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**YOU CAN JUDGE THE HEART OF A MAN BY HIS TREATMENT OF
ANIMALS: FINDING THE LINKS BETWEEN ANIMAL CRUELTY,
EMPATHY AND AGGRESSION IN A NEW ZEALAND HIGH-SCHOOL
SAMPLE.**

A thesis presented in partial fulfilment of the requirements for the degree of

Masters of Science

in

Psychology

at Massey University, Wellington,
New Zealand.

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2011

Abstract

The conclusions emerging from recent research in the United States is that cruelty to animals, especially by children and adolescents, is a form of rehearsal for human-directed aggression (Ascione, 1998a, 1998b, 2005; Feldmann, 1997; Quinn, 2000). The role of empathy in the animal cruelty and aggression link has not been as well explored, but there is some evidence that it is a relevant construct (Zdradzinski, 2010). The present study used the Buss-Perry Aggression Questionnaire-Short Form (BPAQ-SF), the Empathy Quotient Eight (EQ-8) and a modified version of the Youth Assessment for Animal Abuse (YAAA) to investigate the relationship between animal cruelty, aggression and empathy in 133 New Zealand secondary school students aged between 16 and 19 years (M age = 16.8). There was a weak positive relationship between animal cruelty and aggression in the total sample ($r = .185, p = .05$) and a slightly higher weak positive correlation between the physical aggression scale from the BPAQ-SF and animal cruelty ($r = .187, p = .05$). A regression analysis showed aggression and gender accounted for 10.7% of the variance for animal cruelty. When the genders were broken down, the males of the sample had a weak positive relationship between animal cruelty and verbal aggression ($r = .282, p = .05$). In this cohort empathy was not related to animal cruelty but did have a moderate negative relationship with verbal aggression in the males of the sample ($r = -.304, p = .05$). In summary, the present research findings support the findings from overseas suggesting, particularly in a male sample, there is a relationship between animal cruelty and aggression. However, contrary to previous research empathy was not related to animal cruelty in this sample.

Acknowledgements

I would like to thank the entire interdisciplinary team that made this work possible, especially my supervisors Dr. Ian Evans and Dr. Ruth Tarrant from Massey University and Dr. Nick Wilson from the Department of Corrections for their support and valuable advice.

Thank you to my employers at the Department of Corrections, who were very supportive and allowed me the time away from my employment to complete this research.

To Glenis De Castro, and Geoffery Shepherd a special thank you for your time and support.

Thank you to all school staff who were involved in this work and who contributed to the collection of questionnaires and to all the students who graciously gave their time to participate in this research.

Thank you to my mother and my partner for their patience, love and support during the writing of this thesis. And finally, thank you to my father who passed away during the writing of this thesis, I dedicate this to you for always believing in me even when I couldn't find the strength to believe in myself.

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 07/40.

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1. Introduction to the Current Research

Animal cruelty and its association with human directed violence has become a popular topic in the literature over the past 15 years (Ascione, 2005). The New Zealand media have started reporting incidence of severe animal abuse as frequently as other criminal activities. In the time this thesis was written I have personally viewed national stories on kittens that had their paws severed, a teacher who beat a possum to death in conjunction with his students, a neighbour slaughtering a number of dogs on a neighbouring farm and a group of teens beating a seal to death. Much like human related violence, which in nature elicits moral and societal outrage (Blackburn, 1993), intentional animal cruelty, as in the above stories, has a tendency to stir strong emotions in the general public.

Some intentional animal cruelty acts can be shocking in nature and can be indicative of a perpetrator with serious antisocial behavioural issues (Ascione, 1998b). Historical evidence of animal cruelty, along with fire starting and bed wetting beyond a certain age, have been labelled as the serial killer triad of behaviours (Ressler, Burgess, & Douglas, 1989). Some infamous cases of offenders of severe violent crimes who have histories of animal cruelty include:

- Luke Woodham, who stabbed his mother to death and then took a rifle to his high school and killed two students, injuring another seven, wrote tales of animal torture in journals found after the attack (Miner, 2000).
- Carroll Edward Cole, who was executed in 1985 for the murders of 35 people, stated his first act of violence was as a child when he strangled a puppy (Lockwood & Hodge, 1998).

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- Edmund Emil Kemper III who in 1973 was convicted of killing eight women including his mother, had a history of torturing cats and dogs as a youth. Kemper also murdered his grandparents with whom he had been sent to live (Lockwood & Hodge, 1998).
- Dylan Klebold, one of the two Columbine high-school shooters (April 20th 1999), was well known by his family and friends to partake in acts of intentional animal cruelty and mutilation (Miner, 2000).
- Brenda Spencer, who shot at arriving school children injuring nine and killing two, had a history of abusing cats and dogs and stated her favourite method of torture was setting fire to their tails (Lockwood & Hodge, 1998).
- Albert DeSalvo, the “Boston strangler”, who sexually violated and murdered 13 women in the early sixties, was known in his youth to trap dogs and cats place them in cages and shoot arrows at them through the cage (Lockwood & Hodge, 1998).
- Jeffery Dahmer, who was convicted of killing 17 men and boys in the Milwaukee area, admitted to impaling the skulls of tortured animals in his yard as a young boy (Miner, 2000).

This list at first glance appears to raise, in the least, a concern that animal cruelty may be a predictor of future aggression and human related violence. It must, however, be noted although most animal abusers will not commit sensational crimes as listed above nearly every serial killer and mass murderer will have some history of abusing animals (Lockwood & Hodge, 1998).

Not only has animal cruelty been linked with extreme acts of violence, as above, it has also been linked to domestic violence (Ascione, 1998a). The testimonies of

survivors of domestic violence often reveal that threats and acts of abuse on pets were used in order to coerce, control and intimidate them into remaining silent (Ascione, 1998a; Arkow, 1996; Firmani, 1997).

The majority of the current research on the relationship between animal cruelty and human related violence is from the United States of America and involves clinical or incarcerated adult samples. There is some suggestion cruelty to animals and other related childhood aggressive behaviour may not be accurately investigated from clinical charts, especially if the initial clinical interviewer does not inquire about these behaviours or fails to record them on the client's records (Langevin, Paitich, & Orchard, 1983). Furthermore, this method has the tendency to over-look a large amount of information around the variables of interest and fails to encompass the actual nature of the behaviour (Felthous & Keller, 1998). Animal abuse by children is not currently monitored; because of this, researchers have relied on data from developmental, psychopathological and family violence literature to gain a greater understanding of the prevalence of this problem (Ascione, 2005).

The current research aims to look at the relationship between aggression and animal cruelty in a normative sample of New Zealand high-school students. It also aims to see how empathy relates to both animal cruelty and aggression. The theoretical model of how I hypothesise the constructs interact is outlined in Figure 1.

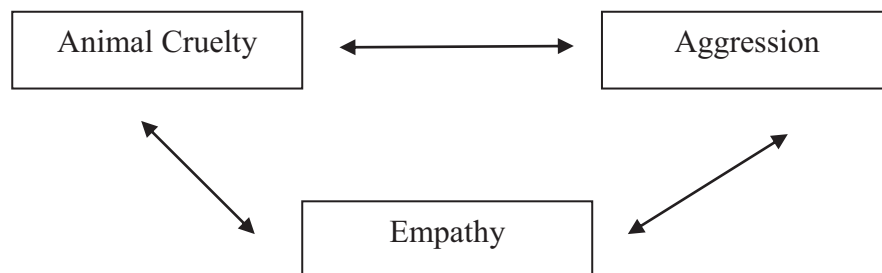


Figure 1. Theoretical model of research constructs and their relationships.

2. Literature Review

2.1. Animal Cruelty

2.1.1. A historical overview of animal cruelty

Humans and animals have relied on each other for the basic necessities of life for centuries (Serpell, 1996). However, seventeenth century rationalists did not consider the care for animals necessary in terms of morality (Midgley, 1983). Some even went as far to argue that animals were just machines who had no independent thoughts or feelings and were therefore incapable of experiencing pain (Rowlands, 2002).

The Western world has only recently attended to the rights of non-human animals. Previously religious attitudes denied animals the possession of a soul and secular traditions denied animals reason (Midgley, 1983). This negative view argued the souls of animals did not survive their death, unlike those of humans; because the only part of the soul that survived was associated with reason and animals did not possess reason (Serpell, 1996).

The Judaeo-Christian philosophical view maintains the earth and all within it, was created by God for the purpose of serving man. Animals are therefore considered inferior to humans (Serpell, 1996). This Western division between humans and animals, characterised by humans ability for intricate language and communication techniques and defended by science, religion and moral philosophy, is now being questioned by many (Midgley, 1983; Rowlands, 2002).

However, humans remain reluctant to admit the line separating humans from other species is tenuous at best (Serpell, 1996). Philosophers are now arguing the concept of rights and equality transcend the species barrier and the concept of post-humanism has emerged (Charles & Davies, 2008; Midgley, 1983). Post humanism

argues humans are not different or special and no animal species is any more or less important than any other (Charles & Davies, 2008). This shift is the result of the increased presence of animals in humans' lives and the recognition of the role animals play in human socialisation (Taylor & Signal, 2008).

Animal cruelty is therefore a relatively new age concept. Although animal abuse has existed for centuries, the recognition of animal cruelty as a societal problem only occurred in the seventeenth and eighteenth centuries. Before this time little awareness of animals suffering and their need for protection from humans, existed (Robin & Bense, 1998).

2.1.2. Definitions.

The difficulty in accurately defining animal cruelty is widely discussed in the literature (Ascione, 1998b; Feldmann, 1997; Felthous & Keller, 1998). Animal abuse definitions tend to vary across time, place, cultures, beliefs and countries. There are a range of factors that affect animal cruelty definitions including: social and culturally sanctioned activities and the differing attitudes towards different species of animals (Feldmann, 1997). Ascione (1998b) was the first to build a solid definition of animal abuse from the literature, he suggests it encompasses any “socially unacceptable behaviour that intentionally causes unnecessary pain, suffering, or distress to, and/or the death of, the animal” (p. 83.)

This definition transcends the realms of physical abuse, sexual abuse and neglect by omission (Feldmann, 1997). Ascione expands on this definition by suggesting the term “behaviour” encompasses both omission and commission of cruelty acts. He suggests that a “socially unacceptable behaviour” may include behaviours that are deemed acceptable across cultures, however, the individual consideration of the culture and its limits on what is deemed socially acceptable needs to be considered. He

also defines “intentional” as concerning the acts of omission or commission that are preformed purposely by the perpetrator as opposed to accidental harm or injury (Ascione, 1998b).

Excluded from this definition are the socially approved practices, such as the raising of animals for food and humane slaughter and practices by veterinarian practitioners such as spaying or neutering. Also excluded are social activities which involve the more controversial use of animals, such as animal testing (Ascione, 1998b).

Felthous and Keller (1987) argued there was a need to differentiate the severe, repeated torture of animals from other cruelty acts and formulated the term: substantial cruelty of animals. They defined this as a chronic pattern of deliberately and unnecessarily physically hurting vertebrate animals (Felthous & Keller, 1998).

2.1.3. The many facets of animal cruelty

Animal cruelty can vary in frequency, severity and chronicity. This ranges from the developmental immature teasing of an animal, such as a toddler pulling the family pet’s tail, to the systematic and intentional torture of animals (Ascione, 2005).

Cruelty to animals has both negative and positive forms; negative abuse is related to the omission of appropriate and life sustaining care (neglect). Positive abuse refers to any violent, physical or psychological act committed against the animal (Ascione, 1998b). While negative abuse is usually limited to cases of starvation, dehydration or refusing adequate medical care, the methods of positive abuse can vary greatly among abusers. Felthous’s research (1998) recounted methods of animal cruelty amongst a sample of animal abusers, which included: setting dogs or cats on fire, beating an animal, pouring acid on an animal, limb amputation, decapitation, fracturing bones and scalding with boiling water. Later, Ascione and Schiff (1999a)

found the most common forms of animal cruelty among their sample consisted of burning, skinning animals alive, injuring animals caught in a trap and bludgeoning or stoning animals. Another aspect of positive animal cruelty is sexual abuse or bestiality which is the sexual interference with animals by humans (Muscarì, 2004).

The reasons proposed for animal cruelty by children and adolescents are varied. The following motivations have been listed for reasons behind animal cruelty by animal abusers: to control an animal, to retaliate against an animal (as in cases of revenge or punishment), to satisfy a prejudice against a particular species of animal, to express aggression through an animal (such as training a dog to bite on command), to improve or enhance one's own aggressiveness (such as shooting animals for target practice), to shock other people, for one's own amusement, to retaliate against another person, to displace aggression from a human to an animal and finally non-specific sadism or perpetrating the act for the pure enjoyment of watching the animal suffering (Felthous & Keller, 1998). In some cases the child participating in animal cruelty is being maltreated or abused themselves and is simply acting in a form of misplaced aggression. Alternatively, children may be exposed to cruelty acts and enact cruelty as a modelled behaviour (Ascione, 2005). Those who are deemed aggressive and have engaged in animal violence are four times as likely to have witnessed a parental or family member perpetrate an act of animal cruelty (Ascione & Schiff, 1999a).

Muscarì (2004) suggested the primary etiology of childhood animal cruelty arises from mimicking negative adult role models. Leading on from this, some researchers have indicated the scapegoat theory as an explanation for animal cruelty during childhood, suggesting the victims of child abuse inflict violence on their pets as a way to gain some control over their situation (De Viney, Dickert, & Lockwood, 1983; Veevers, 1985). Felthous (1998) found alcoholic father figures and the departure

of a father figure was significantly related to the development of animal cruelty in male children.

