An Evaluation of the Effectiveness of an Empathy Training Module for Child Sex Offenders

A thesis presented in partial fulfilment of the
requirements for the degree of
Masters of Arts
in
Psychology
at Massey University, Albany, New Zealand

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2006

Abstract

The aim of the current study was to evaluate the effectiveness of an empathy training module for treatment of child sexual offenders incarcerated at a New Zealand Special Treatment Unit. Twenty-eight participants volunteered for the study which involved three time conditions; pre-intervention, post-intervention and three-month follow-up. Three measures were used to assess generalised empathy and victim-specific empathy in this sample. No significant results were found, although preliminary data did suggest that this sample may differ from previous studies on the victim-specific measure. Namely, contrary to previous research the sample demonstrated the greatest empathy deficit for the child accident victim, rather than their own victims. The current study had a number of limitations, including methodological errors that make the generalisation of results unfeasible.

Acknowledgements

Firstly, thanks to my wonderful husband, James, for all your support, patience and devotion during the ups and downs of this research, including putting our wedding on hold until the project was complete. Thanks also to my mother for the ongoing support and encouragement to embark on this degree and keep going despite the many hurdles. You have both been my strength throughout this project and I appreciate all you have done to ensure that I am able to succeed with this study. Thanks also to my extended family and friends who supported me and showed an interest in my research, including the lively debates which I so enjoyed. Also, a special thanks to my niece, Becky and good friend, Sinnetta for your patience with proof-reading my work, guidance from your own experiences with writing theses and being there for me when things got tough to reassure me that it is 'normal'.

Thank you to my supervisor, Mei Williams, for your enthusiasm and guidance with this research.

Thank you to the New Zealand Department of Corrections who supported this research and allowed it to happen. In particular, to Jim, Manager at the Special Treatment Unit for all your assistance and support, and Ellen, Senior Practitioner for your guidance, scholarly discussions and great sense of humour. You have both been a terrific help and inspiration.

Finally, a special thanks to the participants of this research, without which this project would not be possible. Your willingness to give up your time and personal insights for the benefit of this research has been much appreciated.

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'Although empathy may sound mysterious, remember that there is much that sounds mysterious in the universe, only you have got used to it; and perhaps you will get used to empathy' H.S. Sullivan.

Psychology is the study of human behaviour and how human beings interact with each other. Empathy is an important ability to have as part of this social interaction as it allows people to understand or feel for each other and provides a regulator for behaviour. Thus, empathy is of interest to psychologists to understand social behaviours that are potentially harmful to the rest of society such as child sexual offending and discover whether empathy has the potential to be used for positive behaviour change.

Empathy is more interesting and complex than it would seem at face value. The concept of empathy features in a range of psychological domains, from training sectors, such as leadership training in the Army (Castell, J., personal communication, September, 2004), to child developmental theory, whereby empathic care is deemed necessary for good development (Weil, 1992). It is also a part of moral development (Hoffman, 2000), and the area which is the focus of this research, empathy and offending; more specifically, sexual offending against children. Child sexual offending is a taboo subject in society and the search for the reasons behind this behaviour and ways to prevent it from happening would make a valuable contribution to society. Marshall, Anderson, and Fernandez (1999) reported that available data suggests an under-estimation of the actual incidence of this type of offending and that there are many lives that are damaged by sex offenders that are unreported.

It has been suggested that empathy is a necessary component of pro-social behaviour (Eisenberg & Fabes, 1990; Vreeke & van der Mark, 2003) and also that sexual offenders specifically have deficits in empathy (Marshall, Hudson, Jones, & Fernandez, 1995). If this were true, the discovery of how to develop empathy in offenders would have immense benefit for society, through the rehabilitation of offenders and the reduction of harm and victim numbers. Therefore, it seems that empathy is not only intriguing but also has the potential to be a great change mechanism to benefit society and is thus well worth researching.

Disagreement and controversy surrounds what is empathy, how is it defined, and how it can be measured. Despite this, empathy features prominently in most psychological interventions such as the therapeutic environment (Johnson, Cheek & Smither, 1983). Lambert (2004) noted it is the central component of the change process, and therapists are encouraged to develop their empathic skills for successful interaction with their clients. So, what is known about empathy?

Defining empathy

The word 'empathy' was derived from the German term, 'Einfuhlung', which referred to 'the tendency of observers to project themselves "into" that which they observe, typically some physical object of beauty' (Davis, 1996, p. 5).

'Einfuhlung' was given its English translation around 1909 by Tichener (Hornblow, 1980). It seems that this term has since been defined in a variety of ways, and interpretation of its meaning varies considerably. Hornblow's (1980) examination of published articles revealed that empathy incorporates a variety of concepts and

behaviours however, Hogan (1975, cited in Hornblow, 1980) concluded that an 'agreed on operational definition is unlikely' (p. 19). The issue of lack of an agreed on definition still exists and causes ongoing problems for research in this area.

Over time, empathy has been defined in many ways, and despite this variety of opinion regarding the definition of empathy, it seems that two predominant schools of thought emerged. One branch of the empathy debate conceptualises empathy as a cognitive process. Koher (1929, cited in Davis, 1996) expressed that empathy was about understanding how another person feels, rather than sharing how they are feeling. This view has also been called perspective-taking, and is the cognitive process (Baron-Cohen & Wheelwright, 2004) of intellectualising what others may be feeling. This view was contrasted by Olden (1953, cited in Weil, 1992) who described empathy as 'the capacity...to feel as the object does' (p. 19). This emphasised empathy as the affective process of an individual describing the ability to experience a match in feelings with another person. Differences can also be seen in the affective empathy definitions depending on how broad or narrow the affect between people is conceptualised, that is, is it a match of feelings or just feeling for the other person? (Baron-Cohen & Wheelwright, 2004). Vreeke and van der Mark (2003) suggested that empathy presupposes how the other person feels, not how they actually feel. Baron-Cohen and Wheelwright (2004) noted four distinct variations of this type of empathy; 1) a match of the other person's feelings, 2) an appropriate emotional response to the other person's feelings (not necessarily a match), 3) any emotional response to another person's emotion, such as experiencing pleasure to another's pain, and 4) concern or compassion. These researchers questioned whether the third response type was in fact empathy, however, they gave an example of people feeling 'relief' at the ending of pain for the

terminally ill which could still fit within the definition of empathy. The fourth response type, concern or compassion, has been argued not to be a good definition of empathy as it does not consider that empathy could be a positive emotion (Polaschek, 2003) and therefore does not necessarily have to only relate to negative experiences.

Hilton (1993) claimed that cognitive empathy is not necessary for emotional empathy, and noted studies of children who expressed vicarious emotions before they are able to name them or understand them. Due to this inference, Hilton (1993) claimed that treatment should aim to evoke emotional empathy by teaching cognitive empathy skills.

Clark (1980) described empathy as an ability unique to human beings, through being able to experience the feelings of another person 'as if they were his or her own' (p. 187). He also highlighted that despite empathy being an important phenomenon, there is currently no agreed upon definition or theoretical grounding for this construct (Clark, 1980), which supports the view already expressed by Hogan (1975, cited in Hornblow, 1980). This is one of the major problems with the construct of empathy and its use in the psychological domain that still has not been resolved.

The 'lay' term for empathy is commonly described as 'walking in the shoes of others' and being able to 'get into the skin' of another person (Hare, 1993). There are obviously problems with this form of definition, particularly with being able to conceptualise and measure such a variable. As Polaschek (2003) has rightly noted 'the generic ability to be empathic doesn't actually need to include any behavioural element, although it would be easier to measure if it did' (p. 174).

The question then remains; can you have a cognitive response without an affective response? Hoffman (1975, cited in Hornblow, 1980) argued that cognitive responses are pre-determined by how an individual experiences and then interprets affective responses. This view is supported by the Cognitive-Behavioural theory that state thought and emotion are closely linked and neither exists without the other. This combining of both views of empathy (cognitive and affective) evidences how the definition of empathy evolved, as up until last decade the consensus was that empathy was either a cognitive or an affective process. Recently, Moore (1990) noted empathy involved both cognitive abilities such as perspective taking and also vicarious matching of another person's emotional state. Williams (1990, cited in Marshall et al., 1995) expanded on this and claimed that empathy was multi-dimensional and included not only cognitive and emotional processes, but also communicative and relational elements, i.e. involving a perceiver and a perceived person. Marshall et al. (1995) argued however, that the perceiver could be a fictional character, thus devoiding any relational aspect. They also claimed that communication is not always present between the individuals involved, and debate whether a person needs to be able to express their emotions in order to experience empathy.

Further confusion has arisen by the terms empathy and sympathy being used interchangeably (Marshall et al., 1995), however, theorists generally agree that these are distinct from one another (Davis, 1996). One distinction is that empathy can be the result of both positive and negative experiences due to the sharing of common emotions (Polaschek, 2003), whereas sympathy is the result of only negative experiences. Miller and Eisenberg (1988) offered a further distinction between the two concepts. They proposed that empathy is an approximately identical response to the other person's

distress, and sympathy may not be identical but reflects feelings of concern. Eisenberg and Fabes (1990) reported that sympathy differs from empathy as it involves the other-oriented desire for the other person to feel better which is different to feeling what the other person feels. It has also been proposed that being moved by another person's plight is not the same as tuning into and responding to their plight (Kohn, 1990). Davis (1996) claimed that sympathy may be a subset of the affective part of empathy. Potentially, both these concepts empathy and sympathy could co-occur in an individual and this could be an explanation for the confusion and mixing of the two. Further, Kohn (1990) noted that empathy has been, at times, confused with 'projection', when a person sees in someone else what they are in fact unconsciously experiencing themselves, but it maybe to painful to acknowledge ownership of the feeling hence it is attributed to the other person

To add to the debate surrounding the definition of empathy, Smith (1973) noted that empathy is a process, not merely an outcome. Further to this claim, Davis (1996) argued that the confusion surrounding empathy arises by mixing the terms 'process' and 'outcome'. Davis (1996) defined 'process' as what unfolds when someone is exposed to another person such as adopting the emotional perspective of the other person. An outcome is what results from that process (the emotional response). Davis (1996) claimed that typically, affective responses of empathy are outcome oriented, and cognitive responses, such as role-taking, typically focus on process. These claims were later further developed by Marshall et al. (1995) who proposed a four staged process of empathy, that highlighted empathy as more a process than an orientation, with the outcome dependent on the process. This will be discussed in more detail later in this research.

Further, the process of being empathic, that is, how empathy is portrayed, has typically been amalgamated with empathy as a disposition (Polaschek, 2003), or a global trait (McGrath, Cann & Konopasky, 1998). Often empathy has been seen as a fixed disposition that promotes a consistent response over time, situation, and people (Marshall et al., 1995). It is argued that if empathy is a human trait, i.e. an innate ability, it should provide consistent scores on the empathy measures which are not dependent on the situation. Polaschek (2003) used anger as an example of how an apparently empathic person, that is someone who has empathy traits, in certain situations could display a lack of empathy, for example, when a person is angry at someone they do not typically demonstrate empathy for the other person and instead are focused on their own intense emotion and viewpoint. Baron-Cohen and Wheelwright (2004) proposed that empathy comprises both state and trait components. Similar to Polaschek's (2003) explanation, these researchers claimed that some people may have higher empathy due to genetic and experiential factors; however the present level of empathy in an individual can vary dependent on the person's current emotional state. They use being drunk, angry or depressed as examples of when a person who would normally be considered highly empathic (in general terms), may experience a deficiency in empathy induced by a change in affective state.

Kohn (1990) also emphasised that empathic responding can depend on a number of situational factors and transitory moods. He noted that the relevant variables would include mood state, focus of attention, whether a person has been in that situation themselves and perception of similarities i.e. the person is more inclined to emphasise with another person who is perceived as similar to themselves. Therefore, Kohn (1990) concluded that individuals will not exhibit a consistent level of empathy with everyone

they meet. Further, he noted some potential obstacles to empathy, for example, someone who is not comfortable with their own emotionality may have difficulty responding to others, or people who are preoccupied such as experiencing anxiety (self-focused) or attempting to analyse another rather than resonating the other person's feelings, may also have difficulty experiencing empathy (Kohn, 1990).

The lack of clarity as to whether empathy is situationally specific or stable across time and situations has caused major problems in empathy research (Hornblow, 1980). This also raises the question of whether empathy is biologically based, or learned (Marshall et al., 1999) and whether there are different types of empathic responses. Davis (1996) discussed the degree of heritability of human personality traits i.e. the genetic component, and reported twin studies that support the heritability of affective empathy to be estimated at around 70%, however, he reported little evidence for the heritability of role-taking ability. With regards to environmental influences on empathy, Davis (1996) reported that there is strong evidence for the association of 'close and secure family relationships' with better affective responsivity to the experiences of others. This has been investigated through attachment assessment, child self report of relationship quality and by comparing children from abusive and non-abusive families. Parental discipline and parents' dispositional empathy was also investigated with mixed results; however, there is some evidence for a 'modelling' effect, particularly between mothers and daughters. Clark (1980) reported that the capacity for empathy may be evolutionary and it is probable that it could be found in the anterior frontal lobe of the human brain. He claimed this theory is supported by evidence of impairment in empathic ability from damage to this part of the brain caused by lesions, lobotomies or

brain injuries. All these considerations and differences of opinion among researchers have compounded to make a clear definition of empathy virtually impossible.

Jolliffe and Farrington (2004) noted a current definition of empathy that appears to be inclusive of both the cognitive process and the affective capacity, which seems to be the delineating factors for the varying opinions of what empathy is; 'the ability to understand and share in another's emotional state or context' (Cohen & Strayer, 1996, cited in Jolliffe & Farrington, 2004, p. 442). This is the definition of choice for this research, as it is close to the original translation of the word, encompasses both cognitive and affective components, and potentially can be operationalised and measured.

Research on empathy

Marshall et al. (1995) highlighted some of the research done to date in the empathy arena. There were a number of common research areas, namely, empathy among therapists towards patients, the differences between males and females in empathic ability, empathic responses in children to distress in other children or cartoon characters, and the role of empathy in social behaviours such as altruism, social competence and aggression.

Historically, psychological study has focused on assessing excesses of empathy rather than measuring deficits (Polaschek, 2003). These research areas have mostly focused on what empathy is or how much empathy good therapists or individuals have, rather than what empathy is not, or what causes absences in empathy.

Langevin, Wright and Handy (1988) noted research by Mehrabian and Epstein in 1972 that examined the relationship between empathy and aggressiveness in college research volunteers. They found that low empathy individuals aggressed more readily than high empathy individuals and concluded that negative emotional cues from victims only inhibited empathic people's aggressive behaviours. Ohbuchi (1988) reported a number of studies where empathy was situationally aroused by exposure to three conditions; pain cues, perceived similarity (between aggressor and victim as perceived by the aggressor), and self-disclosure by a victim. The results suggested that these situations facilitate perspective taking but did not determine emotional responses. In particular, the results found that pain cues evoke empathy in non-angered aggressors and sadistic feelings in angered aggressors. This suggests that if a person is experiencing unpleasant emotions they may be insensitive to the suffering of a victim. The researcher concluded that empathic tendency as a personality trait is only one of a number of factors which may determine an empathic response. Kendall, Finch and Montgomery (1978, cited in Johnson et al., 1983) conducted research with 30 undergraduate students and administered Hogan's Empathy Scale (EM: 1969) and a measure of state anxiety at the start of a university semester. Later in the semester they bought in a guest speaker who lost their notes, spilled their coffee and repeated themselves several times. The students were rated again on the measures and it was found that highly empathic person's levels of state anxiety increased on the second administration and low empathy person's levels of state anxiety showed no increased in anxiety after exposure to the guest speaker.

Kohn (1990) reported a review of 120 empathy studies using children and adults conducted by Eisenberg and Lennon in 1983 that looked at gender differences in

empathy. These researchers found that when empathy was measured by self-report, females appeared more empathic whereas if empathy was measured by physiological change or facial expression then there appeared to be virtually no gender differences. Johnson et al. (1983) reported two studies of empathy using Hogan's Empathy Scale (EM: 1969). Kendall and Wilcox (1980, cited in Johnson et al., 1983) assessed the relationship between empathy scores and therapist effectiveness. They found the therapist empathy scores predicted patient improvement regardless of the approach used by the therapist (i.e. behavioural or cognitive). On a slightly different note, Gary (1978 cited in Johnson et al., 1983) compared abusive and non-abusive mothers using the EM and QMEE and a measure of stressful life events and concluded that a lack of empathy predisposed mothers towards child abuse, not the presence of stress.

