The intergenerational transmission of violence? : The self-report of physical abuse in childhood among violent and non-violent offenders

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The Faculty of Community Services, Education and Social Services.
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EDITH COWAN UNIVERSITY
Western Australia

The Intergenerational Transmission of Violence?
The self-report of physical abuse in childhood among violent and non-violent offenders.

John Dockerill

This thesis is presented as part of the requirements for the award of the Degree of Doctor of Philosophy (Forensic Psychology) of Edith Cowan University.

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ABSTRACT

This study examined the parental disciplinary history of male offenders to explore the relationship between report of childhood physical abuse and subsequent violent offending, based on the concept of intergenerational transmission of violence. The study also examined the relationship between reports of childhood physical abuse and juvenile delinquency together with an examination of the links between physical abuse and anger. Finally, this study explored the relationship between witnessing aggression to other family members and the motivation for subsequent violent offending (hostile motivated versus instrumentally motivated).

Social learning theory provided the theoretical basis for this research. The underlying premise is that families who utilize physically abusive discipline, and/or who model or reinforce the use of aggressive behavior may set the stage for their children to acquire and utilize aggressive behavior in their adult relationships.

One hundred and ninety-nine incarcerated offenders (100 violent offenders and 99 non-violent offenders) participated in this study. Participants were interviewed by research assistants using a structured interview format to obtain information regarding the disciplinary style and experience for each of their direct caregivers, types of disciplinary methods used, injuries emanating from the discipline, together with details of quality and quantity of witnessed abuse of others. A structured interview format was also employed to gather information about participants' record of juvenile delinquency. Participants then completed the Novaco Anger Scale Revised (NAS(R)) and the State-Trait Anger Expression Inventory (STAXI).

Statistical analyses reveal no significant differences between participants in the violent offender group and non-violent offender group on any of the physical abuse variables. Physical abuse variables were subsequently aggregated to form the Abuse Index. Differences between the violent offenders and non-violent offenders on this measure failed to reach statistical significance. Participants in the violent offender...
group scored significantly lower on a sub-scale of the STAXI (Anger Expression/Control) compared with participants in the non-violent offender group. There were no other significant differences between the groups on any other anger variable. The witnessing of the physical abuse of others was significantly related to instrumental violence among participants in the violent offender group.

Whilst there were no significant differences between the groups on the abuse variables, the self-report of physical abuse in childhood was positively correlated with all other variables including juvenile delinquency, anger and offending. Juvenile delinquency and anger were also positively correlated. This provides a model for understanding the relationship between parental style and offending behavior.

Results are then discussed in the context of the contribution of this study to the level of knowledge of the cycle of violence. The limitations of the study are then noted, including issues pertaining to the utilization of retrospective studies. Suggestions for further research include an assessment of participants’ perception of the fairness of physical discipline reported, the inclusion of early attachment history, and the verification of self-reported physical abuse.
I certify that this thesis does not, to the best of my knowledge and belief:

(i) incorporate without acknowledgment any material previously submitted for a degree or diploma in any institution of higher education;

(ii) contain any material previously published or written by another person except where due reference is made in the text; or

(iii) contain any defamatory material.

John Michael Dockerill

Date: 14/2/03
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CHAPTER 1

INTRODUCTION

Introduction to the problem area

Parental disciplinary practices have changed significantly during recent times, notably since Curtis (1963) reported that “Violence breeds violence-perhaps”. There has since developed a substantial body of literature that examines the relationship between physical discipline and abuse in childhood and subsequent violent behaviour.

Historically, children have been considered along with wives as goods and chattels, part of the property of the male head of the house (Andrews, 1991). If the male head of the household used physical violence, there was little concern or attention given to the consequences of such behaviour; this being deemed a ‘private domain’. Indeed, physical punishment was, until very recently, seen as an essential part of normal family disciplinary practice, and a major component of teaching the child pro-social skills and social conformity. Families who failed to discipline their children appropriately were considered to be failing in their parental duties (Andrews, 1991). The philosophy of “spare the rod and spoil the child’ prevailed in many segments of society for many years.

Kempe, Silverman, Steele, Droegemueller and Silver (1962) coined the term “The battered child syndrome” to describe children they saw in hospital emergency departments with serious non-accidental injuries, perpetrated usually by their parents or other direct care-givers. This influential article led to a reconsideration of disciplinary practices, including corporal punishment, that was driven initially by the medical profession, and led in turn to the formation of child abuse units attached to general and
paediatric hospitals. Many such units remain active today, and take a multidisciplinary, psycho-social perspective on the prevention and treatment of child abuse.

Shortly following Kempe et al (1962) paper, Curtis (1963) published a brief paper in the American Journal of Psychiatry in which he speculated on the psychological and psycho-social effects of physical abuse upon the child.

He wrote: -

"It is important that the psychological implications of extreme (physical) treatment of children be kept in mind. One might expect the sequelae would be varied, however, it may be useful to re-emphasise one possible consequence which is overt, obvious and of great public concern and social consequence in its own right; namely the probable tendency of children so treated to become tomorrow's murderers and perpetrators of other crimes of violence" (Curtis, 1963, p. 368).

It is acknowledged from the outset that not all children who are physically abused grow up to become violent delinquents, or adult offenders. However, there is a high proportion of delinquents, particularly violent delinquents, who have been severely abused as young children (Blackburn, 1993). Indeed, many violent adult criminals have histories of extra-ordinary abuse in childhood, mainly physical abuse (Lewis, Mallough & Webb, 1990). According to Kruttschnitt, Wand and Sheble (1987) one of the most consistent findings in the family violence literature is that individuals who were abused or raised in abusive environments during their developmental years are more likely to be abusive adults than individuals who were not abused as children.

Several researchers have indicated that violent offenders are more likely than other types of offenders to report a physically abusive childhood environment (Graham-Bermann, 1998; Kruttschnitt & Dornfield, 1993; Len, 1988; McCord, 1977; Deblinger, McLeer, Atkins, Ralphe & Foa, 1989; Widom, 1989). Other researchers have shown that offenders who were abused as children are no more likely to have committed violent or aggressive crimes than non-abused offenders (Kratcoski & Kratcoski, 1982), and so the research literature is not as consistent as may be believed.
According to Cummings (1993) and Widom (1989), there is little research on the long-term consequences of abusive home environments, in particular physical abuse in the home. Most of the existing literature appears to focus on the effects of current violence among children and adolescents, both delinquent and non-delinquent. (Conaway & Hanson, 1989; Howing, Wodarski, Kurtz, Gaubing, & Herbst, 1990; Widom, 1990). There are other empirical problems evident in the literature on child abuse and its relationship to criminal behaviour, for example, a lack of research that examines the magnitude of the relationship between an abusive childhood and eventual criminal activity (Cummings, 1993). The current study will address these issues by focussing on the early disciplinary history of a group of adult violent offenders and comparing this with a group of non-violent offenders. Furthermore, the severity of abuse (severity being a composite of the frequency of the physical abuse and the level of harm) will be compared with the level of harm perpetrated by violent offenders in their index offence.

Theoretical Framework

The theoretical basis of this study is Alfred Bandura's social learning theory (1976, 1978, 1979, & 1983). According to Cummings (1993), Bandura was of the opinion that much of human behaviour, good and bad, normal and abnormal, is learned primarily by imitation. According to Bandura’s modelling theory, children’s behaviour imitates that of their parent or other care-giver. In aggressive and abusive families this type of modelling sets up and reinforces the learned behaviours the child first acquires and then engages in. A pattern begins to form, and this is called the intergenerational transmission of violence (Zigler & Hall, 1987) or the cycle of violence (Widom, 1989). For the purpose of this study the terms ‘cycle of violence’ and the ‘intergenerational transmission of violence’ will be used interchangeably.

According to social learning theory we learn how to deal with people in the way we observe and deal with each other in our own family network. Thus social learning theory seems to endorse the old adage, “violence breeds violence”. Steinmetz and Straus (1974) have described the family as the “cradle of violence”, whilst Weissmann and Silvern (1994) report that parents who abuse their children generally have had
parents who abused them. Basically, social learning theory holds that the family provides role models for growing children who draw from these early experiences in establishing their own adult role expectations and behaviour (Muenzenmaier, Meyer, Struening, & Ferber, 1993).

How we as a society view violence, corporal punishment and child abuse in some ways determines how we perceive the adult violent offender. Social learning theory provides an effective theoretical foundation for understanding the interaction of behaviour, cognition and environmental influences, and their contribution to the intergenerational transmission of violence. The child who witnesses the physical abuse of others in the family home may well grow up to use violence to accomplish goals, while those who experience the abuse more directly may use violence as a reflection of pervasive hostility (Novaco, 1994).

The history and effects of child abuse and the roots of corporal punishment provide a useful foundation on which to build a framework for examination of contemporary disciplinary practice and social development. These areas are relevant to the following discussion of male offenders in order to give a fuller understanding of how history and tradition provide learning tools for social behaviour.

**Importance of the study**

According to Oliver, Hall and Neuhaus (1993) “Violence is spinning out of control in the United States” (p. 37). This emotionally charged statement reflects the sensationalism generated primarily by the popular press, and the subsequent anxiety, and at times almost hysteria evident in the community with regard to the perception of increasing levels of violence. The literature would suggest that indeed the more serious levels of violent crime, such as murder and manslaughter, have not increased in America in the last fifteen years, and the rate per population has remained fairly constant (Browne & Herbert, 1997). There has however been a significant rise in the
reported incidence of robbery, serious assault and sexual assaults during this period in most western societies (Blackburn, 1993).

The situation appears to be very similar in Australia. A review of Recorded Crime (Australian Bureau of Statistics, 1998) reveals an increasing number of mainly young men being convicted for serious offences against the person in the period 1993 to 1998. On a National level, the annual rate of murder and attempted murder has remained steady with 1.5 per 100,000 persons being recorded. The rate of reported sexual assault has also remained relatively stable on a National basis during the five-year period 1993 to 1998 with a range of 69 to 79 per 100,000 persons. The rate of manslaughter and driving causing death has likewise been relatively constant with a prevalence of 0.21 to 0.26 per 100,000 persons, and 1.26 to 1.40 per 100,000 persons respectively.

On an annual basis assaults in general have been increasing since 1995 when first recorded separately, with a prevalence of 562.91 in 1995 to 709.24 per 100,000 persons in 1998. Robbery is the category with the highest increase during the period 1993 to 1998. The rates have been increasing each year from 12,765 in 1993 to 23,778 in 1998. This represents a victimisation rate of 72 per 100,000 in 1993 to 127 per 100,000 persons in 1998.

Western Australia has recorded the highest increase in victimisation rates in Australia in the period 1993 to 1998. This increase includes robbery, sexual assaults and other assaults (plus other offences against property). Armed robbery has increased from 9.54 to 18.01 per 100,000 persons, whilst unarmed robbery has increased from 12.93 to 21.62 per 100,000 persons. The incidence for all robbery combined has increased from 22.47 to 39.63. During this period the reported incidence of sexual assaults have increased from 26.71 to 45.77 per 100,000 persons. Recordings for assault as a separate category were first reported in 1995 when 430.47 per 100,000 persons were recorded. By 1998 this had risen to 472.78 per 100,000 persons in Western Australia.
The statistics presented above were collated utilising official police arrest and conviction rates on a National and State by State basis, and may well represent an understatement of the true incidence of offending behaviour. A more reliable indication of actual offending rates may be found with reference to victimisation studies (Crime and Safety, Australian Bureau of Statistics, 1998). In the 12 months prior to the 1998 survey it is estimated that there were 79,100 persons aged 15 years or over in Australia who were victims of 117,600 incidents of robbery. Similarly there were 618,300 people the victims of approximately 1.5 million assaults in the year prior to the 1998 survey (Crime and Safety, 1998, 43-44). Children under 15 years of age are not included in Australian victimisation studies, and the rate of assault against children (including child abuse) is not clear.

Child abuse notifications are collated in Australia by the Australian Institute of Health and Welfare, and published in “Child Protection Australia”. The 1997-98 edition reports that the number of notifications of child abuse and neglect has increased considerably over the past decade in most States and Territories; reporting variations notwithstanding. In the 1992-93, 1995-96 and 1997-98 reporting periods there were approximately 73,000, 92,000, and 98,568 notifications respectively. Of the 1997-98 notifications slightly more than 26,000 (or 27%) cases of abuse and neglect were substantiated.

Physical abuse was the most common form of substantiated abuse in four Australian States, including Western Australia. In the period 1997-98 there were 434 (or 39%) substantiated cases of physical abuse in Western Australia. The true incidence of (physical) abuse is unknown, but is probably substantially higher than officially reported cases; family violence remains grossly under reported (Hyman, 1990).

Purpose of the study

From an examination of the literature pertaining to the intergenerational transmission of violence, set in the context of social learning theory, it would be reasonable to conclude that violent offenders will report significantly higher measures
of physical disciplinary experiences in childhood when compared with non-violent offenders.

The literature would further lead to the conclusion that violent offenders would not only experience higher levels of abusive discipline compared with non-violent offenders, but would also report higher levels of observing such behaviour between other people, particularly in the family home. Social learning theory would predict that violent offenders who have witnessed physical abuse will use violence instrumentally in their index offence, as a means to an end rather than as an end in itself as is the case for hostile motivated violence.