2.1.4. The prevalence of animal cruelty

The original studies in the area of animal cruelty yielded information that was regarded soft or dubious. It has been suggested the limited sample selection and data collection may have contributed to these inconclusive results (Felthous & Keller, 1998). The basic information on the incidence (new cases) and prevalence (existing cases) of animal cruelty behaviour is lacking in the literature (Ascione, 1998b). Also the reported incidence of animal cruelty in the literature is usually only present for younger children, specifically male children referred to psychiatric services (Ascione, 2005).

One piece of research conducted by Flynn (1999a) did examine animal cruelty in a normative population. Flynn looked at animal cruelty among undergraduate psychology students and found 17.6% had perpetrated abuse, 13.1% killed a stray or wild animal, 2.6% killed a pet or companion animal and 1.5% had engaged in sexual activity with an animal. Also he found of those who had participated in animal cruelty, 48% had first abused an animal as teenagers, 40% between the ages of 6 and 12 years and 11% abused an animal for the first time under the age of 6 years.

According to New Zealand Police Statistics (2010), there were 425 recorded incidents of animal cruelty offences in the 2009/10 fiscal year and there were 1418 incidents of animal cruelty offenses in the previous four years. Of those recorded incidents only 59.3% were resolved. The statistics also show the recorded incidence of animal cruelty offences has increased by 52.3% in the last four years (Table 1).

Table 1

New Zealand Police National Recorded and Resolved Animal Abuse Offences Years ending 30 June

Year	Recorded	Resolved	% Resolved	Per 10, 000 population
2006/07	279	182	65.2	0.7
2007/08	339	193	56.9	0.8
2008/09	375	226	60.3	0.9
2009/10	425	240	56.5	1
Total	1418	841	59.3	-

The New Zealand research on animal cruelty incidents is also limited. Research asking perpetrators about animal abuse is predominantly missing from the New Zealand based literature. Williams, Dale, Clarke and Garrett's (2008) research of 383 veterinarian professionals found 63% of respondents interviewed had seen abused animals in their practice in the last 5 years. Further, 37% had seen abuse cases at least once a year and 9% at least four times a year.

2.2. Empathy

2.2.1. Definitions

In the psychological literature a number of definitions for the concept of empathy exist (Valiente et al., 2004). This is predominantly due to the multifaceted and multidimensional construct that empathy represents (Duan & Hill, 1996).

Historically, the term empathy came from the word *Einfühlung*, which means the humans spontaneous projection of real psychic feeling onto others. Titchener coined the term empathy from the term *Einfühlung* in 1924 and defined it as “a process of humanising objects, of reading or feeling ourselves into them” (p.417).

It remains unclear whether empathy is a trait-like construct or a situational one. Empathy is sometimes referred to as personality trait or general ability, or alternatively as a situational state (Barrett-Lennard, 1962; Batson & Coke, 1981; Book, 1988; Danish & Kagan, 1971; Duan & Hill, 1996; Dymond, 1950; Greenson, 1967; Hogan, 1969; Rogers, 1957; Rozin et al., 2005).

In the literature empathy has been defined as the vicarious experience of another’s emotions (Eisenberg et al., 1991; Eisenberg & Miller, 1987), an expression of another persons feelings or situation (Zellars & Perrewe, 2001) and “an affective response that stems from the apprehension or comprehension of another’s emotional state or condition, and that is identical or very similar to what the other person is feeling or would be expected to feel” (Eisenberg & Fabes, 1998, p. 702).

Other researchers have taken a broader definition of empathy which encompasses sympathy (Davis, 1994). Social and developmental psychologists tend to think of empathy as the ability to be vicariously aroused by the affective state of another person (Miller & Eisenberg, 1988).

2.2.2. Cognitive empathy and affective empathy

Many researchers suggest different types of empathic responding exist and cognition and affect are typically linked with empathy in the literature (Cohen & Stayer, 1996; Zahn-Waxler, Robinson, & Emde, 1992). The cognitive or intellectual aspect of empathy relates to one person taking the perspective of another and understanding that individual’s cognitive or affective states (Bakker & Demerouti,

2009; Bock & Goode, 2006; Davis, 1983; Duan & Hill, 1996; Duan & Kivlighan, 2002; Giancola, 2003). The cognitive aspect of empathy is often labelled empathy accuracy or perspective taking in the literature (Eisenberg & Fabes, 1990). Affective empathy is defined as the ability to share the feelings of another (emotional congruence or emotion match) (Eisenberg & Fabes, 1990). It is one person responding with the same emotion as another and experiencing that emotion as the other experiences it (Duan & Hill, 1996).

Further complicating matters, there has been some suggestion that cognitive and affective forms of empathy are in fact distinct phenomenon, but both forms are believed to interact with one another (Askan & Kochanska, 2005). This vague picture on empathy as depicted by the literature, suggests a more systematic approach to the research of the empathy construct is required to understand it as an affective or cognitive phenomenon (Askan & Kochanska, 2005).

2.2.3. The Development of Empathy

Empathetic reactions are thought to develop early (Eisenberg, Murphy, & Shepard, 1997). One manifestation of this is a newborn infant becoming distressed when they hear another child cry (Simner, 1971; Zahn-Waxler, Robinson, & Emde, 1992). There is some theory and research implicating this reflexive crying in infants as an early forerunner for more mature forms of empathetic arousal (Zahn-Waxler, Robinson, & Emde, 1992). The last twenty years of research has shown that toddlers and young preschoolers have a wide repertoire of moral emotions and empathic responding and they exhibit a variety of behaviours that show an internal understanding of others emotions (Askan & Kochanska, 2005).

Two prominent approaches to the study of children's conscience development (including empathetic understanding) have emerged in the literature. The first is a

cognitive developmental approach and emphasises universals in development (Kohlberg, 1969). The second approach focuses on socialisation tradition (Maccoby, 1984; Sears, Rau, & Alpert, 1965) and emphasises the consistency and stability of observed variation in emotional behaviour and cognition across time and situations (Aksan, & Kochanska, 2005). The underlying inherent theory behind the concept of empathy as a situation-specific cognitive or emotional state is that despite the developmental level of an individual's empathy, the expression of empathy is dependent on the specific context and varies by situation (Askan & Kochanska, 2005).

Zahn-Waxler et al's research on empathy in two year old twins (1992), found that there was evidence for heritability of empathy, especially the affective component of empathy. Exposure to high levels of positive emotions has been shown to assist children to experience and express appropriate emotion. This in turn results in them feeling more comfortable experiencing others emotions. Alternatively, those children primarily exposed to either negative dominant emotion (e.g., emotions that threaten others) or negative submissive emotions (e.g., sulking or withdrawal) tend to be unable to comfortably empathise or sympathise with others (Valiente et al., 2004).

Research has suggested decreased grey matter in the frontal cortex may result in the reduced empathy noted in individuals with conduct disorder (Stadler et al., 2007). The left cortex has been found to be activated during empathetic judgements; lesions in this region result in an impaired empathy functioning (Farrow et al., 2001).

2.2.4. The psychological importance of empathy

Empathy has been viewed as the "spark of human concern for others, the glue that makes social life possible" (Hoffman, 2000, p. 3). It is important for social adjustment and positive interpersonal relationships. Being able to recognise or share another's emotion is fundamental in social life and emotional interactions (Davis,

1994; Ickes, 1993; Levenson, 1996). It is also important in the development of moral judgement and pro-social altruistic behaviour (Batson, Ahmad, Lishner, & Tsang, 2002; Eisenberg, 2000; Hoffman, 2000).

Empathy acts as a predictor to social functioning and contributes to affective bonding, understanding and caring actions between individuals. Successful human social interaction is dependent on one's ability to understand others intentions and actions (Farrow et al., 2001). A positive relationship has been found between empathy or sympathy and the quality of friendships and social competency in children and adolescents (Eisenberg et al., 1996). Empathy is unique in that it acts as neutral dimension of emotional support. Without the empathiser feeling responsible for fixing or alleviating the emotional experience it allows another individual to feel understood and supported (Zellars & Perrewè, 2001).

Empathy is an important factor in encouraging prosocial behaviour and social competence (Eisenberg & Fabes 1998; Hoffman, 2000; Staub, 1979). Lower levels of empathetic expression may indicate delays in socio-moral development (Miller & Eisenberg, 1988). Clinical interventions aimed at increasing empathetic responses have resulted in a decrease in reported antisocial behaviour and interpersonal violence (Schewe & O'Donohue, 1993). Limitations in empathy development have also been linked to psychopathy. The British psychiatrist Cleckley (1976) was the first to conceptualise the characteristics of psychopathy as impulsiveness, a lack of empathy and guilt and narcissism often accompanied by a tendency for severe violence.

2.3. Aggression

2.3.1. Aggression: An historical overview

Aggression stands as one of the most frequently researched areas of human behaviour (Hennig, Reuter, Netter, Burk, & Landt, 2005). Research focusing on

aggression and antisocial development encompasses a wide domain of theoretical perspectives and an assorted array of disciplines (Granic & Patterson, 2006). The original 18th century theories on the development of aggression by Rousseau, who suggested “humans are fundamentally good,” and Hobbes, who suggested “the wicked are children who have never grown up,” formed the basis of the literature until the early 1970’s (Archer, Hartup, & Tremblay, 2005).

In the subsequent 30 years there has been a theoretical and empirical shift in the research on aggression. The concentration has moved from the aggressive act (events and situations) to the developmental processes of aggression within the individual (Vitaro, Brendgen, & Barker, 2006). Recently psychobiological approaches have added to the psychoanalytical explanations, learning theories and the frustration-aggression theory of aggression (Hennig, Reuter, Netter, Burk, & Landt, 2005).

Technological advances including molecular genetics, brain imaging and hormone sampling, have helped activate this current shift. Also adding to this shift is the movement away from simple correlational research to more sophisticated statistical analysis, which can provide information about the specific developmental path of aggression, rather than simply how it related to other constructs (Archer et al., 2005).

2.3.2. The development of aggression

In 1973 Bandura sought to explain aggression as a learned behaviour, he theorised all aggression was learned through social modelling and not innate in any form. He stated “the specific forms that aggressive behaviour takes, the frequency with which it is displayed, and the specific targets selected for attack are largely determined by social learning factors” (p.28). Parental physical abuse has been shown to increase the amount of aggression displayed in male children. A physically abusive parent

becomes a behavioural model for the development of aggression in a child (Felthous, 1998). Archer et al., (2005) observed, however, children in the first three years of life appear to be learning not to use physical aggression to acquire their wants. He goes on to suggest if this is the case, then the development of aggression is not so much a learned behaviour as a learning to control maladaptive expressions of the behaviour (Archer et al., 2005). Further complicating the social learning theory of aggression is the fact aggressive children tend to interpret social cues in ways that evoke emotions of personal distress, such as threatening, or aggressive, resulting in behaviour consistent with those emotions (Miller & Eisenberg, 1988).

Recent literature suggests aggression is a much more complex behaviour than social learning theory implies (Archer et al., 2005; Bushman & Baumeister, 1998; Reeder, Kumar, Hesson-McInnis, & Trafimow, 2002; Vitaro et al., 2006) and other internal individual factors along with external factors impact on the level of aggression exhibited. Reeder et al., (2002) suggests it is now commonly ascertained in modern psychology that when considering one's ability to control their aggression, as the strength of the situational causality increases, dispositional causality weakens. This recognition of social and cognitive interaction as an important factor for the development of aggressive behaviour has only been recently recognised (Bushman & Baumeister, 1998; Kirkpatrick, Waugh, Valencia, & Webster, 2002).

2.3.3. Types of aggression (premeditated vs. impulsive aggression)

In an attempt to understand the multi-faceted and multi-causality nature of aggression a large collection of the research has focused on defining the type of aggression exhibited. The literature defines aggression as either premeditated or impulsive. Age seems to have an effect on the type of aggression expressed and younger children are more likely to exhibit signs of impulsive aggression rather than

premeditated aggression (Conor, Stienhard, Cunningham, Anderson, & Melloni, 2004). Evidence supporting the validity of the different aggression typologies has been shown in research by Dodge & Coie, (1987). However, clear definition and clarification of the concept of aggression is hindered by factors relating to the choice of participant population and measurement techniques employed (Kockler et al., 2006).

Premeditated aggression (sometimes referred to as instrumental or proactive aggression) relates to the forms of aggression that are predatory, callous, instrumental and lack emotion, (Cornell et al., 1996; Weinshenker & Siegel, 2002; Woodworth & Porter, 2002). Premeditated aggression is clinically defined as aggression that is methodically and deliberately undertaken for the benefit of a desired goal (Kockler et al., 2006). It is generally linked to violent acts that gratify both psychopathic and narcissistic motives, especially criminal acts like rape and serial rape/murder (Cornell et al., 1996; Meloy, 2000). It is deliberate in nature, coercive and motivated by external reinforcements (Conor et al., 2004). Premeditated aggression is characterised by quiet, patient, stalking, behaviour with minimal emotional arousal (Eichelman, 1992).

Impulsive (or reactive) aggression on the other hand is affective, reactive and usually involves little forethought (Cornell et al., 1996; Weinshenker & Siegel, 2002; Woodworth & Porter, 2002). As it is an angry or defensive response to a perceived threat, provocation, or frustration (Conor et al., 2004). Impulsive aggression is thought to be theoretically rooted in frustration aggression models (Berkowitz, 1989). Impulsive aggression is often characterised by a frenzied attack that is usually defensive and results in greatly increased arousal in the autonomic nervous system (the flight and fight response) (Eichelman, 1992). As such, it is highly emotive. It generally

occurs in response to a provocation of some kind, potential motives for this form of aggression include defence mechanisms and revenge tactics (Reeder, Kumar, Hesson-McInnis, & Trafimow, 2002). Impulsive aggressors are unpredictable and explosive and often react with immediate destructive violent force (Kockler et al., 2006).