Similarly, whether empathy inhibits aggressive and anti-social behaviours was investigated by Miller and Eisenberg in 1988. They defined empathy in affective terms and found evidence of a modest negative relation between empathy and aggressive and anti-social behaviour.

Models of empathy

Polaschek (2003) reported that currently there is no consensus about the best model of empathy. Davis described empathy 'in the broadest sense ... [as] the reactions of one individual to the observed experiences of another' (Davis, 1983, p.113). He explained empathy as a set of constructs, which differs from the common schools of thought previously held that empathy was either a cognitive or an emotional construct. This multidimensional approach proposed by Davis (1983) reflects the variety of reactions or responses often referred to as empathy. Davis' (1983) rationale for this was that

empathy is a set of constructs, each relating to responsivity to others, but each discriminable from the other, that is, although there are different aspects of empathy i.e. emotional or cognitive, together (not singularly) they make up what is empathy. With this theory in mind, Davis (1980) designed the Interpersonal Reactivity Index (IRI) which measures empathy through four sub-scales. The IRI (Davis, 1980) has an advantage over other measures commonly used prior to its conception that are restricted to narrower domains, that is, just one aspect of empathy.

Marshall et al. (1995) proposed a model of empathy as a four staged process involving 1) emotional recognition, 2) perspective taking, 3) emotional replication and 4) response decision. This view highlights the stance of empathy as more of a process than an orientation and, as mentioned earlier, the debate around process or orientation has created further difficulty in defining and measuring empathy. The model evolved from their work with sex offenders. Marshall et al. (1995) claimed the first stage involves a person being able to accurately discriminate the emotional state of another person. The researchers noted that this stage is a prerequisite to unfolding empathy, that is, if the individual was unable to interpret distress in another person then the remaining stages of empathic response would not unfold and the person would appear to lack empathy. Marshall et al. (1995) reported that they found no studies examining the deficiencies of emotional recognition in aggressive individuals, although, Feshbach (1987) and Miller and Eisenberg (1988) found empathic subjects had more skill at recognising emotional states than non-empathic individuals. The second stage of this model, perspective taking, involves being able to see the other person's point of view. The researchers stated that the individual must be able to do this in order to experience the emotional state of another person (the following stage). The third stage of Marshall et al.'s (1995)

model concerned experiencing an emotional response that replicates (or nearly replicates) the other person's emotional response. They highlighted that in order to replicate the emotion, the person needed to have moved through stage one and two, that is, they need to know what the emotion is and adopt the perspective of the other person. This requires the empathic person to have an emotional repertoire and again lack of these skills may present as un-empathic. The final stage involves empathic responding, and the decision to act (or not to act) on the basis of their feelings. The researchers claimed that each of the stages builds on the previous stage and deficits in empathy may be a consequence of not moving completely through the four stages. Polaschek (2003) argued that there are limitations to this model, in particular, regarding the first component, and whether people do in fact need to observe (or hear) from someone in order to experience emotional responding, for example, it is argued that empathy can still occur even when hearing in the third person. Polaschek (2003) also raised concern about situations where people do not reveal their true feelings or instances when people lie, as potentially causing problems for the theory behind this model.

Despite the recent emergence of these models of empathy there is still no agreed on view of what empathy is (Moore, 1990). Although, the models have provided significant contribution to the debate on empathy and have expanded thinking on what empathy is, to the degree that it appears that it is now generally agreed that the empathy construct has many facets and therefore is difficult to measure. As yet, there does not appear to be any agreeance on which or how many of these facets are in fact 'empathy'.

Empathy and offending

With all the controversy and debate around what empathy is, or is not, and a general consensus that it includes both cognitive and affective components, the questions remains how does all this relate to offending and in particular, sexual offending?

Empathy can be viewed as an individual protective factor that decreases the probability of certain types of behaviour, particularly criminal ones (Jolliffe & Farrington, 2004) as an awareness of the harm that could be caused to other people may inhibit some behaviours. Similarly, a lack of empathy may have a facilitating influence on offending (Jolliffe & Farrington, 2004). Low empathy has been included in many explanations of anti-social behaviour, and is a central component to the concept of psychopathy (Blackburn, 1993; Jolliffe & Farrington, 2004). Interestingly, Hilton (1993) noted that psychopathic offenders' typical characteristics include shallow affect, callousness, and have under-developed cognitive empathy and absent emotional empathy. He claimed that treatment promoting cognitive empathy may increase the likelihood of recidivism in this type of offender (Hilton, 1993) although an explanation of why this is so is not given. Hare (1993) claimed that typical characteristics of psychopaths such as lack of remorse, shallow emotions, and deceitfulness are closely associated with a 'profound' lack of empathy, which he described as being able to construct a mental and emotional copy of another person. He also noted that psychopaths display a general lack of empathy towards family members and strangers alike, and that inability to appreciate the feelings of others makes them capable of behaviours that others would view as 'horrific' (Hare, 1993). Similarly, Hare (1993) noted that psychopaths typically have a lack of concern for the effects they have on others and this is associated with their ability to rationalise their behaviour and deny

personal responsibility for their actions. Interestingly, few sex offenders are diagnosed as psychopathic, that is, around 7.5% of child molesters and 12.2% of rapists are psychopathic (Marshall, 1996).

Andrews and Bonta (2003) reported research that found interpersonal sensitivity, which they considered to be another name for empathy, was not a good predictor for criminal behaviour. In contrast, Jolliffe and Farrington (2004) conducted a meta-analysis of studies relating measures of cognitive and affective empathy to offending. They found that low cognitive empathy had a strong relation with offending, whereas low affective empathy was weakly related to offending. These researchers also noted that sex offenders are thought to lack empathy for their victims because if they were able to feel empathy, the recognition of the victims suffering would prevent further harmful behaviour (Jolliffe & Farrington, 2004). Langevin et al. (1988) also support this theory; they argued that a lack of empathy for their victims allows sex offenders to commit offences that result in fear and emotional consequences for their victims. Jenkins-Hall (1989) claimed criminals have difficulty assuming the perspective of others and are often unable to recognise signs of fear, distress or discomfort in victims and thus have difficulty realising the impact of their behaviour on the victims. This is similar to Marshall et al.'s (1995) theory of empathy in sex offenders, in which deficits are confined to their victims, rather than a generalised empathy deficit.

Current research has focused on whether offenders lack empathy or, have the ability to be selective as to when it is experienced or ignored. This links with the idea discussed earlier that empathy deficits may be situationally specific, rather than an indication of a trait deficiency in an individual. Another possible explanation could lie in the model of

empathy proposed by Marshall et al. (1995), which encompassed a four-staged process as discussed earlier in this research. Perhaps if the sex offender does not recognise the distress of the victim, due to lack of emotional recognition skills, this would allow continuation of the harmful behaviour due to the perception that no harm is being done. Marshall et al. (1995) suggested that the lack of empathy displayed by sex offenders may be specific to the offender's victim, or potential victims, for example 'women' or 'children' rather than a general deficit in empathy. A study by McGrath et al. (1998) supported these theories, in that they found sexual offenders less empathic for victims of sex offences compared to other offenders and matched controls. No differences in general empathy were found for sex offenders compared to the control group on general empathy measures. This research is discussed in more detail later in this script.

Further to this, Hare (1993) noted that 'in order to survive both physically and psychologically, some normal individuals develop a degree of insensitivity to the feelings and plight of specific groups of people...for them insensitivity is circumscribed, confined to a specific target group' (p. 44). He used soldiers, gang members and terrorists to highlight how people can be trained to view others as objects (rather than humans) in order to avoid becoming emotionally overwhelmed by the plight of that person. Perhaps with sex offenders, this same internal mechanism is activated, so it is not that they have a general lack of empathy, but are situationally selective as to when and when not to be empathic. Polaschek (2003) noted that early in the offending history there may be deliberate suppression of empathy by the offender, before, during and after the offence(s). This may occur through sexual or affective arousal, cognitive distortions such as blaming, minimising and denial, the use of alcohol, or due to anger. This implies that the offender can use cognitive distortions and

denial to suppress victim empathy and it is purported that this may become automated through repetition, therefore lowering empathy over time (Polaschek, 2003). Polaschek (2003) noted that this phenomenon is not necessarily unique to offenders, for example, if an individual's goal goes against someone else's needs then these techniques may be used to make it viable for the individual to pursue their own goal regardless of the effects on others. An example used by Polaschek (2003) to illustrate this was a manager who has to fire an employee, empathy for that person is suppressed in order to complete the required task. Marshall, Hamilton and Fernandez (2001) claimed that cognitive distortions serve as a protective function within sexual offenders. They suggested that if the offender does not recognise the harm caused to their victim through the use of cognitive distortions, then they will not experience the negative self appraisal about their own behaviour that could potentially create negative emotional reactions in themselves and deter their offending behaviour. Research by McGrath et al. (1998) found a correlation between empathy for victims of sexual abuse and endorsement of cognitive distortions about adult-child sex.

If the theories that empathy deficiencies are situationally specific or offenders can suppress empathy through cognitive distortions are found to be true, this would add value to empathy training within rehabilitation programmes, provided they are targeted at these specific needs. Unfortunately, Marshall et al. (1995) noted that currently there is no evidence of the effectiveness of any approach to enhancing empathy in sex offenders.

Further controversy surrounding empathy and offending stems from the findings of studies which show that offenders do not score 'zero' on paper-and-pencil measures of

empathy, therefore implying that offenders have some capacity for empathy (Andrews & Bonta, 2003). It seems plausible that offenders can have caring, empathic relationships with their family members, or people important to them (with the exception of psychopathic offenders), and therefore have some ability to be empathic.

To date, there is little or no empirical evidence supporting the conclusion that empathy (or lack of it) is linked with offending.

Measurement of empathy

Attempts have been made to measure empathy using a range of instruments. In fact, the beginnings of empirical research into empathy can be found in 1872 when Charles Darwin asked subjects to identify emotions from photographs (Hornblow, 1980) at the time however, this was not termed empathy. Despite this long history of measurement, establishing the reliability and validity of measures for empathy has been difficult due to the problems with definitions and the lack of agreement within the empathy arena.

Hornblow (1980) noted that before the 1960s, it seemed there were no well-validated measures of empathy, and as Choplan, McCain, Carbonell and Hagen (1985) noted, 'surely, before a suitable measure can be developed the construct of empathy must be defined' (p. 635). This is a basic premise that is followed when designing psychological research, but seems to have been overlooked within empathy research and measurement. Studies have measured empathy using a variety of techniques including; facial, verbal, physiological measures and questionnaires, and found that each has its advantages and limitations (Kohn, 1990). Hornblow (1980) noted that various psychological measurement instruments have been used to measure empathy to date

including; the Rorschach Test, the Thematic Apprehension Test, the Role Construct Repertory Test, scales devised for standardised tests such as the Minnesota Multiphasic Personality Inventory (MMPI) and California Personality Index (CPI), rating scales and multiple choice responses to videotaped interviews. Similarly, Marshall et al. (1995) noted a variety of ways that empathy has been evaluated. Namely, observation and coding of behaviours thought to reflect empathy, and measures of perspective taking skills. They noted that the majority of research employed self report questionnaires. If a consensus is reached that empathy can change with the state of a person then it would be difficult to assess empathy with self-report measures as these would not be sensitive to such changes (Baron-Cohen & Wheelwright, 2004). Due to the lack of agreed definition, the measures that have been designed to measure empathy generally reflect which school of thought or viewpoint the researcher aligns themselves with, therefore, care needs to be taken when undertaking empathic research to ensure that the instrument selected reflects the theoretical framework which is under study.

One of the most well used measures for empathy in the past has been Hogan's Empathy Scale (EM: Hogan, 1969), which appears to be based on the cognitive aspect of empathy due to the focus on perspective taking ability (Choplan et al., 1985). This measure has 64 items, which assess four factors; social self-confidence, even-temperedness, sensitivity, and non-conformity (Baron-Cohen & Wheelwright, 2004). The items for this measure were drawn mainly from the MMPI and CPI personality inventories (Hornblow, 1980). Researchers have expressed varied opinions about what this scale purports to measure. Polaschek (2003) claimed it is primarily measuring role- and perspective-taking abilities whilst Davis (1996) claimed this scale is more a measurement of social skill, as did Greif and Hogan (1973, cited in Hornblow, 1980)

and Foreman and Allen (1976, cited in Hornblow, 1980) who suggested from their research that the EM (Hogan, 1969) may be primarily a measure of interpersonal adequacy and social extraversion. Research has highlighted a number of reliability problems with this measure. Choplan et al. (1985) found low reliability estimates and poor internal consistency on this measure. They also reported that two-thirds of the scale items failed to correlate with the total score. Despite these reliability issues, the EM (Hogan, 1969) appeared to have been extensively used in empathy research, in particular within three fields; a) relating empathy to other personality traits such as introversion; b) related to moral conduct and character; and c) using empathy scores to predict behaviour in various situations (Choplan et al., 1985). Hornblow (1980) noted that the EM (Hogan, 1969) has not yet been established within a clinical context as a measure of empathic ability. He claimed this could be due to this measure targeting trait more than state empathy.

Another well used measure has been The Questionnaire Measure of Emotional Empathy (QMEE: Mehrabian & Epstein, 1972) which measures the emotional aspects of empathy. It was designed to assess an individual's tendency to react strongly to another's experience (Mehrabian & Epstein, 1972, cited in Baron-Cohen & Wheelwright, 2004). This scale has 33 items and has been reported to have adequate validity but the worth of this measure is restricted by its confinement to the emotional empathy construct and it is purported that it may in fact tap into a tendency to be aroused in certain situations (Choplan et al., 1985) and thus would not necessarily reflect empathy. The authors reported a split-half reliability of .84, supporting the claim that it measured a single construct (Baron-Cohen & Wheelwright, 2004).

Langevin et al. (1988), on the other hand, found poor internal consistency and advised against further use of this scale in research.

Both these instruments measure different aspects of empathy; however, they are not sufficient measures of this construct as they only measure a limited facet of this phenomenon.

The Interpersonal Reactivity Index (IRI: Davis, 1980) was designed to measure the multidimensional approach to empathy and combat the problems of previous measures that were limited to specific aspects of empathy. This scale has 28 items and is separated into four-subscales each tapping into some aspect of empathy and representing a variety of reactions that others have referred to as empathy which can not be separated (Davis, 1983). The perspective taking (PT) sub-scale measures the ability to appreciate another's point of view, the empathic concern (EC) sub-scale measures the ability to feel compassion or concern, the fantasy (FS) sub-scale measures the ability to identify with fictitious characters, and the personal distress (PD) sub-scale measures the extent to which a person shares the negative emotions of others, rather than an inability to cope with negative feelings (Salter, 1988). Johnson et al. (1983) supported the use of the IRI (Davis, 1980) and claimed that the scale content is relevant to the meaning of empathy. Baron-Cohen and Wheelwright (2004) reportedly found this measure to be the best measure of empathy to date, although they did suspect that it measures processes outside of empathy such as imagination and self-control. This measure is reported to correlate well with both the EM and the QMEE (Choplan et al., 1985). Davis (1980) reported the psychometric properties of this measure which showed the four subscales to have satisfactory internal and test-retest reliability, and to be stable

across repeated administrations to different samples. It was noted that sex differences were found on this measure; in particular females were found to have higher empathy than males (Davis, 1980). Polaschek (2003) claimed this measure lacked external validity due to the seemingly transparent questions and the potential to encourage socially desirable responding.