The purpose of this study therefore is to test the intergenerational transmission of violence model by comparing the childhood physical disciplinary experiences of violent and non-violent prison based offenders. Furthermore, it is the purpose of this study to examine whether childhood physical disciplinary experiences are related to the latency and profile of juvenile delinquency, and to levels of anger and anger expression by comparing the scores of violent offenders with those of non-violent offenders on anger scales and a juvenile delinquency protocol. Finally, it is the purpose of this study to examine whether vicarious exposure to physical violence in the family environment is related to the motivation for offending behaviour amongst violent offenders. A detailed history of participant self-report of physical abuse in childhood will be taken utilising a modified Physical Abuse Questionnaire developed by Andrews (1993) based on the Conflict Tactic Scale of Gelles and Straus (1987). This scale includes items (slapping, smacking) that many would regard as acceptable corporal punishment and not abuse. However, as in Andrews (1993, 1995), these items have been included in the abuse questionnaire on the theoretical basis of the current study, social learning theory. Based upon the concepts of social learning theory, it will be argued that the frequency of physical discipline, regardless of severity (harm) of discipline, contributes to the intergenerational transmission of violence. Having said this however, it is anticipated that there will be a relationship between the level of abuse experienced as a child and the severity of violent offending (Browne & Herbert, 1987).
As stated by Widom (1994), the terms 'discipline' and 'punishment' have different fundamental definitions. The term punishment originates from the Latin *poena*, and evolves from the same roots as that of penalty and pain. The term punishment usually implies the imposition of a penalty for some misdemeanour; real or imagined (Weston, 1994).

Discipline may involve some form of punishment (Sulzer-Azaroff & Mayer, 1977), but the intent of discipline implies the correction of social behaviour in the interest of order or social control. Today however, the terms punishment and discipline are often used interchangeably (Straus, 1991), and for the purpose of this study will be used synonymously. They have been used as a description of any form of adult-child interaction in which the parent (or primary care-giver) intends to inflict a penalty, correct, control or chastise the child for an alleged offence (Websters Ninth New Collegiate Dictionary, 1988).

The distinction between 'normal' parental discipline and physical abuse varies across cultures, cohorts, and socio-economic groups (Shaw & Scott, 1993). For the purpose of this study physical abuse is defined as a case in which an individual has knowingly and wilfully inflicted unnecessary corporal punishment or physical suffering upon the child. Serious cases may include injuries such as bruises or welts, burns, abrasions or lacerations, wounds or cuts, skull or other bone fractures, or other evidence of physical injury to the child (Widom, 1990), but less serious cases may not. A more substantial definition of physical abuse as it pertains to this study will be presented in Chapter Three.

Whilst it is acknowledged that other forms of child abuse often accompany physical abuse (Widom, 1993), there are significant differences in aetiology and sequelae which may confound the 'cycle of violence' concept (Browne & Herbert, 1997), and so for the purpose of this study only physical abuse will be considered.
It is important at this stage to emphasise the fact that the intergenerational transmission of violence model is based primarily upon correlational studies (both retrospective and prospective), and that by definition, no cause and effect can be interpreted from the results. However, a consistent theme emerging from the intergenerational transmission of violence literature is the history of physical abuse in childhood among violent offenders (Browne & Herbert, 1997; Widom, 1989).

Technically the terms 'offender' and 'prisoner' have different meanings, the former referring to any individual who has been charged and convicted of an offence by the Court, whilst the latter refers to an offender who has been sentenced by a court to a term of incarceration. However, there is a tendency in both the academic and popular press to use the terms interchangeably. For the purpose of this study the terms prisoner and offender will therefore be used synonymously.

Organisation of the study

The remainder of this study is presented in the next five chapters. Chapter Two presents an historical review of child-parent relationships, followed by an examination of current issues relating to family violence, corporal punishment and psycho-social sequelae of abuse, followed by a review of social learning theory literature pertaining to the development of aggression. Chapter Three discusses the complexities inherent in trying to define physical abuse, which is then defined for the purposes of this study. The chapter then examines the correlates of child abuse in the context of characteristics of the child and of the parent-caregiver. There then follows a review of the evidence for the intergenerational transmission of violence from a developmental perspective. Chapter Four outlines the methodology and procedures utilised in this study whilst Chapter Five presents an analysis of the data. The final chapter presents the summary, conclusions and a discussion of the results and implication of the study.
CHAPTER 2

HISTORICAL OVERVIEW AND THEORETICAL BASIS FOR THE CYCLE OF VIOLENCE

Introduction

The fundamental focus of this study is on the long-term consequences of parental discipline styles that rely on physical punishment to shape and maintain control of the behaviour of children in their care. This disciplinary style has the potential to be passed on from one generation to another in the form of intra-familial violence and in other violent offending. The transmission of violence within families from one generation to the next thus widens the commonly accepted definition of physical abuse.

The first part of this chapter will present a brief overview of the history of the care and management of children. This will provide a context for subsequent discussion about contemporary views of parental disciplinary practices, with particular emphasis on issues pertaining to corporal punishment. The chapter will conclude with a discussion of social learning theory that forms the theoretical basis for the intergenerational transmission of violence in this study.

Historical overview

The maltreatment of children, together with a disregard for the rights and needs of children (and others) in society is as old as recorded history (Oates, 1996). Whilst the systematic study of child maltreatment is relatively new, the maltreatment of children is not. Throughout recorded history children have endured starvation, abuse,
neglect, exploitation and death at the hands of those whose social role was to nurture, care and protect them. Relatively speaking, until very recently such acts of abuse could be perpetrated by parents or other direct caregivers against children, with the full weight of the law behind them, or at least with the acquiescence of a legal system that chose to turn a blind eye to “things that go on in the private domain of a man’s home” (Oates, 1996, p 27).

Zigler and Hall (1990) report that the Hebrews maintained a strong focus on the family and marriage, and this contributed to a more benevolent frame of reference to the care and discipline of children. However, at times of hardship, Hebrew society increased levels of violence and neglect of their children. In Chinese civilisation the family was the cornerstone of the culture, and women and children were treated “almost as well as men” (Zigler and Hall 1990, p 74). However, in more recent times there has been a marked increase in all forms of human rights violations, particularly against children. The introduction of the one child policy in the second half of the twentieth century by the Chinese communist party has led to a sharp increase in the abuse of female children at the social and disciplinary levels (Benzel et al., 1997).

Breiner (1990) reports that the ancient Egyptians were a civilisation whose disciplinary practices in the management of children was generally benign, with low levels of child abuse, except at times of national crises, when the rates of child maltreatment in general increased. The Greeks on the other hand, are reported to be a civilisation having a glaring history of parental discipline involving harsh punishment and other forms of child abuse that society sanctioned both morally and legally (Bensel, Rheinberger and Radbill, 1997). The Romans are reported to be similar to the Greeks in their discipline of children (Bensel, Rheinberger & Radbill, 1997; Zigler & Hall, 1990). The rates of child abuse were exceptionally high, and the legal system gave little, if any protection to women and children.

There is evidence supporting the use of harsh, corporal punishment in the Bible, which is described by Greven (1990) as the primary guide for child rearing and
discipline for the western world for generation after generation. Some of the most commonly cited passages include:

Folly is close to the heart of the child, but the rod of discipline will drive it far from him (Proverbs, 22:15).

He who spares his rod hates his son, but he who love him takes care to chastise him (Proverbs, 13:24).

The rod of correction gives wisdom, but a boy left to his whims disgraces his mother (Proverbs 29:15) (Cummings, 1993, p. 32)

Parental discipline, particularly in western societies, continued to be dominated by Christian philosophy throughout the ages, although there is no reference in the New Testament to parental discipline involving the use of corporal punishment (Greven, 1990).

The sixteenth century is highlighted as a time in Europe when acts of child maltreatment and harsh corporal punishment were not only prevalent in the home environment, but were also becoming common in the school system, with stories of beatings, sexual abuse and other forms of abuse being wholesale (Gillham, 1994). Children who were sent away to board at school were particularly at risk in a system (now) regarded as punitive and brutal (Gillham, 1994).

Oates (1996) comments that the onset of the industrial revolution saw some relief from hard labour for most adults, but that it ushered in “a new age of darkness for the children of the lower classes” (p. 4). During the industrial revolution children were sent out to work in the factories, often for 12 hours per day, and sometimes longer. These children were often badly treated by the mill and factory owners who regarded their employees as goods and chattels. This was the time of apprenticeships, and this status meant a license to be disciplined harshly and often violently.
Whilst there were advocates for the rights of children throughout the ages, their voice was muted by the indifference of the majority. It was not until the mid-nineteenth century that the beginnings of change became evident, although rates of child abuse and murder by parents and those in locus parenti remained high. A case of child abuse in the United States of America was noted as the birth of the movement for the protection of children. When the eight year old Mary Ellen (Zigler & Hall, 1990) who was severely abused by her stepmother, was brought to the attention of the community in 1874, it became apparent that there was no statutory body in place to represent Mary’s needs, and it was subsequently left to the Society for the Prevention of Cruelty to Animals to advocate on her behalf. Gillam (1994) notes that some members of the community at the time considered this to be quite appropriate, as children were considered to be generally “like animals” (p. 56). Others saw the injustice in this case (and many other cases like it), and a year later the Society for the Prevention of Cruelty to Children was established. It is ironic that the needs of animals were considered more important than those of children at that time. Similar agencies quickly developed in Britain and Europe, but these agencies had little in the way of enforcement powers until their work was later enshrined in legislation.

The Victorian period in Britain is generally regarded as an age of austerity, and children were still regarded very much as chattels, or at best second rate citizens, particularly amongst the poor masses. While parental discipline remained harsh, however, there were various Acts of Parliament designed to protect the poor and vulnerable, including children. For example, in the late nineteenth century, the British Parliament passed the ‘Poor Law’ that was intended to provide shelter and other basic needs to the poor and homeless. However, as recent history reveals, the vulnerable members of society are often re-victimised by the very people who were intended to care and protect them (Boss, 1980). Such was the fate of many children in the early twentieth century.

During this period the medical profession began to take note of, and advocate for the many children presenting at hospitals with suspicious or unexplained injuries. Zigler and Hall (1990) refer to a paper presented to a medical meeting by Dr West in
1888, in which he describes the presentation of mysterious thickening of arm and leg bones in four out of five siblings of a London family. Whilst West is reported to have questioned the cause of these presenting skeletal deformities, his colleagues and peers dismissed them as being the early signs of rickets, very common at the time.

It was the introduction of radiological techniques in the early twentieth century that facilitated clearer, differential diagnosis. Caffey (1946) presented a paper to a radiological convention that included radiological records of old and more recent fractures in a child presenting at the local hospital. In this paper Caffey discusses how he pondered the likely cause of these injuries, including the possibility that they were the result of intentional ill treatment. However, he concludes that there was insufficient evidence to support the notion of physical child abuse.

A number of further studies have reported similar cases of unexplained skeletal injuries to children, but it was not until 1962 when Kempe and his colleagues (Kempe et al., 1962) definitively noted the relationship between these injuries and maltreatment by the caregivers. Kempe et al referred to the 'Battered Child Syndrome' to describe these clinical findings, and this heralded a period when child abuse was defined more by the consequences, that is, the level of harm sustained by the child rather than the act or intent of the perpetrator. Today the legal definition of physical child abuse still relies primarily on the consequences, or level of injury to the child.

Shortly after the battered child syndrome was first described, Curtis (1963) published a brief article in the American Journal of Psychiatry in which he speculated on the psychological and psycho-social effects of physical abuse upon the child. He wrote:

"It is important that the psychological implications of extreme (physical) treatment of children be kept in mind. One might expect the sequelae would be varied. However, it may be useful to re-emphasise one possible consequence which is overt, obvious and of great public concern and social consequence in its own right; namely the probable tendency of children so treated to become tomorrow's murderers and perpetrators of other crimes of violence" (Curtis, p. 368).
Given the importance of the question raised by Curtis (1963), there have been remarkably few studies focussing directly on the relationship of physical abuse to violent delinquency or particularly to adult violent offending. That is the purpose of this study.

So far this discussion has focussed on parental discipline at the severe to extreme end of the spectrum when the rights of the child were either absent, or if present, totally disregarded. However, the focus of this study is on the relationship between parental styles that include all aspects of physical coercion, including corporal punishment, and subsequent violent behaviour. The intergenerational transmission of violence model is not contingent upon the severity of physical discipline alone. It is the frequency of the experience based upon the principles of social learning theory (to be discussed later in this chapter), as well as the level of (physical) harm that impacts on the cycle of violence. There will now be a discussion on the role of corporal punishment in the context of the cycle of violence, followed by a discussion of social learning theory and violent behaviour.

Corporal punishment and children

Punishment is defined as an adverse stimulus or consequence that is presented following a response to reduce the rate and probability of the re-occurrence of that response (Diamantes, 1992). Cummings (1993) defines corporal punishment as the use of physical force with the intention of causing a child to experience pain, but not injury, for the purpose of correction, or control of the child's behaviour. Straus (1991) comments that corporal punishment is a mild form of physical abuse that is generally culturally acceptable.

Straus (1991) states that corporal punishment in the family home is endorsed by law and that a review of the literature reveals that corporal punishment is only regarded as physical abuse when it causes physical or psychological harm, low self-esteem,
increased aggression, anxiety or withdrawal. Straus refutes this and stresses that what is regarded by most in western society, as a harmless and necessary parental practice is fraught with the same sequela as more severe levels of physical discipline. Straus (1994) makes the point that ending corporal punishment in the home is an important approach to preventing criminal violence, depression and low work performance. Hill (1980) discusses the pros and cons of corporal punishment. On the one hand, he comments that “corporal punishment:

- Halts undesirable behaviour.
- Helps children learn acceptable behaviour.
- Discourages others from imitating bad behaviour” (p 18).

