violent crimes. The authors discovered that alcohol dependence and marijuana dependence were strongly related to violence. Also, the individuals who had met any diagnostic disorder (e.g., depression, anxiety, schizophrenia-spectrum disorder) were at a higher risk of committing violence compared to those who did not meet a diagnostic disorder (Arseneault, Moffitt, Caspi, Taylor & Silva, 2000).

Lastly, Dixon, Howie and Starling (2004) examined a sample of juvenile offenders, 71% of whom were detained for violent crimes against a person. The authors found that 91% had conduct disorder, 85% had substance dependence, 56% had alcohol dependence, and 55% had depression. The authors concluded that psychological disorders had a strong association with their offender status.

This section described women's forms, functions, and motivations of violence, highlighting several differences to what is known about male's use of violence among these domains. It is evident that negative childhood experiences involving abuse and dysfunction are predisposing factors that increase the likelihood of women using violence. Women who have experienced abuse are also more likely to suffer from mental illness, substance abuse, and/or poor emotion regulation, which can be precipitating and perpetuating factors for using violence.

# Chapter Three–Prison Violence

## New Zealand's Perceptions of Prison Violence

This section discusses the New Zealand public's perceptions of violence in prisons, and how politicians, policy, and media play a role in the misconceptions of the severity of violent behaviour behind bars. This chapter highlights that prison violence can be difficult to detect and document by correctional staff, further contributing to the misunderstanding of the frequency and severity of prison violence.

The New Zealand public tends to perceive prison as an institution that houses the most dangerous people in the country, with violence naturally occurring within the prison setting (Foulds & Monasterio, 2018). Politicians have exaggerated New Zealand's crime problem in media statements and as a result, New Zealanders have expressed a desire for better protection from dangerous criminals (Foulds & Monasterio, 2018; Pratt & Clark, 2005). These demands consequently lead to *The Sentencing and Parole Reform Act 2010* that introduced the three-strike sentencing law to New Zealand (Rumbles, 2011). The three-strike law has been employed across the United States for several decades; it is essentially a countdown to permanent incarceration as a result of committing multiple serious offences, such as violence, which have been decided by the court as a "strike" (Kovandzic, Sloan, & Vieraitis, 2004). This legislation was implemented as a deterrent for re-offending, however, research on the effects of this law has had inconsistent results in the United States. Marvell and Moody (2001) discovered that the law had no crime reducing effects, whereas Helland and Tabarrok (2007) found that offenders who had received two strikes showed reduced rates of arrests. With Helland and Tabarrok's (2007) findings, it can be

speculated that the results represent two-strike offenders who are more cautious of being caught on a final strike, and therefore continue criminal behaviours undetected.

The three-strike legislation may have reinforced the public's opinion that prison contains the most dangerous offenders and likewise when the news reports the most shocking incidents of severe injury, it can associate with the public's current beliefs of New Zealand prison culture. Among the many misconceptions of life behind bars, one of the most prominent is the severity of injuries that are inflicted on prisoners by other prisoners. This misunderstanding can be seen as an effect of the media exposing and emphasising the most shocking violent stories that arise in prison, which tend to occur at a minor rate. For example, video footage recorded by a prisoner emerged from New Zealand's Mt Eden Corrections Facility for men in July 2015 showing violent brawls between prisoners, particularly gang members (NZ Herald, 2015). The videos that were released in 2015 shocked New Zealand, as allegations began to surface of "fight clubs" occurring frequently in the Mt Eden prison, however, no evidence proved such claims (Shane Cowlishaw, 2016). Reports of incidents such as this can encourage the public's belief that serious violent incidents occur frequently in prison, however, official data in prisons in the United States consistently suggest that serious violence occurs the least in prisons (Cunningham & Sorensen, 2007; Harer & Langan, 2001).

In the United States, Harer and Langan (2001) found when investigating the prevalence of violence by severity that only 2.8% of 24,765 female prisoners and 18.5% of 177,767 male prisoners were cited for serious violence during the seven-year study period. It seems New Zealand follows this trend, as a study of

886 female prisoners revealed that of the official misconducts that were recorded in the 12-month period, only 12% were classified as violent (Collie & Polaschek, 2003).

Official data does not always reflect the accuracy of prisoner behaviour as not all misconduct is detected or documented. This was shown when Steiner and Wooldredge (2012) found discrepancies between self-reported misconduct and official reports of misconduct in a sample of 5,630 male prisoners from several United States prisons. The results uncovered that official reports of misconduct underestimated the levels of misconduct that were self-reported and that the inconsistency was determined by the type of misconduct. Official records of assaults were found to be 80% lower than the proportion of prisoners who admitted to assaulting another prisoner or being assaulted by another prisoner in their self-reports, whereas thefts in prison were reported the same by official reports and self-reports. The significant discrepancy found by Steiner and Wooldredge (2012) suggests that correctional staff do not detect a large proportion of assaultive misconduct and that prisoners refrain from providing staff with information on the misconduct that has been missed. Perhaps prisoners are reluctant to reveal their victimisation in fear of being questioned further about the origins of their injuries and exposing the perpetrator, as this may have consequences from the perpetrator or other prisoners. A “snitch” is when a prisoner discloses information with prison guards that would otherwise be exclusive knowledge between prisoners. This role is described as heavily undesirable for the reason that the individual cannot be trusted as their actions may put other prisoners at risk for penalties or an increased sentence length. Violent prisoners may threaten further victimisation if the victim “snitches”, and

prisoners may keep their minor injuries hidden for this reason. Low-severity violence that causes minor to moderate injury is more easily hidden from prison officers compared to a severe assault that has caused serious injury and that is more likely to require medical attention; perhaps this explains why low-severity violence was significantly unnoticed by staff (Marquart & Rowbuck, 1985). Overall, it is clear that a number of violent incidents that occur between prisoners are undetected by correctional staff and unreported by prisoners; it is likely that such information is not reported by prisoners due to the fear of victimisation from other prisoners.

**Theoretical Models and Theories of Prison Violence**

This section refers to the theoretical models and theories of prison violence, such as prisonization, the deprivation model, and the importation model, and how they have been incorporated into prison research to predict violent and misconduct behaviours. This section additionally highlights the differences between male and female prison adjustment, and how this may have an effect on their violent and misconduct behaviours.

Researchers have investigated the extent to which prison life can have a negative effect on prisoner attitudes and behaviour, developing the theory of "prisonization" and theoretical models of deprivation and importation (Dhami, Ayton & Loewenstein, 2007; Paterline & Petersen 1999; Harer & Steffensmeier, 1996). Prisonization is the process in which a prisoner adopts the social and cultural life of prison society, including accepting the inferior role as a prisoner, learning the structure and regime of prison life, and learning to be passive about one's own needs. This notion heavily focusses on the adoption of an informal

prisoner code that guides the prisoners' behaviour in regards to the expectations of the interactions between other prisoners and guards (Paterline, & Petersen, 1999).

The deprivation model and importation model are two widely recognized theoretical frameworks that explain why a prisoner might be at an elevated risk of engaging in violence and misconduct (Cao, Zhao & Van Dine, 1997). The deprivation model proposes that misconduct behaviour is a direct response to the custodial environment of prison, also known as the "pains of imprisonment" (Harer & Steffensmeier, 1996; Cao, Zhao & Van Dine, 1997; Jiang & Fisher-Giorlando, 2002; Dhami, Ayton & Loewenstein, 2007; Paterline & Petersen, 1999). Pains of imprisonment include the loss of liberty and autonomy, limited contact with the outside world, removal of heterosexual contact, and depletion of general privacy (Tasca, Griffin & Rodriguez, 2010). The deprivation model suggests that prisonization is the process of adapting to these physical and social deprivations that are imposed by incarceration (Paterline, & Petersen, 1999). It can be argued that prisoners housed in maximum-security facilities experience greater deprivation due to the increased security, minimal contact with other prisoners, greater level of controlled routine, and typically fewer educational or vocational opportunities (Marcum, Hilinski-Rosick & Freiburger, 2012; Kigerl & Hamilton, 2016; Tasca, Griffin & Rodriguez, 2010).

The importation model explains prisoner behaviour as the representation of pre-prison behaviours and attributes (Dhami, Ayton & Loewenstein, 2007). This model suggests that a prisoner's behaviour is simply an extension of the values, morals, and attitudes that were learned in the community (Harer & Steffensmeier, 1996; Lahm, 2008; McCorkle, Miethe & Drass, 1995; Tasca, Griffin & Rodriguez, 2010; Kigerl & Hamilton, 2016). High frequencies of rule-

breaking and violent prison behaviour are often a result of prisoners who are associated with gangs, have a history of violence, or obtain a criminal history record in the community (Tasca, Griffin & Rodriguez, 2010).

Several studies have examined the explanatory power of the deprivation and importation model for predicting problematic prisoner behaviour. For example, Dhami, Ayton and Loewenstein (2007) conducted a study with 712 male prisoners from low-, medium-, and high-security facilities in the United States to investigate prisoner adaptation using variables from the deprivation and importation models. The authors of this study used self-administered surveys that included prisoners' behavioural, psychological, social, and emotional adaptations to incarceration based on their time served in their current sentence (to measure deprivation) and the quality of their pre-prison life (to measure importation). Prisoners' quality of life was measured by whether the prisoner had used drugs, served prior sentences, finished high school, were employed, and/or had an intimate-partner relationship. The author measured 13 deprivations, including the number of programmes attended (e.g., anger management or addiction programmes), frequency of contact with family or friends from the outside, and thoughts about missing freedom. The results revealed that both the deprivation and importation models help to explain adjustment in prison.