Pithers (1994) used the IRI (Davis, 1980) to assess treatment gains with paedophiles (N = 10) and rapists (N = 10). He found greater means on the scores for the paedophiles than the rapists, and the effect of treatment was not significant, although average scores increased after treatment. In 1999, he administered the IRI (Davis, 1980) to a further group of child sexual abusers (N = 15) and rapists (N = 15) under two conditions: typical mood (day to day outlook) and precursive mood (the predominant emotion prior to sexually abusive acts). For both mood types he found the child abusers had a significantly higher total score than the rapists, indicating greater levels of empathy in the child abuser sample. Marshall, Jones, Hudson and McDonald (1993) reported results of their research indicating child molesters did not differ significantly from available normative data on the IRI (Davis, 1980). However, the researchers concluded that differences in empathy could be due to the subjects presenting themselves as favourable due to their incarceration. Marshall et al.'s (1993) second study using community based child molesters (N = 20) revealed significantly different scores from the matched community control group of non-offenders. This study demonstrated a much lower total score for the child molesters on the IRI (Davis, 1980) indicating a probable deficit in general empathy. Further, Curwen (2003) using the IRI (Davis, 1980) in her research with 123 male community-based adolescent sex offenders found age and social desirability were related to IRI (Davis, 1980) scores. She concluded

that victim empathy was not related to IRI (Davis, 1980) scores, based on correlations between therapist rated victim empathy with the empathic concern and perspective-taking sub-scale scores from the IRI (Davis, 1980). Hansen (in press, cited in Marshall et al., 1999) reported that the PT and EC sub-scales of the IRI (Davis, 1980) appeared to show promise for assessing empathy in sex offenders, however, despite this he suggested that it may be too general.

Jolliffe and Farrington (2004) conducted a meta-analysis investigating 21 cognitive and 14 affective empathy studies spanning 32 years of research. They found that of the 21 cognitive studies, eight used the IRI (Davis, 1980) and all but two found no significant differences between child molesters and other groups on the perspective taking sub-scale. Similarly, of the 14 affective studies, nine used the IRI (Davis, 1980), but again all except two found no significant differences between child molesters and the other groups on the empathic concern sub-scale. Despite these research outcomes, of the three measures discussed thus far, psychometric data and theory favours Davis' (1980) Interpersonal Reactivity Index (Polaschek, 2003).

The Empathy Quotient (EQ: Baron-Cohen & Wheelwright, 2004) is one of the newest self-report empathy questionnaires designed for use with adults of normal intelligence. It has 60 questions, 40 relating to empathy and 20 filler questions used to distract the respondent from the relentless focus on empathy. It is based on the view of empathy as co-occurring cognitive and affective processes. Initial research has revealed both gender differences with empathy in the general population and an empathy deficit in Asperger Syndrome or high functioning autism. Baron-Cohen and Wheelwright (2004) acknowledged the limitations of this questionnaire particularly with the self-report

format, as it is possible that it only assesses an individual's beliefs about their own empathy or how they might like to be seen (or think about themselves) rather than accurate empathy levels.

Another new measure designed specifically for assessing victim specific empathy in child sex offenders is the Child Molester Empathy Measure (CMEM: Fernandez, Marshall, Lightbody & O'Sullivan, 1999). This scale features three vignettes, one featuring a non-gendered child who was disfigured in a motor vehicle accident, the second features a non-gendered child who has been sexually molestered by an unknown assailant over a period of time, and the final scenario is the offender's own victim. For each vignette, there are two sections of responses required. In Part A, the respondent is asked to indicate on a 10-point likert scale the degree to which they think the child would be experiencing a list of 30 emotions, thoughts and behaviours. In Part B, the respondent is asked to indicate on the 10-point likert scale how they feel about what the child has experienced (20 items). Fernandez et al. (1999) reported the CMEM to be internally reliable, produced stable responses over time, and discriminated between child molesters and non-offenders.

Marshall, Champagne, Brown and Miller (1997) found differences between an incarcerated non-familial child molester sample ($N = 32$) and community-based non-offenders ($N = 32$) on the CMEM (Fernandez et al., 1999). In particular they found that the child molesters showed less empathy towards the general sexual abuse child victim than the non-offenders, and no difference between the groups for the child accident victim. They also found that child molesters showed less empathy towards their own victim than on the other two scenarios. Further research has compared child

molesters ($N = 34$), incarcerated non-sex offenders ($N = 24$) and community non-offenders ($N = 28$) who were matched with the offender groups on education and social economic status (Marshall, Hamilton & Fernandez, 2001). It was found that there were no differences between these groups on the accident victim scenario, significant differences in the scores only on Part A of the sexual abuse victim scale and when comparing the differences across the three victims, the child molesters had the least recognition of harm for their own victims (Marshall et al., 2001). Fernandez et al. (1999) also found that child molesters showed less empathy for their own victims than for the other two victims.

From a review of studies using this questionnaire, as with the Empathy Quotient (EQ) (Baron-Cohen & Wheelwright, 2004) measure, although showing good results thus far, most of the reported research is from the researchers who designed the measure. In addition the sample sizes are small and the measure has not been administered repeatedly in a longitudinal design. Further criticisms of the CMEM (Fernandez et al., 1999) include the transparency of the content of this measure. Also, in Part B of the measure, in which the respondent is asked how they felt about the child's experience, it is not possible to distinguish between the vicarious emotional response to the victim and the offenders own personal distress. Also, respondents can score highly (reflecting high empathy) on this measure despite active cognitive distortions (Polaschek, 2003).

Empathy measurement with sex offenders

In order to assess evidence of the levels of empathy in offenders and any changes in empathy, accurate and reliable measurement instruments would be required. The accurate measurement of empathy to date has been confounded by the ongoing debate

of what empathy is and how it is manifested. The most common method of measurement for sex offenders has been paper and pencil self-report questionnaires which assess either general empathy or victim specific empathy (Polaschek, 2003) as these are easy to administer and can be completed in a relatively short period of time. Using this type of questionnaire raises a number of questions, mostly around the accuracy of the responses, potential biases, and whether what is being assessed is actually 'empathy', or some other construct. Langevin et al. (1988) suggested that sources other than offenders' self report are necessary to assess whether offenders lack empathy. Further, self-report measures rely on the assumption that respondents are aware of what they are feeling and can, and will, report these accurately (Eisenberg & Fabes, 1990). Polaschek (2003) questioned whether people are able to evaluate their own empathic abilities accurately, as previously mentioned. An obvious problem with assessing empathy, particularly with incarcerated sex offenders is the possibility of social desirability responding particularly when freedom may rest on this. Mullen (2000) noted that incarcerated offenders attempted to create a good impression of themselves when completing questionnaires. Eisenberg and Fabes (1990) noted that adult self reports of empathy have been associated with social desirability, and therefore can tell the researcher more about how the respondent wants to be seen by others rather than how they actually feel or respond. Wood, Grossman and Fichtner (2000) reported some offenders under report offence behaviour and over represent treatment gains. They theorise that this could be due to seeking personal gain such as parole or earlier release. Also, Pithers (1999) reported that research of sex abusers neglected the potential importance of circumstances under which subjects complete self report measures.

Training and treatment of empathy

Empathy training is not unique to the sex offender field; Feshbach and Feshbach (1982) conducted an empathy training programme for school children to address the problem of social violence. They assumed that training focused on cognitive and affective empathy skills would increase empathy levels and that increase would facilitate behaviours that are incompatible with aggression, such as sharing and generosity. Results of this research suggested that empathy training helped to increase positive social behaviours in the children eg. co-operation and generosity.

Ninety-four percent of North American sex offender treatment programmes target empathy (Polaschek, 2003; Pithers, 1994) as the common assumption behind these treatment programmes is that offender recidivism will be reduced through empathy training by increasing an individual's empathy (Jolliffe & Farrington, 2004). Thus, many prison treatment programs including those designed for sex offenders are intended to increase empathy in offenders (Jolliffe & Farrington, 2004), and the programmes in New Zealand are no exception (Hudson, Marshall, Ward, Johnson, & Jones, 1995). Marshall et al. (1995) noted that Feshback (1978) and Iannotti (1978) demonstrated that instilling empathy through training produced reduction of aggression and replaced hostile responses with socially appropriate behaviour. This would clearly be an appropriate treatment aim for sex offender programmes. Despite empathy training featuring in most treatment programmes there is still little empirical research to support the relationship between empathy and sexual offending or whether empathy training is effective for treatment outcome (Marshall et al., 1995; Smallbone et al., 2003). Marshall, Jones, Ward, Johnston and Barbaree (1991) conducted a review of available treatment approaches and concluded that comprehensive cognitive-behavioural

programmes are 'likely' the most effective for child molesters. The Relapse Prevention phases of these treatment programmes see victim empathy as the pivotal reason for not offending based on the assumption that if the offender has empathy, he or she would be aware of the victims' pain and therefore not harm them (Laws, 1989). Research, however, has yet to prove the value of empathy training in reducing re-offending with sex offenders and this is what makes the current study valuable as it will make a contribution to this field.

New Zealand has two Special Treatment Units for child sex offenders. They are run by the Department of Corrections Psychological Service exclusively for men who have committed sexual offences against children. The units are 60-bed stand-alone facilities where standard prison rights and regulations apply. They utilise cognitive-behavioural and social learning theory, based on procedures to effect behaviour change, with the goal of helping offenders prevent re-offending. A key feature of the programme is the promotion of a therapeutic environment within a Tikanga Maori framework; this is what makes the programme unique to New Zealand.

Men on the programme are volunteers who have been referred from the Public Prison institutions. They are assigned to therapy groups and each group consists of 10 men who work through the therapy programme together from start to finish. The treatment programme is approximately 40 weeks (nine months) and each person spends around nine hours a week in therapy.

The programme comprises of the following modules: group norm building, victim empathy, offending patterns, sexual reconditioning, relationship skills and sexuality

education, mood management and relapse prevention. The victim empathy module is the key component of this treatment, and due to this importance it features early on in the programme. As the victim empathy is a module in its own right, with 15 structured sessions, it is possible to assess the effectiveness of this module.

Sexual offenders' treatment efficacy research

There appears to be little research around the efficacy of treatment programmes for sexual offenders. One explanation for this that has been proposed is the idea that treatment outcome studies with this population are 'hampered' by ethical dilemmas due to the potential consequences to victims and society if sex offenders are allocated to no treatment groups (Marshall, 1993). Much of the debate around treatment efficacy has stemmed from Furby, Weinrott and Blackshaw's (1989, cited in Alexander, 1999; Miner, 1997) review of treatment outcome studies which suggested little support in the research for the efficacy of treatment for sexual offenders. They concluded that there were methodological flaws in virtually all the studies, and this made the validity of conclusions near impossible. A further review by Alexander in 1999 of relevant treatment outcome studies between 1943 and 1996 found more favourable results. She reviewed 79 relevant studies and completed a series of analyses comparing treated and untreated subjects ($N = 10,988$). Recidivism was used to measure treatment success, and was defined as rearrest for a new sexual offence, rather than reconviction as used in other reviews. A recidivism rate of less than 11% was set as the ceiling for positive treatment outcome. Alexander (1999) found that treated subjects had lower recidivism rates than untreated, for example with child molesters ($N = 2137$) the recidivism rate after treatment was 14.4% compared to 25.8% for untreated child molesters. She also investigated the treatment effectiveness by method and location and found that relapse

prevention programmes had a recidivism rate of 8.1% compared to the category of group/behavioural and other which had a recidivism rate of 18.3%. The results for the child molesters by location were: outpatient 13.9%; prison 21.4%; hospital 14.2%; mixed 11.9% and untreated 25.8% which suggested that a mixture of treatment locations was most effective. The results suggested that non-incestual offenders may experience greater treatment effectiveness, for example, incest offenders had a recidivism rate of 4.0% when treated compared to 12.5% untreated, whereas non-incestual offenders had a treated recidivism rate of 1.7% compared to 32.0% untreated. The researcher concluded that many treated sexual offenders had recidivism rates below 11% which provides support for treatment effectiveness. In 1995, Hall (cited in Miner, 1997) found a significant but small effect on 12 studies favouring treatment over no treatment, and concluded that the problem of statistical power is present in most sex offender outcome research, and thereby hinders sound treatment efficacy research findings. Marques (1995, cited in McConaghy, 1999) found mentally disordered sexual offenders (treated re-offence rate = 35.7%) and unmarried sexual offenders (treated re-offence rate = 19%) to be more likely to re-offend than non-mentally disordered (treated re-offence rate = 9.86%) or married (treated re-offence rate = 1.9%) sexual offenders. She also found a higher percentage of these two sub-groups in treatment groups compared to control groups, which could have confounded the results of treatment efficacy studies. Wood, Grossman and Fichtner (2000) raised the concern as to whether apparent treatment success is maintained beyond release. This concern arose from the theory that incarcerated offenders may be motivated to change their circumstances rather than themselves, that is, in order to gain release they co-operate with the institution and attempt to impress the staff by going along with the programme

and feigning change. To date, there are very few longitudinal studies assessing the maintenance of treatment effects post-release.

In an unpublished masters thesis, Maude (1996) conducted research at a New Zealand Special Treatment Unit using a multiple case study design to assess and compare the empathic ability of seven incarcerated incest offenders. She used the IRI (Davis, 1980) and a version of the CMEM (Fernandez et al., 1999) along with a qualitative interview and found that victim specific empathy was high prior to treatment and increased post-treatment.

Grossman, Martis and Fichtner (1999) identified a number of research design problems that have contributed to the problem with establishing treatment efficacy in sexual offenders. In particular, the lack of random assignment to treatment groups, and the lack of matched controls, or use of treated and untreated samples for comparison have hindered the ability to generalise the outcome of studies in this area. They noted that the programme selection criteria also can affect the results, as there is typically limited sampling and at times this is restricted to 'volunteers', or subjects that comply with treatment producing sampling bias in such studies. This research can be further hampered by the types of offenders studied i.e. incestual child molesters compared to extrafamilial (who recidivate at nearly twice the rate of the incest offenders), or not categorising offenders by the gender of their victims which can also impact results.

Aims of the research

It is evident that further research in the empathy area is required. The current study aims to evaluate the effectiveness of empathy training with sex offenders in a New

Zealand setting and in doing so contribute to the ongoing debate in around empathy and sex offenders and inspire others to pursue research in this area. Whilst there has been some studies of empathy with child sex offenders, to date this type of research has not been done with the participants of this New Zealand Special Treatment Unit, although the programme overall has been evaluated with regards to decreasing recidivism. With empathy being a large part of the treatment programmes components (and not unique to this programme) it is pertinent to find out how much impact this training is having. Also, the assessment phase of the treatment programme does not include any measures of empathy and this research may highlight potential tools for assessing and monitoring this population. Further, although previous researchers have found that sex offenders do not display a lack of general empathy, to the researchers' knowledge no study was located that tested general empathy and victim specific empathy in the same sample to analyse whether there were any differences between general and victim specific empathy. This is what makes the current research unique. This research will trial a new general empathy measure alongside one, which has agreed reliability and validity, to discover whether this clear and concise measure will be useful for assessing empathy in this population or has better ability to discriminate this population from non-offenders.

Research into empathy within the sex offender field is still a relatively new innovation and to date there is still little agreement as to what empathy is, how to measure it and whether what we are measuring is in fact empathy or some other construct. Through the current research I hope to make a valuable contribution to this field, in summary the aims of this research are:

- to evaluate the effectiveness of the empathy training module at a Special Treatment Unit

- to assess the sensitivity to changes in empathy levels for assessment and monitoring of empathy in this population
- investigate general and victim specific empathy at the same time
- trial a recently developed general empathy measure

Hypotheses

The hypotheses of this research are:

1. As there are a small number of studies investigating generalised empathy in child sex offenders, and only a few such studies in New Zealand, the level of empathy as measured by the two general empathy measures in this study is of interest. It is hypothesised that empathy as measured on the generalised empathy measures, the Empathy Quotient (EQ); (Baron-Cohen & Wheelwright, 2004) and Interpersonal Reactivity Index (IRI); (Davis, 1980) prior to intervention with the empathy training module will be lower than non-sexual offending populations.
2. There have been mixed results with regard to treatment efficacy studies, and there has been little research investigating the effectiveness of empathy training modules, despite them featuring in many sex offender treatment programmes. It is hypothesised that empathy levels on each of the three measures used in this study will increase; indicating participants will become more empathic, after the empathy training module intervention.
3. It has been questioned as to whether treatment effectiveness is maintained, and whether incarcerated offenders attempt to create favourable impressions in order to obtain early release which may produce consistently high results on the

measures. It is hypothesised that empathy levels attained immediately after the intervention will be maintained at the three-month follow-up.

4. Consistent with previous research of Fernandez et al. (1999) and Marshall et al. (1999), it is hypothesised that on the Child Molester Empathy Measure (Fernandez et al., 1999), child sexual offenders will show the greatest empathy deficit with their own victim.