On the other hand he comments that “corporal punishment:

- Causes children to withdraw and/or to become aggressive.
- Causes children to generalise, that is, if a student in a class is reprimanded for idle talking (s)he may generalise and become antagonistic to other figures of authority.
- Encourages imitation of the punishment itself.
- May result in avoidance by siblings and peers” (p. 19).

Parents or caregivers have probably hit children since the beginning of time, and this has until very recently been a parental action that was sanctioned by the State. However, attitudes are now changing. In 1979, some four American States passed legislation prohibiting the use of corporal punishment in schools. By the year 2000, all American States had passed such legislation, but not without protest (Hill, 1980). Whilst the law pertaining to corporal punishment is changing in the non-family domain, (school, apprenticeships, the military), in most parts of the Western world the law continues to give parents the right to utilise corporal punishment in the discipline of their children. According to Cummings (1993), in many States of the United States of America parents cannot be charged with assault for punching their children, “providing it does no (physical) harm” (p. 57). In stark contrast, Swedish law prohibits the use of
corporal punishment by parents or anyone else interacting with or teaching children (Oates, 1996, p. 17).

Almost every child has been hit by their parents or parent substitute (Mihalic & Elliott, 1997). Corporal punishment often begins in infancy, and the incidence climbs to a peak of around 90% by the age of three or four. Even by the late teens, approximately one quarter of families surveyed by Gelles and Cornell (1990) reported the use of corporal punishment by parents. In this study Gelles and Cornell found that for some children corporal punishment was a rare event, but for many others it was a daily event. By far the majority reported a frequency of corporal punishment as once or twice per week. For many participants in their study, the severity of corporal punishment involved mild slapping on the hand or buttocks, but for others it involved being hit with a belt or paddle. The duration of corporal punishment, that is the number of years it was experienced, ranged from three or four years for the majority, to continuous until leaving home for a few.

Straus (1994) reports that 90% of American parents hit their children, most over a period of many years, and approximately 35% of American children are hit from their toddler years up to when they leave home. The immediate effects of corporal punishment may be to "stop the target misbehaviour, but the long term effect is to increase the chances of more severe behaviour disturbance, including impaired learning and delinquency, and as adults, depression, child abuse, wife-beating and other crimes" (p. 4).

There is considerable evidence that corporal punishment is associated with aggression in children, and that later in life this aggression includes physical assaults on spouses and other intimates (Straus & Yodanis, 1996). The data from 4,401 couples in an (American) National Family Violence Survey were examined utilising a theoretical model of three processes; social learning theory, depression and truncated development of non-violent conflict resolution skills. The results of this study were consistent with the theoretical model. Corporal punishment was related to later aggression in childhood, and subsequent violence towards intimates in the male participants.
As children mature, parents generally rely less on physical punishment and more on alternative strategies, such as verbal reasoning. As children’s reasoning abilities develop they are more likely to respond to non-punitive types of discipline (Straus & Yodanis, 1996). Catron and Masters (1993) examined the frequency, severity and rationale for the use of physical punishment among two groups of children; four year olds and twelve year olds, together with their mothers. Results indicate that the younger children received more frequent corporal punishment for a more generalised range of transgression compared with older children. However, the younger children were more accepting of the legitimacy of the punishment than the older children, probably due to the less sophisticated level of moral development of this group of children (Straus & Yodanis, 1996). The older group of children were more accepting of corporal punishment experienced from school teachers, and less accepting of corporal punishment from parents, especially for what was considered to be minor transgressions by the participants. The older children reported that corporal punishment administered by their parents left them feeling angry, alienated, and violated.

Straus (1994) reports that in a National (American) survey of discipline within the family, a little over half the participants in the grade five age group reported regular corporal punishment in the preceding year, and one in four by the end of college. In the same study reported earlier by Straus and Donnelly (1993), the median rate of corporal punishment for the twelve month period prior to the study was four times, with a mean of six times. Whilst there were some variations in the length of time in which corporal punishment was used across socio-economic groups, by and large the incidence was not related to socio-economic status. Straus and Donnelly argue that despite the fact that corporal punishment by parents is exempt in (American) law, and is taken for granted by most American parents and children, its use is beyond doubt harmful because it leads to an increased probability of violence and other crime, depression, alienation and under-achievement.
Corporal punishment and adolescents

Twenty five percent of university students interviewed by Straus (1994) reported that they had been hit by their parents or other caregivers during their final year at secondary school. In their 1985 study, Gelles and Straus found that approximately 50% of 18year old respondents reported having been hit during the previous year. This corporal punishment happened approximately six times per year. Straus (1994) noted an issue regarding one parent versus two parent families. On the one hand two parent families may present a double jeopardy when both parents administer corporal punishment, whilst on the other hand one parent may function as a buffer, protecting the child from corporal punishment or even worse.

Straus (2000) comments that males experience corporal punishment more frequently than females. In Straus’s (1985) study more than half the teenagers surveyed reported receiving corporal punishment during the previous 12 months. Fathers tended to hit teenage girls less often than their mothers did, and the severity of punishment was higher among boys than girls. Straus (1994) reports that since so many boys and girls experience corporal punishment during adolescence, both are exposed to harmful side effects inherent in corporal punishment which boys tend to act out (violent behaviour), and girls tend to act in (depression, suicidal behaviour). Thus the cycle of violence may relate more to the way males respond to physical discipline.

Mothers are much more likely to use corporal punishment on their children compared with fathers. They spend much more time with their children than do fathers, and Western society is inclined to perceive the mother as the main disciplinarian. Mothers are much more likely to hit a child if she herself is a victim of domestic violence (Muuss, 1976). However, if rates of punishment are adjusted for time spent in child-care, fathers would rate higher than mothers in their use of corporal punishment (Straus, 1994). The younger the parent, the higher the rate of use of corporal punishment at all child age ranges.

Regardless of age or sex, the more an individual is exposed to, or experiences corporal punishment, the more likely they are to repeat this behaviour. People who
experience corporal punishment are likely to support its use when they are themselves parents. Parents who were abused as a child are more likely to abuse their own children.

The myths that perpetuate corporal punishment

Kadushin and Martin (1981) highlight the many myths in most Western societies regarding corporal punishment that contribute to what the authors refer to as "the conspiracy of silence" regarding child abuse. These myths include the notion that children need to be shown who is in control, and taught the hard way about societal expectations. They also include the concept that if the child is not taught their proper place, they may grow up to be selfish, egocentric adults. This view probably derives from the Biblical injunction of "Spare the rod and spoil the child" discussed above. The negative effects of corporal punishment are well documented by Straus and others (Gelles & Cornell, 1990; Gershoff, 2002; Straus, 1979; 1991; 1994; Straus, Sugarman & Giles-Sims, 1997), and include personality disorders, Post traumatic Stress Disorder, violent (and other) crime, depression, wife abuse, child abuse and substance abuse. As most corporal punishment begins in the first year of life, developmentally the child may experience attachment problems, including difficulty in relationships, mental health issues and dependent behaviours (Myers, 1999; Santrock, 1999). One of the consequences of early attachment problems is intimate partner abuse, and in extreme cases, masochistic sexual behaviour (Bandura, 1973). Corporal punishment may be enshrined in religion, as mentioned above, and is promoted therefore as an act of parental love for the child.

Higgins and Bargh (1987) state that there are two major myths relating to the use of corporal punishment by caregivers. They are the myth that corporal punishment is effective, and the myth that it is harmless. In Straus’s (1994) review of the literature relating to the negative effects of corporal punishment, the conclusion is that children who experience frequent episodes of corporal punishment are two to four times more likely to fail at school, have contact with the justice process, be violent against intimates and non-intimates, and to under achieve in the workforce.
The use of corporal punishment against children in school is now illegal in every State in the USA, and all but One State in Australia. A survey of families in the United States of America (Straus, 1991) found that 84% of those surveyed agreed that it was sometimes necessary to give children a good, hard spanking. This response was against the background information provided to participants that corporal punishment leads to negative consequences. Straus and Gelles (1987) comment that study after study has demonstrated that almost all (American) parents act on the belief that corporal punishment is necessary to control the behaviour of their toddlers. Viewed developmentally, the more corporal punishment is used, the greater the risk of escalating violence, because corporal punishment does not help a child develop an internalised conscience, and may lead to more physically aggressive behaviour by the child (Straus, 1991).

Straus's (1978) survey saw approximately one third of respondents report that they considered hitting children with objects to be physical abuse, but when this study was repeated in 1991, almost half reported that hitting with an object was abuse (Teske & Thurman, 1992, Table 12). These changes may indeed reflect a change in the utilisation of corporal punishment by parents over the decade 1975 to 1985. However, it may also reflect a change in the willingness of parents to acknowledge the use of corporal punishment, particularly at the more severe end of the spectrum. During this period there has been a sharp focus on the benefits and consequences of corporal punishment, and in many American States, the use of corporal punishment in schools had been banned. The experience of corporal punishment by children is argued to lead to physically aggressive adults, particularly amongst boys, who are punished more often than girls.

For some parents the use of corporal punishment may be related to levels of parental stress. Hitting their child may either increase their level of tension, or decrease their level of tension. In either case there is a strong likelihood of punishment continuing and possibly escalating into physical abuse. Hitting a child (or anyone else) as a last resort may contribute to an escalation, as by then parents may be highly aroused and angry, and that may increase the possibility of further escalation. Whilst
only a few spanked children experience obvious harmful effects, many aggressive and
depressed adults report having experienced high levels of corporal punishment.

**Corporal punishment and physical abuse**

Kadushin and Martin (1981) note that most cases of physical child abuse are the end point of a continuum that began with corporal punishment that subsequently gets out of hand. Ninety-five percent of incidents of physical abuse do not involve severe injuries (Garbarino, Kostelny, & Dubro 1991) and typically are rooted in corporal punishment rather than psychopathology (Gershoff, 2002). Straus (1994) refers to the escalation theory in which corporal punishment accidentally leads to (minor) injury, or where the severity of punishment increases in order to maintain effect. Other theories that have examined the relationship between corporal punishment and physical abuse include cultural spillover, depression and marital violence.

Straus (1991) points out that the theories of escalation, cultural spillover, depression and marital violence have been brought together as a model tested by way of path analyses. Corporal punishment has been shown, if somewhat equivocally, to be associated with physical abuse. Despite the evidence, the relationship has been neglected, and there is therefore a paucity of relevant literature. At the intergenerational level of analyses, corporal punishment has been shown to increase the risk of the child victim growing into an adult who becomes physically abusive, both in their intimate relationships (Browne & Herbert, 1997; Chiland & Young, 1994; Wiehe, 1996) and non-intimate relationships (Boss, 1980; Frude, 1994; Howells & Hollin, 1993).

Straus (1991) suggests that corporal punishment is tied in with family values and attitudes favouring violence, with an increased chance of violence between partners and an increased risk of depression in caregivers. He adds “in the long term, corporal punishment may increase the chances of misbehaviour, even crime, including violence, both in the home (siblings, wife beating, and physical abuse), and outside the home (delinquency, robbery, assault and homicide)” (p. 99). Corporal punishment is highest in families where there is parental violence.
1. Because of the general level of anger and frustration inherent in families where there is marital violence.

2. Because marital violence and corporal punishment are both part of a more general use of violence for power and control. Violence between partners is a major link to parenting styles reliant on corporal punishment and physical abuse.

3. Because of the inability of some families to use reasoning and problem solving negotiations in both the partnership and child rearing.

Sears, Maccoby and Levin (1957) examined the patterns of disciplinary practice of more than two thousand families. Their results indicate that children who are spanked most often are rated by peers, teachers and friends as being the most aggressive, and to have a poorly developed conscience compared with their less spanked peers. When controlling for other causes of violence and other criminal behaviour, Sears et al. found evidence that being exposed to corporal punishment leads to violence and other criminal behaviour during adolescence and adulthood. This phenomenon applies to corporal punishment in the home and in school, and in other aspects of society that condone physical violence (such as the military, gangs and prison). Eron (2000) comments that the more a society engages in culturally accepted force to achieve socially legitimate ends, the more general the tendency for those engaged in illegitimate activity to use force for their own purposes.

The issue of the chicken and egg in this debate is acknowledged. That is, do difficult, misbehaving children incite corrective (corporal) punishment, which in turn exacerbates the behaviour of the child, or does corporal punishment result in negative behaviour in the child that in turn incites the parent and leads to further corporal punishment. According to Straus (1991), the answer is yes, and yes. He comments that the important issue is that whilst the target behaviour is managed in the short term by the use of corporal punishment, in the long term there are negative, and often criminal outcomes.

Not all children exposed to corporal punishment or physical abuse grow up to be offending adults, but when compared with those who have not experienced significant amounts of corporal punishment, those who have are over-represented in crime statistics.
by a ratio of three to one (Kaufman & Zigler, 1987). Furthermore, the more severe the discipline, the higher the ratio of adult offenders.

Correcting misbehaviour by the use of corporal punishment carries a high risk of creating a sense of powerlessness and alienation in the developing child (Straus, 1991), and this child may well seek solace with similar minded peers (Volavka, 1995). They may avoid attending school, perform below par when they do attend, and possibly drift into offending behaviour. Corporal punishment teaches children what to do, as dictated by the disciplinary practice, but it does not teach them how to think or how to problem-solve. Brian and Freed (1982) found a link between corporal punishment and lower grades at college. This finding included reports of both past and current corporal punishment. Piaget (cited in Straus, Gelles, & Steinmetz, 1980) states that corporal punishment may arrest moral development, and poor moral development is well documented as a criminogenic factor (Blackburn, 1993).