The motives behind impulsive aggression result in this behaviour often being viewed socially as a relatively positive form of aggression, suggesting the ultimate goal of the aggressor is legitimate or even understandable or relatable, even when another has been harmed (Reeder et al., 2002). Meloy (2000) concluded those who display impulsive affective aggression suffer from a lack of cognitive resources that result in the aggressor being overwhelmed by competing stimuli, which briefly renders the aggressor helpless. Thus, the impulsive aggressor often acts before they think and are therefore, frequently caught and consequently punished for their violent outbursts.

In terms of criminal behaviour, impulsive aggression has been suggested as a more pervasive form of violence and premeditated aggression evident in a smaller sub group of offenders (Cornell et al., 1996).

2.3.4. Juvenile aggression and violent crime

Recently there has been concern around the escalating rates of early childhood aggression (Weir, 2005). There is growing public concern over the increase in juvenile violent crime during the past two decades. Interpersonal violence now ranks as one of the major causes of death for adolescence in the United States (Eddy, Whaley, & Chamberlain, 2004). Australia and New Zealand are also experiencing increasing rates of juvenile violent crime (Muckerjee, Carach, & Higgins, 1997; Weatherburn, 1997).

There has been a lot of research dedicated to the understanding of the precursors for violent offending (Kenny & Press, 2006). The young people who are at greatest risk for violent offending are those who have extensive histories of antisocial

behaviours and who associate with peers that have similar histories. Adolescent males are at the highest risk for displaying violent behaviours. In the past ten years the western world has seen an increase in the number, severity and lethality of violent acts committed by adolescent males specifically (Eddy et al., 2004).

2.4. The Relationship Between Animal Cruelty, Empathy and Aggression

2.4.1. Animal cruelty and human related aggression

There are two predominant theories on the animal cruelty human aggression link in the literature. The graduation theory which suggests those deliberately being cruel to animals will eventually graduate deliberately being aggressive towards humans and the desensitisation theory which suggests the exposure and participation in callous behaviour results in desensitisation of empathic responding and moral response to violence (Charles & Davies, 2008). Animal cruelty and human aggression share similar basic characteristics, they represent a form of violence perpetrated on living creatures, that feel pain, display physical signs of that pain and can die from the inflicted injuries (Ascione, 2005).

The earliest documented interest in the links between animal cruelty and violence towards humans was noted by Locke (1705). He stated “they, who delight in the suffering and destruction of inferior creatures, will not be apt to be very compassionate or benign to those of their own kind” (Ascione, 1998b, p. 5). Later Freud also held the view that cruelty to animals was indicative of potentially seriously violent individuals (Slavkin, 2001). More recent research has repeatedly found those convicted of violent offences were significantly more likely than non-violent offenders to have had a historical component of animal abuse in childhood (Blair et al., 2004; Felthous & Kellert, 1998; Lockwood & Hodge, 1998; Quinn, 2000; Ressler et al., 1988; Slavkin, 2001; Squires, 2000; Wickens, 1998). The conclusions emerging from

the research is that cruelty to animals especially by children and adolescents is a form of rehearsal for human-directed aggression.

Ascione and Schiff (1999a) found that deliberate infliction of harm on an animal, as a child, was present among 63% of aggressive criminals and only present among 11% of non-aggressive criminals in their sample. They go on to say 70% of non-aggressive criminals who admitted to harming animals showed or expressed signs of remorse for their actions compared with just 40% of the aggressive criminal sample. Hellman and Blackman, (1966) conducted a small study on institutionalised adolescent boys with highly aggressive tendencies; they found their entire sample had displayed cruelty to animals. Connell's, (2005) research on male juvenile offenders currently serving sentences in New Zealand youth offender units found those offenders who were cruel to animals had been convicted of a higher number of violent offences than those who have not intentionally harmed animals. Felthous (1998) research on male psychiatric patients found those who displayed animal cruelty behaviour in childhood were more likely to be aggressive in other situations. He also found; those who had been cruel to animals in childhood and adolescence also suffered from: parental abuse, anger control issues, destructive behaviour and truancy. Further, Ascione & Schiff, (1999b) found aggressive criminals are significantly more likely to express hatred or dislike of animals when compared to a non-aggressive criminal sample.

More recently however, Zdradzinski (2010) research on a sample of 53 male students currently attending school for youth with behavioural problems found that verbal and physical aggression had no predictive or relational correlation to animal cruelty behaviour. However, she did note more generalised aggression including rule-breaking and externalising behaviours were related to animal cruelty.

2.4.2. Animal cruelty and empathy

Freud (1905) first suggested clinicians need to pay attention to those children who are cruel to animals and their peers, he also suggest the absence of empathy and sympathy in childhood can result in cruelty impulses that cannot be broken in adulthood (Ascione, 1998b). More recently, Zdradzinski (2010) found empathetic concern to be predictive of animal cruelty behaviour. Specifically she found those who were cruel to animals showed a lowered empathetic concern than those who were not cruel to animals.

Similarly, Eckardt (2010) looked into the role of empathy and broader personality traits on attitudes towards animals in a sample of 241 undergraduate students. She also found those who had high levels of empathy, as measured on the Interpersonal Reactivity Index (IRI) (Davis, 1983) also had more positive attitudes towards animals and took a more negative view of animal cruelty (as measured on Attitudes toward the Treatment of Animals Scale) than those who had lower levels of empathy.

However, unlike the relationship between animal cruelty and aggression, the relationship between animal cruelty and empathy has not been so well explored in the literature. Ascione (1998b) noted while cruelty to animals and a lack of empathy would appear to be related constructs, this relationship has not been widely investigated and there is a critical need for further research in this area. Eckardt (2010) shared this view, noting empathy has been generally ignored when examining people's attitudes and behaviours towards animals.

2.4.3. Null hypotheses

In summary, there seems to be a relationship between animal cruelty and aggression from the current literature and there seems some indication empathy may also play a part in animal cruelty behaviour and in human related aggression.

Animal cruelty acts as a form of non-human aggression. Therefore, it is reasonable these constructs are inherently linked in some way. Further, I think the behaviours could be serving the same psychological purpose for the perpetrator. For example, animal cruelty and some human related aggression particularly domestic violence could help the aggressor gain a sense of control or power, particularly when the victim is someone or something smaller or weaker than themselves.

Further, if some instances of animal cruelty, particularly severe punishment, are in response to the animal “wronging” its master in some way, anger may also be related to animal cruelty. There is also some indication in the literature that some individuals take pleasure in the premeditated callous torture of animals. In this sense it might be fair to suggest the distinction made between the types of aggression (premeditated versus impulsive aggression) could also apply to animal cruelty.

So where does empathy come in? I think empathy will act as a mediator in both animal cruelty and aggression. I think higher empathetic functioning will act as a protective factor for both animal cruelty and aggression and alternatively individuals with lower empathetic functioning will be more likely to display aggressive behaviour (both premeditated and impulsive) towards humans and animals.

Therefore, the null hypotheses for the current research are:

- Animal cruelty, aggression and empathy are independent constructs and are not related.
- Animal cruelty does not predict human related aggression.

- A low level of empathetic responding does not predict animal cruelty or human related aggression.

3. Methodology

3.1 Participants

The participants in the current study were 203 Wairarapa high-school students. Schools were recruited via a formal letter introducing the research and researcher and a follow up meeting request was made with the principals of each school. Seven schools were approached and five declined to participate in the research. The remaining two schools were located in the greater Wairarapa, which is located north of Wellington, New Zealand. The Wairarapa region is made up of smaller towns and predominantly rural.

Of the 203 participants 38 did not meet the age criteria for the study (16 years or over) and their results were not included. A further 32 had incomplete responses and had failed to complete all of the measures. This resulted in 133 participants remaining in the study.

3.2 Measures

3.2.1 Animal cruelty questionnaire

There are not many psychological measures currently available that examine people's attitudes towards animal cruelty. The complexity of the behaviour has resulted in many limitations in the current assessment measures (Dadds et al., 2004).

To examine animal cruelty, Ascione, Thompson and Black (1997) developed the Cruelty to Animals (Children and Animals) Assessment Instrument (CAAI) (Appendix A). It incorporates both a child self-assessment and parental assessment form (Dadds et al., 2004). The CAAI provides information on animal cruelty types, estimates of the severity of cruelty acts and the motives and social context of the cruelty acts (Ascione et al., 1997). The inter-rater reliabiliies for the CAAI are positive (between 60% and 80%) and it has been found a good tool for looking at the

motivations behind the behaviour (Ascione, 2005). Based on the CAAI and the Boat Inventory on Animal-Related Experiences (BIARE) (Boat, 1999), Pagani, Robustelli, & Ascione, (2007) developed the Youth Assessment for Animal Abuse (YAAA) (Appendix B) a self report questionnaire used in their research on Italian youth attitudes and behaviours towards animals. Frank Ascione was kind enough to send me this questionnaire for use in my research.

While the CAAI and the YAAA appeared to be useful measures for animal cruelty, I chose not use either measure for my research as they had limitations that did not make them viable for my population. The most limiting of the CAAI was the parental assessment aspect. My population was an older youth population (over 16 years-of-age) and I did not feel I would gain anything by asking the participants parents about their children's behaviour. Secondly, both the CAAI and the YAAA were developed for use in America and Europe and therefore, some questions were posed in a way that was not relatable to New Zealand youths or that included animals not commonly found in New Zealand (e.g., squirrels).

As such, I chose to alter the Youth Assessment for Animal Abuse (YAAA) by changing the language to relate to a New Zealand population and including some additional questions to capture different aspects of the behaviour. I included three questions that were reversed scored (Q3 "have you ever felt animals like or love you, or that you have a special bond with most animals?"; Q10 "have you ever tried to help an animal who was obviously suffering/injured?" and Q18 "have you ever intervened or tried to stop someone hurting an animal in front of you"). The reverse score items aimed to examine youths empathy towards animals (Q10 and Q18) and their perception towards their own relationship with animals (Q3).

Felthous and Kellert (1998) suggested victimising a variety of species especially those considered socially valuable, a lack of remorse and participating in a range of cruelty acts are the factors which hold the most predictive validity for future aggression. To examine this concept further I included a tick box question (which was a collation of two YAAA questions) listing the types of animals the participant may have been cruel to (Q5) and a tick box question on the types of animal cruelty engaged in (Q7).

I also wanted to examine the reasons or motivations my sample had for harming an animal, so I included a question on motivating factors behind being cruel to an animal (Q6).

The items on the final questionnaire can be grouped into five general themes (general questions, type of abuse, motivation, social or individual acts and empathy). Questions taken directly from the YAAA are scored as per that measure. All other items follow the same general scoring as the YAAA items. Most items are multiple-choice and scored between 0 and 4, with a higher score indicating a higher level of cruelty.

As previously mentioned, three questions are reversed scored (Q3, Q10 and Q18) and they are scored between 0 and 3, with 0 the lower the score indicating a higher level of care or empathy for an animal.

Three items are tick box response format, as explained above and are scored for each item ticked and according to severity depending on the question. For example, in Q5 which asks about the types of animals the participant may have harmed in the past a tick in the worms and insects option would gain a score of 2, 1 point for harming one type of animal and 1 point for it being a worm or insect. Alternatively, if this box and the pet animal's box were ticked the total score would be 6, 2 points for harming two

types of animals, 1 point harming worms or insects and 3 points for harming pet animals.

Lastly there is a written response format question (Q21). This is scored according to level of animal cruelty indicated in the response as outlined in Table 2.

Table 2

Animal Cruelty Questionnaire Question 21 scoring (as Taken from the Youth Assessment for Animal Abuse)

Type of response	Score
If no instances of maltreatment or only one case of minor, teasing, non-destructive, or non-painful act is mentioned.	0
More than one case of above acts, is assumed that the acts would not cause physical harm, e.g., annoying, teasing, frightening, restraining, or interfering. Examples: loud noise to scare sleeping pet, bangs on birdcage, chases ducks, etc. No malicious intent.	1
One or more acts of maltreatment assumed to result in pain or discomfort to the animal, maybe accompanied by minor physical damage. No use of weapons or tools. Examples: twisting leg, throwing something at an animal, tying legs together with string, pressing jaws together.	2
One or more instances of maltreatment considered to result in significant pain or discomfort to an animal, maybe accompanied by physical damage. Examples: deep cuts, loss of parts of limbs, prolonging suffering, torturing, using instruments (weapons, extremes of temperature, caustic agents) or suffocation.	3

The animal cruelty questionnaire has a minimum score of 0 and a maximum score of 162. The higher the score a participant has the greater their incidence and severity of animal cruelty behaviour.

3.2.2 EQ-8

The EQ-8 is a shortened version of Baron-Cohen & Wheelwright's (2004) Empathy Quotient (EQ). The original EQ comprised of 60 questions, 40 assessing empathising or systemising respectively and 20 filler items (Baron-Cohen & Wheelwright, 2004). This 60 item scale was then shortened by Baron-Cohen et al., in 2006 to a 22 item scale (the EQ-Short).

The items selected for the EQ-Short were chosen from the original 60 item scale using a principal components analysis (Baron-Cohen et al., 2006). Using this principal component analysis data, Loewen, Lyle, & Nachshen, (2009) took the four affirmative EQ questions with the highest principal component factor loadings and the four reversal items with the highest factor loading to produce an eight item empathy quotient, the EQ-8. The EQ-8 was shown to hold distributional properties that reflect that of the EQ-short and the full 60 item EQ scales and to be internally reliable ($\alpha = .76$) (Loewen, Lyle, & Nachshen, 2009).

The EQ-8 has a forced-choice format, measured on a Likert scale and is usually self-administered. Approximately half the items in the EQ-8 are worded to produce a "disagree" response and half an "agree" response. The participant scores 2 points if they strongly display an empathising response and 1 point if they slightly display an empathising response (i.e., each item being scored 2,1, 0,0) (Baron-Cohen & Wheelwright, 2004) (Table 3).