Method

Research Design

The current research featured a longitunal repeated measures within subjects design. The data was collected between January 2005 to January 2006 from four separate treatment groups and at three different time conditions; pre-intervention, post-intervention and three-month follow-up.

Treatment Programme

The Special Treatment Unit treatment programme takes several groups throughout the year, each starting at different times of the year. Each treatment group runs for 40 weeks and has 10 participants and a different therapist with each group. The entry criteria to attend the programme are: the participant must accept all or part of their offending, must have at least one offence against a child, must have enough command of English to cope with an intense therapy programme, must not have current, untreated mental health issues, and must have the intellectual ability to cope with the course (van Rensburg, personal communication, 21 April, 2006). Each module of the programme is a separate entity and the empathy training module is the first treatment module of the programme, after group norming. The empathy module consists of 15 sessions which include a number of readings and videos in which the victims' plight is discussed or where victims speak out. These are then discussed in the treatment group. There are a number of group and individual role plays in which the effect of the offending on victims and family members is depicted. Finally, participants are expected to write a letter as if they were the victim(s) and state how they see the world from this viewpoint (van Rensburg, personal communication, 21 April, 2006).

Participants

The participants were 29 males who volunteered to participate in this study. They were all incarcerated in one of two specialist treatment units that are designed for child sexual offenders, and all were about to start treatment at the Special Treatment Unit before they began their participation in this research. Seventy-two and a half percent (72.5%) of the potential participants agreed to participate in this study. There was one drop out in this study, due to being transferred from the treatment unit after the pre-intervention phase. His data for pre-intervention was collected but as he did not complete the post-intervention and follow-up assessments his data was not included in subsequent analysis. The final number of participants used for data analysis was 28.

Participants' ages ranged from 31 years to 61 years ($M = 44.18$, $SD = 7.55$). The participants rated themselves as New Zealand European ($N = 15$), New Zealand Maori ($N = 12$), and Pacific Islander ($N = 1$). The participants rated themselves in five different relationship status categories and educational levels varied from primary to tertiary level (see Table 1). This shows that the sample was mostly well educated and the majority have experienced either marriage or a marriage-like relationship.

All the participants were currently serving a sentence for sex offences against children. The offences listed for these participants were: sexual violation/rape, unlawful sexual connection/unlawful sexual intercourse, indecent assault/indecent act/permitting or inducing or procuring an indecent act, sodomy, and assault with intent to commit sexual violation/rape. Of these offences, a number of the participants were charged with more than one offence. The sex of the victims were predominantly female ($N = 22$), with fewer male ($N = 3$), or both ($N = 3$). The number of victims ranged from one to 30,

with most participants having only one victim ($N = 15$) and four had more than three victims. Seventeen of the participants only had victims who were family members or from the family unit (eg. step-daughter), seven had victims who were not known or related to the offender, and four had victims that fell into both categories.

Twelve of the participants reported no previous sexual or non-sexual offending. The number of offences reported by the participants is indicated in Table 1.

The participants reported whether they had received previous treatment for their sexual offending, as this could be a potential confounding variable for this study. The majority of the participants in this study had not received any previous treatment ($N = 21$). Five participants reported they had received some form of treatment previously for their sexual offending, and two were unsure.

Table 1
Frequencies and Percentages of the Demographic Variables Relationship Status, Educational Level and Previous Offences

Variable	Frequency	Percentage
Relationship Status		
Single/Never Married	8	28.57
Married (First Time)	8	28.57
Remarried	1	3.57
Divorced or Widowed	7	25.00
Defacto	4	14.29
TOTAL	28	100
Educational Level		
Primary (or less)	2	7.14
Junior High School (Form 3-4)	11	39.29
Senior High School (Form 5-7)	6	21.43
Tertiary	6	21.43
Unknown	3	10.71
TOTAL	28	100
Number of Previous Sexual Offences		
Nil	20	71.43
1 to 10	7	25.00
11 to 20	1	3.57
TOTAL	28	100
Number of Previous Non-Sexual Offences		
Nil	15	53.57
1 to 10	9	32.15
11 to 20	3	10.71
20+	1	3.57
TOTAL	28	100

Materials

Three self-report questionnaires were used in this study (see Appendix C). These were selected based on reported reliability, availability and also, the face validity for the construct of empathy as perceived by the researcher.

1) The Empathy Quotient (EQ: Baron-Cohen & Wheelwright, 2004)

This questionnaire was designed by Baron-Cohen and Wheelwright in 2004, and is one of the newest measures of general empathy to date. It was designed to be 'short, easy to use and easy to score' (Baron-Cohen & Wheelwright, 2004, p.166). It is a self-report measure that consists of 60 items, comprised of 40 empathy items and 20 filler/control items, which are used to distract the participant from the relentless focus on empathy. It has a forced choice format that can be self-administered.

Responses are recorded on a 4-point Likert scale – 1) strongly agree, 2) slightly agree, 3) slightly disagree or 4) strongly disagree. One of the benefits of the EQ (Baron-Cohen & Wheelwright, 2004) is that it is easy to score and easy to interpret as it provides a single total score. The scoring is based on the record of empathic behaviour, on each empathy item a person can score a '2', '1' or '0', producing a maximum possible score of 80 and a minimum score of zero. One point is given for a 'slightly' response and two points for a 'strongly' response; these are then summed to give a total score. The filler items *eg. 'I prefer animals to humans'*, or *'I try to keep up with current trends and fashions'* are not scored. Approximately half the items are worded to produce a 'disagree' response, *eg. 'I find it hard to know what to do in a social situation'* and half to produce an 'agree' response, *eg. 'I can easily tell if someone else wants to enter a conversation'*. High total scores indicate higher empathy.

Initial studies completed by Baron-Cohen and Wheelwright (2004) indicate that the EQ (Baron-Cohen & Wheelwright, 2004) appears to discriminate between individual, gender and group differences in both a general population sample and a clinical sample.

The EQ (Baron-Cohen & Wheelwright, 2004) appears to show promise in the area of empathy measurement, and to date has not been used with an offender population.

2) The Interpersonal Reactivity Index (IRI: Davis, 1980).

In developing this measure Davis' (1980) intention was to create 'an individual difference measure of empathy' (Davis, 1983, p.113) and it is based on his multi-dimensional approach to empathy. The IRI is a 28-item self-report measure consisting of four 7-item subscales each tapping a specific aspect of the concept of empathy. Respondents circle their preferred option for each item on a 5-point Likert scale that ranges from 0 ('*does not describe me very well*') to 4 ('*describes me very well*').

The four sub-scales of the IRI (Davis, 1980) are:

a) The Perspective Taking sub-scale (PT) covers the 'tendency to adopt the psychological point of view of others' in everyday life, *eg. 'I try to look at everybody's side of a disagreement before I make a decision'*. The expectation is that higher PT scores will be associated with better social functioning and higher self-esteem, as perspective taking ability can facilitate better interpersonal relationships due to the individuals' ability to anticipate the reactions and potential behaviours of others. Subsequently, self esteem is enhanced by these improved interpersonal relationships (Davis, 1983).

b) The Fantasy sub-scale (FS) covers 'tendencies to transpose themselves imaginatively into the feelings and actions of fictitious characters in books, plays and movies' '*eg. I daydream and fantasize with some regularity about things that might happen to me*'.

c) The Empathic Concern sub-scale (EC) is the tendency to experience feelings of sympathy and compassion for unfortunate others, '*eg. I often have tender, concerned feelings for people less fortunate than me*'. It is expected that this scale will display some association with emotional reactivity, and is related to feelings of warmth and sympathy indicating concern for other people.

d) The Personal Distress sub-scale (PD) is the tendency to experience distress and discomfort in response to extreme distress in others, '*eg. In emergency situations, I feel apprehensive and ill-at-ease*'. It is expected that this scale will have a negative relationship with social functioning and self-esteem, as it is hypothesised that those with high PD scores will be prone to anxiety and discomfort in emotional social settings.

The IRI (Davis, 1980) has been frequently used for research purposes (Carlyon, 2004; Polaschek, 2003), and it has been reported as the best measure of general empathy to date (Baron-Cohen & Wheelwright, 2004). Outcomes of previous research with sex offenders were reported earlier in this script. It has been reported that the four-factor structure of this measure has been confirmed in two studies (Pithers, 1994; 1999).
As with any self report measure, there are limitations with regards to accuracy with measurement of the construct using this questionnaire, in particular, this measure asks the respondents' likelihood of engaging in particular behaviours or viewpoints, and does not require the stated outcome to occur in order to achieve an 'empathic' score (Davis, 1996).

3) The Child Molester Empathy Measure (CMEM: Fernandez, Marshall, Lightbody & O'Sullivan, 1999)

This scale was developed by Fernandez, Marshall, Lightbody and O'Sullivan (1999) with the aim to develop a measure of victim empathy for the assessment of child molesters. The measure assesses empathy in three contexts; a) toward a non-gendered child who was in a motor vehicle accident and was disfigured, b) toward a non-gendered child who had been sexually molestered by an unknown assailant over a period of time, and c) toward the offender's own victim.

Each scale (scenario) is made up of two parts, a) the respondents' appraisal of how the child would be feeling, i.e. his cognitive recognition of the child's distress (30 items) and b) an estimate of his own feelings about the child's experience (20 items). The responses to each item are indicated on a scale ranging from 0 to 10 – the degree to which the respondent believed the child was experiencing what was described or what the respondent was feeling when thinking about the child.

The scores are calculated by summing the responses for the negatively phrased items *eg. 'feels sad'*, and reverse scored for the positively phrased items *eg.' child is successful at school'*. Together the two parts involve 50 items for each of the three scales, and the maximum possible total score for each scale is 500. High scores reflect greater empathy since they indicate recognition of distress and absence of good feelings in the child in part a) or in the respondent in part b).

The CMEM (Fernandez, Marshall, Lightbody, & O'Sullivan, 1999) was found to be both internally reliable (alpha = .85 or higher), produced stable responses over time indicating test-retest reliability and discriminated between child molesters and non

offenders (Fernandez et al, 1999). Previous research using this measure is reported earlier in this research.

Procedure

Approval for this study was obtained from the Massey University Human Ethics Committee and the New Zealand Department of Corrections. After approval was gained, the researcher then liaised with the Manager of the Special Treatment Unit, and was assigned a Senior Practitioner as the point of contact in the Unit for this research.

Four groups were selected to take part in this research, based on their availability during the research's time frames. The potential participants were approached by their group therapists and invited to participate in this study. They were told that participation in this research was voluntary and would not affect their treatment. They were further advised that the research was to evaluate the effectiveness of the treatment programme, rather than empathy per se. This ensured that responding in the questionnaires was not affected by social-desirability or an effort to portray themselves as empathic.

Those who agreed to participate were seen by the researcher and given the Information Sheet (Appendix A) and invited to ask questions. They were told that the treatment or prison staff will not have access to the individual information from this research, however an overall summary will be provided at the end of the study. The participants were then asked to sign a consent form (Appendix B). Each participant was assigned a unique number in order to maintain their anonymity on the questionnaires and also to enable pre and post comparison of results.

The three questionnaires used in this study were compiled into one booklet with a standardised answering format which required the respondents to circle their preferred response to each question or statement on a numerical Likert scale. The questionnaires were entitled 'Evaluation of Treatment Project 2005', with no reference to the actual name of each questionnaire and were presented in the following order: The Empathy Quotient (EQ), Interpersonal Reactivity Index (IRI), and the Child Molester Empathy Measure (CMEM). The questionnaires were administered up to three different times for each group. The first administration to each group was conducted at the beginning of treatment (during induction to the unit), the second administration was immediately after the empathy training module, and the third administration was three months after the second administration for each group.

Self report demographic data was collected from questionnaires the participants completed as part of their induction into the treatment programme. The groups consisted of the participants within each of the Special Treatment Units' therapy groups (up to 10 participants in each group) who had volunteered for this study. Each of these therapy groups starts their programme at different times of the year. The first three groups were administered the questionnaires as part of their programme induction (pre-intervention). All the groups were administered the questionnaires after the empathy training module (post-intervention), and groups one and two were the only groups to be administered the follow up administration (three months after the intervention). The other two groups follow up scores were unable to be obtained and not analysed at the time of writing, as the time these were due fell after the study completion date.

The overview on the front of the questionnaires read:

'Thank you for participating in this project. The following questionnaires ask for your opinions or thoughts or feelings in a range of circumstances. They cover your overall experience as well as specific aspects. Your responses to these questionnaires are an important part of our efforts to keep improving this treatment programme. Thank you, Tracy.'

The instructions on the inside cover read:

'Please answer the following questionnaires with honesty. If you are unsure of an answer, please choose the option closest to your view. There are no right or wrong answers. Please try to select an answer for each question. If you have any questions please do not hesitate to ask.'

The administration of the questionnaires was done separately, by research group, in the Special Treatment Units' Visits Room. The researcher administered all the questionnaires except the pre-intervention questionnaires for the first two groups, which were carried out by the treatment unit workers. The participants were seated separate from each other to enable independent responding and privacy and were told there was no time limit and they could leave the room when they had finished. Opportunities to ask questions throughout and the aims of the study and confidentiality was reiterated along with the instructions for completing the questionnaires as per the booklets. The questionnaires took between 20 and 60 minutes to complete. Once completed the booklets were handed to the researcher, and the participant thanked for participating in this research. As part of the approval for ethics, if a participant became distressed they were referred to the treatment therapist to follow up. There was only one occasion when this occurred.

Results

The results are presented with the data screening information first, followed by scale reliability information, and then the analyses conducted on the sample's data to investigate each hypothesis in this research. The study aimed to investigate the effectiveness of an empathy-training module within a New Zealand Special Treatment Unit for child sexual offenders. The data was analysed using the SPSS for Windows statistical package, version 12.0 (SPSS Inc., 2003).

Data screening

A missing data analysis was conducted using SPSS for Windows, version 12.0 (SPSS Inc., 2003). It was found that, particularly on the CMEM (Fernandez et al., 1999) there were large numbers of missing data as shown in Table 2. During the analyses, missing data was handled by excluding cases pairwise, so that all possible data could be included for each analysis. Other strategies to deal with missing data were considered but eliminated due to the large quantity concerned, and it was decided not to replace any of the missing data (Drawneek, T., personal communication, 24 January, 2006). On CMEM (Fernandez et al., 1999), the first two groups had parts of the questionnaire missing due to experimenter error. As a result the pre-intervention data for the CMEM (Fernandez et al., 1999) was not used in the analysis. As shown in Table 2, the sample numbers (*N*) at each administration varied dependent on where the groups were in their treatment during this study. That is, one group had already received treatment prior to the start of the study, so only their post-treatment data were attained as they also left the facility before the three-month period for follow-up. Also for one group, the three month period from treatment had not elapsed prior to the study completion date, so their

follow-up data was not obtained. Therefore, the sample size for pre-intervention was 20, for post-intervention was 28 and the three-month follow-up was 13.

Table 2
Missing Data Analysis for Scales Used in the Present Study

Scale	Valid Cases		Missing Cases		Total	
	N	Percent	N	Percent	N	Percent
EQ (Pre)	18	90.0%	2	10.0%	20	100.0%
EQ (Post)	25	89.3%	3	10.7%	28	100.0%
EQ (FUp)	11	84.6%	2	15.4%	13	100.0%
IRI (Pre)	18	90.0%	2	10.0%	20	100.0%
IRI (Post)	25	89.3%	3	10.7%	28	100.0%
IRI (FUp)	12	92.3%	1	7.7%	13	100.0%
PT (Pre)	20	100.0%	0	0	20	100.0%
PT (Post)	28	100.0%	0	0	28	100.0%
PT (FUp)	12	92.3%	1	7.7%	13	100.0%
EC (Pre)	19	95.0%	1	5.0%	20	100.0%
EC (Post)	27	96.4%	1	3.6%	28	100.0%
EC (FUp)	12	92.3%	1	7.7%	13	100.0%
FS (Pre)	20	100.0%	0	0	20	100.0%
FS (Post)	28	100.0%	0	0	28	100.0%
FS (FUp)	12	92.3%	1	7.7%	13	100.0%
PD (Pre)	19	95.0%	1	5.0%	20	100.0%
PD (Post)	26	92.9%	2	7.1%	28	100.0%
PD (FUp)	12	92.3%	1	7.7%	13	100.0%
CMEM Sc 1 (Pre)	5	25.0%	15	75.0%	20	100.0%
CMEM Sc 1 (Post)	23	82.1%	5	17.9%	28	100.0%
CMEM Sc 1 (FUp)	9	69.2%	4	30.8%	13	100.0%
CMEM Sc 2 (Pre)	2	25.0%	15	75.0%	20	100.0%
CMEM Sc 2 (Post)	25	89.3%	3	10.7%	28	100.0%
CMEM Sc 2 (FUp)	10	76.9%	3	23.1%	13	100.0%
CMEM Sc 3 (Pre)	3	15.0%	17	85.0%	20	100.0%
CMEM Sc 3 (Post)	19	67.9%	9	32.1%	28	100.0%
CMEM Sc 3 (FUp)	11	84.6%	2	15.4%	13	100.0%

NOTE: EQ = Empathy Quotient, IRI = Interpersonal Reactivity Index, PT = Perspective Taking sub-scale, EC = Empathic Concern sub-scale, FS = Fantasy sub-scale, PD = Personal Distress sub-scale, CMEM = Child Molester Empathy Measure, Sc 1 = Scenario One, Sc 2 = Scenario Two, Sc 3 = Scenario Three, Pre = Pre-Intervention, Post = Post-Intervention, FUp = Three Month Follow-Up.