The harmful effects of corporal punishment may be reduced, but not eliminated, by loving parent(s) who explain the cause and effect of the child’s behaviour on the parents. As Hirschi (1969) states, being able to influence a child’s behaviour is very much dependent on the formation of a close bond between parent and child, and typically in families who rely on corporal punishment as the major modus operandi in the management of children, there is a potential for this bond to be absent, or damaged (Helfer, Kempe, & Krugman, 1997). Whilst it may not be possible to determine whether poor bonding results in an increase in the utility of corporal punishment, or whether the use of corporal punishment leads to poor bonding, particularly in the toddler years, Huesmann (1986, 1994) concludes that the use of corporal punishment increases the prospect that aggressive behaviour will be transmitted to the next generation.

Straus, Sugarman and Giles-Sims (1997) conducted a two-year study that explored the relationship between parental spanking and subsequent antisocial aggressive behaviour. Participants included children in three age brackets; 3-5 years, 6-9 years and 10 years plus to take into account possible different effects of corporal punishment on different developmental stages. Gender and socio-economic variables,
including the pre-existing level of anti-social behaviour were also controlled. Results indicate that when all these other variables were controlled for, there still remains a clear link between corporal punishment and aggression, and other aspects of anti-social behaviour.

Smith and Brooks-Gunn (1997) examined the incidence, predictors and consequences of harsh discipline in a sample of low birth-weight children aged one year and three years of age. Seven hundred and fifteen children attending a health clinic due to low birth weight were assessed for the effects of harsh punishment on their IQ. Mothers’ reports of discipline were compared with reports from health nurses who spent up two hours per week in the family home. Whilst the actual time spent by health nurses observing interactions in the family home was relatively short, Smith and Brooks-Gunn note that the mothers’ reports of their disciplinary practice corresponded well with that of observers, including that of a punitive style. Unfortunately not all studies utilise both self-report and observer observation of parental discipline style, but the large number of participants in Smith and Brooks-Gunn’s study raises the confidence in the utility of self-report.

As with previous studies, boys in Smith and Brooks-Gunn (1997) study received harsher, more frequent corporal punishment than did girls, and for both boys and girls, IQ was around 12 points lower amongst those who received frequent, harsher punishment compared with lower levels of punishment. Maternal warmth was a variable that moderated the effect of corporal punishment on IQ scores, particularly in girls. Whilst these studies conclude that physical abuse is somewhat responsible for lower IQ, it may well be the case that children who function in the lower levels of intelligence, particularly those defined as having an intellectual disability, are more at risk of harsh discipline/physical abuse. This will be addressed in more detail in Chapter Three.
Muller (1996) examined family aggressiveness factors as predictors of corporal punishment among 1536 parents, and 983 college students. The underlying thesis of this study was the impact of child characteristics in the families that use high levels of corporal punishment. Muller proposed a reciprocal effects model of corporal punishment which suggests that both parents and children take an active role in precipitating child maltreatment, and that the use of physical force to resolve conflicts may be a function of an aggressive micro-system in which all members are active participants. Muller found that childhood aggressiveness was a significant predictor of parental punitiveness, and remained so when the parents’ (usually mothers’ in this study) own history of corporal punishment was controlled. This raises the dilemma inherent in physical abuse research of whether the child’s misbehaviour is the result of poor, aggressive parenting, or whether the harsh discipline is the result of childhood characteristics. Most studies (see Straus, 1993, for summary) conclude that when a more careful study of punishment history is taken into consideration, corporal punishment precedes all but the rudiments of childhood personality. This is not to say that neonates and young children do not bring into the family their own temperament, but this is rudimentary, and may have little impact on the parent-child relationship, except in the most extreme of cases.

Not every researcher agrees that corporal punishment should be avoided. Hill (1980) reacted against the growing impetus in the school system to ban the use of corporal punishment. He comments that some of the most ardent opponents of the use of corporal punishment in schools are from parents of the “brattiest” (p. 14) children. He goes on to say that “the old adage that children learn well when they get a pat on the back, and that sometimes these pats have to be low enough and hard enough to gain their attention, is still valid” (p. 14). McCord (1991) critically examines and rejects the claim that the experience of physical aggression leads to aggressive behaviour through the acceptance of violent norms. In this examination McCord criticises both the use of punishment and reward as a means of educating children in non-violent social interaction. She comments that children do not require punishment if their teachers will guide them consistently, and they do not require rewards if intrinsic values of what they ought to do are made apparent to them. She concludes that the probability of children
learning pro-social means of social interaction is directly related to the use of reason by those teaching them. Rewards and punishment in the process of education she claims leads to adults for whom self-interest becomes the legitimate grounds for choice. Straus (1994) addresses this issue and concludes that social reinforcement quickly becomes associated with internal, self-regulating (intrinsic) behaviour.

Oates (1996) discusses the problems inherent in trying to define abuse across the whole spectrum, including physical abuse, and notes the influence of both time and culture on what is and is not accepted as reasonable parental discipline. The problem of relying on the level of harm to the child as the definition of abuse is highlighted by Oates when he comments:

"A child may be pushed roughly to the floor by his father. He first lands against a soft armchair and then falls to the carpeted floor. No injuries sustained. On another occasion, exactly the same amount of force and aggression is used by the same father. This time the child hits his head on a protruding cupboard, sustains a fracture, and then falls to a concrete floor, receiving further head injuries" (p. 3).

Clearly, in the first example the incident is likely to go un-reported, whereas in the second incident, medical attention would be required, and the case probably reported to the authorities for their investigation of physical child abuse.

The extent of harm to the child, while still an important principle in the legal determination of abuse, has been replaced in the literature by psychosocial theories that focus more upon the causes of abuse and less upon the consequences. Social learning theory argues that the frequency of physical punishment increases the risk of the cycle of violence, and not the level of harm sustained by the child per se. There will now be a discussion of social learning theory as it relates to this study.
Social Learning Theory and the cycle of violence

Social Learning Theory, developed in the 1950s and 1960s by a number of workers, most notably Julian Rotter (1954, 1960, 1966, cited in Cummings, 1993), and Albert Bandura (1973, 1977, 1986, 1995, 1997), has grown out of the early work of behaviour theorists J.B. Watson and B.F. Skinner. Learning theories in general have emerged at a time when psychology was influenced by Freud and the Neo-Freudians, whose work was centred around concepts of mind, the unconscious, and childhood experiences as they impacted on certain innate drives, such as Eros and Thanatos (De-Zulueta, 1998). Social learning theory attempts to explain the person's selection of specific responses from a larger repertoire in predicting behaviour in social settings (Mihalic & Elliott, 1997).

Watson (cited by Hoffman, Ireland, & Widom, 1994) focussed on overt behaviours, those that can be observed and measured. He also emphasised the importance of influencing behaviour by the careful manipulation of appropriate environmental processes. Archer (1994) comments that whilst Watson acknowledged so-called mentalistic phenomenon, these he saw as pre-behavioural experiences, and therefore of little value to the scientist-practitioner. Skinner (cited by Hoffman et al., 1994) was particularly noted for the development of operant conditioning and his emphasis on various aspects of reinforcement schedules. Schultz (1990) notes Skinner's stress on the importance of overt behaviour as the cornerstone of modern psychology, both academic and applied.

Albert Bandura, a more recent theorist in behavioural psychology, drew on the work of Watson, Skinner and other behaviourists of the day, and in partnership with others developed social learning theory (Loevinger, 1987). Bandura (1973) proposed that behaviour, including aggressive behaviour, is learned and maintained through environmental experiences, either directly or indirectly. He notes that the learning of aggressive behaviour is controlled by reinforcement contingencies, including punishment, the same as any other behaviour (Bandura, 1973).
Social learning theory operates within a framework of interaction based on triadic responsibility: behaviour, cognitive and other personal factors, and the environment, which reciprocally determine or affect one another. When aggressive behaviours are paired with positive reinforcement, the child may learn to regard these behaviours as appropriate, normal and worthwhile. The perceived rewards may be physiological, social or psychological (Bandura, 1986). Environmental factors include family variables that may have a profound effect on the child's learning. Behavioural factors include the child's previous aggressive behaviour, and more importantly, its consequences. Cognitive and other personal factors include the child's perception of the behaviour and its consequences.

The psychological debate at the time was inclined to divide human existence into theories of mind (such as the Freudian perspective), cognitions (Piaget for example), and behaviours. Bandura and others have integrated these concepts, and have argued that human behaviour cannot be fully understood without a recognition of the influence of mental activity (Cummings, 1993). The psychological functioning of an individual involves a reciprocal interaction between three interwoven influences: behaviour, cognitive processes and environmental factors (Bandura, 1986).

However, social learning theory places much greater emphasis on external environmental cues as elicitors of aggression than it does on internal drives. Bandura (1973) proposed that aggressive behaviour is learned and maintained through environmental experiences either directly or vicariously, and that learning of aggression is controlled by reinforcement contingencies and punishment in a manner similar to that of learning any new behaviour (Pagelow & Pagelow, 1984).

Bandura points out that according to social learning theory, aggression is usually controlled and maintained by the process of positive reinforcement (Bandura, 1965; 1973). Individuals infer that violence is an effective means of gaining control over the behaviour of others by experiencing or observing the use of violence for this purpose. To the extent that those who employ violence are not punished, but often rewarded for
their actions, observers are more likely to use such tactics in their interactions with others (Bandura, 1977).

Eron (1994) reports on a longitudinal study of 22 years showing that when children were exposed to aggressive role-models, the children’s aggressive behaviour increased. When parents punish their children physically, this may serve as a model for future aggression on the part of the child. Social learning theory holds that new behaviours may also be acquired vicariously by watching an influential role-model engage in an action which has positive outcomes.

Supporters of the social learning view of aggression (such as Arriaga & Oskamp, 1999; Bandura, 1971, 1973; Berkowitz, 1993, Eron, 2000; McNamara, 1970) emphasise that aggressive behaviour should be seen as a learned form of social behaviour which is processed in the same way as any other complex social behaviour. Baron and Byrne (1987) point out that to fully understand the nature of aggression there must be information on three basic issues. They are:

1. The manner in which such behaviour is acquired.
2. The rewards and punishments that affect its current performance.
3. The social and environmental factors that influence its occurrence in a given context” (p. 301).

This highlights the fact that social learning theory does not attribute aggression to one or a small number of factors. It suggests that the roots of aggressive behaviour are highly varied in scope, and involve a complex interplay amongst many factors.

Individuals acquire aggressive responses through being directly rewarded for such behaviour (Abrams & Niaura, 1995). Providing reinforcement for acts of aggression increases the probability that similar acts will be repeated on later occasions (Baron & Richardson, 1994). Animal studies provided the early evidence for such effects. In these studies organisms provided with various forms of reinforcement, such as food, water, or escape from electric shock for aggressing against others quickly
acquired strong tendencies to engage in aggressive behaviour (Baron & Richardson, 1994). Ulrich, Johnston, Richardson and Wolff (1963) for example, exposed docile rats to water deprivation, and observed that these animals soon became aggressive towards other animals when such behaviour led to access to water.

Reinforcement in the process of learning is a much more sophisticated process for humans than that of animals. Apart from basic needs, such as food and water, reinforcers that have been shown to markedly increase the tendency of both children and adults to behave aggressively include the acquisition of various material incentives, such as money, desired objects, toys and sweets; social approval and increased status; and the alleviation of aversive treatment at the hands of others (Baron & Richardson, 1994).

Huesmann, Eron, Lefkowitz and Walder (1984) suggest that conditions which facilitate the learning of aggressive behaviour seem to be those in which the child has many opportunities (trials) to observe aggression, and in which the child is the object of aggression. Fry (1988) studied the Semai community of Malaya and notes that one of the most significant inhibitors of childhood aggression is the fact that children see so few examples of such behaviour. Fry comments that even the child who wanted to be aggressive would have no clear idea of how to proceed.

Human aggression is caused by a combination of complex factors such as individual learning history, both direct and indirect, anticipated consequences of behaviour, physiological state (hostile motivated violence) and genetic makeup. Aggression is but one of a multitude of behaviours available to an individual at any given time. The likelihood that an individual will be aggressive at any particular time is a function of his or her self-efficacy regarding not only aggressive behaviour, but the multitude of other behaviours in their repertoire. Thus, acts of aggression are seen as learned behaviours engaged in for a perceived positive outcome (Bandura, 1978). That an individual would be aggressive in a given situation rather than the infinite number of other responses available to them is an artifact of several possibilities, including:

1. Learning history of positive outcome for aggressive behaviour.
High self-efficacy in regards to aggressive behaviour
Low self-efficacy for alternative behaviours
An environmental setting that precludes the possibility of employing alternative behaviours (such as in the context of street gangs).

According to social learning theory, environmental factors are far more important in the etiology of aggression than a genetic basis. Genes contribute to the gender, physical stature and temperament, but they provide a channel for individual learning history. Although genetic heritage does interact with the environment to influence response possibilities and consequences, it is the social learning resulting from such interactions that is the ultimate mediator in the development of (aggressive) behavioural patterns (Karshmer, 1978).

Bandura (1976) comments that individuals tend to aggress toward others in a context where it is relatively safe and rewarding to do so, but they are disinclined to behave aggressively when to do so carries a high risk of punishment. Behaviour patterns that are over-learned in early childhood interactions with others are automatically used by the child when adapting to new circumstances and situations. The social learning explanation has been used to describe the ways in which children from violent families learn aggressive tactics. Children of physically punitive parents tend to use aggression when relating to others. Their parents often disciplined them by screaming, slapping and beating them; thus modelling aggression as a method of dealing with problems. These parents often themselves had parents who were physically punitive (Bandura & Walters, 1963; Straus & Gelles, 1980). Although not all children who have been exposed to physical discipline go on to be criminals and/or abusive parents, around thirty percent do continue the cycle of violence (Kaufman & Zigler, 1987; Widom, 1989).