Prisoners who had a poor quality of life outside of prison were found to participate in more programmes than prisoners who had a good quality of life outside of prison; programme participation was a significant predictor of positive adjustment and less misconduct behaviour in prison ($\eta^2$ =.01). Perhaps the authors found this result because prisoners with a poor quality of life are motivated to resolve problems such as drug addiction or poor emotion regulation, which

prisoners with a good quality of life do not have. Deprivation measures showed that prisoners who had spent more than five years in prison had more thoughts of needing to control their lives ($\eta^2$ =.01), had greater feelings of hopelessness ($\eta^2$ =.02), and had a higher frequency of misconduct ($\eta^2$ =.06). These results suggest that both the importation and deprivation models have explanatory power, however, this study sample consisted of only male prisoners and may not reflect the same results with female prisoners.

Gover, Pérez and Jennings (2008) used official data as well as self-report questionnaires from 247 male and female prisoners to examine whether theoretical predictors of misconduct, such as the importation and deprivation theories, applied similarly to male and female prisoners. The results of this study revealed that three importation measures (i.e., age, race, and education) were significant in disciplinary violations involving females, but not males; as females who were younger, non-white, and did not attain education had a higher likelihood of misconduct. The deprivation factors that significantly influenced females' misconduct but not males' misconduct were perceived prison safety (felt safe in prison) and perceptions of staff treatment (perceiving staff in a caring way). The four importation measures that were significant for male prisoner misconduct, but not female prisoners, were prior incarceration, low self-control, and conviction for a violent or non-violent offence compared to prisoners with convicted drug offences.

The deprivation factors that significantly influenced males' misconduct behaviours were prison work (men with jobs) and being confined to a medium-security or maximum-security prison (fewer violations in a minimum-security facility, more violations in a maximum-security facility). Sentence length was a

deprivation measure that was significant for both male and female prisoner misconduct, as longer sentences increased the likelihood of misconduct. Overall, the authors found that when predicting misconduct both importation and deprivation measures were different for male and female prisoners, however, both the deprivation and importation model was supported in this study.

DeLisi (2003) acquired a sample of 1,005 male and female prisoners to examine the importation model on prisoner misconduct. Predictor variables included demographic factors and other prison information such as sentence length and violence history. The findings supported the importation model by revealing that prisoners with extensive arrest histories, histories of violence or weapon use, and prior prison sentences were more disruptive prisoners in prison in terms of misconduct. The results suggest that violent and criminal behaviours that were present in a prisoners' life before prison was heavily predictive of their behaviour inside of prison for both sexes.

It has been recognized that women respond differently to incarceration compared to men, as women's pains of imprisonment can feature different factors to men. For example, the greatest pain of incarceration for some women is the detachment from their children, whereas men's greatest imprisonment pains tend to revolve around the loss of heterosexual contact and lack of autonomy (Celinska & Sung, 2014; Tasca, Griffin & Rodriguez, 2010). Research illustrates that more incarcerated women have young children compared to incarcerated men, and scholars agree that mother-children relationships tend to be more dynamic compared to father-children relationships (Pollock, 2003). Mothers are more likely to be the child's current caregiver, are more likely to have legal custody, report more distress over separation, and exhibit more concern about their child's

fate compared to fathers whom are incarcerated (Jiang & Winfree, 2006; Pollock, 2003). There is evidence that being a mother is an additional factor in the deprivation model, as Jiang and Winfree (2006) found that when women kept in contact with their children their pains of imprisonment were reduced and therefore were less likely to engage in misconduct.

Evidence suggests that interpersonal relationships among female prisoners contribute to prison adaptation in comparison to male prisoners (Trammell, Wulf-Ludden & Mowder, 2014). Female prisoners more commonly participate in homosexual or pseudo-family relationships compared to male prisoners; these relationships provide women with comfort, affection, and support (Wulf-Ludden, 2013; Trammell, Wulf-Ludden & Mowder, 2014), which reduce the effects of the pains of imprisonment. Trammell (2009) interviewed 33 paroled women about their experiences in prison, finding that many women had created pseudo-families and developed romantic and sexual relationships. The women largely claimed that their prison families were substitutes for the family they had left in their lives before prison, and they often bonded over their commonalities such as victimisation or trauma from child separation. In contrast, male prisoners often concentrate on doing their prison time rather than creating meaningful relations with other prisoners (Jiang & Winfree, 2006). This suggests that women adapt better to some of the deprivation factors that affect male prisoners.

It seems that female prisoners adjust differently to incarceration than males for several reasons. It is evident that men and women have contrasting pains of imprisonment, and that women are more likely to adapt to prison as a result of the social connections that they form with other women. Within these relationships, the women may bond over commonalities, such as the pain of child

separation, or abuse histories. In terms of importation, women with extensive abuse histories are at higher risk for prison violence and misconduct, and these women may choose to seclude themselves from meaningful relationships in fear of further victimisation and betrayal, consequently affecting their prison adjustment.

## Predictors of Prison Violence

Scholars have commonly recognized that violent female offenders are underrepresented in prisons worldwide in comparison to their male counterparts, perhaps this is why the research on violent women in prison remains minimal while research on violent men is widely investigated (Reidy & Sorensen, 2018). Female prisoner research is very rare in New Zealand, although there is one study by Collie and Polaschek (2003) that have investigated female misconduct in New Zealand prisons.

This section investigates predictors of violence, such as demographics, prior incarceration, sentence length, convicted offence type, gang membership, and victimisation and abuse. These predictors have been explored frequently in prison violence literature; some of which have clear correlations to violence, while others require further research.

**Demographics.** Research with both male and female prisoner samples often nest their results together, leaving the differences between male and female unclear (DeLisi, 2003; Sorensen & Cunningham, 2010). Sex is one of the strongest predictors of both criminal and violent offending, as males are known to commit violent crimes at a higher frequency and severity compared to females

(Broidy, Cauffman, Espelage, Mazerolle & Piquero, 2003; Harer & Langan, 2001; Reidy & Sorensen, 2018; Staniloiu & Markowitsch, 2012).

In the correctional facility context, the literature indicates inconsistent research findings with the effect of sex on the likelihood of misconduct. Misconduct is defined as any type of disciplinary violation performed inside of prison, ranging from minor violations (e.g., stolen property, fighting, and contraband) to major violations (e.g., serious assault, use or possession of a weapon, and attempted escape) (Gover, Pérez & Jennings, 2008; Harer & Langan, 2001). It is widely agreed that female prisoners are far less likely to perpetrate serious acts of violence in comparison to male prisoners (Harer & Langan, 2001; Lahm, 2008; DeLisi, 2003; Craddock, 1996; Goetting & Howsen, 1986).

Harer and Langan (2001) explored the prevalence of different types of violence between male and female prisoners. Firstly, the authors reported that the average rate for recorded violence by females was 54.4% of the average male rate. By severity, females' non-serious violent misconduct was 91.7% of the mean male rate, and serious violent misconduct was 8.14% of the mean male rate. At most, female violence resulted in minor injury, whereas male violence was found to cause moderate to major injury and in two cases death. Overall, Harer and Langan (2001) report from their sample of 31,303 women and 238,052 men that women's violence occurred at a considerably lower rate compared to men's, as well as perpetrating less severe violence compared to men.

One of the most robust determinants of institutional violence and misconduct among prison research is age, regardless of sex or ethnicity (Griffin & Hepburn, 2006; Bell, 2017; Goetting & Howsen, 1986; Craddock, 1996). This is expected as age is a strong predictor of violence outside of prison (Cullen &

Wilcox, 2013), as mentioned in chapter one. A notion that helps to explain the disproportion of prisoner age across all prison populations is the age-crime curve, which illustrates a distribution of the relationship between age and criminality (Farrington, 1986). The curvilinear distribution peaks during late adolescence and begins to decline after 20 years of age (Bonta & Andrews, 2016). Another notion of age and criminality that helps to describe the age distribution in prison is Moffitt's (1993) theory of two types of offenders; the adolescence-limited offender, and the life-course-persistent offender. The adolescence-limited offender refers to a large group of offenders that mostly desist from criminal lifestyles in early adulthood for reasons such as job opportunities and adult roles, for example, becoming a parent. It is suggested that adolescence-limited offenders become distressed while waiting for maturation thus they are in search of adult responsibilities and privileges. These individuals may engage in criminal activity to acquire what they perceive as adult roles and freedoms, and later discontinue criminal involvement when reaching adulthood and naturally facing adult responsibilities that are inconsistent with offending behaviour. Life-course-persistent offenders consist of a small group that persists with criminal behaviour into adulthood and tend to come from adverse backgrounds (Moffitt, 1993).

The relationship between age and prisoner misconduct is consistently negative across the literature, that is, misconduct rates decrease with age. For example, Cunningham, Sorensen and Reidy (2005) acquired a sample of 2,595 male maximum-security prisoners in the United States and reviewed their disciplinary records. The authors used a logistic regression analysis to predict violent incidents; testing variables such as age, education, prior prison record, convicted offence, and sentence length. The authors discovered that the most

significant predictor was age, as age increased when the likelihood of committing violent misconduct decreased. Prisoners aged younger than 21 were over three times more likely to engage in prison violence compared to prisoners aged from 31 to 35.

Another study found similar results; Cunningham and Sorensen (2007) found in their sample of 24,517 male close custody prisoners that age was the strongest predictor of disciplinary records while testing age, gang membership, prior prison sentences, violent convicted offence, and sentence length. To investigate the prevalence of violent misconduct by age, the authors formed six age categories; ages younger than 21, age 21 to 25, age 26 to 30, age 31 to 35, 36 to 40, and ages older than 40. The results of this study revealed that younger prisoners were more likely to commit violent misconduct compared to older prisoners. Prisoners aged 21 to 25 were the most violent overall (64% more likely to engage in violence compared to those aged younger than 21). Also, prisoners who were over the age of 40 were approximately 50% less likely to be violent compared to prisoners aged 31 to 35.