Reliability

According to Baron-Cohen and Wheelwright (2004), the EQ had good internal consistency with a Cronbach alpha coefficient reported of .92. In the current study the Cronbach alpha coefficient was .85, although caution should be taken with emphasis on this figure, due to the low sample numbers. Davis (1980) reported the psychometric properties of the IRI (Davis, 1980). He noted that all four sub-scales had satisfactory internal consistency (internal reliabilities ranging from .71 to .77), and good test-retest reliability (test-retest reliabilities range from .62 to .71). In the current study, the Cronbach alpha coefficients were .54 for the personal distress sub-scale, .64 for the fantasy sub-scale, .77 for the empathic concern sub-scale and .73 for the perspective taking sub-scale, which are slightly lower than Davis' figures. On the CMEM, Fernandez et al. (1999) reported internal reliability for the general sexual abuse victim (Scenario Two) with an alpha coefficient of .91, and .89 for the accident victim (Scenario One). Two week test-retest reliability was assessed using the Pearson product moment correlation and found $r = .83$ for the accident victim, and $r = .64$ for the general sexual abuse victim. The current study found a Cronbach alpha co-efficient of .85 on the CMEM (Fernandez et al., 1999), demonstrating good internal consistency. Again, this should be treated with caution due to the low sample numbers.

Assessment for Normality

The Shapiro-Wilk statistic was used for testing normality due to the sample size being less than one hundred as suggested in Pallant (2005). The significance levels for each scale were greater than .05, therefore normality was assumed, with the exception of the post-intervention scores for the IRI (Davis, 1980), and the post and follow-up scores for scenario two on the CMEM (Fernandez et al., 1999). The skewness of the data on each

scale was also investigated, and it was found that despite variability between scales, each were within an acceptable range to meet the assumption of normality, therefore allowing the use of parametric statistics. Table 3 shows the Shapiro-Wilks statistics, skewness and kurtosis scores for each of the scales used in this research.

Table 3
Tests for Normality of the Scales Used in the Present Study

Scale	Shapiro-Wilk			Skewness	Kurtosis
	Statistic	df	Sig.		
EQ (Pre)	.94	18	.23	-.11	-1.37
EQ (Post)	.98	25	.86	.29	.076
EQ (FUp)	.92	11	.32	.28	-1.43
IRI (Pre)	.93	18	.19	-.92	2.43
IRI (Post)	.89	25	.01	-1.20	2.39
IRI (FUp)	.88	12	.09	1.23	1.59
PT (Pre)	.94	20	.26	-.71	.64
PT (Post)	.97	28	.58	-.30	-.14
PT (FUp)	.98	12	.97	.18	.49
EC (Pre)	.97	19	.76	-.44	.054
EC (Post)	.93	27	.06	-1.18	2.61
EC (FUp)	.94	12	.53	.75	.35
FS (Pre)	.96	20	.51	-.47	-.45
FS (Post)	.96	28	.35	-.30	-.27
FS (FUp)	.96	12	.78	-.61	1.51
PD (Pre)	.96	19	.58	-.03	-.91
PD (Post)	.95	26	.19	.66	.40
PD (FUp)	.92	12	.32	.69	.55
CMEM Sc 1 (Pre)	.77	5	.05	-1.85	3.67
CMEM Sc 1 (Post)	.96	23	.41	-.30	-.61
CMEM Sc 1 (FUp)	.94	9	.59	-.74	.50
CMEM Sc 2 (Pre)	.91	5	.49	.04	-1.90
CMEM Sc 2 (Post)	.85	25	.00	-1.44	1.79
CMEM Sc 2 (FUp)	.82	10	.02	-1.72	3.00
CMEM Sc 3 (Pre)	.86	3	.26	1.60	0
CMEM Sc 3 (Post)	.95	19	.42	-.84	1.01
CMEM Sc 3 (FUp)	.92	11	.32	-.42	-.88

NOTE: EQ = Empathy Quotient, IRI = Interpersonal Reactivity Index, PT = Perspective Taking sub-scale, EC = Empathic Concern sub-scale, FS = Fantasy sub-scale, PD = Personal Distress sub-scale, CMEM = Child Molester Empathy Measure, Sc 1 = Scenario One, Sc 2 = Scenario Two, Sc 3 = Scenario Three, Pre = Pre-Intervention, Post = Post-Intervention, FUp = Three Month Follow-Up.

The relationship between each of the scales used in this research was also investigated. It was predicted that positive relationships would exist between the three scales used in this study, as reported by previous research. Pearson Product Moment Correlation Coefficients were calculated, and it was found that generally, medium to high correlations exist between the scores of the EQ, IRI and CMEM (see Table 4). Only three of the correlations met the levels for significance, these were the EQ and PT subscale, the EQ and EC subscale, and the PD subscale and Scenario 1 of the CMEM. It is probable that this outcome is due to the small sample size as noted by Pallant (2005). Interestingly, many of the correlations were negative, which was not the expected direction, as seen in Table 4.

Table 4
Relationship Between Scales Used in the Present Study

	EQ	IRI	SC1	SC2	SC3
IRI	.396				
SC1	-.218	.090			
SC2	-.564	-.814			
SC3	-.750	-.990			
PT	.608**		-.569	-.280	-.941
FS	-.152		.732	-.723	-.791
EC	.506*		-.160	-.637	-.902
PD	-.315		.887*	-.837	'-.837

NOTE: EQ = Empathy Quotient, IRI = Interpersonal Reactivity Index, SC1 = Scenario 1 on CMEM (Child Molester Empathy Measure), SC2 = Scenario 2 on CMEM, SC3 = Scenario 3 on CMEM, PT = Perspective Taking, EC = Empathic Concern, FS = Fantasy, PD = Personal Distress.
*Correlation is significant at the .05 level of probability.
** Correlation is significant at the .01 level of probability.

Hypothesis Testing

The means and standard deviations for each scale, on each time condition were attained as shown in Table 5.

Table 5
Descriptive Statistics for the Scales and Subscales Used in the Present Study

Scale	*N*	*M*	*SD*
EQ (Pre)	18	36.67	10.91
EQ (Post)	25	38.72	11.16
EQ (FUp)	11	39.09	9.02
IRI (Pre)	18	59.72	11.72
IRI (Post)	25	61.80	11.80
IRI (Fup)	12	59.50	6.39
PT (Pre)	20	17.80	5.53
PT (Post)	28	17.32	4.65
PT (FUp)	12	19.25	2.93
FS (Pre)	20	13.05	5.63
FS (Post)	28	13.46	4.74
FS (FUp)	12	11.58	3.85
EC (Pre)	19	20.26	5.34
EC (Post)	27	20.89	4.73
EC (FUp)	12	20.67	3.42
PD (Pre)	19	9.95	2.97
PD (Post)	26	9.50	4.68
PD (FUp)	12	8.00	3.64
CMEM			
Scenario 1 (Pre)	5	328.00	41.16
Scenario 1 (Post)	23	344.70	56.62
Scenario 1 (FUp)	9	377.44	58.26
Scenario 2 (Pre)	5	410.80	53.11
Scenario 2 (Post)	25	423.64	45.92
Scenario 2 (FUp)	10	441.10	44.41
Scenario 3 (Pre)	3	410.33	67.00
Scenario 3 (Post)	19	424.89	43.22
Scenario 3 (FUp)	11	439.82	46.22

NOTE: EQ = Empathy Quotient, IRI = Interpersonal Reactivity Index, PT = Perspective Taking, EC = Empathic Concern, FS = Fantasy, PD = Personal Distress, CMEM = Child Molester Empathy Measure, Pre = Pre-Intervention, Post = Post-Intervention, FUp = Follow-Up.

To test the first hypothesis of this study, that empathy on general empathy measures will be lower than a non-sexual offending sample, descriptive statistics were attained for the scale and subscale scores on the EQ (Baron-Cohen & Wheelwright, 2004) and IRI (Davis, 1980) for comparison with previous studies. Table 6 shows the mean scores for this study on the EQ (Baron-Cohen & Wheelwright, 2004) prior to intervention and the mean scores reported by Baron-Cohen and Wheelwright's (2004) pilot testing of the EQ. It also shows the mean total scores for this study on the IRI (Davis, 1980) prior to intervention with the mean score reported by Marshall et al. (1993), Pithers (1994; 1999), and Salters' (1988) normative data.

As shown in Table 6, the mean score for this sample on the EQ (Baron-Cohen & Wheelwright, 2004) is lower than the mixed-gender control group and male sample scores from the EQ (Baron-Cohen & Wheelwright, 2004) pilot testing research. The current sample's mean score is above the cut-off score of 30 or less. According Baron-Cohen and Wheelwright (2004) this cut-off score indicates low empathy as measured by the EQ (Baron-Cohen & Wheelwright, 2004).

Table 6.
Comparison of the Mean Total Scores on the EQ and IRI found in the Present Study, with the Scores from Previous Studies

Study	Sample	*N*	*M*	*SD*
EQ on Present Study	NZ Child Sexual Offenders	18	36.67	10.92
EQ Pilot Testing (Baron-Cohen & Wheelwright, 2004)	UK Mixed Gender Controls	90	42.1	10.6
	UK Males (Mean age 38.8 years)	71	41.8	11.2
IRI on Present Study	NZ Child Sexual Offenders	18	59.72	11.72
Salter (1988)	Male Students	500	61.01	
	Factory Workers	138	63.03	
Marshall, Jones, Hudson & McDonald (1993)	NZ Child Molesters (Incarcerated – Pre-treatment)	92	60.9	11.5
	NZ Child Molesters (Community-based)	20	46.75	26.77
	Community Controls	20	63.10	12.78
Pithers (1994)	USA Treatment Centre			
	Pedophiles	10	64.9	9.12
	Rapists	10	53.6	12.12
Pithers (1999)	Study 1: Child Abusers	15		
	Typical Mood		62.2	7.25
	Precursive Mood		61.3	6.63
	Study 2: Pedophiles	10		
	Pre-treatment		64.9	9.12
	Post-treatment		78.6	6.29

NOTE: EQ = Empathy Quotient, IRI = Interpersonal Reactivity Index.

Table 7 shows a comparison of the mean scores on the sub-scales of the IRI (Davis, 1980) compared with previous studies.

Table 7
Comparison of the Subscale Scores on the IRI found in the Present Study with the Scores from Previous Studies

Study	Sample	*N*	*M*	*SD*
Present Study	NZ Child Sexual Offenders			
PT		20	17.80	5.53
EC		19	20.26	5.34
FS		20	13.05	5.63
PD		19	9.95	2.97
Davis (1980)	Male Students	500		
PT			16.78	
EC			19.04	
FS			15.73	
PD			9.46	
Salter (1988)	Factory Workers	138		
PT			18.35	4.4
EC			20.19	4.25
FS			13.4	6.3
PD			11.09	5.73
Smallbone, Wheaton & Hourigan (2003)	Australian Intrafamilial Child Molesters	29		
PT			17.76	6.18
EC			21.62	5.40
FS			13.28	6.26
PD			11.07	4.25
	Australian Extrafamilial Child Molesters	26		
PT			18.04	5.23
EC			21.00	4.51
FS			12.19	4.29
PD			12.27	5.88
Marshall, Jones, Hudson & McDonald (1993)	NZ Child Sexual Offenders	92		
PT			16.0	4.6
EC			19.8	5.0
FS			13.5	6.2
PD			11.8	4.8
	Community Child Molesters	20		
PT			16.90	5.34
EC			20.20	6.37
FS			12.10	6.47
PD			10.35	4.90

NOTE: PT = Perspective Taking sub-scale, EC = Empathic Concern sub-scale, FS = Fantasy sub-scale, PD = Personal Distress sub-scale

As shown in Table 7, the Perspective Taking (PT) sub-scale score was higher than Davis' (1980) student sample, but lower than Salters' (1988) factory workers. It can also be seen that on this sub-scale, this research's sample scored similar to the Australian sex offender's sample scores, which also has a similar number of participants, but higher than the New Zealand sex offender's sample scores reported by Marshall, Jones, Hudson and McDonald (1993). The Fantasy (FS) sub-scale score was lower than the students' sample scores and comparable with the factory workers scores. The score on this sub-scale was comparable with both the Australian and New Zealand sex offender sample scores. The Empathic Concern (EC) sub-scale score was comparable with the factory workers scores but higher than the students, and New Zealand sex offender sample. The mean scores of this study on this sub-scale are lower than the Australian sexual offender sample's scores. The Personal Distress (PD) sub-scale was comparable with students but lower than the factory workers and both the sex offender samples.

Compared with the other samples, there is some support for the hypothesis that general empathy scores would be lower than non-sex offending populations. This was evident on the EQ (Baron-Cohen & Wheelwright, 2004), however, on the subscales of the IRI (Davis, 1980), this sample was lower on the Fantasy and Personal Distress sub-scales, but higher on the Empathic Concern subscale. On the Perspective Taking sub-scale, the sample was higher than the student sample but lower than the factory worker sample. These inferences can not be confirmed without statistical analysis, as it is not known whether these results are statistically significant.

To assess the second hypothesis of this research (that empathy levels on each of the three measures will increase with intervention), paired samples (repeated measures) t-tests were calculated to compare the differences in the mean scores pre-intervention and post-intervention. On the EQ (Baron-Cohen & Wheelwright, 2004), a two-tailed t-test for paired samples (repeated measures) indicated that there was no significant increase in empathy scores from Pre-Intervention to Post-Intervention ($N = 15$), $t\ (14) = -1.85$, $p > 0.05$. The eta squared statistic (0.20) indicated a large effect size (based on guidelines from Cohen, 1988). On the IRI (Davis, 1980), a two-tailed t-test for paired samples (repeated measures) indicated that there was no significant increase in empathy scores from Pre-Intervention to Post-Intervention ($N = 15$), $t\ (14) = -.97$, $p > 0.05$. The eta squared statistic (0.12) indicated a moderate effect size. None of the sub-scales of the IRI (Davis, 1980) produced a significant effect from Pre-Intervention to Post-Intervention as seen in Table 8.

The differences in scores on each scenario of the CMEM (Fernandez, Marshall, Lightbody & O'Sullivan, 1999) could not be computed due to the small sample size that occurred as a result of the missing data on the pre-intervention questionnaires. However, each the parts of each scenario that were complete on the pre-intervention were investigated and it was found that for Part A on Scenario One of the CMEM (Fernandez et al, 1999), there was no significant increase from Pre-Intervention ($M = 204.93$, $SD = 30.42$) to Post-Intervention ($M = 208.53$, $SD = 31.55$, $t\ (14) = -.41$, $p > 0.05$). The eta squared statistic (0.01) indicated a small effect size. For Part A on Scenario Two of the CMEM (Fernandez et al, 1999), there was a significant increase from Pre-Intervention ($M = 248.62$, $SD = 35.54$) to Post-Intervention ($M = 268.54$, $SD = 28.40$, $t\ (12) = -2.65$, $p < 0.05$). The eta squared statistic (0.37) indicated a large effect

size. For Part B on Scenario Three of the CMEM (Fernandez et al, 1999), there was no significant increase from Pre-Intervention ($M = 159.50$, $SD = 23.64$) to Post-Intervention ($M = 174.10$, $SD = 16.80$, $t\,(9) = -1.80$, $p > 0.05$). The eta squared statistic (0.26) indicated a large effect size.