Bandura and Walters (1989) added a new and significant aspect to the social learning model; which is the concept of vicarious learning. This is the manner in which children (and others) learn social roles and behaviour by the direct observation of other people, without direct reinforcement of their own behaviour. Browne and Herbert
(1997) point out that vicarious learning takes place in three main arenas, the family, amongst peers, and more recently, from the electronic media. One may therefore learn violent behaviour through modelling or reinforcement in the family (Farrington, 1991; Kalmuss, 1984; Straus & Gelles, 1986), in peer groups (Hoffman, Ireland, & Widom, 1994) and from television and movies (Pervin, 1993).

In social learning theory, learning occurs through direct reinforcement via reward and punishment, and by observation (modelling); that is, behaviour is influenced by direct experience, or as a result of the observation of the behaviour of other people. In order for observation to result in behaviour, the individual has to retain the originally observed behaviour in memory. The memory of these events will involve symbols, which at a later time are converted into action similar to the observed behaviour (Bandura, 1977). Browne and Herbert (1997) note that this process is very much influenced and limited by the (cognitive) skill level of the individual. Whether or not the behaviour is repeated is finally determined by outcomes; that is whether the behaviour leads to reinforcement or punishment, and whether the individual is sufficiently motivated to engage in the behaviour (Bandura, 1977). Hall, Herzberger and Skowronski (1998) examined outcome expectancies and values based on social learning theory in a group of 10-15 year old boys and girls. Children imagined themselves engaging in aggressive behaviours, and rated the likelihood of each of a number of outcomes (outcome expectancy) as well as how much they cared about the outcomes (outcome values). Expectancies, values and their interactions were differentially related to aggression depending on the specific outcome investigated (for example, punishment, bad feelings in self or other, prevention of future aggression, and peer respect).

Modelling principles suggest that children learn to be aggressive by observing aggressive models, such as their parents, who are familiar and powerful. Furthermore, aggression is developed and maintained in family environments that use high levels of physical punishment and influence behaviour through coercive means (Halloran, Doumas, John, & Margolin, 1999). Modelled behaviour is more likely to be adopted if the behaviour is perceived to be resulting in desirable outcomes. Observing violence in
one's family of origin creates ideas and norms about how, when and towards whom aggression is targeted.

Modelled (violent) behaviour is moderated by cognitive and self-reflective functions. Another component of Bandura's theory relates to the concepts of self-regulation and self-efficacy in which individuals develop beliefs about their abilities, and in turn, the evaluation of beliefs may influence whether or not certain behaviours are attempted, and whether they provide reinforcement for future behaviour. Social learning theory emphasises a reciprocal relationship between personal (self-regulation and self-efficacy) and situational characteristics in explaining aggression (Bandura, 1986).

Studies of exposure to media violence, though somewhat equivocal, lend support to the role of imitation in the development of aggression. Freedman (1984) however states that considering the methodological complexities of the research topic, it is reasonable to conclude that exposure to media violence may be one factor contributing to the levels of violence in most (Western) societies. Smith and Mackie (2000) note that on average, American children view three and a half hours of television each day. Friedrich-Cofer and Huston (1986) reviewed the literature on the effects of television violence on viewer aggression and concluded that longitudinal studies have demonstrated "a significant and consistent relationship between TV viewing and later aggression" (p. 61). Bushman (1995) studied the relationship between trait anger and the effects of viewing violent or non-violent movies. The results indicate that media violence is more likely to elicit aggressive affect and behaviour in high trait anger men compared with low trait anger men. Bushman (1995) concludes that whilst the negative effects of media violence are most problematic for people who are highly aggressive by nature, it should not be interpreted to mean that media violence does not affect most members of society.

In the United States of America, Congress has been concerned about the violent content on television since the 1950s, holding its first hearing into the relationship between media violence and juvenile delinquency in 1952 (Hoerrner, 1999). Since then there have been numerous Senate investigations examining the link between media violence, particularly that on the electronic media, and violence in society. These
investigations have, without exception, concluded that there exists a clear (though complex, Browne & Herbert, 1997) relationship between violence viewed on television and violent behaviour, particularly among children and young adults (Hoerrner, 1999). Similar relationships have been found in meta-analytic reviews of the literature between aggressive video games and violent behaviour, particularly in males (Anderson & Bushman, 2001; Griffiths 1997).

Modelling was demonstrated in a study of 3 to 5 year old boys and girls (Bandura, Ross, & Ross, 1961, 1963). Half the children observed an adult confederate behaving aggressively towards a large plastic doll known as a Bobo doll. When these children were later observed in a separate room playing with the doll, they were observed to imitate the aggressive behaviour of the adult model, whilst the children who did not witness aggressive behaviour by the adult confederate did not behave aggressively. Many studies employing variations of the doll procedure have reported similar results confirming the hypothesis that observing aggression leads to hostility in children and adults, and that individuals observing such behaviour become more generally hostile (Walters & Grusec, 1977). For example, Liebert and Spratkin (1988) repeated this study, and gave children the opportunity to be aggressive to a confederate rather than toward the doll. Participants who had been exposed to the aggressive model subsequently demonstrated higher levels of aggression compared with those viewing the non-aggressive model. When persons serving as a model are seen to be rewarded for their aggressive behaviour, such behaviour is more likely to be imitated by the observer, especially children (Bandura, 1977). Furthermore, individuals (again, particularly children) tend to imitate or model the behaviour of others they regard as important, powerful or successful (Bandura, 1995).

In long term correlational studies (Eron, 1982; Huesmann, 1986), the amount of television viewing was recorded for children ranging in age from pre-school to high school, and the aggressive content noted. At regular follow up over a number of decades, details of their actual aggressive behaviour were collected from ratings reported by parents, teachers and peers. Results of these studies indicate that the more media violence viewed the more aggressive they were rated as children, and later as
adolescents. There is some evidence from these studies that the effects of watching media violence on overt aggressive behaviour are cumulative, and that the effect increases slightly with the age of the child (Browne & Herbert, 1997).

An important part of modelling is the distinction between acquisition and performance. New, complex patterns of (aggressive) behaviour may be learned or acquired, regardless of reinforcers (modelling), but whether or not the behaviour is performed will depend on rewards and punishments. Bandura, Ross and Ross (1963a) demonstrated the concepts of acquisition and performance in their study of three groups of children, each of whom observed a confederate express verbal and physical aggression towards the plastic doll. The first group of children saw the model experience no consequences for aggressive behaviour; the second group saw aggressive behaviour being rewarded, whilst the third group saw aggressive behaviour being punished.

Following the three groups observing aggressive behaviour towards the doll, they were then presented with two conditions. In the first condition children were left alone in a room with many toys, including the doll, and their behaviour watched through a one way mirror to see if they would engage in aggressive behaviour. In the next condition children were given incentives to replicate the model's behaviour. As would be anticipated according to social learning theory, there were significantly more observations of aggressive behaviour by the children in the reward condition compared with the no reward condition. Furthermore, observation of the children in the no incentive condition indicated very clear differences. Children who observed the model being punished for behaving aggressively towards the doll performed significantly fewer acts of aggression compared with both the reinforce or no consequence conditions. This difference was negated by offering children attractive incentives to reproduce the models' behaviour. Thus, the consequences to the model for aggressive behaviour had a clear effect on the aggressive acts, but no effect on the learning of children's performance of the modelled aggressive behaviours.
Modelling is important in shaping behaviour, particularly aggressive behaviour (Bandura, 1977, 1979, 1983; Platt & Prout, 1987). Bandura (1983) comments that trial and error learning, because of potentially dangerous or even fatal consequences:
"is not an adaptive process for acquiring aggressive responses. A safer approach is to observe the aggressive behaviours of others, form a conception of how the behaviour is performed, and on later occasions, the symbolic representation can serve as a guide for action" (p. 6-7).

As discussed previously, role models do not have to be physically present to influence the observer, their symbolic representation, in books, television and movies is sufficient for the process of learning among observers. Exposure to aggressive models may make violent behaviour seem more appropriate because it can stimulate aggressive thoughts and feelings, and contribute to the perception of hostile intent to ambiguous behaviour, making retaliation to perceived provocation more likely.

A further feature of social learning theory that singles it out from many other learning theories involves the concept of self-regulation and self-efficacy (Cummings, 1993). The self is seen as a set of cognitive processes and structures concerned with thought and perception (Schultz, 1990). Children develop certain beliefs about themselves, which in turn may influence whether they indulge in any given behaviour, and, more particularly, whether such behaviour is reinforcing to them or not. A classic example can be found within sub-groups of adolescents who participate in, and value violence (Peters, McMahon, & Quinsey, 1992).

Schultz (1990) states that self-reinforcement is as important to the shaping of behaviour as reinforcement by others, and that the individual may self administer reinforcement or self administer punishment. Through these self-regulatory mechanisms, behaviour can be maintained independently of external incentives or coercion (Cummings, 1993). These self-regulatory reinforcement schedules may be particularly potent. For example, if an individual believes that an aversive experience will occur, that individual may learn to avoid the situation, which may in turn result in avoidance of more general situations. O'Leary (1988) points out that once this avoidant behaviour pattern is established, it may be very difficult to eliminate, as the opportunity to (re) learn non-avoidant behaviour is absent.
To summarise, the individual may learn aggressive or violent behaviour either directly or vicariously from (his) parents or other caregivers, (Boss, 1980; Browne & Herbert, 1997; Gillham, 1994; Oates, 1996), in peer groups (Peters, McMahon & Quinsley, 1992) and from television, videos and movies (Huesmann, 1994). Although harsh punishment administered to children is generally intended to correct unwanted behaviours (such as aggression), it may have several unintended consequences. Children so treated learn that physical aggression is permissible in some contexts, such as intimate relationships, and that violence is justified when an individual is guilty of some wrongdoing, or perceived to be so (Polk, 1995).

Simons, Lin and Gordon (1998) point out that children typically modify their behaviour following punishment, thus giving them first hand experience with violence as an effective means for modifying the behaviour of others. They conducted a longitudinal study of 608 males and females between 1982 and 1992. As predicted from social learning theory, those who experienced or witnessed the physical abuse of others as a child were subsequently more aggressive in their relationships, particularly intimate, family relationships as determined by independent raters.

Thus, based on the principles of social learning theory, the experience of corporal punishment and/or physical abuse in childhood is believed to increase the probability of overt aggressive behaviour in adulthood. The purpose of the current study therefore is to investigate the childhood discipline experiences of offenders and to examine the relationship between the amount of physical discipline, including corporal punishment, experienced as a child and subsequent violent offending. A review of the literature pertaining to problems inherent in the definition of physical abuse followed by parent and child characteristics that have been shown to increase the risk of physical abuse will follow in the next chapter. This will be followed by a discussion of the relationship between child abuse and the intergenerational transmission of violence.
CHAPTER 3

PHYSICAL ABUSE AND THE CYCLE OF VIOLENCE

"What is done to children, they will do to society" (Karl Menninger, desk diary, October 22nd, 2000).

Introduction

This study addresses the intergenerational transmission of violence hypothesis by examining whether physical discipline experienced in childhood is associated with later violence as an adult. It is acknowledged from the outset that not all physically abused children grow up to become violent delinquents or adult criminal offenders. However, there are high proportions of delinquents, particularly violent delinquents who have experienced physical abuse in early childhood. (Blackburn, 1993). Indeed, very many violent criminals have histories of extraordinary abuse in childhood, mainly physical abuse (Lewis, Mallouh, & Webb, 1990).

Violent behaviour, like most human behaviour, is the consequence of a complex interaction of interpersonal, intra-personal and environmental factors, and some would argue strongly for the genetic basis for offending behaviour (Eysenck, 1977). Included in the intergenerational transmission of violence literature are a variety of adoption studies that have revealed a relationship between children’s aggressiveness and antisocial behaviour, and that of both their natural and in some cases adoptive parents (Eron, 2000). These and other studies (Moffitt, Caspi, Rutter, & Silva, 2001 for example) raise the question of a genetic basis for aggressive and antisocial behaviour. They also raise the question of the effects of environment in the development of these and other behaviours. However, it seems clear that predisposing factors interact with
social and personal factors to influence the cycle of violence. Whilst DiLalla and Gottesman (1991) argue that a discussion on the intergenerational transmission of violence is incomplete without reference to genetic studies, for the purpose of this study the literature review will focus on the psycho-social contribution to the concept.

Research into child abuse is an extremely controversial area fraught with many methodological, conceptual and theoretical difficulties (Widom, 1989). However, and despite the problems, it is the opinion of the current researcher (and of Cummings, 1993) that from a psychological perspective there is both theoretical and empirical utility in addressing the concept of childhood physical abuse and the cycle of violence despite the many difficulties.

Ascertaining how many children are abused, or are at risk of serious abuse is problematic for many reasons, such as definitional issues, reporting issues and cultural norms. In the financial year 1995-1996 there were 1340 substantiated reports of abuse or risk of abuse by the Department of Family and Children’s Services (now known as the Department of Community Services, Family and Children’s Services) in Western Australia. This is from the 1996 general population in Western Australia of 1.793 million people (Australian Bureau of Statistics, National Census, 1998). The Department of Community Services investigated 2569 of the 3720 allegations of abuse, and substantiated 1050. The remaining 290 were classified “at risk”. It should be noted that this was the first year of a new reporting system in Western Australia, which led to fewer follow-up investigations emanating from complaints. In the annual report from the reporting year 1994-1995, there were 2100 substantiated cases of abuse (Fitzpatrick, 1996).