A limitation of this study was that the authors did not specify whether age had been measured by the age of when the prisoner was admitted to prison, the age at the time of the incident, or the age at the time the data was collected for the research. The authors reported that there was an overall negative relationship between age and violent misconduct.

Kuanliang, Sorensen and Cunningham (2008) compared age and prison misconduct with a sample of 37,457 juvenile, youthful, and adult male prisoners between the years 1998 and 2002. Age was categorised into groups; juveniles included 13-17 years, youthful adults included 18-20 years, and adults included

21-25 years, 26-30 years, 31-35 years, 36-40 years, and 41 years and older. The frequency of misconduct between the groups revealed a notable difference, as the juvenile group had a significantly higher percentage of frequency and prevalence for all disciplinary violations. The 41 years and older group displayed the lowest rates of total misconduct.

From the limited research that has explored female prisoner behaviour separate from male prisoners, it was evident that age also negatively predicts prison misconduct for females as it does for males (Gover, Pérez & Jennings, 2008; Pollock, Mullings & Crouch, 2006; Steiner & Wooldredge, 2014). Valentine, Mears and Bales (2015) obtained a large sample of 137,552 male and female prisoners aiming to assess the relationship between age and misconduct by examining single ages from 16 to 64 years of age, rather than organizing ages into groups. The authors discovered that the relationship between age and misconduct is curvilinear for both male and female prisoners, and that misconduct behaviour was largely produced between the ages of 16 and 24, falling dramatically after age 24. Younger prisoners are more inclined to break prison rules regardless of sex (Kuanliang, Sorensen, & Cunningham, 2008; Flanagan, 1980; Reidy & Sorensen, 2018; DeLisi, 2003; Craddock, 1996) and engage in violent behaviour (Kuanliang, Sorensen & Cunningham, 2008; Cunningham, Sorensen & Reidy, 2005; Cunningham & Sorensen, 2007; Sorensen & Cunningham, 2010).

**Prior incarceration.** This is one of the most frequently used importation measures among prison violence literature and has consistently been recognized for misconduct predictability (Marcum, Hilinski-Rosick & Freiburger, 2012). Prisoners with previous prison sentences are expected to be more problematic as

their re-offending behaviours indicate that prison has not deterred them from committing further crime and this has resulted in their return. Nilsson (2003) explained how those who leave prison and re-offend are often those who have poor environments to return to, such as undesirable living conditions and pro-criminal social connections. Another aspect of prison release is the marginalising factor that freedom imposes on the individual when they are searching for employment opportunities as these are reduced, therefore, some offenders may feel the need to depend on crime to alternatively fulfil an income which can ultimately result in reconviction and re-incarceration.

Cunningham and Sorensen (2007) explored predictive factors for violent misconduct in several United States prisons and reported from their large sample that male prisoners who had served a prior prison sentence were more likely to engage in violent acts compared to prisoners who were first-timers. The same authors produced another study one year later with a different study sample and discovered that prior prison sentences increased the expected violent citation numbers by 29% (Sorensen & Cunningham, 2010). Similar findings were reported by Cunningham, Sorensen and Reidy (2005) as prisoners who had served prior sentences were more likely to commit violent acts.

In samples of both male and female prisoners, researchers have found similar results (DeLisi, 2003; Cooper & Werner, 1990; Kuanliang & Sorensen, 2008). DeLisi (2003) found that prior incarceration was the most significant predictor of prison misconduct. Cooper and Werner (1990) discovered that prior convictions were positively correlated with prison violence, and Kuanliang and Sorensen (2008) found that a history of incarceration in adulthood increased the likelihood of rule violations by 42.3%. These results are based on the behaviour

from both men and women, however, do not report behaviour by sex, therefore, it can be speculated that the results are weighted more heavily by males behaviour as the sample sizes are consistently disproportionate by sex.

One study by Gover, Pérez and Jennings (2008) separated the findings from male and female prisoners and found that prior incarceration was the only predictor that affected males differently. The authors found that females with prior prison sentences *decreased* the mean number of prison violations they committed by 51%, whereas prior incarceration for males *increased* the mean number of violations by 250%. The findings from Gover, Pérez and Jennings (2008) pose a unique argument, that is, that women are less likely to engage in misconduct if they return to prison. Several researchers who have investigated women's adaptation to prison suggest that men and women have different adaptive strategies to prison life, further proposing that females adjust better to prison life and are therefore are less likely to engage in misconduct behaviour. Perhaps women who have experienced prior incarceration are more reactive to the consequences that are involved with misconduct behaviour, and refrain from engaging in conduct that will result in a penalty (Craddock, 1996, Harer & Langan, 2001).

**Sentence length.** A prisoner's sentence length reflects the crime in which they were convicted; longer sentences are typically caused by serious crimes (e.g., homicide, robbery) and shorter sentences by minor crimes (e.g., petty property crime, public order crimes) (Jeffries & Newbold, 2015). Scholars have explored the effects of sentence length on prisoner behaviour to find whether prisoners with longer sentences are more likely to engage in misconduct in prison compared to

those with shorter sentences due to the serious nature of their convicted offence (Schenk & Fremouw, 2012).

The following section explores research that has discovered a positive relationship between prison violations and sentence length, that is, prisoners with *longer* sentences have a higher frequency of prison violations. Goetting and Howsen (1986) investigated the correlates of prisoner misconduct with a sample of 5,586 male and female prisoners in the United States; approximately 80% were male and 20% were female. The results reported that prisoners serving longer sentences committed a greater proportion of violations compared to prisoners serving shorter sentences. The same results were found when Craddock (1996) examined patterns of misconduct with a sample of 3,551 male and 1,315 female prisoners, although results were not separated between sexes. Similarly, Collie and Polaschek (2003) found in their study of 886 female New Zealand prisoners that prisoners serving longer sentences were more likely to be cited for misconduct. The same relationship was found when Casey-Acevedo and Bakken (2001) separated their sample of 123 female United States prisoners into a short-term group (serving less than 18-months) and a long-term group (serving more than 18-months). This finding was found once more when Thompson and Loper (2005) investigated the influence of sentence length on prisoner behaviour by dividing their sample of 692 women from a United States prison into three groups; long-term prisoners serving 10 years or more, medium-term prisoners serving two to 10 years, and short-term prisoners serving less than two years. The results showed that long-term and medium-term females had higher rates of misconduct compared to short-term female prisoners. These studies support the idea that offenders who are incarcerated for committing serious crimes and

received lengthy sentences are more likely to engage in misconduct compared to prisoners serving shorter sentences for committing minor crimes.

Some researchers anticipate that prisoners with longer sentences are less concerned about the consequences of breaking prison rules, whereas prisoners with short sentences may be fearful of extending their sentences due to bad behaviour (Thompson & Loper, 2005; Acevedo & Bakken, 2001). There is evidence that the relationship between sentence length and misconduct is far more complex than this. Understandably, prisoners who receive life or death sentences have committed the most serious offences (although, not always violent); these prisoners have no chance of release and are perceived as having nothing more to lose.

The next section investigates research that has discovered a negative relationship between prison violations and sentence length, that is, prisoners with *shorter* sentences have a higher frequency of prison violations.

Cunningham, Sorensen and Reidy (2005) found in their sample of male prisoners that a life-without-parole sentence or death sentence was a risk-reducing factor. The authors categorised sentence length into six groups; two to five years, six to 10 years, 11 to 20 years, more than 20 years, life sentence, and death sentence. The results reported that prisoners serving a sentence length of six to 10 years were the most likely to engage in violence compared to any other sentence length category. These findings suggest that long sentences reduce the likelihood of misconduct; this relationship has been found by several other prison studies.

Cunningham and Sorensen (2007) grouped sentence lengths into four categories; one to five years, six to 10 years, 11 to 20 years, and more than 20 years. The results showed that prisoners serving one- to five-year sentences were

twice as likely to have violent citations compared to prisoners who were serving sentenced that exceeded 20 years. Additionally, prisoners serving six to 10 years were almost 60% more likely to be violent than prisoners serving longer than 20-year sentences, and prisoners serving 11 to 20 years were almost 40% more likely to be violent compared to prisoners serving longer than 20 years. This shows how the probability of violent misconduct increased as sentence length decreased.

An older study by Flanagan (1980) analysed the relationship between served prison time and prison misconduct using the Department of Correction's official data in the United States. Two samples were extracted from this data; the short-term sample consisted of 701 male prisoners who had served less than five years, and the long-term sample contained 765 male prisoners who had served five years or more. The data was collected between 1973 and 1976, and in this time both samples in conjunction had mustered 13,998 rule violations. The results showed that prison violations were recorded at a higher rate for prisoners who were serving short sentences.

Similar results were found by Reidy and Sorensen (2018) when acquiring a sample of 2,777 female prisoners and categorising their sentences into three groups; two years or less, two to eight years, and eight or more years. The authors found that the women serving two years or less were the most likely to commit serious and violent violations, and the women serving eight or more years were the least likely to engage in serious violence.

This section showing a negative relationship between sentence length and prison misconduct can be explained by the deprivation model, as this model suggests that new prisoners are more likely to engage in misconduct due to the difficulty of adjusting to their recent loss of liberties, thus less inclined to adapt to

prison life, as they are aware of their imminent release (McCorkle, Miethe & Drass, 1995).