Table 3

EQ-8 Item Scoring

<i>Item</i>	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
I find it easy to put myself in somebody else's shoes	2	1	0	0
I am good at predicting how someone will feel.	2	1	0	0
I am quick to spot when someone in a group is feeling awkward or uncomfortable.	2	1	0	0
Other people tell me I am good at understanding how they are feeling and what they are thinking	2	1	0	0
I find it hard to know what to do in a social situation	0	0	1	2
I often find it hard to judge if something is rude or polite	0	0	1	2
It is hard for me to see why some things upset people so much	0	0	1	2
Other people often say that I am insensitive, though I don't always see why	0	0	1	2

Total scores of 1 - 6 points on the EQ-8 indicate a lower than average ability for empathetic responding, 7 - 10 points indicates and average level of empathetic

responding, 11 - 13 points indicates an above average level of empathetic responding and 14 - 16 points indicates a high level of empathetic responding.

3.2.3 Buss-Perry Aggression Questionnaire-Short Form (BPAQ-SF)

The Buss-Perry Aggression Questionnaire (BPAQ) was developed by Buss and Perry in 1992. It is a revision of the self report 75 item Buss-Durkee Hostility Inventory (1957). The BPAQ is a 29 item self report questionnaire. It has four factors involving Physical Aggression, Verbal Aggression, Anger and Hostility these were determined in item-level factor analyses across three samples (Buss & Perry, 1992; Buss & Warren, 2000). Internal consistency for the subscales on the BPAQ range from $\alpha = .72$ for Verbal Aggression to $\alpha = .89$ for the total BPAQ score. Retest reliability is also strong with correlations ranging from $r = .72$ for Anger to $r = .80$ for Physical Aggression (Buss & Perry, 1992).

However, Bryant and Smith 2001 sought to refine the BPAQ as they found the original questionnaires four factors explained too little common variance (80%). Further, the original questionnaire exhibited mediocre goodness-of-fit ($GFI = .76 - .81$). To develop a more appropriate measurement model, Bryant and Smith (2001) omitted items from the BPAQ with low principal component analysis factor loadings ($\lambda < .40$) or items that loaded at least moderately ($\lambda = .40$) on two or more scales. They also omitted items that did not reflect the direct endorsement of aggressive traits (reverse worded items). The end result was a 12-item, four-factor measurement model (the Buss-Perry Aggression Questionnaire-Short Form or BPAQ-SF), which has an acceptable goodness-of-fit ($GFI = .94$). This result was further confirmed by Diamond and Magaletta in their research with a clinical sample in 2005.

Like the EQ-8 the BPAQ-SF is a forced choice format on a Likert scale and is self administered. There are three questions for each of the four factors (Physical

Aggression, Verbal Aggression, Anger and Hostility). As stated above, all of the items are worded to elicit a positive aggressive response. Participants rate each question as either 1 = extremely uncharacteristic of me, 2 = somewhat uncharacteristic of me, 3 = neither uncharacteristic nor characteristic of me, 4 = somewhat characteristic of me, or 5 = extremely characteristic of me. The items are scored 1 - 5 as listed above, therefore the highest possible score on each factor is 15 and the minimum score on each factor is 3. The maximum total score for the BPAQ-SF is 60 and the minimum score is 12 (Bryant & Smith, 2001). Scores are classified as low, medium, or high.

3.3 Procedure

Ethical approval for the project was approved by the Massey University Human Ethics Committee: Southern B, Application in September 2007. Changes were made to the initial questionnaire developed for the research to incorporate two additional measures in May 2009 and those changes were approved June 2009.

Seven secondary schools throughout the Wairarapa and Hutt Valley were approached to take part in this research. Of the seven schools approached five declined to participate in the research.

I gave each of the remaining schools an option for how the research was to be undertaken. Both schools opted for the students to be gathered in a common area and undertake the research under teacher supervision. Both schools who participated in the research were public co-ed schools. Students were invited to participate in the research via an information sheet attached to the questionnaire (Appendix C). All students were also reminded by the teachers overseeing the data collection that participation was not compulsory and that the research was anonymous and therefore they were not required to place their name on their questionnaire sheet. These points were outlined on both

the information sheet and the questionnaire cover page. The only personal data collected were the gender and age of each participant.

Students put their completed questionnaires in a box at the front of the room. These were not viewed by school staff and I collected them from the staff immediately after the students had completed the questionnaire.

I examined all the questionnaires and those that did not meet the age criteria of 16 years or over were excluded from the data entry phase. Any incomplete questionnaires were also excluded. The data from all remaining questionnaires were entered into a Microsoft excel spreadsheet.

The remaining data set was uploaded and investigated using the SPSS statistical package version 18.

4. Results

4.1 Descriptive Information on the Sample

The mean age for the participants was 16.8 years ($SD = .76$) with a range of 16 to 19 years. There were 82 (62%) students who identified as female and 51 (38%) students who identified as male.

4.2 Descriptive Information from the Animal Cruelty Questionnaire

There were 129 students who indicated they currently had an animal or had owned animals previously (97%) and 4 students (3%) indicated they had never owned an animal.

Of the 133 participants 46 (35%) indicated they had never harmed an animal in the past, 13 (10%) indicated they had punished an animal in the past but never had harmed animals for any other reason and 74 (56%) indicated they had harmed animals (Table 4).

Table 4

Animal Cruelty General Grouping as per the Animal Cruelty Questionnaire for Males and Females

	Has not harmed animals	Has only harmed animal for punishment	Has harmed animals in other ways
Males ($n = 51$)	24%	2%	75%
Females ($n = 82$)	41%	15%	44%
Total	35%	10%	56%

The reasons for harming animals varied across the sample. Hunting/fishing and punishment were the most predominant reasons why people had harmed animals. Of the males in the sample 53% indicated they had harmed an animal while hunting or fishing and 37% had harmed an animal as punishment for an undesirable act. In the females of the sample 15% indicated they had harmed an animal while hunting or fishing and 24% indicated they had harmed an animal for punishment (Table 5).

Table 5

The Reasons Male and Female Participants Gave for Animal Cruelty

	Males		Females		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Hunting/fishing	27	53	12	15	39	29
Punishment	19	37	20	24	39	29
I didn't like it	9	18	12	15	21	16
For fun/enjoyment	7	14	4	5	11	8
Too young to know better	6	12	4	5	10	8
Entertainment	3	6	2	2	5	4
To make it hard/tough	2	4	0	0	2	2
I was angry at something else	2	4	1	1	3	2
Copying someone else	2	4	0	0	2	2
To punish someone else	2	4	0	0	2	2
To impress others	1	2	0	0	1	1
I don't know why I did it	1	2	2	2	3	2

The type of animal harm committed also varied across the sample. Using a weapon, throwing stones and beating or kicking an animal were the most common

ways in which participants had harmed animals in the past. In the males of the sample 41% indicated they had harmed an animal with a weapon, 33% had thrown stones at an animal and 33% had beaten or kicked an animal. In the females of the sample 12% indicated they had harmed an animal with a weapon, 9% had thrown stones at an animal and 13% had beaten or kicked an animal (Table 6).

Table 6

Types of Animal Cruelty Acts Committed by Male and Female Participants

	Males		Females		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Using a weapon	21	41	10	12	31	23
Throwing stones	17	33	7	9	24	18
Beating/kicking	17	33	11	13	28	21
Running over an animal	11	22	5	6	16	12
Poisoning	6	12	2	2	8	6
Giving it alcohol or drugs	6	12	4	5	10	8
Burning	5	10	2	2	7	5
Dropping off something	5	10	1	1	6	5
Drowning	4	8	1	1	5	4
Strangulation/suffocation	4	8	1	1	5	4

4.3 Distribution of Scores

4.3.1 Animal cruelty questionnaire

A histogram of the total animal cruelty scores showed the data did not follow a normal distribution. A Kolmogorov-Smimov test for normality was performed which confirmed this fact $D(133) = .174, p < .01$). The data were also extremely positively

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skewed $z(\text{skew}) = 2.55$, (Figure 2). The removal of extreme outliers did not normalise the distribution and the remaining scores still had an extreme positive $z(\text{skew}) = 1.403$. As such, I made the decision to transform the data using a Logarithmic Transformation. The resulting transformed scores followed a normal distribution both visually (Figure 3) and statistically following a Kolmogorov-Smimov test $D(133) = .104, p = .114$.

The untransformed animal cruelty questionnaire scores ranged from 0 to 152 ($M = 21.29, SD = 22.71$). Males had a higher mean score $M = 30.45 (SD = 28.96)$ than females $M = 15.59 (SD = 15.38)$. A Mann-Whitney U test was conducted to evaluate the difference between males and females scores. The results of the test were in the expected direction and significant, $z = -3.61, p < .01$. Males had an average rank of 82.29, while females had an average rank of 57.49.

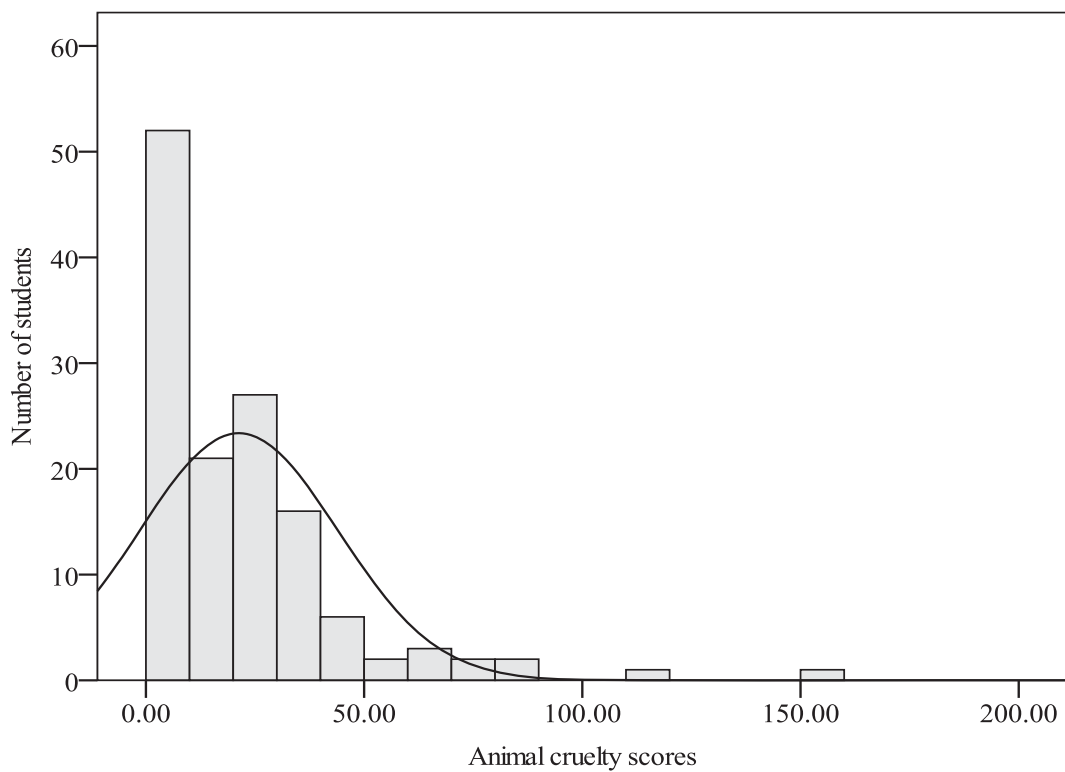


Figure 2. The distribution of the raw animal cruelty scores.

The transformed scores ranged from 0 to 2.18 ($M = 1.15$, $SD = 0.44$). An independent t -test confirmed the difference between the transformed male ($M = 1.31$, $SD = 0.45$) and female mean ($M = 1.05$, $SD = 0.40$) scores were significant ($t(131) = -3.512$, $p < .01$).

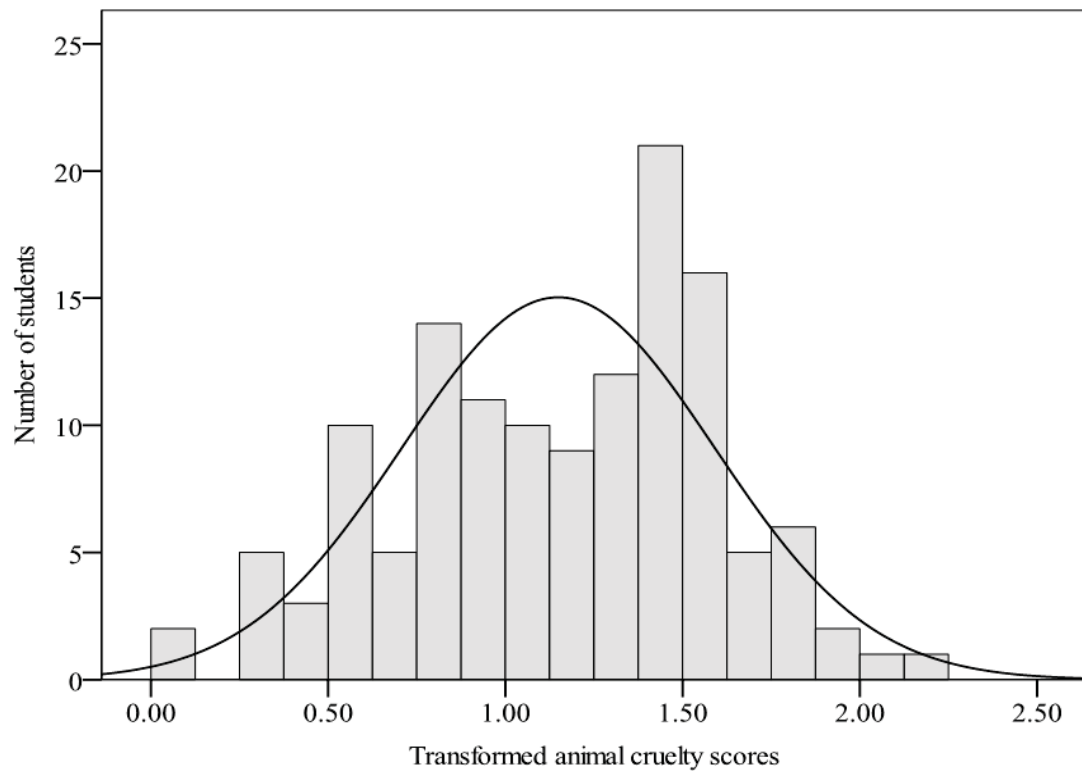


Figure 3. The distribution of animal cruelty scores following a logarithmic data transformation.