**Over-view of the chapter**

The first part of this chapter will discuss issues pertaining to the definition of physical child abuse. This is one of the many methodological issues that complicates research in the field of child maltreatment and makes comparisons between studies difficult. This will be followed by a review of the correlates of physical abuse in the
context of characteristics of the child and of the parent or other direct caregiver. There will then be a review of the developmental effects of physical abuse on children, juveniles and adults. In the following two sections there will be a discussion of the relationship between the experience of physical child abuse and offending behaviour, and that of physical abuse and anger. The relationship between the witnessing of the physical abuse of others and the motive for subsequent violence (instrumental versus hostile motivated) will be examined in the next section of this chapter, which will conclude with a critique of the methodology of the studies reviewed.

**Definition of physical child abuse**

The term “child abuse” covers many different forms of maltreatment including sexual abuse, emotional abuse, neglect and physical abuse, and may involve a variety of social settings. They may all be included in the term “Interactional Breakdown within the family environment” (Helfer & Krugman, 1997, p. 27). For the purpose of this study of the intergenerational transmission of violence, the focus will be on physical abuse by parents or other direct caregivers in the context of discipline in the family home.

It is not easy to define physical abuse. Not only do definitions differ across era and culture (as discussed in the previous chapter) but as Wolfe (1987) points out, different definitions of child abuse may be adopted depending on the setting. For example, in the legal setting physical abuse is defined with a focus on the overt consequences of the abuse, such as bruises, fractures or other medically based evidence. The level of evidence required for a determination of physical abuse is dictated by the minimum community standards prevalent at the time, which are very much influenced by practices within the medical profession in terms of what signs of injury will be reported (Oates, 1996).

Definitions of child (physical) abuse may be arranged on a continuum ranging from narrow to very broad, the narrowest of which includes only intentional and severe physical abuse (Zigler & Hall, 1990). However, there is little, if any consistency in the literature as to what constitutes severe physical abuse, and profound difficulty
determining the intent of the perpetrator. Some definitions of physical abuse are a direct reflection of statutes or legislation that may differ from one jurisdiction to another. This problem is highlighted by the Australian Institute of Health and Welfare (1999) who collate data on child abuse and protection throughout Australia on a State by State basis. They report that each State and Territory has its own legislation, policies and practices on issues pertaining to child abuse and neglect. Whilst the processes utilised to protect children across jurisdictions are similar, there are differences in legal definitions of abuse and neglect between these jurisdictions which make direct comparisons difficult. Other definitions reflect the theoretical or research perspective of the social investigator, whilst others reflect the role of human service workers who are responsible for the protection of children and the maintenance of the family unit.

Knutson (1995) points out that whilst many definitions of physical abuse refer to an act of commission against a child by its caretaker, such definitions may specify an act, an act and a consequence or merely the consequence of the caretakers act. Straus (1994) comments that when the act is the defining criterion, then abuse may range from striking with some objects (but not others) to striking some parts of the body (such as the face) but not others (such as the hand). Similarly, when the consequence of an (abusive) incident is the criterion, then physical abuse may be defined by the level of tissue damage ranging from bruises, abrasions through to fractures, burns and other life-threatening injuries. As Straus (1990) notes, definitions of physical abuse based upon the level of injury have varied significantly, probably reflecting difficulty setting a standard level of trauma that would withstand legal scrutiny.

Gil (1970) defines physical abuse as:

“The intentional, non-accidental use of physical force or intentional, non-accidental acts of omission on the part of a parent or other caretaker interacting with a child in his or her care aimed at hurting, injuring or destroying that child” (p. 7).

Parke and Collmer (1975) on the other hand define physical abuse with a focus or reference to the prevailing community attitudes to the parenting of children: They define physical abuse as: “Any child who receives non-accidental injury (or injuries) as
a result of acts (or omissions) on the part of their parents or guardians that violate the community standards concerning the treatment of children” (p. 513).

By far the broadest definitions of child (physical) abuse are those of national and international agencies such as the Child Welfare League of America who are quoted by Giovannoni and Becerra (1979), “abuse is defined as the denial of normal experiences that produce feelings of being loved, wanted, secure and worthy, and exposure to unwelcome and demoralising circumstances” (p. 88). Such broad definitions may be of use to social policy makers, but are of little value to the researcher.

Browne and Herbert (1997) present the guidelines issued by the Department of Health in the United Kingdom for professionals exposed to children at risk of abuse. Physical abuse is defined as the “actual or likely physical injury to a child, or failure to prevent physical injury (or suffering) to a child including deliberate poisoning, suffocation and Munchausen’s syndrome by proxy” (p. 114). Munchausen’s syndrome by proxy is a phenomenon wherein a parent or other direct caregiver exposes the child to a series of medical examinations, tests, procedures and interventions based on deliberately fabricated symptomatology. Many of these procedures may involve life-threatening risk, such as cardiac catheterisation.

Goddard (1996) presents an Australian Commonwealth definition of physical abuse which reads “Any non-accidental physical injury inflicted upon a child by a person having the care of a child” (p. 35). Inherent in this definition is the concept of intent. Human intent is not an easy concept to define or measure. However, as Knutson (1995) notes, definitions of physical abuse relying on the intent of the perpetrator have been extensively employed by doctors, nurses, social workers, psychologists and the legal profession, notwithstanding the inherent difficulty. Knutson concludes, “the alleged accidental nature of a disciplinary act should be determined probabilistically” (p. 4). What is clear is that there is no single definition of abuse, including physical abuse, and that this position contributes to the lack of consistency in the research literature (Cicchetti & Toth, 1995).
Widom and Maxfield (1996) define physical abuse as those cases where “an individual knowingly and willfully inflicts unnecessarily severe corporal punishment or unnecessary physical suffering upon a child” (p. 227). With so many variations in the behaviours defined as abuse, Gelles and Straus (1989) conclude that the solution to the definitional problem is to focus on specific, definable acts of (omission and) commission that are harmful to individuals in families, in this case acts of physical violence.

One definition that is considered useful in the context of this study is that of Wiehe (1996) who defines physical abuse as the:

“Inflicting of injury on a child through hitting, biting, kicking, slapping, and similar means. Injuries may also result from the use of an object such as a belt, stick, rod, or bat. This form of abuse generally involves wilful acts of adults that result in injury to the child. However, physical abuse also may result from parental actions where the intent was not to injure or harm the child. This may occur in disciplinary situations where a parent whips, beats, or uses other forms of corporal punishment” (p. 35).

This definition widens the parameters of physical abuse to include the concept of corporal punishment and seems to over-ride the concept of intent (of the perpetrator). The definition refers to an unspecified level of injury to the child. Social learning theory would suggest that the level of harm experienced by the physically abused child is not the key factor that contributes to the cycle of violence. The chronicity and frequency of physical abuse (at all levels of harm) has been shown to be a major contributor to the cycle of violence (Bandura, 1977, 1978, 1979, 1983, 1986, 1995; Bec-Sander, 1995; Rivera & Widom, 1990; Widom, 1989; Widom & Maxfield, 1996). For the purpose of this study therefore, physical abuse will be defined as a process that includes any physical force used by the parent (or parent substitute) to the child, usually (but not exclusively) in the context of discipline of the child and will include corporal punishment. Whilst the intent of the perpetrator may be of legal interest, it is considered irrelevant to the intergenerational transmission of violence (MacIntyre & Cantrell, 1995). The level of harm to the child and the frequency of abuse will contribute to the definition of severity in this study.
Whilst Thornberry, Ireland and Smith (2001) found that the effects of physical abuse was most significant when the abuse commenced in adolescence, Erickson and Egeland (1987) found differently. They examined whether the consequences of abuse differed depending on the age of onset, and the continuity or chronicity of physical abuse. They compared children who were maltreated during the first two years of life, those whose maltreatment began later in the pre-school age, and children who were maltreated consistently from infancy up to and including school-age. Whilst their study was limited by small numbers of participants, the results suggest that the earlier the onset of physical abuse, the more likely it is to continue, and the more severe the behavioural consequences as rated by observers unaware of the abuse history of participants. In the Thornberry, Ireland and Smith (2001) study, participants were drawn via official records of abuse, and families in the younger age group had all participated in extensive treatment, perhaps confounding their results. The age of onset of physical abuse will be investigated in the current study, as will the chronicity. The relationship between chronicity (or frequency) of physical abuse and the cycle of violence is well supported in the literature (Browne & Herbert, 1977; Cicchetti & Carlson, 1990; Helfer, Kaufman & Zigler, 1990; Kempe & Krugman, 1997; Straus, 2001; Zigler & Hall, 1990), and has a solid grounding in social learning theory (Bandura, 1999).

**Correlates of physical child abuse**

There is no such thing as a typical abused child. Similarly, there is no such thing as a typical abusing family. There are however, certain characteristics that are found more often amongst abusive families than others.

**The correlates of physical abuse; characteristics of the child**

Physical abuse is the product of a complex set of interactions involving the child, the parent, and the social milieu in which they interact. There are several characteristics of the child that have been found to be associated with an increased risk of (physical) abuse, including the age of the child, the sex of the child and the birth
order in the family (Straus, 1996). Kempe and Kempe (1978) studied the records of over 2000 admissions of children presenting with non-accidental injuries and found that children under three years of age were over-represented. In an earlier study, Gil (1970) found that in a sample of child abuse cases taken across several (American) States, approximately 15% were children under the age of one year. At the very best this represents parental discipline that fails to recognise the vulnerability of the infant. Gil’s study also found that 25% of the sample of abused children was under two years of age, 20% were aged between three and five years, and that 50% were younger than six years of age. This would represent the pre-school years, and would mean more time at home in the care of parent(s) or parent substitute, increased parent-child interaction, and subsequent risk of abuse (Harvey & Kelly, 1993; Van Hasselt, Morrison, Bellack, & Hersen, 1988).

Zigler and Hall (1990) reviewed the literature relating to the correlates of childhood physical abuse and found that infants were most at risk, closely followed by premature and low birth weight babies. These were children at their most vulnerable, and who presented as very demanding, both day and night, and for whom the bonding process was interrupted by the medical needs of the child, and in many cases, those of the mother.

Young children with conditions such as hyperactivity, cerebral palsy and mental retardation are particularly at risk of physical child abuse (Friedrich & Boriskin, 1976; Kolko, 1992). Children with such problems may well increase or contribute to family stress, which may already be affected by unemployment, financial problems, social isolation and parental relationship conflict. Other factors contributing to an increase in family stress include poor sleep patterns and feeding problems in the infant. Cicchetti and Carlson (1990) point out from their review of the literature that physically abused children are likely to originate from large families. They note that in 1987 some twenty percent of American families had four or more children, whilst official (American) statistics for the same period found that slightly more than 40% of substantiated cases of physical child abuse referred to government authorities were from families with more than four children. Helfer, Kempe and Krugman (1997) found similar relationships.
between family size and physical child abuse for English and New Zealand populations. Zigler and Hall (1990) report that the youngest child in the family with more than four children was typically the target of physical abuse, often perpetrated by siblings as well as parents or parent substitute. The lowest percentage of reported child physical abuse was in single child families, even when the other child factors were taken into consideration (Zigler & Hall, 1990).

The correlates of physical abuse; Parents or substitute parents

There have been many studies examining the characteristics of perpetrators of physical child abuse, and it is clear that there is no such thing as a typical perpetrator. The physical abuse of children knows no socio-demographic boundaries, although people living in poverty are over-represented in abuse statistics (Bartol, 1991; Boss, 1980; Gillham, 1994; Spinetta & Rigler, 1972), particularly physical abuse (Howells & Hollin, 1993; Huesmann & Miller, 1994; Thompson & Cowen, 1993; Wiehe, 1996).

Before examining the characteristics of perpetrators of child abuse it is important to consider who are the perpetrators. Gil (1970) studied the social and personal characteristics of perpetrators of child physical abuse in cases where the incidence of abuse had been reported to the authorities. He reports that in approximately 46% of the reported cases, the mother (or mother substitute) perpetrated physical child abuse and that the father (or father substitute) perpetrated 39%. Other family members or close family friends perpetrated many of the remaining incidents, usually in the child’s own home. However, according to Gil’s study, for approximately 29% of the cases there was no father (or father substitute), which probably increases the percentage rate of abuse perpetrated by fathers in two parent families in Gil’s sample. Straus (1994) reports that on initial perusal of the literature pertaining to the incidence of physical child abuse by mother or father, it appears that mothers are over-represented as perpetrators, but that when time actually spent with the child(ren) is factored in then fathers (or father substitute) are the major perpetrators of physical abuse. Gelles (1975) found that when single parent families were factored out of the equation, and time spent with the child factored in, then fathers (or father substitute) were responsible for
approximately two thirds of physical abusive incidents against children across the age range.

Muller and Diamond (1999) have investigated the role of fathers’ and mothers’ physically abusive parenting on the development of aggressive behaviour in both males and females. The participants included 1,536 parents and their college based children recruited from an undergraduate psychology program in the United States. Students were given a modified version of the Conflict Tactic Scale (Straus, 1979), the Buss-Durkee Hostility Inventory (BDHI, Buss, & Durkee, 1957) and a demographic detail response sheet. Similar protocols were provided to the students’ parents. Results point to the important role fathers play in the adaptive and maladaptive development of their children, particularly with respect to the modelling of aggressive or violent behaviour in boys.