There is evidence that prison adaptation reduces misconduct behaviour, as prison studies often use official citations of misconduct to measure prisoner adjustment, and the deprivation model assumes that poor adjustment increases the likelihood of rule violations (Flanagan, 1980). Zamble (1992) examined prison adaptation by interviewing a sample of 25 male prisoners who had served long sentences in a correctional facility in Canada. Adaptation was measured by a range of different variables such as institutional employment, involvement in sports and hobbies, outside contacts, visitation frequency, and socializing in prison. It was revealed that prisoner misconduct reduced once the prisoners had adapted to prison and actively participated in the prison environment. The author argued that adaptation to prison is the key to personal improvement and observed that once the prisoners became adjusted to the prison environment they began to analyse and control their behaviour. This process leads to a reinforcing cycle that in time will result in the motivation for release to show their family, friends, or community that they have made a positive change. Zamble (1992) further argued that short-term prisoners rarely reach such a stage in their sentence and as a result, they continue with misconduct behaviour and accumulating citations.

Another explanation as to why longer sentenced prisoners are less likely to engage in misconduct might be because they are actively avoiding confrontation to either maintain or obtain certain privileges such as visitation, work participation, commissary, and other benefits that can be granted to behaved prisoners (Reidy & Sorensen, 2018). There are mixed results in the literature suggesting that the relationship between sentence length and prisoner misconduct

is multifaceted and that several factors are contributing to the variation of results among research.

**Convicted offence type.** The crime in which an offender is sentenced to prison can be expected to have an association with their lifestyle and beliefs before prison. There is evidence to support the notion that offenders who live violent and antisocial lifestyles are anticipated to follow these values and norms within the confines of an institution and consequently be more likely to engage in misconduct (Tasca, Griffin & Rodriguez, 2010; McCorkle, Miethe & Drass, 1995).

Bell (2017) retrospectively investigated the United States Department of Corrections data of 31,842 male and 6,674 female prisoners. Convicted offence type was among the predictor variables that were analysed and grouped into three categories; violent crime, property crime, and drug crime. The multivariate analysis revealed that prisoners who were convicted of violent offences were more violent in prison compared to those convicted of property and drug crimes. Similarly, Griffin and Hepburn (2006) investigated the correlates of violent misconduct behaviour with 2,158 male prisoners. The convicted offences were separated into two groups; non-violent offences (burglary, drug crime, and auto theft) and violent offences (robbery, rape, and manslaughter). The results showed that prisoners who were convicted of violent offences were significantly more likely to engage in prison violence, such as assault and fighting, compared to prisoners who were incarcerated for non-violent crimes. Craddock (1996) found that those who were convicted of more severe offences had a higher frequency of

disciplinary violations; this finding was consistent with a sample of 831 male and 174 female prisoners by Drury and DeLisi (2010).

While several studies were able to find a strong correlation between the conviction of serious offences and misconduct in prison (Bell, 2017; Griffin & Hepburn, 2006; Craddock, 1996; Drury & DeLisi, 2003), more evidence suggests that those convicted of less serious offences are more likely to engage in misconduct compared to those convicted of more serious offences (Kuanliang & Sorensen, 2008; Flanagan, 1980). Cunningham, Sorensen and Reidy (2005) investigated several predictive factors of violent misconduct with a sample of male prisoners who had been convicted of murder (*n*=1,067), robbery (*n*=731), property (*n*=630), sexual assault (*n*=384), and drug crimes drugs (*n*=379). The authors reported that the one convicted offence type that significantly predicted violence in prison was property crime. Similarly, Sorensen and Cunningham (2010) retrospectively reviewed 51,527 male and female prisoners in three samples; stock population, admissions cohort, and close custody. The stock population sample included *n*=9,586 convicted murderers, the admissions cohort sample included *n*=837 convicted murderers, and the close custody sample included *n*=450 convicted murderers. The results revealed that prisoners who were convicted of any degree of homicide had significantly fewer violent misconducts compared to prisoners who were incarcerated for public order, property, or drug crimes. Kuanliang and Sorensen (2008) suggest that the variation in findings across studies is the result of samples coming from different geographical regions and different periods. This is because there are changes in policy across time that are likely to alter the type of conviction an offender receives, as well as the length of the sentence they receive; which has been shown

to affect prisoner behaviour and adjustment (Dhami, Ayton & Loewenstein, 2007).

**Gang membership.** Gangs are social groups of deviant individuals that share unconventional norms and values that are known for collectively engage in criminal and violent behaviour (Decker, 1996; Pyrooz, Sweeten & Piquero, 2012). Historically, females were perceived as auxiliaries and instruments for gang members rather than part of the gang (Dukes & Stein, 2003). For this reason, many researchers have assumed that few women participate in gangs as members, thus causing this population to remain understudied for several decades. In recent years, female gang membership has become more recognized and as a result, there has been a growing interest in why females join gangs and to what extent they participate in violence (Sutton, 2017). The stereotype that only males can commit violent acts is outdated. Although males are more likely to be gang affiliated and violent compared to females (Watkins & Melde, 2018), studies have found that female gang members engage in violence at a higher frequency compared to males that are non-gang members (Haymoz & Patti, 2010; Esbensen, Deschenes & Winfree, 1999; Drury & DeLisi, 2010; Pollock, Mullings & Crouch, 2006). However, female gang members commit violence at a lower frequency compared to their male counterparts (Deschenes & Esbensen, 1999).

McGloin (2007) and Sutton (2017) describe a variety of "pushes" towards and "pulls" from gang involvement. They argued that the factors that may "push" an individual into a gang are victimisation, the need for protection, and seeking a sense of belonging, whereas factors that may "pull" an individual from a gang are factors such as parenthood, employment, and prosocial non-gang relationships.

Research suggests that protection is essential to both the formation and perpetuation of gang membership (Esbensen, Deschenes & Winfree, 1999), and those who are attracted to gang membership are those who have experienced victimisation themselves (Melde, Taylor & Esbensen, 2009; Batchelor, 2009). It is recognized that violent women have a heightened probability of abuse histories (Siegel & Williams, 2003; Stuart, Moore, Hellmuth, Ramsey & Kahler, 2006; Pollock, Mullings & Crouch, 2006). These women are more likely to be searching for a sense of belonging, a refuge from abusive families, and fulfilling relationships that may not be met in other parts of their life that gangs can provide (Batchelor, 2005; Batchelor, 2009). Deschenes and Winfree (1999) found from the 380 male and 237 female gang members in their sample that more than half of the females had admitted to joining a gang for protection, and just under half of the males had disclosed the same purpose. Despite protection being a common explanation for joining a gang, gang membership typically heightens the likelihood of victimisation and harm due to the risk that is involved in gang-affiliated activities. Gang affiliation influences norms and attitudes that increase criminal involvement and readiness to engage in violence (Decker, Melde & Pyrooz, 2013).

Crime and violence are integral to gang life, therefore, gang members are more likely to be incarcerated due to their dangerous and criminal lifestyle, more likely to continue their violent behaviour in prison (Fox, Lane & Akers, 2010), and more likely to be incarcerated more than once (Scott & Ruddell, 2011). New Zealand has experienced a gang problem for many decades, thus gangs have been a permanent feature in New Zealand's prisons (Meek, 1992). As expected, gang membership poses a persistent threat to prisoners, staff, and prison order in

correctional facilities, as just like outside of prison, gang members commit a range of illegal acts as part of their association (Decker, 1996). Once incarcerated, gang membership becomes a robust predictor for misconduct behaviour as these prisoners tend to defend their reputation and secure their gang position with the use of violence in prison (Worrall & Morris, 2012).

As a group that thrives on warfare, it is essential that correctional facilities identify gang affiliations, as this knowledge is regularly used to separate gang members to control gang activity and evade the possibility of a gang-motivated assault on other prisoners and correctional staff (Lauderdale & Burman, 2009).

Most of the research on gang membership in prison has focused on either male prisoners or mixed-sex samples; these studies have consistently found that male and female gang-affiliated prisoners are more likely to be involved in misconduct compared to those who are non-gang members (Sorensen & Cunningham, 2010; DeLisi, 2003; Bell, 2017; Cunningham & Sorensen, 2007; DeLisi, Berg & Hochstetler, 2004). Sorensen and Cunningham (2010) found in their sample of male and female prisoners that prisoners who were involved in gangs were 24% more likely to engage in violence compared to prisoners who were not gang-affiliated. Similar findings were discovered in the mixed-sex samples from DeLisi (2003) and Bell (2017), revealing that gang members had a higher proportion of serious violations compared to non-gang-affiliated prisoners. Some institutional violence and gang research has excluded women from their sample due to insignificant numbers, such as Griffin and Hepburn (2006), who only identified five gang-affiliated women in their sample compared to 361 male gang-affiliated prisoners. Lauderdale and Burman (2009) argued that the number of gang-affiliated women in correctional facilities may be insignificant due to the

way gang affiliation is defined by the prison and how the prison identifies these prisoners. Another observation is that identifying gang-affiliated women may not have always been a primary concern for prison staff, as female prisoners do not pose the same physical threat as male prisoners (Reidy & Sorensen, 2018; Harer & Langan, 2001; Craddock, 1996).

**Victimisation and abuse.** A large number of females behind bars have abuse histories from childhood and/or adulthood. Jones, Worthen, Sharp and McLeod (2018) distributed questionnaires to female prisoners to examine the effects of childhood experiences on intimate partner violence in adulthood. The findings from the sample of 355 prisoners revealed that in childhood; 62.8% of the women had been emotionally neglected, 57.8% had been sexually abused, 56.3% had been emotionally abused, and 55% were exposed to physical neglect. Parental divorce, having a mother that was a victim of violence, and being exposed to physical, sexual, and/or emotional abuse were all factors that increased the likelihood of adult victimisation in an intimate partner relationship.

A similar study by Loucks and Zamble (2001) found in a sample of 100 female prisoners that 81% had experienced at least one physical abuse incident during their life and 54% had been exposed to severe physical abuse at least once in the home. Among the women that had experienced physical abuse, 72% had experienced sexual abuse in post-adolescence and 62% had experienced sexual abuse in pre-adolescence.