4.3.2 EQ-8

The EQ-8 scores followed a relatively normal distribution, with a slight negative $z(\text{skew}) = -.180$, this skew was not considered a large enough deviation to deem the data non-normal on a Kolmogorov-Smimov test, $D(133) = .107$, $p = .096$.

The scores ranged from 0 to 16 ($M = 8.92$, $SD = 3.37$). Females showed higher empathy scores ($M = 9.45$, $SD = 3.25$) than males ($M = 8.10$, $SD = 3.41$), (Figure 4)

and, an independent *t*-test showed this difference was significant ($t(131) = -2.266, p = .05$).

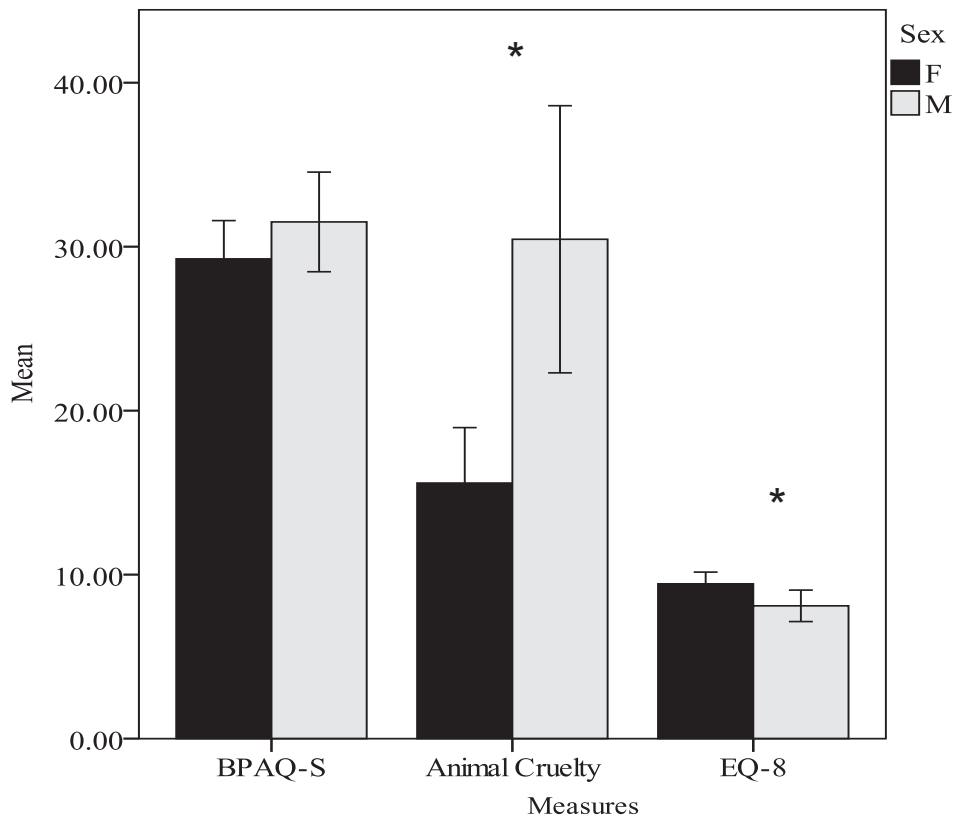


Figure 4. Mean test scores (+2SE) for males and females on the BPAQ-SF, Animal Cruelty Questionnaire and the EQ-8. Asterisk indicates significant differences between mean and females scores ($p = .05$).

4.3.3 Buss-Perry Aggression Questionnaire

The Buss-Perry Aggression Questionnaire Short Form (BPAQ-SF) scores followed a relatively normal distribution, with a slight positive skew $z(\text{skew}) = .70$. Like the EQ-8 this skew was not considered a large enough deviation to deem the data non-normal on a Kolmogorov-Smimov test, $D(133) = .095, p = .177$.

The total scores ranged from 12 to 60 ($M = 30.12, SD = 10.70$). Males had slightly higher mean scores ($M = 31.51, SD = 10.80$) than females ($M = 29.26, SD = 10.62$). However, an independent *t*-test showed this difference was not significant (t

(131) = 1.182, $p = .239$). Males had higher mean scores on all the aggression sub-scales than females (Table 7). These differences were not significant.

Table 7

Mean BPAQ-SF Total and Sub-scale Scores for Males and Females

	Male			Female		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
BPAQ-S Physical	8.10	3.58	51	7.00	3.41	82
BPAQ-S Verbal	8.25	3.40	51	8.28	3.19	82
BPAQ-S Anger	7.02	3.33	51	6.62	3.08	82
BPAQ-S Hostility	8.14	3.31	51	7.35	3.23	82
BPAQ-S Total Score	31.51	10.80	51	29.26	10.62	82

4.4 Correlations and Regression Analysis

I examined whether a relationship between animal cruelty, empathy and aggression exists via a simple bivariate correlation of the three measures used in this study.

For the total sample animal cruelty scores and BPAQ-SF scores showed a significant very weak positive correlation, $r = .185$, $p = .05$ (Figure 5). Further, the physical aggression sub-scale of the BPAQ-SF showed a slightly higher weak positive correlation with animal cruelty $r = .187$, $p = .05$ (Figure 6). The EQ-8 and all other sub-scales on the BPAQ-SF were not significantly related to animal cruelty (Table 8).

Animal Cruelty, Empathy and Aggression

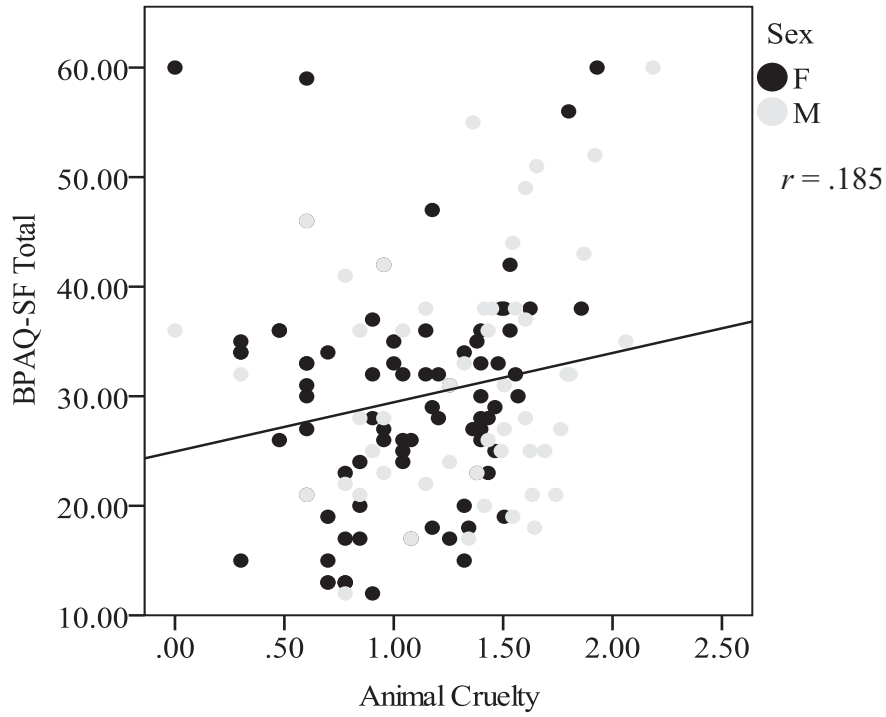


Figure 5. Transformed animal cruelty scores and total BPAQ-SF scores for males and females.

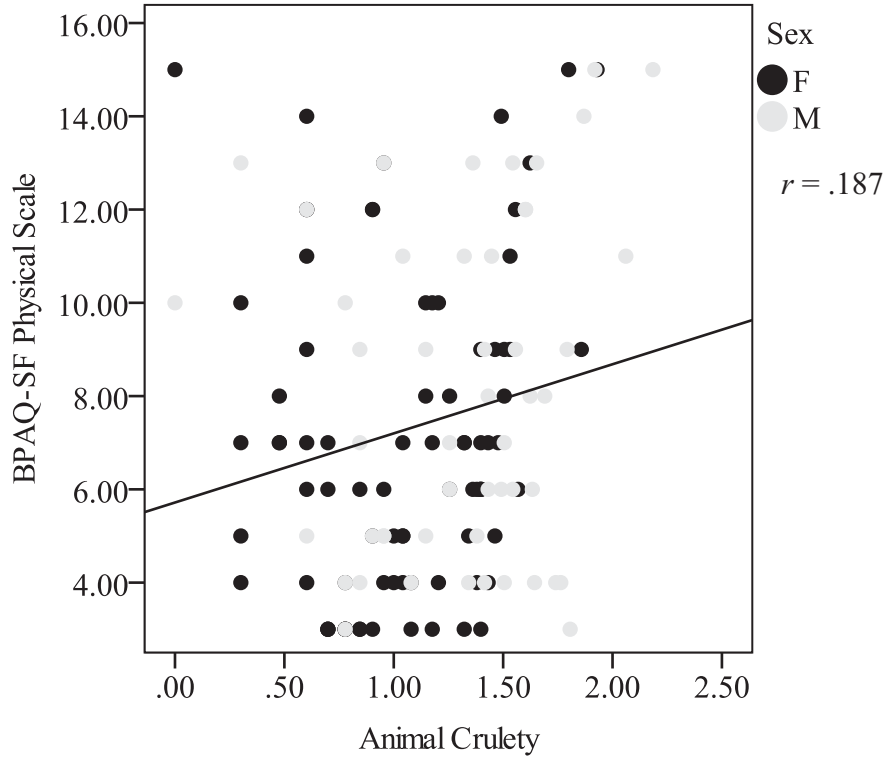


Figure 6. Transformed animal cruelty scores and BPAQ-SF physical aggression sub-scale scores for males and females.

Table 8

Correlations among Animal Cruelty, Age, Gender, EQ-8 Scores and BPAQ-SF Scale Scores for the Total Sample

Variables	1	2	3	4	5	6	7	8	9
1. Animal Cruelty	1								
2. EQ-8	-.150	1							
3. BPAQ-SF Total	.185*	-.132	1						
4. BPAQ-SF Physical	.187*	-.126	.829**	1					
5. BPAQ-SF Verbal	.138	-.164	.816**	.632**	1				
6. BPAQ-SF Anger	.104	-.077	.788**	.503**	.490**	1			
7. BPAQ-SF Hostility	.169	-.061	.809**	.524**	.522**	.584**	1		
8. Age	-.155	-.096	.048	-.052	.095	.059	.061	1	
9. Gender	.293**	-.194*	.103	.153	-.004	.061	.117	-.044	1

Note: EQ-8, Empathy Quotient-Eight; BPAQ-SF, Buss-Perry Aggression Questionnaire Short Form.

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

Given only, gender, the BPAQ-SF total score and the BPAQ-SF physical aggression subscale showed a significant relationship with animal cruelty, these variables were the only ones further investigated.

As physical aggression is a sub-scale of the BPAQ-SF, it was highly intercorrelated with the BPAQ-SF total score ($r = .829, p = .05$) deeming it not a suitable variable to be entered into the multiple regression analysis (Licht, 1995). Therefore, I performed a stepwise backward entry regression analysis with animal cruelty as the dependent variable and the BPAQ-SF physical scale scores and gender as the independent variables. The results of the regression analysis indicated the BPAQ-SF physical aggression scale and gender explained 10.7% of the variance for animal cruelty ($R^2 = .107, F(2,131) = 7.761, p < .01$). In this model gender significantly predicted animal cruelty ($\beta = .271, SE \beta = .076, p < .05$), $t(131) = 3.231, p < .05$ (Table 9).

Table 9

Summary of Stepwise Backwards Entry Multiple Regression Analysis of Animal Cruelty, Gender and Physical Aggression as Measured on the BPAQ-SF (n = 133)

Variable	R^2	B	$SE(B)$	β	t	F
Model 1						
Gender	.107*	.245	.076	.271	3.231*	7.716
BPAQ-SF Physical		.018	.011	.145	1.733	

Note: BPAQ-SF, Buss-Perry Aggression Questionnaire Short Form.

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

The differences between males and females were investigated to determine gender differences in the measures predictability for animal cruelty. A bivariate correlation

analysis showed there were no significant relationships between age, animal cruelty, empathy and aggression for females in this sample.

However, the male correlation analysis showed a weak positive relationship between animal cruelty and the verbal aggression sub-scale of the BPAQ-SF, $r = .282, p = .05$, a moderate negative correlation between the verbal aggression sub-scale of the BPAQ-SF and the EQ-8, $r = -.304, p = .05$ and a moderate negative correlation between age and the EQ-8, $r = -.323, p = .05$ (Table 10).