However, the role of mothers in the cycle of violence has been studied far more extensively than that of fathers, probably because they do spend more time with their children, and are generally more readily available for the purpose of research. Lahey, Conger, Atkerson, and Treiber (1984) for example, examined the parenting behaviour and emotional status of physically abusing and non-abusing mothers. Participants included abusive mothers from low, medium and high socio-economic groups with matched controls. Data collection included direct observations and self-report tests including the Beck Depression Inventory (Beck, Rush, Shaw, & Emery, 1979), the State-Trait Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1970) and the Emotional Distress and Physical Symptom Scales from the Cornell Medical Index (Brodman, Erdmann, & Wolf, 1956). Abusive mothers differed significantly on all scales compared with control groups, particularly those from the lower socio-economic group (Lahey et al., 1984). There were also significant differences between the groups on observed measures of parenting style, with abusive mothers engaging in far higher levels of negative physical behaviours, and a lower percentage of positive behaviours towards their children compared with any of the control groups.
Bousha and Twentyman (1984) examined the interactional patterns of three groups of mothers in an urban setting. There were 12 per group that included mothers with a known history of child abuse, mothers with a known history of neglect, and those with no known history of child maltreatment. There were three ninety-minute observations in the families' own home (no information was given about family structure). Dependent variables included verbal and non-verbal interactions and a measure of total interaction. The results indicate that dysfunctional mothers showed significantly fewer positive behaviours than did control mothers on all measures, and that abusive mothers showed significantly higher rates of verbal and non-verbal aggression towards their children, and fewer positive interactions. The abused children likewise showed fewer positive interactions and higher rates of aggressive behaviour towards their peers compared with either the neglected or non-maltreated children. Rubin, Hastings, Chen, Stewart, and McNichol (1998) observed 52 males and 52 females at free play with a same sex peer in a pre-school facility for a period of 35 minutes. Whilst mothers (who were present throughout the period of observation) rated children's behaviour for levels of pro-social and aggressive interaction, the mothers' behaviour was being assessed by a confederate for type of interaction. Results indicate that the behaviour of the children was directly related to the parenting style; children with negative, punitive mothers scoring highest on observed aggressive play. These results remained significant, though not as strongly, when child temperament was controlled.

In a more recent study, Mahoney, Donnelly, Lewis and Maynard (2000) examined the use of corporal and severe physical punishment among mothers and fathers of clinic-referred children aged between two and 17 years using parental self-report as part of the intake process. The results were compared with a non-clinic control group. They found that clinic-referred parents reported significantly higher levels of corporal and abusive discipline at a younger age compared with the control group. Results also indicate that single parent (usually mother) families were over-represented in the clinic group, and that boys were victimised more frequently than girls. This relationship remained significant when demographic variables were controlled.
Parents’ attribution of their children’s behaviour has been shown to be a further correlate of physical child abuse (Houck & King, 1989; Nuttall & Jackson, 1994). Larrance and Twentyman (1983) for example found that abusive mothers had negative expectations of their children, and attributed inappropriate social behaviour to stable internal characteristics of the child, and random, external factors to account for appropriate social behaviour. This was the exact reverse of that found for non-abusive mothers in their study.

Rodriguez and Green (1997) present in their review of the literature a constellation of parental (or parent substitute) characteristics that have been strongly correlated with physical child abuse. They include the intellectual ability of the parent, general happiness of the parent, ego strength of the parent, unrealistic expectations and understanding of child development and age appropriate behaviour, and poor parenting skills in general. The two main factors to emerge from Rodriguez and Green’s research were parental stress and anger expression style (high anger-low control, Nayak & Milner, 1998). In their study, stress is a collective term employed to account for intra-personal and extra-personal factors that have the effect of increasing the level of arousal, and have been shown in the literature to be correlated with physical child abuse (Rodriguez & Green, 1997).

Tolliver, Valle, Dopke, Sera and Milner (1998) present a number of perpetrator characteristics divided into Demographic and social factors, Biological factors, Cognitive and affective factors and behavioural factors. Mayhall and Norgard (1983) cited eight commonly found characteristics among parents (mothers and fathers) or parent substitutes who had contact with government agencies for established abuse, particularly physical abuse against their children. These characteristics include:

1. Parental immaturity.
2. Low parental self-esteem.
3. Difficulty for parent to seek and find pleasure and satisfaction in the adult world.
4. Social isolation.
5. Misperceptions of the child and lack of understanding of child development.
6. Parental fear of spoiling the child.
7. Strong parental belief in the value of punishment.
8. Serious lack of parental ability to be empathic in relationship to the child.

The important issue to be noted at this point is the inter-relationship between factors, and that no single factor can be demonstrated to have an unequivocal causal link to the cycle of violence (Farrington, 1996).

There are many reports of the relationship between family violence, including child abuse, and alcohol intoxication of the caregivers (Browne & Herbert, 1977; Cicchetti & Carlson, 1990; Howells & Hollin, 1993; Seagull, 1997). In a review of the literature, Zigler and Hall (1990) found that alcohol intoxication of the perpetrator was a significant factor in the incidence of physical child abuse. Seagull (1997) reports that abuse of licit and illicit substances by perpetrators is a critical factor in the incidence of physical child abuse, at all levels of perpetrator (natural parents, substitute parents, other caregivers).

The mental health of the perpetrator has been reported to be associated with increased risk of child physical abuse, including antisocial personality disorders (Aguilar & Nightingale, 1994; Cicchetti & Carlson, 1990), depression, alcoholism and labile personality (Andrews, 1991, 1993; Andrews, Brown & Creasey, 1990; Andrews, Valentine & Valentine, 1994; Corvo & Carpenter, 2000; Green, 1988). However, Kashani, Shekim, Burk and Beck (1987) found no relationship between the psychopathology of the parent and the physical abuse of children. They compared 50 children of parents with a diagnosis of major affective disorders with 50 children with parents who did not have such a diagnosis (as determined by the DSM-III, American Psychiatric Association, 1980), and found no difference between the groups in the incidence of reported parental abuse. Furthermore, Kashani et al. found that parental abuse was predictive of several types of psychopathology in the children from both
groups of this study, including Conduct Disorder, Depression, Impulse Control Disorder, and general aggression.

The effects of physical abuse on children

All violent behaviour impacts on the child (Browne & Herbert, 1997), but there is heterogeneity of such impact. Important factors in the differential impact on the developing child include the type and pattern of violence, the age of the child at time of onset, and the presence (or absence) of a supportive adult caretaker(s) with whom the child can form an attachment (Perry, 1997). The term attachment is used to describe the process that takes place between infants and caregivers (usually parents) during the first two years of life and particularly during the first few months following birth. Attachment behaviour refers to those infant behaviours that are activated by stress, and serve to reduce arousal and regain a sense of security in the child. This is usually achieved by close physical contact with a familiar caregiver (Bowlby, 1977). Zuravin, McMillen, DePanfilis, and Riseley-Curtiss (1996) report that physically abused children are typically low on parental attachment, and that a poorer quality of attachment in infancy increased the probability of the transmission of child abuse from one generation to the next. Whilst the peak child age of parental use of physical discipline has been reported as four years of age (Straus, 2001), most parents are using corporal punishment before the child’s first birthday (Zigler & Hall, 1990).

Children exposed to chronic violence are more likely to themselves be violent (Lewis, Mallough & Webb, 1989; Loeber & Dale, 1997). This is related to many factors, including modelling and directly learning that violent aggression is acceptable, and the ability of the developing child for problem solving (Perry, 1997). The younger the child at the onset of physically abusive discipline, the more likely there will be a negative impact on the development of the child (Bensel, Rheinberger, & Radbill, 1997; Margolin & Gordis, 2000; Straus, 2001), including intellectual and academic development (Perez & Widom, 1994), emotional and social development (Cryan, 1985; Straus, Gelles, & Steinmetz, 1980), and interpersonal/intra-personal development (Straus, 2001; Trickett, 1993).
Whilst the effects of abuse on children depend on the interplay of many different factors, and upon the age of the child at the time of abuse, there are common themes that emerge from the literature relating to the child’s response to violence in the home. Anger and aggression appear consistently as consequences of experiencing or witnessing physical abuse across a wide age range from very early pre-school children to University or College students. Cummings, Zahn-Waxler and Radke-Yarrow (1981) studied the response of 1 to 2 1/2 year old children to the simulated anger and affection of adult confederates in a child-care environment. Mothers who were trained to be observers recorded the responses of the child. The results indicate that by one year of age children are not only aware of other peoples’ angry (or affectionate) interactions, but were also quite likely to evidence an emotional reaction to them. Not only did the children in this study manifest acute signs of physiological distress to angry interactions, they also exhibited expressions of anger. In this study anger was measured on the basis of non-verbal or pre-verbal behaviours.

In a later study, Hennessy, Rabideau, Cicchetti and Cummings (1994) found that physically abused children were significantly more sensitive to inter-adult anger compared with non-abused children, and they appeared particularly sensitive to whether there was resolution to the angry interactions between the adults in the study. The abused children were also more inclined to act out aggressively against their peers. It should however be noted that the ages of participants in these studies were different; children in the latter study being age six to 11 with age appropriate verbal skills.

George and Main (1979) examined the social interaction of abused and non-abused children aged between two and three years across a number of day care facilities. Physically abused children avoided social contact four times more often than their non-abused counterparts, and engaged in twice the rate of aggression, related to both play and other forms of socialisation. Lewis and Schaeffer (1981) observed preschool aged children (physically abused and neglected and a non-maltreated control group), using observers blind to the abuse status of the child. There were no significant differences found in the social peer interactions between the groups other than children who had been physically abused were rated higher on scales of anger and aggression.
Hoffman-Plotkin and Twentyman (1984) studied physically abused and neglected pre-school children separately and a non-maltreated control group in a pre-school centre that integrated abused and non-abused children. Observers were unaware of the treatment status of the children. The results of this study show that neglected children were less likely to socially interact with their peers than either the physically abused or the control group. However, physically abused children were more likely to engage in aggressive behaviours with their peers than either neglected or non-maltreated control group children. Cummings (1987) reports similar results among a group of 105 children (mean age 5.2 years) attending a community pre-school. Children exposed to background verbal anger or aggression among adults were observed to be more aggressive in their play with a friend compared with a matched control group not exposed to background verbal anger or aggression. Similar results are reported by Christopoulos et al., (1987) who investigated the behaviour of the children of abused mothers placed in shelters. Milner (1993) concludes that social information processing in the early developing child is a direct casualty of physical abuse.

Erickson and Egeland (1987) have demonstrated the developmental consequences of early childhood abuse very clearly in a longitudinal study that was based on observations of 267 mother-child pairs when the children were two years, four years and six years of age. Four maltreatment groups were identified in the study; physical abuse, hostile/verbal abuse, neglect and psychological unavailability. Some children appeared in two or more of these categories. The results of several assessment instruments measuring different aspects of the child's social, intellectual and psychological development were compared with those of a matched control group. Results indicate that up until 18 months of age there was little evidence of difference between the groups on any of the measures utilised in their study. By 18 months of age children in the physically abused group scored higher than the other abused groups and the control group on scales of anxious attachment. By 24 months the physically abused group scored lower on the Bayley Scale of Infant Development (Bayley, 1969), and were rated as being more angry, frustrated, non-compliant, less enthusiastic, and expressed less positive affect than any of the other groups in the study.
At 42 months of age, physically abused children in Erickson and Egeland's (1987) study were rated lower on self-esteem, self-control, creativity and assertiveness, and were more highly distractible compared with the control group. In teaching tasks set between mothers and children, (physically) abused participants were found to lack persistence and enthusiasm for tasks, were negativistic, non-compliant, avoidant, and showed little affection towards their mothers compared with children in the control group. The results of pre-school observations and teacher ratings revealed similar results. Physically abused children were rated as non-compliant, having poor self-control, and expressed high negative affect, including anger and sadness. Furthermore, children in the physically abused group were rated as having a higher incidence of behaviour problems compared with other abused and control groups. At 54 months of age, participants in the physically abused group were found to score higher on scales of dependency, negativism and impulsivity compared with other groups in the study.

By the time the group of participants reached sixty four months, the number of characteristics that distinguished physically abused children from their non-physically abused and control counterparts had grown both in terms of the scores on individual factors and the number of factors (Erickson & Egeland, 1987). Physically abused children scored lower on sub-scales of the Wechsler Pre-school And Primary Intelligence Scale of Intelligence (WPPSI). On teacher interviews and behaviour ratings, children in the physically abused group scored significantly different compared with the other three groups of abused participants, and with the control group. By 64 months the children from the physically abused group were rated as being more aggressive, uncooperative, inattentive and disturbing in the class. They were rated as impatient, showed little positive affect, were unpopular (except amongst physically abused peers) and manifested evidence of emotional problems, including nervousness and compulsive behaviour. Almost one half of the children in the physically abused group had to repeat pre-school, or were recommended for inclusion in a special education program, whilst less than twenty percent of the children in the control group were recommended to repeat pre-primary school. The outcome of this study seems to support Volavka's developmental model of physical abuse discussed below.
Jaffe, Wolfe, Wilson and Zak (1986) studied a group of 65 children aged between four years and 16 years (32 exposed to and/or experienced family violence and 15 non-abused control group matched for socio-economic variables). The results indicate that teachers and parents rated abused students lower on scales of social competence. They were absent from school more often, and were rated as more disruptive in the class when they were at school. It was unclear whether raters in this study were aware of the abuse status of participants. Kravic (1987) found that physically abused children were rated as having more behavioural problems compared with a group of non-abused, troubled children (attending a child mental health clinic with unspecified emotional problems), and a non-abused, ‘normal’ control group. Parents completed the Child Behaviour Checklist (Achenbach, 1983) and results indicate that physically abused children were less socially competent in both school and out of school activities, were socially withdrawn and externalised conflict by being more aggressive, delinquent and hyperactive.