An older study by Browne, Miller and Maguin (1999) found that 70% of the maximum-security female prisoners in their sample had reported severe physical abuse in childhood or adolescence, and 59% had reported sexual abuse in

childhood or adolescence. Of these women, 80% were victims of severe physical violence from an intimate partner. These studies show that a large proportion of women in prison have experienced some form of victimisation or abuse before incarceration.

Two studies that investigated the effect of childhood abuse on violent female prisoners found similar results. Pollock, Mullings and Crouch (2006) interviewed 657 female prisoners, finding that over half of the violent women had reported childhood abuse histories. While comparing violent women with non-violent women, the authors found that violent women were more likely to have abuse histories. Batchelor (2005) interviewed 21 violent Scottish female prisoners and discovered that two-fifths of the women reported experiences of sexual abuse, two-fifths reported being a victim to physical abuse, and two-fifths had observed serious physical violence between parents and/or between parent and sibling. These studies illustrate the high prevalence in which incarcerated women experience trauma in childhood, suggesting that there is a strong link between childhood abuse and violent behaviour outside of prison. Although there is minimal research that has directly investigated this link, there is evidence that abused younger females have a significantly higher risk for delinquency and violent intimate relations in adulthood (Browne, Miller & Maguin, 1999).

Few studies have investigated the link between abuse histories and the misconduct occurring in prison, however, for those who have examined this relationship have found that abuse histories have a significant effect on the likelihood of engaging in prison misconduct (Celinska & Sung, 2014; Wright, Salisbury & Van Voorhis, 2007).

Celinska and Sung (2014) observed data from 18,185 male and female prisoners to assess sex-specific explanations of rule violations. Using surveys, the authors found that experiences of prior victimisation, particularly physical abuse, were one of the most significant factors that were linked to a higher likelihood of rule violations for both male and female prisoners. Wright, Salisbury and Van Voorhis (2007) similarly found in their sample of 272 female prisoners that those who experienced abuse in childhood had a higher likelihood of misconduct within six and 12 months of their sentence. The findings from this study illustrate that childhood abuse histories may be a predictive factor for prison misconduct; the authors speculate that these women may be more sensitive to the traumatising and victimising features of prison life and therefore may be at a higher risk of engaging in misconduct.

In summary, this section outlined two key predictors of women's prison violence; age and gang membership. The literature suggests that prior incarceration is highly predictive of prison violence, however, these findings were largely based on male prisoners as females were disproportionate in numbers in these mixed-sex samples. Also, there was evidence to suggest that prior incarceration is not a predictor of violence for female prisoners; this is likely a result of females' coping strategies for the pains of imprisonment and their better prison adjustment, discussed in chapter two. Sentence length and convicted offence type were two predictors that produced inconsistent results and will require further research in the future. Lastly, victimisation and abuse are a significant predictor for female's use of violence in prison, as several researchers have supported this claim with their findings.

## Research Aim

This study aimed to explore the prevalence of female violence and misconduct in New Zealand women's prisons. This study will be providing statistical evidence of vital information about the current climate of New Zealand's female prisons for the Department of Corrections and will deliver valuable suggestions on the allocation of security resources and enhance risk assessment.

## Hypotheses

Hypothesis One: That younger prisoners will have a higher number of violations compared to older prisoners between the years 2012 and 2017. The theory behind age predicting misconduct behaviour is that young individuals have either failed to transition into adulthood and refusing adult-related responsibility, or their transition has been interrupted by factors such as substance abuse.

Hypothesis Two: That gang-affiliated prisoners will have a higher number of violations compared to non-gang-affiliated prisoners between the years 2012 and 2017. Gang members are expected to have a higher number of violations because crime and violence are integral to gang life (Fox, Lane & Akers, 2010).

Hypothesis Three: That prisoners with higher RoC*RoI scores will have a higher number of violations compared to prisoners with lower RoC*RoI scores between the years 2012 and 2017. RoC*RoI scores are not typically used to predict behaviour in prison, but rather predict an offender's risk of reconviction and re-incarceration after prison.

Hypothesis Four: Auckland Region Women's Corrections Facility (ARWCF) will have a higher prevalence of violence and misconduct than Arohata

Prison and Christchurch Women's Prison between the years of 2012 and 2017. ARWCF houses higher security prisoners compared to Arohata Prison and Christchurch Women's Prison (Department of Corrections, 2019), and research from the United States has suggested that prisoners housed in maximum-security facilities are more likely to engage in misconduct compared to minimum-security facilities (Steiner & Wooldredge, 2013).

Hypothesis Five: That prisoners will have a higher frequency of violent incidents compared to non-violent incidents between the years 2012 and 2017. This hypothesis is based on prior research that has found high levels of violent misconduct in female prisons (Reidy & Sorensen, 2018).

# Chapter Four – Method

## Measuring Prison Violence

Prison staff record misconduct through disciplinary violations that are documented on a prisoner's official record (Cao, Zhao & Van Dine, 1997). Many researchers around the world have taken advantage of computerized files that have been accumulated by the Department of Corrections in different countries to conduct statistical analyses and produce evidence of prison misconduct correlations (Schenk & Fremouw, 2012). Prison data is typically quantitative; quantitative research is often more reliable as it depends on measureable events, such as disciplinary violations, whereas a prisoner's thoughts and feelings about their behaviour are difficult to measure (Watson, 2015). However, official reports of prison violations can exclude events that are undetected by prison officers and remain unreported. Also, quantitative data of prison violations may fail to capture emotional and cognitive experiences associated with violations (Willison, 2016). Prison violence research often investigates large samples to assure that the results are robust and reliable; this is because larger samples are more likely to produce accurate mean values, therefore, evade misleading statistics from outliers (Liu, Wu & Zumbo, 2010).

## Estimating Post-Release Criminal Behaviour: RoC*RoI

The RoC*RoI is New Zealand's Department of Corrections statistical tool and post-release estimated risk of reoffending measure that is comprised of two different algorithms; risk of reconviction (RoC) multiplied by the offender's risk of imprisonment (RoI) (Bakker, O'Malley & Riley, 1999). RoC*RoI scores are influenced by a range of variables, such as the offender's age of first conviction

and quantity of previous offences; to assess the offender's probability of incarceration. In addition to demographic information, most New Zealand prisoners have a RoC*RoI score that reflects their risk of post-release criminal behaviour. The RoC*RoI scores can range between .01 and 1; if an offender has a RoC*RoI score of .60 it suggests that the individual has a 60% chance of reconviction and re-incarceration within the next five years, and later offences increase the RoC*RoI score. In terms of accuracy, Bakker, O'Malley and Riley (1998) found that RoC*RoI was 75% accurate for predicting reconviction of high-risk offenders' that were reconvicted and re-incarcerated two- and five- years after release. Like other prisoner data, RoC*RoI relies on the information that is available to the Department of Corrections, therefore, it is not uncommon to have missing data such as offences committed outside of New Zealand, or juvenile offences.

**Sample and Data Analysis**

The Department of Corrections provided access to all reported incidents across the three women's prisons between 1 January 2012 and 31 December 2017 for the purpose of this research. This data was provided in the form of an electronic database that was sent via an encrypted link. Table 1 displays the study sample of 2,038 female prisoners across three New Zealand prisons.

Table 1.

*Study Sample of Female Prisoners*

| Prison | *n* |
|---|---|
| Auckland Region Women's Corrections Facility (ARWCF) | 1,084 |
| Arohata Prison | 537 |
| Christchurch Women's Prison | 417 |
| Total | 2,038 |

Table 2.

*Descriptive Statistics of Study Sample*

| Variable | *n* | Percentage |
|---|---|---|
| Prisoners | 2,038 | 100 |
| Age | | |
| 17-26 | 738 | 36 |
| 27-34 | 641 | 31 |
| 35-75 | 658 | 32 |
| Ethnicity | 2,038 | 100 |
| European | 622 | 31 |
| Maori | 1,252 | 61 |
| Pacific | 101 | 5 |
| Other | 63 | 3 |
| Incidents | 11,368 | 100 |
| Physical Violence | 3315 | 29 |
| Verbal Violence | 1,526 | 13 |
| Property Violence | 582 | 5 |
| Non-Violent Incidents | 5,945 | 52 |
| Gang Members | 362 | 18 |
| Incidents by Gang Members | 2,215 | 19 |
| Mongrel Mob Incidents | 1,503 | 13 |
| Black Power Incidents | 997 | 8 |

Table 2 illustrates the demographics of the prisoners. The age range was 17-75 years old with a median of 28, mean of 29, and a mode of 26. The ethnicity population were 61% Maori (*n*=1,252), 30% European (*n*=622), 5% Pacific Islander (*n*=101), and the remaining 3% were either listed as *other* or *not recorded* (*n*=62). Gang information was provided, including whether the prisoner was a gang member (yes or no), their current gang status (active or former), gang name (i.e., Mongrel Mob, Black Power), and gang role (i.e., patched member, prospect). There were 24 different types of gang names and five different gang roles in the data. Gang-affiliated prisoners accounted for 18% (*n*=362) of the total prisoner sample and 19% (*n*=2,215) of all incidents. The two most numerous gangs in this sample were Mongrel Mob, committing 1,503 incidents in aggregate, and Black

Power committing 997 incidents. Prison violations/incidents ($M$ = 5.5, $SD$ = 9.6, range = 1-154) were reported from 2012 to 2017. Table 2 displays the comparison of prison incidents by violence category and non-violent incidents, illustrating that non-violent incidents (52%) and violent incidents (48%) in aggregate occurred at a similar rate, with physical violence against another person accounting for 29% of all incidents within the 5-years.