This data does not provide support for the second hypothesis of this research that empathy levels will increase after intervention as measured by the empathy questionnaires, except for on Part A on Scenario Two on the CMEM (Fernandez et al, 1999) where a significant result was found.

Table 8
Analysis of Differences Between Mean Scores on the IRI Sub-scales from Pre-Intervention to Post-Intervention and Post-Intervention to Follow-Up.

IRI Subscale	*N*	*t*	*df*	*Sig.(2 tailed)*	*eta²*
Pre- to Post-Intervention					
PT	19	-.26	18	.80	0.00
EC	18	-1.22	17	.24	0.08
FS	19	.046	18	.96	0.00
PD	16	.69	15	.50	0.03
Post-Intervention to Follow-Up					
PT	12	-.65	11	.53	0.04
EC	12	.07	11	.94	0.00
FS	12	.53	11	.61	0.03
PD	10	.35	9	.74	0.01

NOTE: PT = Perspective Taking sub-scale, EC = Empathic Concern sub-scale, FS = Fantasy sub-scale, PD = Personal Distress sub-scale

To assess the third hypothesis (that empathy levels attained after intervention will be maintained at three month follow up), paired samples (repeated measures) t-tests were calculated to compare the differences in the mean scores post-intervention and follow-up. On the EQ (Baron-Cohen & Wheelwright, 2004) there was no significant

difference from Post-Intervention to Follow-up on this scale ($N = 8$), t (7) = .72, $p > 0.05$. The eta squared statistic (0.07) indicated a moderate effect size. On the IRI (Davis, 1980) total score there was also no significant increase from Post-Intervention to Follow-up ($N = 10$), t (9) = 1.55, $p > 0.05$. The eta squared statistic (0.21) indicated a large effect size. The subscales of the IRI (Davis, 1980) did not produce a significant effect either from Post-Intervention to Follow-up as shown in Table 8.

Paired-samples t-tests were conducted to evaluate differences in sex offenders scores on each scenario of the CMEM (Fernandez et al., 1999) from Post-Intervention to three-month Follow Up. For Scenario One, there was a significantly different increase in empathy score from Post-Intervention ($M = 342.57$, $SD = 59.02$) to Follow-Up ($M = 376.00$, $SD = 62.55$, t (6) = -2.62, $p < 0.05$). The eta squared statistic (0.53) indicated a large effect size. For Scenario Two, there was no significantly different increase in empathy score from Post-Intervention ($M = 433.10$, $SD = 41.79$) to Follow-Up ($M = 441.10$, $SD = 44.41$, t (9) = -1.40, $p > 0.05$). The eta squared statistic (0.18) indicated a large effect size. For Scenario Three, there was no significantly different increase in empathy score from Post-Intervention ($M = 427.88$, $SD = 58.44$) to Follow-Up ($M = 437.00$, $SD = 49.03$, t (7) = -.78, $p > 0.05$). The eta squared statistic (0.08) indicated a moderate effect size.

There were no significant findings of difference in the means from post-intervention to three-month follow-up, with the exception of Scenario One of the CMEM (Fernandez et al., 1999), which could indicate support for the third hypothesis of this research that empathy levels from post-intervention to three-month follow-up was maintained. Caution needs to be applied to these inferences however, due to the small sample size.

The fourth hypothesis for the research was that the child sex offenders in this sample would show the greatest empathy deficit for their own victim on the CMEM (Fernandez et al., 1999). A one-way repeated measures ANOVA was conducted to compare Post-Intervention scores on the CMEM (Fernandez et al., 1999) at Scenario One, Scenario Two, and Scenario Three. There was a significant effect for Scenario [Wilks' Lambda = .20, $F(2, 14) = 27.98$, $p < 0.0005$, multivariate partial eta squared = .80]. A further one-way repeated measures ANOVA was conducted to compare Follow-Up scores on the CMEM (Fernandez et al., 1999) at Scenario One, Scenario Two, and Scenario Three. There was a significant effect for Scenario [Wilks' Lambda = .13, $F(2, 6) = 20.74$, $p < 0.01$, multivariate partial eta squared = .87] indicating some differences in the means. To investigate this further the descriptive statistics for the CMEM (Fernandez et al., 1999) were evaluated as shown in Table 9.

On examination of the descriptive statistics for the CMEM (Fernandez et al., 1999), it was found that the results from the scores of the sample in this research do not support the hypothesis that child sexual offenders will show the greatest empathy deficit for their own victim. The mean scores for this sample, show that similar levels of empathy for both the victim of general sexual offending and their own victim. This study showed the greatest deficit in empathy towards the accident victim across all three time conditions, which is contrary to the scores from previous studies, whom had previously hypothesised the greatest empathy deficit on the offenders' own victim.

Table 9
Comparison of the Mean Total Scores on the CMEM found in the Present Study with the Scores from Previous Studies

Study	Sample	*N*	*M*	*SD*
Present Study	NZ Child Sexual Offenders			
Scenario 1 (Pre)		5	328.00	41.16
Scenario 1 (Post)		23	344.70	56.62
Scenario 1 (FUp)		9	377.44	58.26
Scenario 2 (Pre)		5	410.80	53.11
Scenario 2 (Post)		25	423.64	45.92
Scenario 2 (FUp)		10	441.10	44.41
Scenario 3 (Pre)		3	410.33	67.00
Scenario 3 (Post)		19	424.89	43.22
Scenario 3 (FUp)		11	439.82	46.22
Fernandez, Marshall, Lightbody & O'Sullivan (1999)	Canadian Child Molesters	29		
Scenario 1			277.62	61.06
Scenario 2			284.76	101.47
Scenario 3			173.59	127.42
Marshall, Hamilton, & Fernandez (2001)	Canadian Child Molesters	34		
Scenario 1			302.0	
Scenario 2			343.1	
Scenario 3			249.0	

NOTE: Pre = Pre-Intervention, Post = Post-Intervention, FUp = Three month follow-up

Summary of Findings

There was some support for the hypothesis that child sexual offenders will have lower empathy levels than non-sexual offending populations on the EQ (Baron-Cohen & Wheelwright, 2004) and variations on the IRI (Davis, 1980), however it did appear to be lower than factory workers on each subscale and lower than students on the fantasy sub-scale. This study did not find support for a significant increase in empathy levels after intervention with the empathy-training module; however, this could be due to the small

sample size, and methodological error that occurred. This research did not support the hypothesis that the greatest deficit in empathy for child sexual offenders would be for their own victim. Reasonable correlations were found between each of the scales used in this research.

Discussion

The aim of the current research was to investigate the effectiveness of an empathy training module in a New Zealand Special Treatment Unit for child sexual offenders, and compare results with previously reported studies.

For the purpose of this discussion, the main findings from the present study will be discussed in relation to findings from previous empathy research. The researcher will endeavour to provide explanation for any discrepancies between the findings. Methodological flaws in the present study and the implications of the findings for future research will then be discussed.

Hypothesis One

It was hypothesised that empathy in the child sexual offender sample prior to intervention by the empathy training module would be lower than non-sexual offending populations' scores as measured by the generalised empathy measures, the EQ (Baron-Cohen & Wheelwright, 2004) and IRI (Davis, 1980). From the results of this study, it was concluded that empathy in this sample of child sexual offenders, although not significantly different (as no statistical analysis was completed), appeared to be only slightly lower than non-sexual offending populations as reported in previous research by Salter (1988). Statistical analysis of the means of each study, or the use of a matched control group of non-offenders would need to be conducted in order to provide sufficient evidence to support this hypothesis. Furthermore, the scores in this sample did not indicate any deficit in empathy, that is, although the scores are slightly lower than non-sex offending populations they are still not within the range to be

considered deficit in empathy. This could provide support for the prior research conducted by Marshall et al. (1995) that claimed sex offenders do not lack generalised empathy (as measured by general empathy measures such as the IRI).

As this was the first time the EQ (Baron-Cohen & Wheelwright, 2004) was used with this particular population, it shows promise as a measure of general empathy. It was easy to use and produced significant correlations with the perspective taking (r = .608) and empathic concern (r = .506) subscales of the IRI (Davis, 1980). Further research with a larger sample of these offenders would need to be conducted in order to investigate whether this measure is able to discriminate better than the IRI (Davis, 1980), which to date has produced mixed results in the research.

With regards to the lack of support of the hypotheses that child sex offenders would have lower empathy scores it may be that as noted in the method of this research, the participants in this study were subject to mild deception, that is, they were told this research was evaluating the effectiveness of the treatment programme, not empathy specifically. As there was no measure of social desirability responding, it is difficult to know whether this had an impact on the results, and whether this evaluation apprehension could potentially offer threat to the external validity of this study (Coolican, 1994). It is possible that the scores of participants in this study were elevated due to the participants being near the end of their sentences, and attempts to create a favourable impression despite attempts by the researcher to reduce this phenomenon by concealing the aim of the research, guaranteeing confidentiality, and treatment would not depend on

their participation, and by conducting the research as 'an outsider' to the treatment team, that is it was emphasised that this research was being conducted by Massey University and the treatment team would not access the individuals' results. Also linked to attempts to create a good impression, it may well be that due to stereotyping and the negativity that generally surrounds this population in society, the respondents may have attempted to present a favourable image to an 'outsider'.

Interestingly, Marshall et al.'s (1993) study reported results that demonstrated that a community based child molester sample produced mean scores (M = 46.75) that were much lower than the incarcerated child molesters (M = 60.9) in their study. The researchers did not offer explanation for the variation in the scores, however, it would seem that this may provide evidence for Mullen's (2000) claim that incarcerated offenders may respond to create a more favourable impression due to their incarceration. It is probable that the community based offenders in Marshall et al.'s (1993) study were responding more honestly as their release is not dependent on making a good impression and their scores may reflect more accurately the deficit of empathy present in the sex offending population. Unfortunately, the answers to these inferences will not be known unless a measure of social desirability is incorporated into the study, therefore it would be advisable to include a measure of social desirability for future research of this type in order to be able to make more solid claims on this matter and avoid threats to the validity of the study (Coolican, 1994).

Further to the claim that child sexual offenders have less empathy than non-sexual offending populations, although empathy was assessed prior to any interventions, at the assessment stage for the Special Treatment Unit, it should be acknowledged that due to the entry requirements, all the Unit participants were near the end of their sentence and were required to accept their offending (or at least part of it) and be motivated to address their offending as part of acceptance into the Unit. The time that this research was conducted (with regards to length of time after the offence) may give a false impression of the level of empathy in this population. It was noted in the introduction of this research that it was purported sex offenders' lack of empathy and this is what could make it possible for them to offend (Joliffe & Farrington, 2004). The best indication of whether this is true or not, would be the levels of empathy prior to the offending. Obviously, it is highly unlikely that this data would be able to be gathered, nor would it be ethical to gather it, however ascertaining the levels of empathy in sex offenders at the beginning of their sentence may give a more accurate view of their potential deficit in empathy without the confounding effect of prolonged incarceration. This would also require long term follow-up studies to assess probable change in empathy over time, which would provide support for the theory that empathy is not a fixed disposition and changes over time (Polaschek, 2003; McGrath et al., 1988). It may be that through personal development and moving through the cycle of change has had an effect on an individual's empathy levels, and this history could threaten the internal validity of the study (Coolican, 1994), and potentially confound the results of research such as this current study. So, the empathy levels measured at the start of this study may not be a true reflection of the empathy at the time of the offence and therefore it is not certain

whether generalised empathy deficits contribute to offending behaviour (or not). This issue could provide explanation for the findings that sex offender generalised empathy does not differ from non-sex offender populations.

The debate surrounding what is empathy and how to measure it also has implications on these findings. It was noted that the EQ (Baron-Cohen & Wheelwright, 2004) is a relatively new measure and although it appeared to correlate well with the IRI (Davis, 1980), the debate continues as to whether each of these measures are actually measuring empathy or some other construct (Hornblow, 1980). The difficulty around this debate lies in the fact that the construct of empathy continues to be deficit of an agreed on definition or description of what empathy entails, as discussed in the introduction of this study. This issue will continue to impact on research in this area until there is an agreed on definition of this construct, as the lack of construct validity of the measures potentially reduces the impact of results from studies in this field as it is not certain whether they reflect the issue of empathy or some other construct.

Hypothesis Two

The results of this study did not provide any significant findings to support the hypothesis that empathy levels on all three measures will increase after the intervention of the empathy training module. Therefore, it can not be ruled out that the results were likely to have occurred as a result of chance. It is noted that the effect sizes reported in the results section on the EQ (Baron-Cohen & Wheelwright, 2004) were large, and the effect size reported for the IRI (Davis, 1980) was moderate (based on Cohen's (1988) guidelines), indicating some

'strength of association' between the pre-intervention and post-intervention scores. On the IRI (Davis, 1980) subscales and CMEM (Fernandez et al., 1999), the reported effect sizes were mostly small, with the exception of the Empathic Concern subscale on the IRI (Davis, 1980) which produced a moderate effect size, and Scenario Two of the CMEM (Fernandez et al., 1999) which produced large effect sizes. As noted in Pallant (2005), the Eta squared statistics represent how much variance in empathy can be explained by the intervention. Despite failing to reach statistical significance, this provides some favour for the results of this study. It is likely that the lack of significance is due to the small sample size, and hence loss of power. Due to this, the results of this study should be treated with caution.

Further, the high empathy scores across the measures prior to the intervention could also have implications for the treatment effect i.e. it may appear that the effect was smaller than it actually was.

The question as to whether the intervention is actually focused on empathy or some other construct could also have a bearing on the results of this study. As yet, there is no agreed on definition of empathy (Moore, 1990) and therefore, treatments may not actually tap into the construct of empathy. If this was so, then treatment gains would not be evident. It was noted at the beginning of this research that empathy training features in many prison treatment programmes around the world (Joliffe & Farrington, 2004), including both of New Zealand's Special Treatment programmes. Despite this, there has been little research on this particular aspect of the programme, with the exception of Marshall and his

colleagues' research around victim specific and general empathy (Marshall et al., 1995). This researcher does not propose that the empathy training be dropped but clearly further research in this area is required to investigate this phenomenon.

Other probable sources of error in reliability of the results of this study could be temporary individual factors (Salkind, 2003), such as fatigue, health motivation or the participants emotional state at the time of administration and could therefore impact on treatment outcome results. Emotionality could have an effect on choices and level of empathy portrayed. Although the questionnaires were administered at the same time of the day, other confounding variables relating to the participants life could not be controlled, for example, they may have recently had a family visit (of lack of one) which could effect empathy if we accept that it is a process (Smith, 1973) or situationally specific (Hare, 1993). This could wrongly be presumed to be variation (or lack of increase) in scores due to intervention.

In this study, the pre-intervention scores on the CMEM (Fernandez et al., 1999) are confounded by methodological errors made in the printing of the pre-intervention questionnaires to the first two sub-groups (13 participants). Three sections of the questionnaire were omitted – Scenario One Part B, Scenario Two Part B, and Scenario Three Part A. This amounted to nearly 50% (70 questions out of 150 questions) of the data missing. This error was rectified for the post-intervention administration of the questionnaires, and remaining sub-group, however, it has caused a large amount of non-random missing data which has

affected the results of the comparison from pre-intervention to post-intervention due to a very low sample size. This error arose from the researcher not understanding the questionnaire design instructions, and not piloting the questionnaires before use with the study's sample. It is recommended that a pilot study be conducted in future and all questionnaires checked by more than one person. It also would be useful for the design format to be shown in the appendix of the article introducing the measure, rather than just written instructions.

Hypothesis Three

It was hypothesised that the empathy levels attained immediately after the intervention will be maintained at three month follow-up. The statistical analyses of this study did not provide any significant findings to demonstrate differences in the mean scores from post-intervention to follow-up, therefore it could be concluded that the empathy levels from post-intervention were maintained at three month follow up. This is further supported by the fact that the means on each measure at follow up are generally similar to the post-intervention score, although there are some exceptions. On inspection of the raw data and some of the scale means, it appeared that some participants' scores dropped from post-intervention to follow-up. This could highlight that the increase demonstrated in post-intervention scores could be due to the Recency Effect, that is, the empathy scores increased post-intervention due to the concept being fresh in the minds of the participants, and at follow-up three months later, the concepts have been forgotten or put to the back of their minds. This outcome (no change in empathy levels) could also provide support against the concern that

continuing through the treatment programme can have a confounding effect on follow-up scores for empathy.