Table 10
Correlations Among Measures and BPAQ-SF Scales for Males (n = 51)

Variables	1	2	3	4	5	6	7	8
1. Age	1							
2. Animal Cruelty	-.075	1						
3. EQ-8	-.323*	-.039	1					
4. BPAQ-S Total	.050	.215	-.225	1				
5. BPAQ-S Physical	-.060	.156	-.153	.868**	1			
6. BPAQ-S Verbal	.112	.282*	-.304*	.799**	.758**	1		
7. BPAQ-S Anger	.059	.156	-.190	.776**	.504**	.440**	1	
8. BPAQ-S Hostility	.055	.087	-.065	.724**	.466**	.319*	.529**	1

Note: EQ-8, Empathy Quotient-Eight; BPAQ-SF, Buss-Perry Aggression Questionnaire Short Form.

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

To investigate this relationship between verbal aggression and animal cruelty further a simple linear regression analysis was completed for these variables. The results of the regression analysis indicated verbal aggression explained 7.9% of the variance for animal cruelty in the males in this sample ($R^2 = .079$, $F(1,50) = 4.228$, $p < .05$). Verbal aggression significantly predicted animal cruelty ($\beta = .282$, $SE \beta = .018$, $p < .05$), $t(133) = 2.056$, $p < .05$ (Table 11).

Table 11

Summary of Simple Regression Analysis of Animal Cruelty and Verbal Aggression as Measured on the BPAQ-S (n = 51)

Variable	B	SE(B)	β	t	Sig. (p)
BPAQ-S Verbal	.037	.018	.282	2.056	.045

Note: $R^2 = .079$

A stepwise backwards entry multiple regression analysis was used to further investigate the relationship in males between the EQ-8, verbal aggression and age. The results of the regression analysis indicated verbal aggression and age explained 17.7% of the variance for empathy as measured on the EQ-8 ($R^2 = .177$, $F(2,49) = 5.176$, $p < .01$). In this model age and verbal aggression ($\beta = .271$, $SE \beta = .076$, $p < .05$), $t(133) = 3.231$, $p < .05$ significantly predicted empathy (Table 12).

Table 12

Summary of Stepwise Backwards Entry Multiple Regression Analysis of Empathy, Age and Verbal Aggression as Measured on the BPAQ-S (n = 51)

Variable	R^2	B	$SE(B)$	β	t	F
Model 1						
Age	.177**	-1.201	.540	-.293	-2.224*	7.716*
BPAQ-SF Verbal		-.273	.133	-.272	-2.062*	

Note: EQ-8, Empathy Quotient Eight; BPAQ-SF, Buss-Perry Aggression Questionnaire Short Form.

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

4.5 Animal Cruelty Questionnaire Free Response Answers

The free response questions elicited some interesting findings. Two general themes emerged from the answers in the free response question, firstly a number of participants had viewed incidents of animal cruelty which they considered excessive or unnecessary, as shown in the following examples from the research:

- “One day me and a couple of mates were outside a bakery and a guy pulled up because an ambulance had flashed its lights at him and he had his dog dragging behind him on a chain, so we ran over to him and abused him and yelled at him because it was obviously done on purpose, but the dog was pretty screwed anyway.” Male 17 years.
- “A farm I worked on abused the animals physically with a metal hook and kicked animals to get them on the cowshed.” Male 16 years.

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- “I have only harmed animals for hunting or if they growled or bit myself or someone [But] I have seen someone nearly beat a dog to death.” Male 16 years.

The second general theme emerging from the free response question was some of the responses under the guise of hunting or punishment activities may be considered somewhat excessive or to be causing unnecessary suffering. The following quotes from the research are examples of these points:

- “My dog was all worked up running all over the place, my nephew was running down the hallway, dog ran after him and jumped pushing him over and making him hurt himself. So I got the stick I use to take her walking and gave her a hard slap on the bum. She’s never done it again!” Female 16 years.
- “I was hunting with a friend and shot at a possum, I hit it with a 22 calibre rifle but it was not dead. So I shot at it another 6 times in its head and it was still not dead. So I got a .222 calibre rifle and killed it. I got a blood rush and killed more possums.” Male 17 years.
- “I shot a sheep with a BB gun cause it rammed me and bruised my leg.” Male 16 years.

The last point of note from the free response section is there were very few responses in this question which indicated severe abuse or a more pathological enjoyment of animal cruelty. This may be translated to it not being common in the current sample. However, the answers in the corresponding tick box answers on the

types of cruelty acts and types of animals abused contradict this finding. It is more likely there was an unwillingness to disclose details of animal abuse behaviours in the participants. The following quote is an example of severe animal cruelty given in the free response question:

- “I put my pet cat in the freezer for several hours. I felt really good....” Male 17 years.

While the validity of this answer is questionable, because in nature it sounds so unlikely, I feel it was important to quote it here as an example of the type of severe cruelty which are more pathological in nature and may serve as a indication of serious underlying emotional issues.

5 Discussion

5.1 Summary

Each year, the Royal New Zealand Society for the Prevention of Cruelty to Animals receives 14,000 welfare complaints (Royal New Zealand Society for the Prevention of Cruelty to Animals, 2011). Last year 425 animal cruelty incidents were reported to the police and 240 were solved. The international literature on animal cruelty behaviour suggests it is linked to human related violence and aggression (Ascione, 1998b, 2005; Flynn, 1999a; Kellert & Felthous, 1998). In particular systemic animal cruelty in childhood has been connected with domestic violence and severe incidents of interpersonal aggression (Ascione, 1998a, Felthous & Kellert, 1998). Despite this, animal abuse in children is not currently monitored; due to this researchers must rely on data from developmental, psychopathological and family violence literature to gain a greater understanding of the prevalence of this problem (Ascione, 2005).

Given the suggested link to human related violence and magnitude of the animal cruelty issue in New Zealand, examining animal cruelty behaviour in a New Zealand sample seemed both relevant and timely. To date there has been little investigation of animal cruelty in normative populations. Further, the role empathy may play in animal cruelty behaviour and aggression in a normative sample has also not been investigated in the literature. Therefore, the overarching goal of the present research was to extend previous research by examining the relationship between animal cruelty, empathy and aggression in a normative population.

The results of the present research suggested a number of important findings. First, the current research seems to support the animal cruelty aggression relationship. The research suggests this relationship is stronger within the males of this sample. It

also shows empathy does not appear to be related to animal cruelty; however, it may be linked to verbal aggression in males.

5.2 Animal Cruelty

In this research sample 65.4% (87) of participants indicated they had harmed animals in the past. Males had higher levels of animal cruelty than females. The reasons for the discrepancy in this result could possibly be due to the high occurrence of farming duties, hunting and trapping activities among this rural sample. Hunting and trapping are traditionally male dominated activities, therefore, both the accessibility to animals in general and situations that could elicit animal cruelty behaviour may have been higher in the males of this sample. Another possibility is males are traditionally more likely than females to participate in aggressive activities or violence. Animal cruelty is essentially non-human violence and therefore the higher incidents of animal cruelty in males may be related to their higher levels of aggression.

The type and frequency of animal cruelty acts varied greatly among this sample. Over all the majority of the types of animal cruelty acts generally followed either a hunting/fishing (29%) or punishment motivation (29%). As suggested above, males were more likely to participate in hunting and fishing activities (53%) than females (15%). Not liking an animal (16%) was also a popular reason for a cruelty act in this sample. Of the total sample only 4% participated in animal cruelty for enjoyment.

Using a weapon (23%), beating or kicking an animal (21%) and throwing stones (18%) were the most common ways in which participants had harmed animals in the past. The use of weapon being the most common way in which participants in this sample harmed animals ties in with hunting/fishing being the most common form of animal cruelty in this sample. Beating or kicking an animal also ties in with punishment being a common motivator for animal cruelty in this sample. However, throwing stones

at an animal denotes a more pathological form of animal cruelty. Further, other severe acts of animal cruelty including giving an animal alcohol or drugs (8%), burning (5%), dropping off something (5%), drowning (4%) and strangulation/suffocation (4%) were also observed in this sample.

Therefore, while the majority of respondents admitted to behaviours that were inside the realms of social acceptance, there are some individuals who are committing cruelty acts that are of social concern. Further adding to this is the free response questions indicated some animal cruelty behaviours that were under the guise of hunting or punishment activities but were excessive and would have caused unnecessary pain and suffering for the animal. This is important if we go back to Ascione's (1993) definition of animal cruelty, which states animal cruelty encompasses any "socially unacceptable behaviour that intentionally causes unnecessary pain, suffering, or distress to, and/or the death of, the animal" (p. 83.). This suggests that young people may justify cruelty acts by using the guise of socially accepted activities or may use the guise of such activities to fulfil some other purpose, possibly an enjoyment in participating in animal cruelty. For example, while hunting is considered a socially acceptable form of animal harm the intention is to keep the suffering of the animal to a minimum and only doing what is necessary to cleanly kill the animal. Any act that prolongs the animals suffering is no longer serving the purpose of killing an animal for sport or food and thus is serving a different purpose or motivator for the perpetrator.

5.3 Animal Cruelty and Aggression

In the current research, for the total sample animal cruelty and aggression showed a significant correlation. The exact type of aggression as measured on the BPAQ-SF related to animal cruelty varied between the total sample and the males of the group. The total sample had a weak correlation with both the total scores on the BPAQ-SF ($r =$

.185) and the physical aggression scale ($r = .187$) and animal cruelty. This result follows the trends in the previous research which suggests a link between animal cruelty and interpersonal violence (Ascione, 1998b, 2005; Hellman & Blackman, 1966; Felthous & Kellert, 1987; Lockwood & Hodge, 1998; Quinn, 2000; Ressler et al., 1988; Slavkin, 2001; Squires, 2000; Wickens, 1998).

However, when the genders were analysed separately this pattern changed. Firstly, the female group showed no significant relationship between animal cruelty and aggression. The male group showed a significant relationship between animal cruelty and verbal aggression ($r = .282$); however, animal cruelty was not significantly related to the total score of the BPAQ-SF or the other scales on the BPAQ-SF (physical aggression, anger, hostility). The lack of a relationship between physical aggression and animal cruelty differs from the previous research.

The reasons for this deviation from previous research findings are unclear. It maybe that we would see higher scores for physical aggression in an older male sample purely due to exposure to more situations or experiences that may have elicited a violent response. Further, the addition of alcohol and drugs may result in higher incidents of physical aggression; we may expect to see less alcohol related violence in a younger sample, especially when the drinking age is 18 in New Zealand. It also may suggest this finding was in fact a type I error and simply due to chance.

While aggression in some form is linked to animal cruelty how much aggression predicts animal cruelty is relatively small. In the whole sample gender and physical aggression explained 10.7% of the total variance for animal cruelty. In the males in the sample verbal aggression explained 7.9% of the variance for animal cruelty. Therefore, there is a large component of the animal cruelty behaviour left unexplained by aggression. Previous research has linked domestic violence, child abuse and physical

punishment to animal cruelty. Ascione (1998a) noted it is becoming increasingly more common to see cruelty to animals listed in domestic violence checklists. DeViney et al., (1983) studied 53 families under New Jersey Division of Youth and Family services for incidents of child abuse. The majority of the families who were being investigated for physical abuse also had historical evidence of animal abuse and parental child abuse is the most common back ground for those children abusing animals (Robin & Bensel, 1998). There is also some evidence to indicate a relationship between animal cruelty and harsh physical punishment exists (Flynn, 1999b). These variables may have held better predictive abilities for animal cruelty in this sample.

5.4 Empathy

Based on previous research (Ascione, 2005; Zdradzinski, 2010) I had theorised a lack of empathy may be another predictive variable for animal cruelty and with the addition of aggression would further explain the variance in the above model. This was however, not the case in this research. There was no significant relationship between animal cruelty and empathy in this sample. This result differs from previous research findings (Zdradzinski, 2010).

There were differences between the levels of empathy as measured on the EQ-8 between males and females. In this sample females had higher mean scores on the EQ-8, therefore higher levels of empathetic concern for others than males. This finding follows the previous research findings on empathy differences between genders in the literature (Askan & Kochanska 2005; Eisenberg, Murphy, & Shepard, 1997; Simner, 1971; Zahn-Waxler, Robinson & Emde 1992).

Despite the fact empathetic concern was not linked to animal cruelty in this sample, empathy was related to verbal aggression in the males of the sample ($r = -.304$). As empathetic concern increased the propensity for verbal violence decreased in the

males of this sample. Further, verbal aggression and age explained 17% of the total variance for empathy and verbal aggression and age predicted empathetic concern for males in this sample. With each increase in age and verbal aggression empathy scores as measured in the EQ-8 decreased.

5.5 Limitations in the Current Research and Future Directions

There are a number of limitations present in the current research. The first is the limited sample. This sample was from two rural colleges in the Wairarapa, New Zealand. The size of the schools, the size of the communities the colleges were located and the socioeconomic status of these areas would not be representative of the New Zealand high-school student population. The sample needed the inclusion of a city based school to better represent the target population. Further, it would have been better completed in a variety of centres throughout New Zealand to capture a broader sample. However, both the lack of interest in participation in the research from Wellington city based high-schools, the time frame and the limited financial assistance for the research made this outside the scope of the present study. Any future research should encompass city and rural participants.

The second lot of issues lie in the measurement tools used in the current study. The animal cruelty questionnaire although developed from one of the only recognised measures on animal cruelty, had some issues that were only recognised following the research. The questionnaire had questions up front asking the participant about whether they has ever harmed an animal and then talked about punishment activities later on. This layout resulted in many students proceeding to answer initially they had not harmed animals and then answering that they had participated in animal punishment acts. While this in itself does not discredit the findings, as the element of punishment

behaviour is considered within realms of socially accepted behaviour when considering animal harm, it did cause some possible confusion and mixed results.

Further, the option to opt out of answering many of the cruelty questions by answering upfront that they had never harmed animals, could have caused some false results. It is unlikely anybody has ever gone through life without intentionally harming an animal in some shape or form. Staying with Ascione's format of the Youth Assessment for Animal Abuse (YAAA) which allows a "Never", "I have never harmed animals" or "None" response for each question would have eliminated this problem. Any future research would need to consider these issues.