Each prisoner in the sample had committed a minimum of one prison violation between 2012 and 2017. To maintain privacy, each prisoner in the sample was anonymized by a fictional prisoner ID number that did not correspond with their existing prisoner ID number. Each incident was reported with an incident ID; most incidents provided additional incident information such as the date, time, setting, and participant role.

IBM SPSS Statistics, version 25 was used to analyse the data. The original data listed 28 incident categories including; activates smoke alarm, activates sprinkler, assault – no injury, assault – non-serious, assault – serious, assault – sexual, attempts to coerce/corrupt staff, breaks prison rules, deliberately obstructs view (in no other category), dilute/tampered sample, disobeys lawful order, fighting, graffiti/tagging, other prisoner behaviour, other wilful damage (in no other category), prisoner abuses or physically threatens prisoner, prisoner abuses prisoner, prisoner threatens prisoner, prisoner verbally abuses/threatens non-custodial employee, prisoner verbally abuses/threatens other over phone, prisoner verbally abuses/threatens staff, prisoner verbally abuses/threatens visitor, smoking, stand-overs/intimidation/taxing, steals prison property, steals prisoner property, written threats to external people (via the prison mail system), and written threats to staff or prisoner.

In the process of data cleaning, incidents were then collapsed into several variables. First, violence was separated into three variables; *physical violence, verbal violence, and property violence*. As the descriptive statistics revealed that more than half of the disciplinary violations were non-violent, another variable was created called *recorded violations*; this variable included all of the misconduct listed above (both violent and non-violent incidents). For this reason, the recorded violations variable was used in the analysis rather than the violence variables. The *recorded violations category* variable was created to categorise the number of incidents per prisoner into three groups (1 incident, 2-4 incidents, and 5+ incidents) based on cumulative percentages. An additional variable called *age category* was created to categorise prisoners by three age groups; 17-26 (*n*=738), 27-34 (*n*=641), and 35-75 (*n*=658).

Descriptive statistics are used to describe the features of the data sample and report the central tendency, variability, and frequency distributions (Coakes & Ong, 2009). Descriptive statistics were used to observe and describe the sample as well as identify the appropriate statistical analyses for the data based on the normality of the distributions.

The Mixed Model ANCOVA (3x2) analysis was conducted to investigate the relationship between RoC*RoI scores and gang membership (yes or no) on violation frequencies (low, medium, high) while controlling for the effects of age as a covariate to increase the accuracy of the results (Coakes & Ong, 2009).

Nonparametric statistics were employed, such as the Mann-Whitney U test and Kruskal-Wallis test, as the recorded violations variable did not meet the assumptions of parametric tests and was not normally distributed with skewness and kurtosis outside of an acceptable range (skewness = 6.54, kurtosis =70.72).

The Kruskal-Wallis test is a nonparametric alternative to one-way ANOVA and was employed to identify differences across the three age groups by recorded violations, and tested if there was a significant difference in recorded violations between the three prisons.

The Mann-Whitney U test is a nonparametric alternative to an independent-samples t-test and was used to compare between the three age groups as well as compare recorded violations by gang membership and non-gang membership. This test was also used to compare recorded violations between Arohata Prison, Auckland Region Women's Corrections Facility (ARWCF), and Christchurch Women's Prison.

The effect size is the extent of the difference between groups (Sullivan & Feinn, 2012) and Cohen's guidelines for interpreting an effect size were employed; $r = 0.1$ for small, $r = 0.3$ for medium, and $r = 0.5$ for large effect sizes (Gignac & Szodorai, 2016). The effect size is fundamental to the results of the statistical analysis, as the *p*-value reports the statistical significance, however, it does not reveal the size of the effect because it is independent of sample size (Sullivan & Feinn, 2012).

## Ethical Considerations

This research was approved by the University of Waikato's School of Psychology Ethics Committee (#19:12). To obtain the sample and data for the current study, a police vetting and proof of identity check were both implemented and authorised by the Department of Correction before the commencement of the study.

The prisoners who had committed a minimum of one prison violation between 1 January 2012 and 31 December 2017 from all three women's prisons were included in the current study. Maori were anticipated to be over-represented in New Zealand women's prisons reflecting the statistics provided by the Department of Corrections (2019) from previous years; because of this, guidelines for Maori research ethics were closely followed with the Maori ethical framework. Tikanga based principles involve relationships, research design, cultural and social responsibility, and justice and equity.

Relationships refer to the quality of interactions between researcher and participants. Although this study did not involve face-to-face engagement with the study sample, cultural sensitivity and cultural safety were maintained as each individual's privacy was respected through anonymization. The research design was a mainstream approach, as both Maori and Pakeha individuals were in the study sample; this approach was used as the collection of ethnicity data was not of primary use. Mana tangata (justice and equity of Maori) refers to consent of research participation and the right to be informed of individual or collective risk. Due to the nature of the present study, the prisoners were not able to give consent to the research or informed of risk, however, personal information such as the prisoners' identification numbers were anonymised to support privacy.

Treaty of Waitangi principles was followed; including protection, participation, and partnership, describing the roles and responsibilities of the researcher. The protection principle refers to the protection of Maori rights, values, and cultural concepts in the process of the research. Due to the nature of the current study, protection of the data was vital as the present study involves access to data that will be considered Maori intellectual property as Maori are

over-represented in the sample. In addition to maintaining confidentiality, this data was analysed and reported with cultural sensitivity. Participation refers to Maori involvement in research, and that Maori engagement should have tangible benefits. There was no active participation from the individuals in the present study; the individuals were not able to discuss their stories and their names have been anonymised to numbers which dehumanises the individuals. The current study has been conducted with these limitations in mind; although Maori are not actively participating in the study, the study will deliver valuable suggestions on the allocation of security resources, which will improve the safety of prisoners as a tangible benefit. Lastly, partnership ensures that Maori rights are protected, such as the rights of the collective. Both Western ethical guidelines (human research ethical guidelines) and Maori ethical guidelines were recognized because Western perspectives tend to focus on protecting individual rights, whereas Maori perspectives are inclined to emphasise the rights of the collective. Recognizing both Western and Maori ethical perspectives was necessary as there were foreseeable issues of applying one perspective to all of the prisoners in the data.

Overall, privacy was a priority for the present study; confidentiality was retained between the primary investigator and supervisors through password protected files and computers. Failure to maintain confidentiality rejects both Maori rights, Western rights, and ethical duties, therefore, all prisoners were anonymised and the three prison were coded to maintain privacy when reporting and interpreting the results.

# Chapter Five - Results

The following section reports the results that were revealed from the present study data of 2,038 female prisoners and a total of 11,368 incidents between the years 2012 and 2017. RoC*RoI scores, gang membership, and age were three variables that were tested as potential predictors of incidents/misconduct across the three women's prisons; Arohata Prison, Auckland Region Women's Corrections Facility (ARWCF), and Christchurch Women's Prison. In addition, the frequency of misconduct by prison was investigated.

## RoC*RoI and Gang Membership Effects on Misconduct

Prisoner RoC*RoI scores were distributed close to normal with skewness and kurtosis values ranging from -.96 and .11 (Field, 2013), with scores ranging from 0.01 to 0.94 ($M$=.40, $SD$ =.20). From the total sample of $n$=2,038 prisoners, $n$=1919 RoC*RoI scores had been recorded with missing scores comprised of 5%. After controlling for age effect, the ANCOVA demonstrated that there was a significant moderate main effect of violation frequencies on RoC*RoI scores ($F$ $(2, 1916) = 47.10$; $p<.001$, $\eta^2 = .05$).

Post hoc tests showed that the lower violation category (1 incident) had a significantly lower RoC*RoI mean score of .37, 95% CI [0.34, 0.39], compared to the medium violation category (2-4 incidents) with a mean score of .41, 95% CI [0.38, 0.43], and the high violation category (5+ incidents), which had a significantly higher mean score of .51, 95% CI [0.49, 0.53], compared to both lower groups (all with $p \leq 0.02$).

This indicates that prisoners who had a RoC*RoI score of 0.49 and higher were more likely to commit five or more incidents.

Figure 2 shows that gang membership also demonstrated a significant main effect of a smaller size ($F$ (1, 1917) = 36.81; $p$<.001, $\eta^2$ =.02) with gang members having overall higher RoC*RoI scores ($M$=0.47, 95% CI [0.44, 0.49]) compared to non-gang members ($M$=0.39, 95% CI [0.38, 0.40]. The observed power of this analysis was β ≥0.98 suggesting that a probability to make a type II error (not detecting an effect) was less than 1%.

An interaction effect is when a predictor variable changes depending on the level of another predictor variable when an interaction effect is discovered in an ANCOVA test, which means that the main effects may be misleading (Embretson, 1996). As shown in Figure 2, there was no significant interaction between the frequency of violations and gang membership (p=0.69) while measuring RoC*RoI scores, which indicates a main effect of gang membership.