One of the sub-groups' follow-up data was not collected due to the due date for collection falling outside the timeframe of this research. This limited the follow-up sample number to 13. As stated previously, due to the small sample size these results should be viewed with caution.

It is of note that the follow-up scores were obtained whilst the participants were still incarcerated, and at the time, close to their release dates. This could have had a impact on the follow-up scores as participants may have continued to attempt to create a favourable impression by presenting as 'empathic' and over represent treatment gains in order to attain release, as mentioned earlier in this discussion.

It is noted that there were still high numbers of missing data on the CMEM (Fernandez et al., 1999) at follow-up, even when the full questionnaire was administered. This missing data appeared to be due to the participants choosing not to provide an answer to certain questions, rather than random occurrence. It is likely that this was due to the personal nature and intensity of the questions on the CMEM (Fernandez et al., 1999) which are very specific and relate to a sensitive topic. Review of the raw data did not show any particular participant or question to be regularly missing data, and the questions missed also varied over time condition, that is, it was noted that a single participant did not necessarily miss the same question on the next administration. Although

participants were encouraged to answer every question, this was difficult to prevent. The questionnaires were checked by the researcher after administration, but due to the quantity of questions, it was difficult to note all missing responses. A written prompt at the end of each page for the participant to ensure all questions are answered, or computer administration of these questionnaires might aide in eliminating missing data selectively by having the participant prompted before completion to go back to the missed questions.

Hypothesis Four

The fourth hypothesis of this study proposed that on the CMEM (Fernandez et al., 1999), child sexual offenders would show the greatest empathy deficit towards their own victim. This is one of the latest theories in empathy research, that child sexual offenders' empathy deficit is victim specific (Marshall et al., 1995). Inspection of the mean scores from this study showed considerable difference from previous studies. The current study's means for their own victim (Scenario Three) were much higher than the previous studies samples over each of the three time conditions. Also, the current study's mean scores for the accident victim (Scenario One) were the lowest overall, demonstrating the greatest empathy deficit for this child out of all three scenarios. This is contrary to previous research where the accident victim had elicited the greatest empathy scores and their own victim the least. It is difficult to say why these differences have occurred, but could be due to the current sample being at a Special Treatment Unit, and the participants may have higher empathy towards their victim due to their current environment, more advanced motivation than the other samples or trying to create a good impression as already discussed. Incidentally,

the two Canadian studies noted in the results of this research were of incarcerated child molesters, but it was not stipulated whether these participants were at Special Treatment Units.

The Analysis of Variances (ANOVAs) conducted on the scenarios at post-intervention and follow-up revealed a significant difference in the means. However, a post-hoc Tukey honestly significant difference test should have been conducted to confirm where this difference lies. The pre-intervention scenarios were not able to be compared due to the large amounts of missing data as stated earlier. Inferences therefore can not be made from these results.

Limitations of the study

The current research had a number of theoretical and methodological limitations that could be addressed by further research in this area. A number of these have already been mentioned throughout this research. Firstly, the lack of an agreed on definition of the construct of empathy compromises the construct validity of not only the measures used to assess empathy, but also the training to increase empathy. The measures chosen for this research each had reported reliability and validity figures that were favourable, and to minimise mono-method bias, this research used three questionnaires, each purported to measure empathy. The definition of empathy chosen for this research was 'the ability to understand and share in another's emotional state or context' (Cohen & Strayer, cited in Joliffe & Farrington, 204, p.442). The researcher felt that each of the measures used in this study demonstrated face validity for assessment of the construct of empathy based on this definition. Despite this, as with other research in this

area, a lack of agreed on definition of empathy limits the generalisability of this research.

The sample size in this research is also a limitation. As noted in the introduction of this research, research has been conducted with relatively small sample sizes due to the access issues such and finding sufficient offenders to use in the research.

Another limitation of this research, and most empathy studies, entails the use of self-report questionnaires. As previously stated, the use of this type of questionnaire raises questions around accuracy of the responses, and response biases. A variety of measurement techniques would possibly be more suited for investigating the concept of empathy, particularly making use of observations of behaviours from significant others.

A degree of deception was used in this study to try and eliminate 'hypothesis guessing' from the participants (Coolican, 1994). However, the participants may have 'guessed' what the measures were assessing and responded in ways to create a good impression, which compromises the external validity of this study. The probable social desirability responding has also been mentioned as a potential limitation of this research, as it could have confounded the results.

It was noted that there were methodological errors made at the start of the research which had an impact on the results and sample size of this study. Other considerations are the selection bias, that is, participants were from a specialised

population (child sexual offenders in a Special Treatment Unit in New Zealand). Due to this specialised sample, which included only those that volunteered for the study, there is no ability to generalise the results to other child sexual offenders. Also, using only complete cases in the results section may have biased results and also limit generalisability.

The first two sub-groups' pre-intervention questionnaires were administered by a Psychologist Assistant from the Special Treatment Unit. It was noted that the groups appeared to have more questions and missing data (not including the non-random missing data from the methodological error mentioned previously) compared to the administrations conducted by the researcher. Results could have been confounded by having two different administrators. Also, the groups who had the Psychologist Assistant may have linked this with the treatment, and responded to create a good impression (evaluation apprehension), as mentioned previously, thereby potentially elevating pre-intervention results.

A number of issues arose around the CMEM (Fernandez et al., 1999). During administration of the Pre-intervention questionnaires, a number of participants asked questions around the age of the children in the scenarios. Some participants claimed that the child's age should be stated, and that this would be relevant to what response they selected. This could be investigated further to see if the age does have an effect of varying the responses. For the purpose of this research, the participants were told 'it is not stated', and left to the respondent to make their own inferences, rather than contaminate or lead the answers. This issue could highlight the activation of cognitive distortions in

these respondents. For example, in the minds of some offenders perhaps it is would OK for the child victim to be 11 years of age, but not OK for the victim to be 3 years of age (that is the accident and general sex abuse victims). It would have been interesting to investigate with the participants who asked about the ages to check what that was about; however, the researcher did not want to confound the results.

Another question that arose for the CMEM (Fernandez et al., 1999) was whether the respondents answer the questions how they feel presently or at the time of their offending. This was not stated in the questionnaire article or instructions. The researcher told the participants to answer in the present so as to keep it consistent with subsequent administrations and may highlight the change (or lack of it) over each administration. Also, potentially offenders could be serving time for historical offences (eg 20 years ago) and it would be difficult to have an accurate memory of each emotion and thought at that time. This issue supports the previous discussion of the need to administer the measures close to the time of offence to gain an accurate gauge of the levels of empathy at the time of the offending, or at the least near the beginning of incarceration. It would be of interest to know whether this issue arose in other studies and how they handled it, as this is not stated in the research of this measure.

Finally, although the data of the research does not show a significant increase in empathy levels, it was observed by the researcher that the groups' behaviours during the questionnaire administration were more sombre during the follow-up administration than the pre-intervention. In fact, the treatment team was alerted

regarding one participant who was upset on completion of the questionnaires at follow-up and told the researcher he was upset because he 'now understands what he has done [to his victim]'. These observations highlight that in empathy research it would be valuable to have some form of behavioural observation including reports from significant others.

Future Research

Research in empathy and sexual offending is still in the early stages. A number of potential research questions for the future have been raised throughout this research. Foremost would be establishing an agreed on definition of the construct of empathy and then conducting comparison studies across a range of time conditions and populations. Further research is needed with the use of the empathy questionnaires, particularly the Empathy Quotient (Baron-Cohen & Wheelwright, 2004) and Child Molester Empathy Measure (Fernandez et al., 1999). To build on this current study, it would be worthwhile to conduct a long term follow-up study with a larger sample size to further investigate the effectiveness of treatment. It would also be useful to obtain the scores for child sexual offenders at the beginning of their incarceration, rather than so late in their sentence, when their empathy scores may not necessarily reflect how they were at the time of the offending.

Future research should also consider the use of random assignment to a number of different groups, where ethically feasible, such as one group subject to minor deception (i.e. not told what the study is) and another group informed of the aim of the study to see how this affects the results. It could also include a matched

control group such as child molesters who are incarcerated, but not undergoing any treatment in order to evaluate the effectiveness of treatment.

Finally, it would be useful to administer a measure of cognitive distortions, such as Abel's (1989) alongside the empathy measures at each time condition to ascertain how these vary as a result of change in empathy and/or treatment.

Conclusion

The present study did not find support for the effectiveness of an empathy training module for child sex offenders in a New Zealand setting, however these results should be treated with caution due to the limitations of the current study such as small sample size and methodological errors that occurred. The current study did produce interesting results on the Child Molester Empathy Measure (CMEM: Fernandez et al., 1999), in particular, findings contrary to previous studies that child sex offenders in this sample demonstrated greatest empathy towards their own victims.

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Evaluation of Treatment Project

INFORMATION SHEET

Researcher(s) Introduction

Hello, my name is Tracy Smith. I am a Masters of Arts degree student at Massey University and I am conducting a project here at Te Piriti as the research component of my degree.

Mei Wah Williams, a lecturer at Massey University is the supervisor for this project. Any enquiries regarding this project can be directed to either Mei or myself, at Massey University, School of Psychology, Private Bag 102 904, North Shore MSC.

This project is designed to evaluate the effectiveness of this special treatment programme. It is hoped that this study will help improve the treatment programme, and increase our knowledge in this area and the development of future interventions.

Participant Recruitment

- You are invited to participate in this research, and can be reassured that you will not be disadvantaged by your decision, whether or not you decide to participate in this research.
- Your treatment and parole options will not be effected in any way by your decision.

Project Procedures

- The data in this study will be used for the thesis report and may be published in scholarly journals.
- No identifying information or names will be used in the report, or disclosed to any persons other than my supervisor and I.
- The data for this project will be stored in a locked cabinet, which only I will have access to.
- The data specific to this project will be destroyed (by shredding) five years after the research is completed.
- You may receive a summary of the findings if you wish, by providing me with a postal address.

Participant involvement

You will be asked to fill in questionnaires that ask about your opinions on a range of things. These questionnaires will be given on up to four separate occasions and will be administered and collected by me. It is expected that it will take no more than about 30 minutes to complete the questionnaires. I also ask your permission for access to your scores on the tests you were given by the treatment team at the start of your assessment, this will be collated as a group and compared with other studies done.

It is not anticipated that this research will cause any harm to you, although some may experience mild discomfort around the nature of some of the questions. If at any time you feel uncomfortable or distressed by the procedures or content of this research you can discuss this with your therapist or psychologist.

Participant's Rights

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- *decline to answer any particular question;*
- *withdraw from the study at any time [data can only be removed prior to the thesis being printed];*
- *ask any questions about the study at any time during participation;*
- *provide information on the understanding that your name will not be used;*
- *be given access to a summary of the project findings when it is concluded.*

Committee Approval Statement

This project has been reviewed and approved by the Massey University Human Ethics Committee, ALB Application 04/090. If you have any concerns about the conduct of this research, please contact Associate Professor Kerry Chamberlain, Chair, Massey University Campus Human Ethics Committee: Albany, telephone 09 414 0800 x9078, email humanethicsalb@massey.ac.nz.

THANK YOU FOR CONSIDERING THIS INVITATION. I LOOK FORWARD TO WORKING WITH YOU ON THIS PROJECT. TRACY.

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Evaluation of Treatment Project 2005

PARTICIPANT CONSENT FORM

This consent form will be held for a period of five (5) years

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree to participate in this study under the conditions set out in the Information Sheet.

Signature: ..... **Date:** .....

Full Name - printed .....

APPENDIX C

The questionnaires used in this study are presented in the following order:

The Empathy Quotient (EQ: Baron-Cohen and Wheelwright, 2004)
The Interpersonal Reactivity Index (IRI: Davis, 1980)
The Child Molester Empathy Measure (CMEM: Fernandez et al., 1999)

QUESTIONNAIRE #1

Below is a list of statements. Please read each statement carefully and rate how strongly you agree or disagree with it by circling the answer which fits closest to your view. There are no right or wrong answers, or trick questions.

Examples	Strongly agree	Slightly agree	Slightly disagree	Strongly disagree
E1. I would be very upset if I couldn't listen to music everyday.	1	2	3	4
E2. I prefer to speak to my friends on the phone rather than write letters to them.	1	2	3	4
E3. I have no desire to travel to different parts of the world.	1	2	3	4
E4. I prefer to read than dance.	1	2	3	4
1. I can easily tell if someone else wants to enter a conversation.	1	2	3	4
2. I prefer animals to humans.	1	2	3	4
3. I try to keep up with the current trends and fashions.	1	2	3	4
4. I find it difficult to explain to others things that I understand easily, when they don't understand it first time.	1	2	3	4
5. I dream most nights.	1	2	3	4
6. I really enjoy caring for other people.	1	2	3	4
7. I try to solve my own problems rather than discussing them with others.	1	2	3	4
8. I find it hard to know what to do in a social situation.	1	2	3	4
9. I am at my best first thing in the morning.	1	2	3	4
10. People often tell me that I went too far in driving my point home in a discussion.	1	2	3	4
11. It doesn't bother me too much if I am late meeting a friend.	1	2	3	4
12. Friendships and relationships are just too difficult, so I tend not to bother with them.	1	2	3	4
13. I would never break a law, no matter how minor.	1	2	3	4
14. I often find it difficult to judge if something is rude or polite.	1	2	3	4
15. In a conversation, I tend to focus on my own thoughts rather than on what my listener might be thinking.	1	2	3	4
16. I prefer practical jokes to verbal humor.	1	2	3	4
17. I live life for today rather than the future.	1	2	3	4
18. When I was a child, I enjoyed cutting up worms to see what would happen to them.	1	2	3	4
19. I can pick up quickly if someone says one thing but means another.	1	2	3	4
20. I tend to have very strong opinions about morality.	1	2	3	4
21. It is hard for me to see why things upset people so much.	1	2	3	4
22. I find it easy to put myself in somebody else's shoes.	1	2	3	4
23. I think that good manners are the most important thing a parent can teach their child.	1	2	3	4
24. I like to do things on the spur of the moment.	1	2	3	4
25. I am good at predicting how someone will feel.	1	2	3	4
26. I am quick to spot when someone in a group is feeling awkward or uncomfortable.	1	2	3	4
27. If I say something that someone else is offended by, I think that that's their problem, not mine.	1	2	3	4

	Strongly agree	Slightly agree	Slightly disagree	Strongly disagree
28. If anyone asked me if I liked their haircut, I would reply truthfully, even if I didn't like it.	1	2	3	4
29. I can't always see why someone should have felt offended by a remark.	1	2	3	4
30. People often tell me that I am very unpredictable.	1	2	3	4
31. I enjoy being the center of attention at any social gathering.	1	2	3	4
32. Seeing people cry doesn't really upset me.	1	2	3	4
33. I enjoy having discussions about politics.	1	2	3	4
34. I am very blunt, which some people take to be rudeness, even though this is unintentional.	1	2	3	4
35. I don't tend to find social situations confusing.	1	2	3	4
36. Other people tell me I am good at understanding how they are feeling and what they are thinking.	1	2	3	4
37. When I talk to people, I tend to talk about their experiences rather than my own.	1	2	3	4
38. It upsets me to see an animal in pain.	1	2	3	4
39. I am able to make decisions without being influenced by people's feelings.	1	2	3	4
40. I can't relax until I have done everything I had planned to do that day.	1	2	3	4
41. I can easily tell if someone else is interested or bored with what I am saying.	1	2	3	4
42. I get upset if I see people suffering on news programmes.	1	2	3	4
43. Friends usually talk to me about their problems as they say that I am very understanding.	1	2	3	4
44. I can sense if I am intruding, even if the other person doesn't tell me.	1	2	3	4
45. I often start new hobbies but quickly become bored with them and move onto something else.	1	2	3	4
46. People sometimes tell me that I have gone too far with teasing.	1	2	3	4
47. I would be too nervous to go on a big rollercoaster.	1	2	3	4
48. Other people often say that I am insensitive, though I don't always see why.	1	2	3	4
49. If I see a stranger in a group, I think that it is up to them to make an effort to join in.	1	2	3	4
50. I usually stay emotionally detached when watching a film.	1	2	3	4
51. I like to be very organized in day-to-day life and often make lists of the chores I have to do.	1	2	3	4
52. I can tune into how someone else feels rapidly and intuitively.	1	2	3	4
53. I don't like to take risks.	1	2	3	4
54. I can easily work out what another person might want to talk about.	1	2	3	4
55. I can tell if someone is masking their true emotion.	1	2	3	4
56. Before making a decision I always weigh up the pros and cons.	1	2	3	4
57. I don't consciously work out the rules of social situations.	1	2	3	4
58. I am good at predicting what someone else will do.	1	2	3	4
59. I tend to get emotionally involved with a friend's problems.	1	2	3	4
60. I can usually appreciate the other person's viewpoint, even if I don't agree with it.	1	2	3	4

QUESTIONNAIRE #2

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate number on the scale at the top of the page: When you have decided on your answer, circle your response.