The current tools available for measuring empathy also have their limitations. There is evidence that inter-correlations between different empathy measures are generally weak, (Gladstein et al., 1987). This is predominately due to the discrepancies in empathy definitions (Hassenstab et al., 2007). Also, there are issues with confounding variables being present in current empathy rating scales (Duan & Hill, 1996). These factors coupled with the reliance on self report measures has resulted in inconsistencies in previous research findings. It has been suggested these issues reflect the multidimensional, multifaceted nature of empathy and better understanding of the empathy construct is needed to produce a measure capable of capturing the different components of empathy one may wish to study (Duan & Hill, 1996). This limitation is difficult to control for at this time, future research may be required to develop a tool that accurately measures the empathy construct in a way that produces meaningful results. Alternatively, measurements of situations that evoke empathetic responding rather than self-report measures may better capture the construct. However, there remains the issue that experiencing empathic feelings does not always invoke somebody to react in a social situation.

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The results from the current research suggest examining animal cruelty in youth populations may be able to identify young people who may need some intervention to ensure their aggressive tendencies do not flow over into human related aggression. A follow up study involving those individuals in this sample who had higher scores on the animal cruelty questionnaire in five years time that re-measures their aggression and explores whether they had been involved in any violent crime would give further credit to this notion and also allow a better understanding of these relationships.

6 Conclusion

Animal cruelty encompasses any “socially unacceptable behaviour that intentionally causes unnecessary pain, suffering, or distress to, and/or the death of, the animal” (Ascione, 1998a, p. 83.). Animal cruelty as a behaviour has been linked to human related aggression in the literature. The extent of this link is variable. As a concept it has gained a lot of publicity over the past 15 years, in particular linking animal cruelty in youth or childhood with high profile serial killers and mass murderers has resulted in both public interest in the topic and a surge in the psychology literature on this topic (Ascione, 1998a, 2005; Lockwood & Hodge, 1998; Miner, 2000; Ressler et al., 1989). However, the previous research has focused on incarcerated or clinical offenders and not on the connections in a normative population (Ascione, 1998a). Also missing from the current research was the effect empathy may have on the picture (Ascione, 1998a; Eckardt, 2010).

The overarching goal of this research was to examine the relationship between animal cruelty, empathy and aggression in a normative youth sample. The findings in this sample indicated the majority of animal cruelty was undertaken during hunting or fishing activities or punishing an animal for an undesirable act. It was also evident some behaviours described under the guise of “normal” punishment or hunting activities were in fact extreme and constituted animal cruelty. The research showed animal cruelty was related to aggression, both physical aggression in the total sample and in male’s verbal aggression. It also showed empathy was not related to animal cruelty in this sample, however, empathy and verbal aggression were related in males.

There is evidence from this research that physical aggression and gender does predict animal cruelty, but the degree of this prediction is small and there may be other variables that would be a stronger predictor of animal cruelty in this sample.

These results differ from the original theoretical model I had developed for this research. The revised theoretical model developed from the research findings is somewhat more complex (Figure 7), aggression and specifically physical aggression is positively related to animal cruelty, gender is also positively related to animal cruelty, however, empathy is not. Empathy is negatively related to gender.

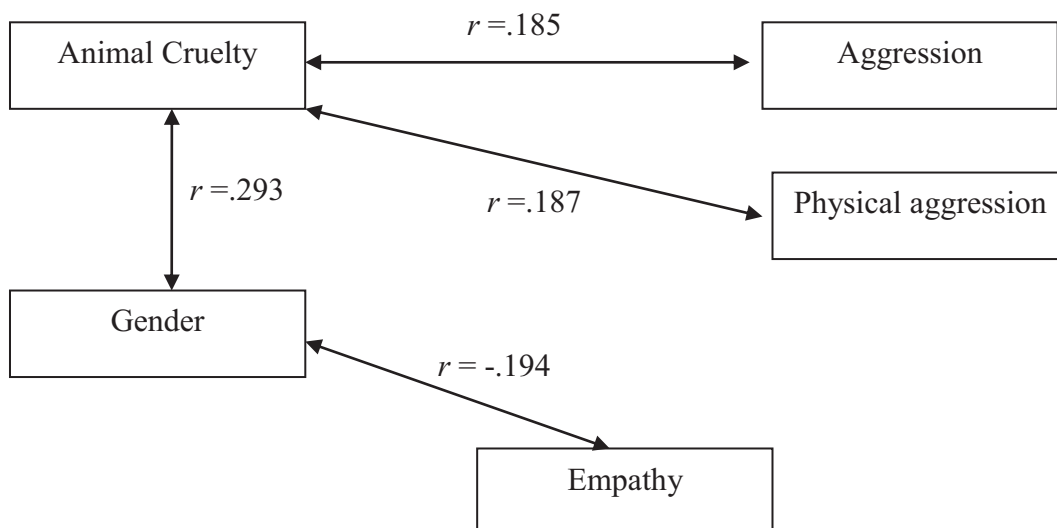


Figure 7. Revised theoretical model of research constructs and their relationships.

In summary, when consulting the null hypothesis stated earlier in this research the following conclusions can be made:

- Animal cruelty and aggression are not independent constructs and are related, the null hypothesis was false in this case.
- Animal cruelty does predict human related aggression, the null hypothesis was false in this case.

- A low level of empathetic responding does not predict animal cruelty or human related aggression, proving the null hypothesis correct in this case.

These results suggest examining animal cruelty in youth populations may assist in the identification of young people who are at risk for future human related aggression. Any future research would need to look at a broader sample as this sample was limited to a rural sample. It would also be beneficial to conduct a 5 years follow up study of those participants who had higher scores on the animal cruelty questionnaire to see if the predictive ability of animal cruelty being a precursor for future human related violence held credence. It may also be useful to see if animal cruelty behaviour is linked with bullying, as it may well be related.

There may also be a need for more initiatives on animal cruelty education in schools. As some in this sample committed unnecessary cruelty under the guise of socially accepted behaviours there is still an inherent understanding and compassion lacking in some young peoples attitudes towards animals.

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Appendices

Appendix A: Cruelty to Animals (Children and Animals) Assessment Instrument Questions and Scoring Chart

1. Have you ever hurt an animal on purpose? (tick):
 - Never
 - Hardly ever
 - A few times
 - Several times
 - Frequently

2. How many times have you hurt an animal on purpose? (tick):
 - Never
 - Once or twice
 - Three to six times
 - More than six times

3. a) What types of animals have you hurt in the past (tick as many boxes as needed):
 - None
 - Wild animals How many? _____
 - Stray animals How many? _____
 - Farm animals How many? _____
 - Pet animals How many? _____

3. b) Which of these animals have you been cruel to? (tick):
 - None
 - Worms or insects
 - Fish, lizards, frogs etc.
 - Birds or mammals

4. How long did you do this for (on and off)? (tick):
 - Never
 - For about 1 month
 - For about 6 months
 - Longer than 6 months

5. When was the last time you hurt an animal on purpose? (tick):
 - I have never hurt an animal
 - More than a year ago
 - Less than 1 year ago but more than 6 months ago
 - In the last 6 months (half a year)

6. Do you treat animals cruelly in front of others or by yourself? (tick):
 - I have never hurt an animal
 - In front of others
 - Alone

Animal Cruelty, Empathy and Aggression

7. a) If you hurt an animal with others, are they adults or friends? (tick):
 I have never hurt an animal
 Adults who were also hurting the animal
 Friends who join in
 With friends who don't join in
7. b) If you hurt an animal by yourself, do you try to hide what you have done? (tick):
 I have never hurt an animal
 No, I don't try to hide it
 Sometimes I try to hide it, not always
 Yes, I do try to hide it
8. If you purposely hurt an animal, do you feel very sorry for it and feel sad that you hurt it? (tick):
 I have never been cruel to an animal
 Yes, I feel very sad for the animal
 Sometimes I feel bad, not always
 No, I do not feel bad for the animal
9. How do you feel about people hurting animals? (tick):
 Very sad and upset
 Don't know
 They deserve it
 It is fun

ANSWER THIS LAST QUESTION IF YOU HAVE HURT AN ANIMAL ON PURPOSE.

10. Can you tell us what happened when you hurt an animal on purpose or what you usually do if you hurt animals often?

Scoring Chart

Item	Response	Score
1. Frequency	Never	0
	Hardly ever	1
	A few times	2
	Several times	3
	Frequently	4
2. Frequency	Never	0
	Once or twice	1
	Three to six times	2
	More than six times	3
3. a) (i) Diversity:	None	0
	Across Categories: One of four types harmed (wild, pet, stray, farm)	1

Animal Cruelty, Empathy and Aggression

	Two of four types	2
	Three or four of four types	3
3. a) (ii) Diversity:	None from any categories	0
	Within Categories:	
	No more than two animals from any one category	1
	More than two but fewer than six from one category	2
	Six or more animals from any one category	3
3. b) Diversity	None	0
	Animal maltreated is an invertebrate (worm, insect)	1
	Animal is a cold blooded vertebrate (fish, reptile)	2
	Animal is warm blooded vertebrate (bird, mammal)	3
4. Duration	Never	0
	Maltreatment occurred in a one month period	1
	Occurred in a 6 month period	2
	Occurred in a period longer than 6 months	3
5. Recency	Never	0
	Maltreatment occurred over 1 year ago	1
	Occurred over 6 months ago	2
	Occurred in the last 6 months	3
6. Covert	Never hurt an animal	0
	Child performs act in front of peers	1
	Child is alone	2
7. a) Isolate	Never hurt an animal	0
	Child is with one or more adults	1
	Child is with one or more peers who are participants	2
	Child is with peers who are not participants	3
7. b) Conceal	Never hurt an animal	0
	Don't try to hide it	1
	Sometimes hide it	2
	Always try to hide it	3
8. Sentience	Never been cruel to an animal	0
	Child indicates remorse or sensitivity to animal's distress	1
	Oscillates between sensitivity and callous uncaring	2
	No evidence of caring or empathy	3
9. Empathy	Very sad and upset	0
	Don't know	1
	They deserved it	2
	It is fun	3
10. Severity (free response)		
	If no instances of maltreatment or only one case	0

Animal Cruelty, Empathy and Aggression

of minor, teasing, nondestructive, or nonpainful act is mentioned.

More than one case of above acts, is assumed that the acts would not cause it physical harm, e.g. annoying teasing, frightening, restraining, or interfering. Examples: loud noise to scare sleeping pet, bangs on birdcage, chases ducks, etc. No malicious intent. 1

One or more acts of maltreatment assumed to result in pain or discomfort to the animal, maybe accompanied by minor physical damage. No use of weapons or tools. Examples: twisting leg, throwing something at an animal, tying legs together with string, pressing jaws together. 2

One or more instances of maltreatment considered to result in significant pain or discomfort to an animal, maybe accompanied by physical damage. Examples: deep cuts. Loss of parts of limbs. prolonging suffering, torturing, using instruments (weapons, extremes of temperature, caustic agents), suffocation. 3

Appendix B: Youth Assessment for Animal Abuse (YAAA) Attitudes and Behaviors toward Animals.

**Youth Assessment for Animal Abuse (YAAA)
Attitudes and Behaviors toward Animals**

Below, you will find a series of questions that are related to certain experiences you may have had with animals. One of these experiences could involve hurting animals on purpose or seeing someone else do this. But, remember we are not interested, for now, in your experiences with these animals: a) insects (mosquitoes and wasps) that bite or animals that carry diseases (like bird flu); b) animals that are attacking people; c) animals that are used for food. These types of experiences, which are also very important, we will study at some other time.

*Answer these questions in a clear and honest way. The questionnaire is anonymous. This means that no one will know who has answered these questions. We only ask you to write in the box at the top of the page on the left **F** if you are a girl or **M** if you are a boy.*

The questionnaire will not be given to teachers and will not be graded. It is not important if you make spelling or grammatical mistakes. Answer the way you honestly think. Also, do not worry about describing facts or feelings that we or other adults might not like.

In the questions where you find a box () , you must put a cross or X for the answer you have chosen.

Thank you for your help!

1. Have you ever hurt an animal on purpose?

- No, never
- 1-2 times
- 3-6 times
- More than 6 times

2a. Animals can live in many different environments. Which of the animals listed below have you hurt on purpose? (*check more than one answer if necessary*)

- | | |
|---|-----------|
| None of these animals | |
| Wild animals (for example, frogs, spiders, squirrels) | How many? |
| Stray animals (for example, abandoned dogs or cats) | How many? |
| Farm animals (for example, cows or pigs) | How many? |
| Pet animals (for example, dogs, cats, fish) | How many? |

2b. There are different kinds of animals. Which of the animals listed below have you hurt on purpose? (*check more than one answer if necessary*)

- None
- Worms or insects
- Birds (for example, sparrows, pigeons) or mammals (for example, dogs, cats, mice)
- Other types of animals (for example, fish, lizards, frogs)

3. For how long did you hurt animals on purpose? (if you don't remember well, choose the answer that is the closest)

Never

For a time lasting from about 1 day to one month

For a time lasting from about 1 month to 6 months

For more than 6 months

4. When was the last time that you hurt an animal on purpose?

I never hurt an animal on purpose

During the last 6 months

More than 6 months ago

5. Do you hurt animals on purpose in front of other people or by yourself?

I have never hurt an animal on purpose

In front of other people

By myself

- 6a. If you have hurt an animal on purpose in front of other people, were the other people usually adults or were they usually friends similar in age to you?