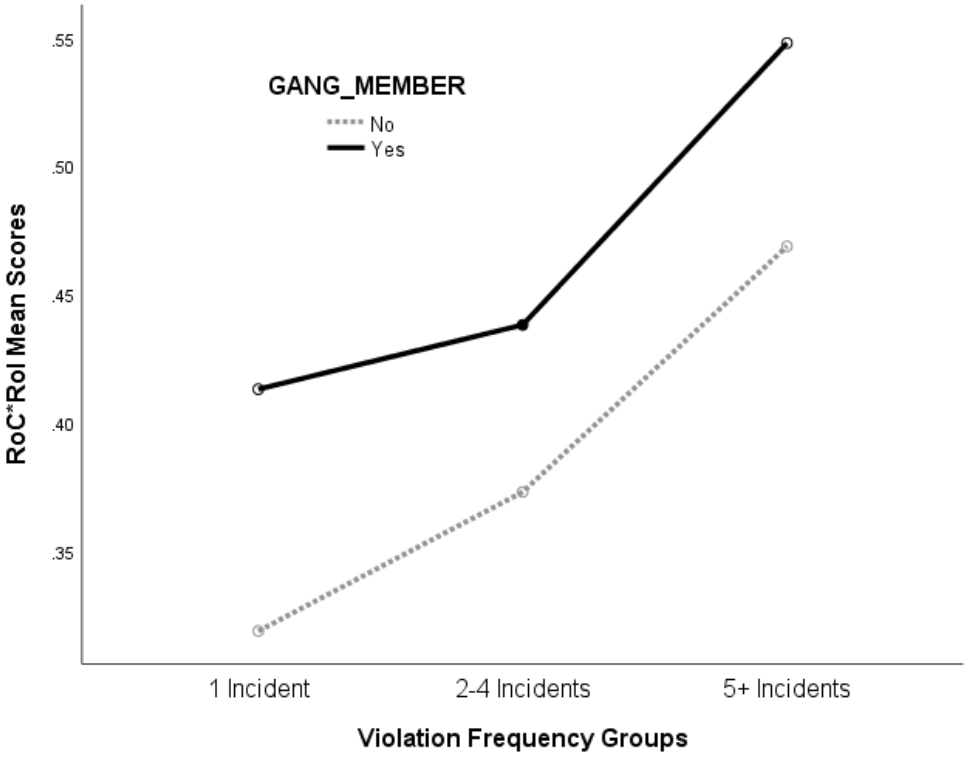


*Figure 2.* Mean RoC*RoI scores for three violation groups by gang membership ($n$=1,919).

**Age Effect on Misconduct**

ANCOVA shows that age covariates significantly with RoC*RoI scores explaining 11.5% of variance in the data ($F$ (1, 1918) =15.48; $p$<.001, $\eta^2$ =.01). Therefore, the effect of age on recorded violations as a continuous variable was investigated using three different age categories of equal size and created based on sample distribution; 17-26, 27-34, and 35-75 years of age. The Kruskal-Wallis test indicated significant differences across age groups (H (2) = 42.18, $p$<.001). The Mann-Whitney U test was conducted to compare individual group pairs showing that there were significant differences between all groups; 17-26 and 27-34 (Z = -1.25, $p$ = 0.12, $r$ = 0.03), 17-26 and 35-75 (Z = -6.17, p<.00, $r$ = 0.17), and 27-34 and 35-75 (Z = -4.90, p<.00, $r$ = 0.14). For the current study, the difference between the age groups 17-26 and 27-34 was not significant ($r$ = 0.03) and the difference between age groups 27-34 and 35-75 was reflected by a moderate effect ($r$ = 0.14). The strongest effect at a moderate level was observed between ages 17-26 and ages 35-75 ($r$ = 0.17). The Mann-Whitney U test also showed that gang members had a significantly higher number of recorded violations ($Z$ = -5.93, $p$<.001, $r$ = -0.13), demonstrating a moderate effect.

**Misconduct Frequency by Prison**

The Kruskal-Wallis test indicated that there was a significant difference in recorded violations between all three prisons (H (2) = 40.28, p<.001). The Mann-Whitney U test indicated that there were differences in the frequency of incidents between ARWCF (*Mdn* = 2) and Christchurch Women's Prison (*Mdn* = 3) were statistically significant, $U$ = 199342.5, $p$ <.001, $r$ = 0.09, as ARWCF had fewer violations. Similarly, the differences in the frequencies of incidents between

Arohata Prison (*Mdn* = 3) and ARWCF (*Mdn* = 2) were also statistically significant, $U = 238567$, $p < .001$, $r = 0.09$, as ARWCF had significantly fewer violations. The differences between recorded violations and Arohata Prison (*Mdn* = 3) and Christchurch Women's Prison (*Mdn* = 3) were not statistically significant, $U = 105131.5$, $p = 0.10$, $r = 0.12$.

# Chapter Six - Discussion

The current study examined predictive factors associated with prison violence and misconduct in a sample of female prisoners (*n*=2,038) in New Zealand between 1 January 2012 and 31 December 2017. The current study found a significant correlation between violation frequencies and RoC*RoI scores, in that prisoners with higher Roc*RoI scores had higher counts of violations. Similarly, a significant correlation between violation frequencies and gang membership was found as gang-affiliated prisoners were more likely to have higher RoC*RoI scores and consequently higher counts of violations. Consistent with the literature, a significant correlation between age groups and violation frequencies were identified, as younger prisoners had higher violation counts compared to older prisoners. Lastly, violation frequencies differed between the three prisons; one prison reported lower incidents in comparison to the remaining two prisons.

## The Relationship between Age and Prison Misconduct (Hypothesis One)

The findings from this study supported hypothesis one and was consistent with previous research as younger prisoners were more likely to engage in misconduct compared to older prisoners (Gover, Pérez, & Jennings, 2008; Pollock, Mullings & Crouch, 2006; Steiner & Wooldredge, 2014; Valentine, Mears, & Bales, 2015; Reidy & Sorensen, 2018; DeLisi, 2003; Craddock, 1996; Jiang & Winfree, 2006; Cunningham, Sorensen & Reidy, 2005). In the current sample, prisoners aged 17-26 had higher rates of misconduct compared to prisoners aged 35-75, and prisoners aged 27-34 also had a higher rate of misconduct compared to those aged 35-75, however, the youngest age group

revealed a stronger effect. The effect size that was revealed between the youngest age group and the oldest age group was expected due to prior research.

**The Relationship between Gang Membership and Prison Misconduct (Hypothesis Two)**

The findings from this study supported hypothesis two as gang members accounted for a small but significant number of recorded violations despite accounting for 18% of the overall sample of 2,038 women. This result was consistent with research on other female gang populations in prison (Sorensen & Cunningham, 2010; DeLisi, 2003; Bell, 2017; Fox, Lane & Akers, 2010).

In the sample of the current study, there were 24 different gangs; the two largest gangs were Mongrel Mob with 1,503 incidents accounting for 13% of all recorded violations, and Black Power with 997 incidents accounting for 8% of all recorded violations. Out of the 11,368 incidents that were committed within the five-years, gang-affiliated prisoners committed 2,215 incidents.

It is evident that a common precursor for gang involvement is individuals who come from a family of dysfunction and abuse. Dysfunctional families and abuse are two key risk factors for the use of violence in prison, as research indicates that female prisoners who have experienced prior victimisation, particularly physical abuse, are more likely to have a higher number of rule violations compared to prisoners who have not experienced prior victimisation (Celinska & Sung, 2014; Wright, Salisbury & Van Voorhis, 2007).

Evidently, both male and female gang-affiliated prisoners have a higher proportion of general misconducts and serious violations compared to non-gang-affiliated prisoners (Bell, 2017; Sorensen & Cunningham, 2008; DeLisi, 2003).

Several authors have proposed that gang-affiliated prisoners are more likely to engage in misconduct behaviour as a result of the importation theory and "importing" pre-prison characteristics into prison. Gangs are known for relying on violence to resolve conflict and to gain power and respect, therefore it can be expected that gang members engage in prison violence when they are faced with discord, such as a prisoner challenging their power (Tasca, Griffin & Rodriguez, 2010).

**The Relationship between RoC*RoI scores and Prison Misconduct (Hypothesis Three)**

Hypothesis three was supported as prisoners with high RoC*RoI scores were found to have significantly higher incident rate compared to prisoners with lower RoC*RoI scores. Hypothesis three involved a variable that is unique to New Zealand prison data; the RoC*RoI score. The current study used RoC*RoI scores as a predictor for prison misconduct, although RoC*RoI is a tool for assessing an offender's probability of post-prison reconviction and imprisonment. Two New Zealand studies used RoC*RoI scores to predict the reconviction and imprisonment of offenders, finding that the RoC*RoI was highly predictive two- and five-years after release (Bakker, O'Malley & Riley, 1998; Bakker, O'Malley & Riley, 1999). Hypothesis three was supported as prisoners with higher RoC*RoI scores were significantly more likely to have a greater number rule violations, more specifically, those with a RoC*RoI of 0.49 or higher were more likely to have more than five reported incidents compared to those with a score less than 0.49. The results of the current study suggest that this risk measure may

also predict prison misconduct in addition to the purpose in which it was designed for.

### Frequency of Recorded Violations between Arohata Prison, Auckland Region Women's Corrections Facility (ARWCF), and Christchurch Women's Prison (Hypothesis Four)

The analysis of the data revealed a significant difference in recorded violations between each prison. The largest difference in frequency of misconduct was observed between ARWCF and Christchurch Women's Prison, this difference was also equivalent to Arohata Prison and ARWCF. There was no significant difference discovered between Arohata Prison and Christchurch Women's Prison. Hypothesis four was rejected as the results indicated that ARWCF had fewer recorded violations between 2012 and 2017 compared to Arohata Prison and Christchurch Women's Prison. It was speculated that ARWCF would have the highest frequency of recorded violations for systematic reasons; ARWCF houses minimum- to maximum-risk prisoners, containing the highest security of female prisoners in New Zealand, whereas Arohata Prison and Christchurch Women's Prison house minimum- to high-risk prisoners (Department of Corrections, 2019). The speculation that a facility that houses maximum-security prisoners would accumulate a higher number of violations was based on prior research in the United States. The research discovered that male maximum-security prisoners were more likely to engage in misconduct compared to minimum-security prisoners (Steiner & Wooldredge, 2013). Perhaps Steiner & Wooldredge (2013) found this result because maximum-security facilities in the United States are more restrictive for prisoners, and provide prisoners fewer

privileges compared to lower security prisoners. Highly restrictive regimes and low levels of privileges are two aspects that have been found to interfere with prison adjustment (Dhami, Ayton & Loewenstein, 2007; Kigerl & Hamilton, 2016), and poor adjustment is correlated with an increase in misconduct (Flanagan, 1980). The key explanation for why Steiner and Wooldredge's (2013) findings did not generalize with the current study is due to the difference in population; Steiner and Wooldredge (2013) studied males in a United States prison and the current study investigated females in New Zealand prisons.