READ EACH ITEM CAREFULLY BEFORE RESPONDING.
Answer as honestly as you can. Thank you.

	DOES NOT DESCRIBE ME WELL				DESCRIBES ME VERY WELL
1. I daydream and fantasize, with some regularity, about things that might happen to me.	1	2	3	4	5
2. I often have tender, concerned feelings for people less fortunate than me.	1	2	3	4	5
3. I sometimes find it difficult to see things from the "other guy's" point of view.	1	2	3	4	5
4. Sometimes I don't feel very sorry for other people when they are having problems.	1	2	3	4	5
5. I really get involved with the feelings of the characters in a novel.	1	2	3	4	5
6. In emergency situations, I feel apprehensive and ill-at-ease.	1	2	3	4	5
7. I am usually objective when I watch a movie or play, and I don't often get completely caught up in it.	1	2	3	4	5
8. I try to look at everybody's side of a disagreement before I make a decision.	1	2	3	4	5
9. When I see someone being taken advantage of, I feel kind of protective towards them.	1	2	3	4	5
10. I sometimes feel helpless when I am in the middle of a very emotional situation.	1	2	3	4	5
11. I sometimes try to understand my friends better by imagining how things look from their perspective.	1	2	3	4	5
12. Becoming extremely involved in a good book or movie is somewhat rare for me.	1	2	3	4	5
13. When I see someone get hurt, I tend to remain calm.	1	2	3	4	5
14. Other people's misfortunes do not usually disturb me a great deal.	1	2	3	4	5
15. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.	1	2	3	4	5
16. After seeing a play or movie, I have felt as though I were one of the characters.	1	2	3	4	5
17. Being in a tense emotional situation scares me.	1	2	3	4	5
18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.	1	2	3	4	5

	DOES NOT DESCRIBE ME WELL				DESCRIBES ME VERY WELL
19. I am usually pretty effective in dealing with emergencies.	1	2	3	4	5
20. I am often quite touched by things that I see happen.	1	2	3	4	5
21. I believe that there are two sides to every question and try to look at them both.	1	2	3	4	5
22. I would describe myself as a pretty soft-hearted person.	1	2	3	4	5
23. When I watch a good movie, I can very easily put myself in the place of a leading character.	1	2	3	4	5
24. I tend to lose control during emergencies.	1	2	3	4	5
25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.	1	2	3	4	5
26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.	1	2	3	4	5
27. When I see someone who badly needs help in an emergency, I go to pieces.	1	2	3	4	5
28. Before criticizing somebody, I try to imagine how I would feel if I were in their place.	1	2	3	4	5

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE, PLEASE CONTINUE ONTO THE NEXT PAGE AND COMPLETE THE FINAL QUESTIONNAIRE.

QUESTIONNAIRE #3

Scenario 1:

I want you to think about a child who was disfigured in a car accident and had to spend a month in hospital. This child is now out of the hospital and will live with a permanent disfigurement.

Now I want you to circle the number that best indicates the degree to which you think this child would be expressing the following emotions, thoughts or behaviours. Please circle a response for each statement.

		Not at all				To some degree					Very Much
1.	Guilty	1	2	3	4	5	6	7	8	9	10
2.	Sad	1	2	3	4	5	6	7	8	9	10
3.	Angry	1	2	3	4	5	6	7	8	9	10
4.	Self-confident	1	2	3	4	5	6	7	8	9	10
5.	Nightmares	1	2	3	4	5	6	7	8	9	10
6.	Fearful of close relationships	1	2	3	4	5	6	7	8	9	10
7.	Suicidal thoughts	1	2	3	4	5	6	7	8	9	10
8.	Problems with school work	1	2	3	4	5	6	7	8	9	10
9.	Fearful of being hurt	1	2	3	4	5	6	7	8	9	10
10.	Successful at school	1	2	3	4	5	6	7	8	9	10
11.	Repulsed by sex	1	2	3	4	5	6	7	8	9	10
12.	Well-adjusted attitude to sex	1	2	3	4	5	6	7	8	9	10
13.	Sleep disturbances	1	2	3	4	5	6	7	8	9	10
14.	Feelings of loneliness	1	2	3	4	5	6	7	8	9	10
15.	Withdrawn from others	1	2	3	4	5	6	7	8	9	10
16.	Tense	1	2	3	4	5	6	7	8	9	10
17.	Relaxed	1	2	3	4	5	6	7	8	9	10
18.	Has psychiatric problems	1	2	3	4	5	6	7	8	9	10
19.	Has low energy	1	2	3	4	5	6	7	8	9	10
20.	Shows tendency to blame him/herself for all problems	1	2	3	4	5	6	7	8	9	10
21.	Feelings of helplessness	1	2	3	4	5	6	7	8	9	10
22.	Argues with others	1	2	3	4	5	6	7	8	9	10
23.	Fearful of being alone	1	2	3	4	5	6	7	8	9	10
24.	A tendency to cling to his/her mother	1	2	3	4	5	6	7	8	9	10
25.	Proud of self	1	2	3	4	5	6	7	8	9	10
26.	Is in pain	1	2	3	4	5	6	7	8	9	10
27.	Upset	1	2	3	4	5	6	7	8	9	10
28.	Feels sinful	1	2	3	4	5	6	7	8	9	10
29.	Feels dirty	1	2	3	4	5	6	7	8	9	10
30.	Ashamed	1	2	3	4	5	6	7	8	9	10

Scenario 1:

I want you to think about a child who was disfigured in a car accident and had to spend a month in hospital. This child is now out of the hospital and will live with a permanent disfigurement.

This time, indicate how you feel about what the child has experienced

	Not at all				**To some degree**					**Very Much**
1. Guilty	1	2	3	4	5	6	7	8	9	10
2. Sad	1	2	3	4	5	6	7	8	9	10
3. Angry	1	2	3	4	5	6	7	8	9	10
4. Sexual	1	2	3	4	5	6	7	8	9	10
5. Pain	1	2	3	4	5	6	7	8	9	10
6. Affection	1	2	3	4	5	6	7	8	9	10
7. Upset	1	2	3	4	5	6	7	8	9	10
8. Proud	1	2	3	4	5	6	7	8	9	10
9. Devastated	1	2	3	4	5	6	7	8	9	10
10. Helpless	1	2	3	4	5	6	7	8	9	10
11. Responsible	1	2	3	4	5	6	7	8	9	10
12. Sick	1	2	3	4	5	6	7	8	9	10
13. Good	1	2	3	4	5	6	7	8	9	10
14. Frustrated	1	2	3	4	5	6	7	8	9	10
15. Hopeful	1	2	3	4	5	6	7	8	9	10
16. Trusting	1	2	3	4	5	6	7	8	9	10
17. Ashamed	1	2	3	4	5	6	7	8	9	10
18. Disgusted	1	2	3	4	5	6	7	8	9	10
19. Curious	1	2	3	4	5	6	7	8	9	10
20. Shocked	1	2	3	4	5	6	7	8	9	10

Scenario 2:

I want you to think about a child (boy or girl) who has had sex with an adult male. These sexual acts occurred several times over several months and have now stopped.

Now I want you to circle the number that best indicates the degree to which you think this child would be expressing the following emotions, thoughts or behaviours.

		Not at all				To some degree					Very Much
31.	Guilty	1	2	3	4	5	6	7	8	9	10
32.	Sad	1	2	3	4	5	6	7	8	9	10
33.	Angry	1	2	3	4	5	6	7	8	9	10
34.	Self-confident	1	2	3	4	5	6	7	8	9	10
35.	Nightmares	1	2	3	4	5	6	7	8	9	10
36.	Fearful of close relationships	1	2	3	4	5	6	7	8	9	10
37.	Suicidal thoughts	1	2	3	4	5	6	7	8	9	10
38.	Problems with school work	1	2	3	4	5	6	7	8	9	10
39.	Fearful of being hurt	1	2	3	4	5	6	7	8	9	10
40.	Successful at school	1	2	3	4	5	6	7	8	9	10
41.	Repulsed by sex	1	2	3	4	5	6	7	8	9	10
42.	Well-adjusted attitude to sex	1	2	3	4	5	6	7	8	9	10
43.	Sleep disturbances	1	2	3	4	5	6	7	8	9	10
44.	Feelings of loneliness	1	2	3	4	5	6	7	8	9	10
45.	Withdrawn from others	1	2	3	4	5	6	7	8	9	10
46.	Tense	1	2	3	4	5	6	7	8	9	10
47.	Relaxed	1	2	3	4	5	6	7	8	9	10
48.	Has psychiatric problems	1	2	3	4	5	6	7	8	9	10
49.	Has low energy	1	2	3	4	5	6	7	8	9	10
50.	Shows tendency to blame him/herself for all problems	1	2	3	4	5	6	7	8	9	10
51.	Feelings of helplessness	1	2	3	4	5	6	7	8	9	10
52.	Argues with others	1	2	3	4	5	6	7	8	9	10
53.	Fearful of being alone	1	2	3	4	5	6	7	8	9	10
54.	A tendency to cling to his/her mother	1	2	3	4	5	6	7	8	9	10
55.	Proud of self	1	2	3	4	5	6	7	8	9	10
56.	Is in pain	1	2	3	4	5	6	7	8	9	10
57.	Upset	1	2	3	4	5	6	7	8	9	10
58.	Feels sinful	1	2	3	4	5	6	7	8	9	10
59.	Feels dirty	1	2	3	4	5	6	7	8	9	10
60.	Ashamed	1	2	3	4	5	6	7	8	9	10

Scenario 2:

I want you to think about a child (boy or girl) who has had sex with an adult male. These sexual acts occurred several times over several months and have now stopped.

This time, indicate how <u>you</u> feel about what the child has experienced

	Not at all				**To some degree**					**Very Much**
21. Guilty	1	2	3	4	5	6	7	8	9	10
22. Sad	1	2	3	4	5	6	7	8	9	10
23. Angry	1	2	3	4	5	6	7	8	9	10
24. Sexual	1	2	3	4	5	6	7	8	9	10
25. Pain	1	2	3	4	5	6	7	8	9	10
26. Affection	1	2	3	4	5	6	7	8	9	10
27. Upset	1	2	3	4	5	6	7	8	9	10
28. Proud	1	2	3	4	5	6	7	8	9	10
29. Devastated	1	2	3	4	5	6	7	8	9	10
30. Helpless	1	2	3	4	5	6	7	8	9	10
31. Responsible	1	2	3	4	5	6	7	8	9	10
32. Sick	1	2	3	4	5	6	7	8	9	10
33. Good	1	2	3	4	5	6	7	8	9	10
34. Frustrated	1	2	3	4	5	6	7	8	9	10
35. Hopeful	1	2	3	4	5	6	7	8	9	10
36. Trusting	1	2	3	4	5	6	7	8	9	10
37. Ashamed	1	2	3	4	5	6	7	8	9	10
38. Disgusted	1	2	3	4	5	6	7	8	9	10
39. Curious	1	2	3	4	5	6	7	8	9	10
40. Shocked	1	2	3	4	5	6	7	8	9	10

Scenario 3:

I want you to think about your own victim(s), and the experience they had with you.

Now I want you to circle the number that best indicates the degree to which you think this child would be expressing the following emotions, thoughts or behaviours.

		Not at all				To some degree					Very Much
61.	Guilty	1	2	3	4	5	6	7	8	9	10
62.	Sad	1	2	3	4	5	6	7	8	9	10
63.	Angry	1	2	3	4	5	6	7	8	9	10
64.	Self-confident	1	2	3	4	5	6	7	8	9	10
65.	Nightmares	1	2	3	4	5	6	7	8	9	10
66.	Fearful of close relationships	1	2	3	4	5	6	7	8	9	10
67.	Suicidal thoughts	1	2	3	4	5	6	7	8	9	10
68.	Problems with school work	1	2	3	4	5	6	7	8	9	10
69.	Fearful of being hurt	1	2	3	4	5	6	7	8	9	10
70.	Successful at school	1	2	3	4	5	6	7	8	9	10
71.	Repulsed by sex	1	2	3	4	5	6	7	8	9	10
72.	Well-adjusted attitude to sex	1	2	3	4	5	6	7	8	9	10
73.	Sleep disturbances	1	2	3	4	5	6	7	8	9	10
74.	Feelings of loneliness	1	2	3	4	5	6	7	8	9	10
75.	Withdrawn from others	1	2	3	4	5	6	7	8	9	10
76.	Tense	1	2	3	4	5	6	7	8	9	10
77.	Relaxed	1	2	3	4	5	6	7	8	9	10
78.	Has psychiatric problems	1	2	3	4	5	6	7	8	9	10
79.	Has low energy	1	2	3	4	5	6	7	8	9	10
80.	Shows tendency to blame him/herself for all problems	1	2	3	4	5	6	7	8	9	10
81.	Feelings of helplessness	1	2	3	4	5	6	7	8	9	10
82.	Argues with others	1	2	3	4	5	6	7	8	9	10
83.	Fearful of being alone	1	2	3	4	5	6	7	8	9	10
84.	A tendency to cling to his/her mother	1	2	3	4	5	6	7	8	9	10
85.	Proud of self	1	2	3	4	5	6	7	8	9	10
86.	Is in pain	1	2	3	4	5	6	7	8	9	10
87.	Upset	1	2	3	4	5	6	7	8	9	10
88.	Feels sinful	1	2	3	4	5	6	7	8	9	10
89.	Feels dirty	1	2	3	4	5	6	7	8	9	10
90.	Ashamed	1	2	3	4	5	6	7	8	9	10
91.	Guilty	1	2	3	4	5	6	7	8	9	10
92.	Sad	1	2	3	4	5	6	7	8	9	10

Scenario 3:

I want you to think about your own victim(s), and the experience they had with you.

This time, indicate how <u>you</u> feel about what the child has experienced

	Not at all				To some degree					Very Much
41. Guilty	1	2	3	4	5	6	7	8	9	10
42. Sad	1	2	3	4	5	6	7	8	9	10
43. Angry	1	2	3	4	5	6	7	8	9	10
44. Sexual	1	2	3	4	5	6	7	8	9	10
45. Pain	1	2	3	4	5	6	7	8	9	10
46. Affection	1	2	3	4	5	6	7	8	9	10
47. Upset	1	2	3	4	5	6	7	8	9	10
48. Proud	1	2	3	4	5	6	7	8	9	10
49. Devastated	1	2	3	4	5	6	7	8	9	10
50. Helpless	1	2	3	4	5	6	7	8	9	10
51. Responsible	1	2	3	4	5	6	7	8	9	10
52. Sick	1	2	3	4	5	6	7	8	9	10
53. Good	1	2	3	4	5	6	7	8	9	10
54. Frustrated	1	2	3	4	5	6	7	8	9	10
55. Hopeful	1	2	3	4	5	6	7	8	9	10
56. Trusting	1	2	3	4	5	6	7	8	9	10
57. Ashamed	1	2	3	4	5	6	7	8	9	10
58. Disgusted	1	2	3	4	5	6	7	8	9	10
59. Curious	1	2	3	4	5	6	7	8	9	10
60. Shocked	1	2	3	4	5	6	7	8	9	10

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE. YOUR INPUT IN THIS PROJECT IS VALUED AND APPRECIATED. THANK YOU.