I have never hurt an animal on purpose

I have never hurt an animal on purpose in front of other people

They were adults who, together with me, were hurting an animal on purpose

They were adults who were not hurting an animal on purpose (for example, they were only watching)

They were friends who, together with me, were hurting an animal on purpose

They were friends who were not hurting an animal on purpose (for example, they were only watching)

- 6b. If you hurt an animal on purpose by yourself, did you try to hide what you did?

I have never hurt an animal on purpose

I have never hurt an animal on purpose by myself

No, I did not try to hide what I did

Yes, sometimes I tried to hide what I did

Yes, I always tried to hide what I did

7. When you hurt an animal on purpose, did you feel sorry for what you had done?

I have never hurt an animal on purpose

Yes, I always felt sorry for the animal

I sometimes felt sorry for the animal but not always

No, I never felt sorry for the animal

8. When you see someone hurt animals on purpose (not on TV, in movies, or on the Internet or in computer games), how do you feel?

I never saw anyone hurt animals on purpose
 I feel sad and upset
 I do not know how I feel
 I think the animals deserved to be hurt
 I enjoy it

9. When you see someone hurt animals on purpose on TV, in movies, or on the Internet or in computer games, how do you feel?

I never saw anyone hurt animals on purpose in these cases
 I feel sad and upset
 I do not know how I feel
 I think the animals deserved to be hurt
 I enjoy it

Answer question 10a or question 10b only if you have hurt an animal on purpose (if you have never hurt an animal on purpose, describe, in the space under either question 10a or question 10b, one or more experiences of any kind you have had with animals. If you need more space, use the blank space at the bottom of this page and the back of this page.)

- 10a.** If you have hurt an animal on purpose **only once**, can you tell us about it (what you did, what happened)? *(Please describe in as much detail as you are able. . If you need more space, use the blank space at the bottom of this page and the back of this page.)*

- 10b.** If you have hurt an animal on purpose **more than once**, can you tell us about it (what you did, what happened)? *(Please describe in as much detail as you are able. . If you need more space, use the blank space at the bottom of this page and the back of this page.)*

11. Do you have a pet animal?

YES

NO

If you answered YES

a) how many do you have? 1 2 3+

b) what kind or kinds of pet(s) are they? (for example, dog, cat, fish)

If you answered NO

Did you have a pet in the past or did you never have a pet?

I had a pet in the past

I never had a pet

Appendix C: Animal Cruelty Questionnaire and Information Sheet Provided to Participants.

Young Persons Attitudes and Behaviours towards Animals: Student Information Sheet

Dear Student

Pets play an important part in many New Zealanders lives, and the majority of pet owners consider their pets a valued member of the family, who is to be treated with love and care. However, sometimes as part of a training process, or through lack of education, or because of our own personal feelings at the time, our pets can bear the brunt of unfair treatment.

My name is Rochelle Connell and I am a psychology student with Massey University. As part of the requirements for a doctorate degree, I am undertaking research to learn more about New Zealand young persons' attitudes and behaviours towards animals. I want to see how people your age and in your situation feel and behave towards animals, and how you have felt or behaved towards animals as a younger child. I also want to look at your level of empathy (how well you sense and understand someone else's feelings) and aggression and how they are connected to your feelings and behaviours towards animals. You have been selected as a potential participant as you meet the age limits for the research, and are currently enrolled in a Wairarapa or Hutt Valley high school.

Your participation in this research is completely voluntary and any information you provide will be treated as strictly confidential.

I intend to examine your feelings towards animals with a questionnaire. The questionnaire has twenty one questions, most of which have a list of possible answers and allows you to tick a box for the answer you wish to give. One of the questions will require you to write about your experiences with animals.

The questionnaire will take approximately 15-20 minutes of your time.

The questionnaire **will not have your name or personal details on it** and will remain totally anonymous. That is I, as the researcher, the public and any teachers will not know who wrote each answer. I only ask that you tick in the box at the top of the page **F** if you are a girl/female or **M** if you are a boy/male and insert your age in the space provided. It is not important if you make spelling or grammatical mistakes and I am only interested in your opinion, or point of view, so I only ask you answer the way you honestly think.

Also, you do not have to worry about describing facts or feelings that I or other adults might not like, or might not approve of. The questions will look at mostly negative animal human relationships such as animal harm. Some students may find some of the questions a little upsetting or disturbing, I advise any student who has recently lost a loved pet, or who is particularly sensitive towards animals to not participate.

You do not have to answer any questions you feel uncomfortable with and you may pull out of the research at ANY time.

The information you give in your questionnaire will be used to examine young peoples attitudes and behaviours towards animals as a group, and help us better understand human / animal relationships, and how empathy and aggression in people of your age affect your relationship with animals.

Completing this questionnaire is completely voluntary (you only do it if you want to do it) and will not affect in anyway (good or bad) your relationship with your teachers or school staff or myself, the researcher. By filling in and returning the questionnaire you are consenting to the research process. That is you are allowing myself, the researcher to view your answers and use them along with all the other students results in my thesis.

Should you feel the questionnaire raised some issues or used questions you found very upsetting, and you feel you may need to talk to somebody about how you feel, I will organise a qualified counsellor in your area, to talk to you.

A summary sheet which will inform you of all the summary findings made from this questionnaire will be made available to you from your teachers, at the completion of the statistical analysis for this research.

Your participation and your time are greatly appreciated.

Thank you,

A handwritten signature in black ink that reads "Rochelle Connell". The signature is written in a cursive, flowing style.

Rochelle Connell

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 07/40. If you have any concerns about the conduct of this research, please contact Dr Karl Pajo, Chair, Massey University Human Ethics Committee: Southern B, telephone 04 801 5799 x 6929, email humanethicsouthb@massey.ac.nz.

<input type="checkbox"/> F
<input type="checkbox"/> M
— Age (years)

Attitudes and Behaviours towards Animals

On the following pages, you will find a series of questions that are related to certain experiences you may have had with animals, on the way you experience other people's feelings and your aggression. Some of these experiences could involve hurting animals deliberately or seeing someone else do this.

Your participation in this research is completely voluntary and any information you provide will be treated as strictly confidential.

*Answer these questions in a clear and honest way. The questionnaire is anonymous. This means that no one will know how you have answered these questions. I only ask you to tick in the box at the top of this page **F** if you are a girl/female or **M** if you are a boy/male and you fill in your age in the space provided.*

*The questionnaire will not be given to teachers. It is not important if you make spelling or grammatical mistakes. It will not be graded in any way. Answer the way you honestly think. Also, do not worry about describing facts or feelings that myself or others might not like, or might not approve of. **Completion and return of this questionnaire implies you give your consent to complete the research.***

You do not have to answer any questions you feel uncomfortable with and may pull out of the research at ANY time.

Also please remember should you feel the questionnaire raised some issues or used questions you found very upsetting, and you feel you may need to talk to somebody about how you feel, I will organise a qualified counsellor either in your area, or through Massey University, to talk to you.

Thank you for your help.

Rochelle Connell

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1. Do you have a pet animal or have you ever had a pet animal in the past?

- NO. If no please go to question 3
- YES

2. How many animals do you have currently?

- 1
- 2
- 3
- More than 3

3. Have you ever felt animals like or love you, or that you have a special bond with most animals?

- No I never feel like this
- Yes occasionally I feel like this
- I have felt like this often
- I always feel like this

4. Have you ever deliberately hurt an animal in the past?

- NO. If no please go to question 10.
- YES

5. There are many different kinds of animals. Which of the animals listed below have you hurt deliberately? (*tick more than one answer if necessary*)

- Worms or insects
- Birds (for example sparrows, pigeons)
- Farm animals (for example cows, chickens, pigs)
- Pet animals (for example dogs, cats, goldfish)
- Other mammals (for example possums, hedgehogs, mice)
- Other types of animals (for example fish, lizards, frogs)

6. Why have you hurt animals deliberately in the past? (*tick more than one answer if necessary*).

- For punishment
- To make the animal hard/tough
- For fun or enjoyment
- For sport e.g. hunting, fishing
- Because I didn't like the animal
- Because I was angry at somebody or something else
- To impress my mates or to fit in
- Because I was bored or for entertainment

- Because I saw somebody else doing it and wanted to try it
- To hurt or punish another person
- Because I was very young and didn't know how to treat animals at the time
- I don't know why I have deliberately hurt animals

7. Please tick any forms of animal harm below you have been actively involved in (that is any animal harm acts you have done yourself).
(Tick more than one answer if necessary)

- Throwing stones at animals
- Beating an animal with my hands or kicking an animal
- Using a weapon to hurt an animal
- Burning an animal with something or setting an animal on fire
- Dropping an animal from a height over 2 meters
- Running over an animal deliberately with a vehicle or push bike
- Drowning an animal or holding an animal's head under water
- Strangling or smothering an animal
- Poisoning an animal
- Feeding or forcing an animal to drink, eat or breathe in alcohol, drugs or tobacco

8. Have you ever purposely starved an animal or not provided an animal with adequate food or water?

- YES
- NO

9. Have you ever purposely not got a hurt or injured animal medical/vet care?

- YES
- NO

10. Have you ever tried to help an animal who was obviously suffering/injured?

- NO
- YES

11. Have you ever hurt an animal to punish it for an undesirable behaviour (e.g. urinating inside) ?

- NO.
- Yes but I regretted it immediately
- Yes but I regret it now when I think about it
- Yes and I do not regret it at all, the animal deserved it.

12. Thinking of all the times you have hurt an animal deliberately were you usually by yourself or was it usually in front of other people?

- Usually in front of other people
- Usually by myself
- Sometimes in front of other people and sometimes by myself

13. If you have hurt an animal deliberately by yourself, did you try to hide what you did?

- No, I did not try to hide what I did
- Yes, sometimes I tried to hide what I did
- Yes, I always tried to hide what I did

14. When you hurt an animal deliberately, did you feel sorry for the animal afterwards?

- Yes, I always felt sorry for the animal afterwards
- No, I never felt sorry for the animal afterwards
- I sometimes felt sorry for the animal afterwards, but not always

15. Have you ever seen your immediate family members, that is your parents, caregivers, older brothers or sisters, uncles or aunts, hurt animals?

- NO
- YES

16. When you see someone hurt an animal deliberately in person (not on TV, in movies, on the Internet or in computer games), how do you feel?

- I have never seen anyone hurt animals deliberately
- I feel sad and upset
- I do not know how I feel
- I enjoy it or think it is funny

17. When you see someone hurt an animal deliberately on TV, in movies, on the Internet or in computer games, how do you feel?

- I have never seen anyone hurt animals deliberately on TV, in movies, on the Internet or in computer games.
- I feel sad and upset
- I do not know how I feel
- I enjoy it or think it is funny

18. Have you ever intervened or tried to stop someone hurting an animal in front of you (tick more than one answer if necessary) ?

- I have never seen anyone hurt an animal in front of me
- No never

- Yes once
- I have done this occasionally
- I have done this often

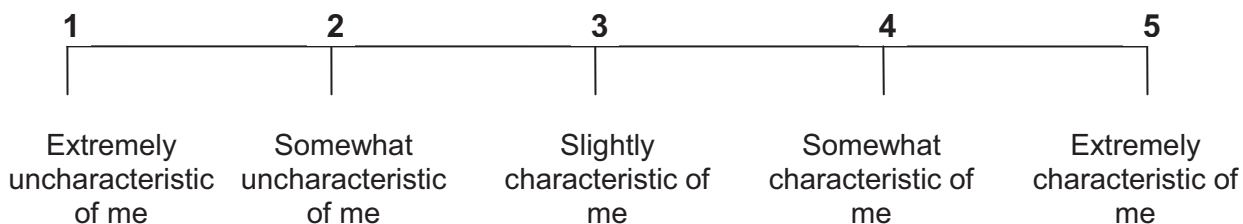
19. The following questions look at how easily you pick up on other people's feelings and how strongly you are affected by other people's feelings. Please read each of the following 8 statements very carefully and rate how strongly you agree or disagree with them. Do this by placing the number which matches your answer on the scale below into the box next to the question. There are no right or wrong answers, or trick questions.



- a) I find it easy to put myself in somebody else's shoes
- b) I am good at predicting how someone will feel
- c) I am quick to spot when someone in a group is feeling awkward or uncomfortable
- d) Other people tell me I am good at understanding how they are feeling and what they are thinking
- e) I find it hard to know what to do in a social situation
- f) I often find it hard to judge if something is rude or polite
- g) It is hard for me to see why some things upset people so much
- h) Other people often say that I am insensitive, though I don't always see why

20. The following questions look at your levels of aggression and how angry you can get. Please read each of the following 12 statements very carefully and rate how characteristic or uncharacteristic they are of you, by placing the number which matches your answer on the scale below into the box next to the question. There are no right or wrong answers, or trick questions.

Animal Cruelty, Empathy and Aggression



- a) Given enough provocation, I may hit another person
- b) There are people who pushed me so far that we came to blows
- c) I have threatened people I know
- d) I often find myself disagreeing with people
- e) I can't help getting into arguments when people disagree with me
- f) My friends say that I'm somewhat argumentative
- g) I flare up quickly but get over it quickly
- h) Sometimes I fly off the handle for no good reason
- i) I have trouble controlling my temper
- j) I feel like other people always seem to get the breaks
- k) I wonder why sometimes I feel so bitter about things
- l) When people are especially nice, I wonder what they want

21. If you have ever hurt an animal deliberately (not by accident): Please write about a time you hurt an animal deliberately in the following space provided (what you did, what happened, how you felt).

If you have never hurt an animal deliberately, but have seen someone else hurt an animal deliberately: Please write about a time you saw someone hurting an animal deliberately, in the following space provided (what you did, what happened, and how you felt).

If you have never deliberately hurt an animal deliberately and never seen anyone else hurt an animal deliberately: Please use the space provided to tell us about a favourite animal or pet, or a special moment you have shared with an animal.

(Please describe as much as you can. If you need more space, use the back of this page.)