The finding from the current study that ARWCF accumulated significantly fewer recorded violations than both Arohata Prison and Christchurch Women's Prison is notable, as the prisoner population of ARWCF is more than double that of Arohata Prison and Christchurch Women's Prison. It can be speculated that female prisons with higher populations may encourage prison adjustment, as facilities with a greater female population allow their prisoners to form connections with a wider range and capacity of females in similar circumstances. Researchers have highlighted the importance of support and comfort that derive from relationships in female prisons, as these relationships are particularly important for those living with abuse histories and/or child separation due to incarceration (Jiang & Winfree, 2006; Wulf-Ludden, 2013). Perhaps the women in ARWCF have more opportunities for supportive relationships and as a result, they are better adjusted to prison life and commit fewer violations.

**Prevalence of Violations by Severity (Hypothesis Five)**

The descriptive statistics revealed that out of 11,368 misconduct incidents, approximately 52% (*n*=5,945) were non-violent and about 47% (*n*=4,893) were

violent, providing poor support for hypothesis five as the frequency difference between the severity of incidents are negligible. The results suggest that non-violent and violent incidents are occurring at similar rates within the three New Zealand women's prisons.

Scholars typically agree that female prisoners are far less likely to engage in misconduct in comparison to their male counterparts (Kuanliang, Sorensen & Cunningham, 2008; DeLisi, 2003; Reidy & Sorensen, 2018; Harer & Langan, 2001; Craddock, 1996). Although the current study does not have a male sample for comparison, it is evident that violent misconduct incidents in New Zealand women's prisons are occurring at a higher rate than what was previously observed in other countries within the past two decades, such as the United States (DeLisi, 2003; Harer & Langan, 2001)

The findings from the current study represent official reports of incidents, therefore, the data only reflects the misconduct that was detected by prison officers. It is possible that violence resulting in minor to moderate injury can be undetected by prison officers because it is easier to conceal, whereas violence resulting in serious injury is difficult to mask and often requires medical attention. This might help to explain why prison research finds that non-violent misconduct occurs more often than violent misconduct, although it seems that non-violent misconduct simply occurs at a higher rate compared to violent misconduct.

## Limitations of the Study

Several limitations challenged the function of this study. First, numerous variables that were comprised in the main dataset were excluded from the analysis, as they did not complement the research aim. The variables that were removed due to partially documented information included PRN (prison record number), SCD (sentence commitment date), and first release date. These variables had frequent missing scores thus were excluded, as they would not increase the value of the analysis. Similarly, variables that were marked as extraneous to the function of the current study included participant role of incident (e.g., perpetrator, accomplice, and victim), gang role (e.g., prospect, associate, etc.), and gang status (e.g., active or former), were removed for the same reason. The final two variables that were excluded from the analysis that would have made an interesting contribution to temporal and spatial trends was the incident date and time, and unit in which each incident occurred. The limitation of the unit variable was that various unit names were not explicit in location and failed to provide additional information other than the name of the unit.

Another limitation of the data was the absence of information that has been utilized by various other prison studies, such as each prisoners convicted offence type (Bell, 2017) and current sentence length (Reidy & Sorensen, 2018), which have shown to increase the likelihood of female's misconduct in prison. These features have mostly been explored in large-scale studies in countries such as the United States, and perhaps the documentation of these features may be more sporadic in smaller prison populations such as in New Zealand.

Lastly, a limitation of working with official report data is the possibility that the numbers may not reflect the violence and misconduct that has been

undetected by correctional staff. Research from prisons in the United States by Steiner and Wooldredge (2012) revealed that 80% of assaultive misconduct that was self-reported was not included in the official data reported by correctional officers. This discrepancy was not reflected in non-violent misconduct such as theft, which suggests that the type of misconduct played a key role in the likelihood of detection from correctional staff. When retrospectively investigating patterns of behaviour from official records in any prison, it is reasonable to presume that some accounts of behaviour have been undetected and unreported.

## Implications for Future Research

Future research should incorporate the features of the current study that were excluded from the analysis, such as the incident date and time, and unit in which each incident occurred; this would compose a fascinating second study on temporal and spatial trends of violence in women's prisons. The second study would ideally reveal the units that are at risk of misconduct as well as the time of day that tends to elicit higher levels of violence. This would provide the Department of Corrections with supplementary knowledge on where violence is more likely to occur and suggest changes in surveillance, security assignment, or other environmental influences in the units that were found to be higher risk.

Several aspects in the literature increased the likelihood of female misconduct, such as a prisoner's convicted offence type and current sentence length (DeLisi, 2003; Bell, 2017; Reidy & Sorensen, 2018). Future research should obtain this information from the Department of Corrections and perform an analysis to test whether these aspects predict similar or different results for a New Zealand population. Likewise, the literature has suggested that prior

victimisation and abuse histories have had a strong influence on women's violence in prison (Batchelor, 2005; Pollock, Mullings & Crouch, 2006) and outside of prison (Browne, Miller & Maguin, 1999; Siegel & Williams, 2003). Research that has been produced from countries such as the United States (Pollock, Mullings & Crouch, 2006; Jones, Worthen, Sharp & McLeod, 2018; McClellan, Farabee, & Crouch, 1997), Canada (Loucks & Zamble, 2001), and Scotland (Batchelor, 2005) has supported this notion, and it would be a valuable publication for New Zealand. The most popular method for exploring trauma is qualitative measures such as interviews (Pollock, Mullings & Crouch, 2006; Batchelor, 2005; McClellan, Farabee, & Crouch, 1997; Browne, Miller & Maguin, 1999), however, it can also be measured quantitatively through the process of coding experiences (Jones, Worthen, Sharp & McLeod, 2018). Quantitative prison research is naturally limited as it quantifies behaviours rather than collecting the underlying reasons or motivations for the behaviour (Watson, 2015), thus a quantitative method for investigating traumatic experiences would provide objective results, however, fail to describe the findings further. Perhaps a mixed-methods study could examine prison behaviour and experience of prior abuse quantitatively, and additionally use interviewing to document women's self-reported accounts of prior abuse. This would be a particularly strong study for the New Zealand female prison population because New Zealand children experience high rates of victimisation (Carroll-Lind, Chapman & Raskauskas, 2011; Marie, Fergusson & Boden, 2009), and evidence suggests that childhood victimisation increases the likelihood of adult perpetration of violence (Babcock, Miller & Siard (2003).

Future research should investigate women's participation in gang membership in New Zealand prisons further. Gang-affiliated women in prison are understudied due to the assumption that few women participate in gangs (Sutton, 2017) and the stereotype that women have less of a capacity to be violent compared to men (Deschenes & Esbensen, 1999). The gang variables that were unused in this study would be appropriate for an informative descriptive study rather than a correlational study, as the gang numbers were small in this data. Among the research on gang membership in prison, no researchers ventured further than identifying whether a prisoner was gang-affiliated or not gang-affiliated. Further analyses could include prisoners' gang names, gang status, and gang role, to reveal the rate in which violent misconduct occurs within the confines of each gang and role.

Lastly, the present study reported that ARWCF had significantly fewer reported violations than both Arohata Prison and Christchurch Women's Prison; this was an interesting finding as ARWCF houses more than double that of Arohata Prison and Christchurch Women's Prison. As the current study was based between 2012 and 2017, future research should following this population from 2018 and onward to examine whether this trend continues and if so, investigate the possible explanations for such findings.

## Conclusion

In New Zealand, there has been an exponential growth in the female prison muster since the early 2000s, highlighting the need for in-depth investigation. As institutional facilities are spaces that house those who have breached the law, and many of these people have violent histories that will continue into prison, aggregation of these offenders has the potential for violence. As the female prisoner population has more than doubled in size over the past two decades, there is the anticipation of higher levels of misconduct than previously recorded. The current study aimed to explore the correlates of violence and misconduct among the understudied population of New Zealand's female prisoners. Between January 1, 2012, and December 31, 2017, 2,038 prisoners committed 11,368 rule violations, 4,893 in which were violent. Consistent with research on other female prisoner populations, age and gang membership were strongly correlated with high frequencies of rule violations. The literature illustrated that a high percentage of violent women have abuse histories (Siegel & Williams, 2003; Stuart, Moore, Hellmuth, Ramsey & Kahler, 2006), which have been found to increase attraction to gangs as these groups provide a sense of belonging, protection, and fulfilling relationships (Melde, Taylor & Esbensen, 2009; Batchelor, 2009). Females' gang membership in prison requires more research to better understand the relationship between violence and gang affiliation.

An interesting finding was the relationship between RoC*RoI scores and prison misconduct. The RoC*RoI is not used to predict prisoner behaviour, however, the results of this study indicate that RoC*RoI may also predict prison

reoffending. This study made a valuable contribution to the correctional literature by establishing three key predictors of misconduct.

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# Appendices

## Appendix A: Ethics Approval Letter

Dear Devin,

**Ethics Approval Application – # 19:12**
**Title: Violence in New Zealand Women's Prisons (Subject to change)**

Thank you for your ethics application submitted for approval which has been fully considered and approved by the Psychology Research and Ethics Committee.

Please note that approval is for three years.

If any modifications are required to your application, e.g., nature, content, location, procedures or personnel these will need to be submitted to the Convenor of the Committee.

I wish you success with your research.

Yours sincerely

Professor Nicola Starkey
Convenor
Psychology Research and Ethics Committee
School of Psychology
University of Waikato