Reid, Kavanagh and Baldwin (1987) utilised a combination of direct observation by observers unaware of participant abuse status, and parent ratings using the Child Behaviour Checklist (Achenbach, 1983). The study involved a group of 21 physically abused children and a group of 21 non-abused children with an average age of six years and eight months. The study involved families who were matched for socioeconomic variables. Results indicate that physically abused children were more hostile and withdrawn, were more aggressive, both verbally and physically, and presented with more numerous and severe conduct problems. The Perry, Doran and Wells (1983) study of 21 physically abused and 21 non-physically abused children found similar social skill deficits and conduct problems, particularly in the school-aged part of the sample.

In a study of thirty physically abused children (determined by reference to official records) aged between 7 years and 9 years, and a matched control group, Kinard (1980) found that physically abused children were rated as far more aggressive in their relationships with their peers and adult contacts compared with children who did not have a history of physical abuse. This study was conducted by observers who were
unaware of the abuse status of the children, and was conducted in both free play and academic settings. Prino and Peyrot (1994) investigated aggressive, withdrawn and prosocial behaviour in a group of physically abused, neglected and non-abused children aged between five and eight years of age and found that physically abused children displayed significantly more aggressive behaviour than any other group in the study. However, no single dimension adequately discriminated between the three groups and the conclusion was that the effects of maltreatment on children must be viewed as multidimensional.

The effects of physical abuse on juveniles

Brezina (1998) notes that during the past few decades a general consensus has emerged among criminologists and other experts in the field regarding the importance of maltreatment in the aetiology of delinquent behaviour. Most of these studies focus on the relationship of child maltreatment, and until recently, little attention has been paid to the relationship of adolescent maltreatment to delinquency (Thornberry, et al., 2001). Brezina (1998) states that whilst teenagers under the age of 18 constitute approximately 38% of the population, this population accounts for 47% of reported victims of abuse and neglect. Thornberry, et al (2001) examined how maltreatment during three different developmental phases (early childhood, late childhood, adolescence) relates to a number of delinquent behaviours, including violent behaviour, and found that maltreatment occurring in early childhood is not related to delinquent behaviour as defined in their study, whereas maltreatment that commences in adolescents was related to seven of their nine measures. However, when physical abuse was partialled out, early onset was associated with aggressive, acting out behaviour. The participants in Thornberry et al’s study were all selected from official records, and families in the early childhood maltreatment group had all been exposed to interventions that may have impacted upon their results.

Whilst Brezina’s (1998) study demonstrates a link between adolescent abuse and delinquent behaviour, the role of participants’ abuse history and of the chronicity of abuse is unclear. The older the child when physical abuse occurs, the less likely that the
child will become aggressive and act out violently, having had the early opportunity to learn more pro-social ways of social interaction (Gutierres & Reich, 1981). However, whilst this may be correct, in the majority of cases the onset of physical abuse occurs early in the child’s development, usually within the first 12 of life, regardless of the age at which the abuse comes to the attention of authorities. (Cummings, Zahn-Waxler, & Rudke-Yarrow, 1981).

When considering the link between child abuse and juvenile delinquency, Gray (1988) comments that “we as a society can never achieve any meaningful success in the war on delinquency until we view the problem in its entire continuum. There is a continuum which initiates with brutality, confusion and withdrawal of love, and finalises in a person-either adolescent or adult-who is repressed, hostile and perhaps even violent” (Faherty, 1981, p. 30, cited in Gray, 1988, p. 109). Whilst these comments are somewhat extreme, they do bring to attention the environmental links to the concept of intergenerational transmission of violence.

There is a substantial body of literature that indicates continuity of aggression over time, particularly in males rated as aggressive in early childhood (Bachman, O’Malley & Johnston, 1978; Coie & Dodge, 1997; Farrington, 1978, 1991; McCord, 1977, 1988; Howells & Hollin, 1993; Pulkinnen & Hurme, 1984). This has been reported to be particularly relevant in boys who have been physically abused (Straus, 2001). By the time (physically) abused boys reach adolescence many (though not all) have come to the attention of the authorities, including education officials, police and probation services (Ford & Linney, 1995). Seagull (1990) reports that in physically abused school-aged children aggression often occurs in the context of non-compliant behaviour, and may be labelled by family and school as hyperactivity. With adolescents on the other hand, aggression may take the form of antisocial behaviour including property destruction and assault (Ford & Linney, 1995).

In a longitudinal study of 411 boys followed from 8 years of age whose parents were receiving input from social services to address their punitive discipline style, Farrington (1978) found that by the age of 18, 27 boys had been convicted of violent
offences and 98 had been convicted of non-violent offences. Of the violent boys, 62% had been exposed to severe physical parental discipline compared to 33% of the non-violent offenders, and 7% of the non-delinquent boys in the sample. Welsh (1976) in his study of 58 court referred boys found a significant relationship between severity of corporal punishment at home and degree of aggressiveness in delinquents. Kent (1976) studied the effects of child abuse on aggression in general. In his study he compared physically abused with neglected children, and found the abused group more aggressive and disobedient when rated by teachers compared with the neglected group. His findings suggested that one of the sequels of physical abuse of children is increased difficulty managing their own anger and aggression. Reidy (1977) compared abused, neglected and non-abused children using observations of free play, and found abused children to be more aggressive in their play compared with neglected or non-abused children. Reidy also found abused children to have significantly more aggressive fantasy than either the neglected or non-abused children.

Scudder, Blount, Heide and Silverman (1993) investigated the link between child abuse, neglect, and delinquency (as determined by reference to official records) using a randomly selected sample of children from a cohort attending high schools in a local community. The results found that adolescents with referrals to the justice system for delinquent behaviour were significantly more likely to have been previously referred as victims of abuse than those who had no reports of delinquency. Similarly, a significantly higher percentage of adolescents reported as victims of abuse had delinquent records compared with those who were not reported as having been abused.

The relationship between childhood maltreatment and juvenile delinquency was investigated by Smith and Thornberry (1995) using official and self-report data from a youth development centre. They found that whilst maltreatment does not guarantee juvenile offending, a history of child maltreatment significantly increases the risk of being arrested, the chronicity of offending and the number of subsequent re-arrests. This relationship was particularly evident in cases of neglect and physical abuse in childhood. Similarly, Kahar (1996) utilised official records of substantiated cases of child abuse in a child protection unit to examine the effects of child abuse on
delinquency. The study involved the use of a matched control group to compare the delinquency rates among the abused and non-abused adolescent participants. Results indicate that physically abused participants have higher rates of delinquency, in particular against the person, compared with non-abused participants. Furthermore, age of onset of abuse was related to age of onset of delinquent behaviour and to the seriousness of offending. Gorman-Smith, Tolan, Loeber and Henry (1998) found that the level of delinquency was significantly related to family problems, with the most serious offending being robustly related to physical abuse in a group of adolescents referred to a child protection unit.

Widom (1994) reports that in prospective studies that follow up individuals who have been abused or neglected in their early childhood, between 10 and 17% develop delinquent behaviour according to official records. It is unknown how many other such children engage in delinquent behaviours that are never apprehended. According to retrospective studies which identify a sample of delinquent youth and utilise a reverse records check to determine the history of abuse or neglect, estimates range from nine to 29% of delinquent children were abused and/or neglected as children (Widom, 1994). Some of the definitional and methodological issues noted earlier in the review might contribute to the wide range in the incidence of abuse cited by Widom.

It is clear therefore (Widom, 1994), that abuse and neglect in childhood do not necessarily lead to offending behaviour, including violence, in adolescence. However, adolescents who were (physically) abused or neglected in childhood are over-represented in offending statistics, particularly violent offending, when compared with the general community norms (Garbarino, Schellenbach, & Sebes, 1986; Henggeler, McKee, & Borduin, 1989; Howing, Wodarski, Kurtz, Gaudin, & Herbst, 1990; Kruttschnitt & Dornfield, 1993). In his study of approximately 2000 delinquents, Alfaro (1978) reports that those who had experienced either physical abuse or neglect were far more likely than their non-abused delinquent counterparts to have engaged in violent delinquent acts. In a longitudinal study of over 1000 cohorts (boys and girls) assessed at ages 3 to twenty one, Moffitt, et al (2001) found a clear relationship between the experience of physical abuse in childhood, and subsequent antisocial and delinquent
behaviour in adolescence males, whereas females were more likely to experience mental health problems and be further victimised in their intimate relationships.

Carlson (1991) reports on the National Incidence Study conducted by the (American) National Center on Child Abuse and Neglect (1981) who found that 39% of all reported cases of physical abuse involve 12 to 17 year old males and females. Furthermore, 24% of child abuse deaths and 41% of serious injuries were among this age group. Boney-McCoy and Finkelhor (1995) utilised a survey methodology to control for biases inherent in the use of official records. In a national United States telephone sample of 1042 boys, and 958 girls aged between 10 and 16 years, controlled for National census distribution of gender and socio-economic variables, nearly 40% reported experiencing physical abuse or assault, usually in the family environment. Abused participants were over-represented on a range of psychological and behavioural symptomatology, including post traumatic stress disorder, depression, drug abuse, hostility and acting out behaviours such as fighting and other forms of violence. There is also an increased risk of suicidal behaviour among adolescents with a history of physical abuse, especially for males (Kaplan, Pelcovitz, Salzinger, Mandel, & Weiner, 1997).

Drug misuse is reported to be related to both the perpetration of child maltreatment (Funder, 1995; Roberts, 1984) and as a consequence of child abuse (Conte & Schuerman, 1987; Fatout, 1990; Kaplan, 1986; Zingraff, Leiter, Johnsen & Myers, 1994). Widom, Weiler, and Cottler (1999) examined whether childhood abuse and neglect increases the risk of drug abuse in a sample of 676 participants with an official record of abuse or neglect dating back to 1967-1971, and 520 matched control participants. The study involved a retrospective and a prospective component. Participants were interviewed between 1989-1995, and the process included a self-report childhood victimisation scale and a drug use-abuse schedule. Official criminal records were then monitored for approximately five years. Results of the prospective component reveal that participants who were abused and(or) neglected were not at increased risk of drug abuse, whilst retrospectively, self-report of abuse and(or) neglect
were associated with robust and significant increase risk of drug abuse, related mental health problems and crime (Widom et al., 1999).

Juvenile mental health facilities have been the venue for several studies investigating the possible links between childhood experiences of physical abuse and juvenile delinquency, particularly violent behaviour (Lewis, Mallouh & Webb, 1990). In a study of 51 adolescents admitted to a residential psychiatric treatment program for example, Connor, Melloni and Harrison (1998) found that the rate of residential aggression (aggression being defined as overt behaviour involving intent to inflict harm or to behave destructively toward another) was significantly related to previous record of violent offending in the general community, and that those with a record of residential violence were over-represented on a history of physical abuse in the developmental period up to 12 years. A history of physical abuse was significantly associated with residents who rated high on the Average Daily Assault Index (ADAI). This index is calculated by taking the number of incidents of aggressive behaviour reported by clinical staff and dividing by the number of days within the unit. What is not clear from these studies is the chronology of the mental health issue that led ultimately to a psychiatric admission, and the onset of parental physical abuse, and it is therefore unclear whether the dependent variable in these studies is in fact cause or effect.

Developmentally, adolescence is the time when young men and women are socialising and forming intimate (sexual) relationships. There seems to be clear evidence that adolescent males who have experienced physical abuse in their early developmental years will themselves become perpetrators of violence in the context of their forming intimate relationships (Gillam, 1994; Goodwin, 1994, Moffitt, et al, 2001). This phenomenon has been referred to as dating violence (Dutton, 1992) and seems to lend support to the concept of the intergenerational transmission of violence.

Swinford, DeMaris, Cernovich and Giordano (2000) investigated the impact of experiencing harsh physical discipline in childhood on the development of anti-social
behaviours during adolescence, particularly on the perpetration of violence against intimate partners and other close relationships. Six hundred and eight participants from a larger longitudinal study were interviewed in 1982 and again in 1992-93. Results indicate that harsh physical punishment in childhood is associated with an increased risk of serious juvenile offending, and of violence against intimate partners, and that intimate violence is continued into young adulthood. These findings are reported as providing evidence for the intergenerational transmission of violence. The results are supported by Merrill, Hervig and Milner (1996) and Towberman (1994) who also found a relationship between the experience of physical abuse in childhood and subsequent violence in intimate relationships amongst juveniles and young adults.

College students have been utilised extensively for the study of the cycle of violence, delinquency and other effects of child abuse. Loos and Alexander (1997) investigated the long-term effects of physical and verbal abuse and emotional neglect among 247 female and 155 male college students. Participants completed retrospective questionnaires of parental abuse and neglect, together with anger, loneliness, and social isolation scales. Results indicated that physical abuse as a child predicted higher scores on Trait Anger compared with non-abused participants. This relationship was highest for physically abused males, who also scored highest on measures of overt aggression as rated by parents and College staff. There are a number of other psychosocial factors that distinguish physically abused adolescents from their non-abused counterparts. They include poor family relationships and emotional instability (Graziano & Namaste, 1990; Hjorth & Ostrov, 1982), higher levels of psychopathology (Grilo, Sanislow, Fehon, Martino, & McGlashan, 1999), impulse control problems (Hare, 1993), poor problem solving skills and low self-esteem (Jonson-Reid, 1998).

Blumenthal, Neemann and Murphy (1998) found a significant relationship between the exposure to parental aggression (physical, verbal and combined), and elevated scores for depression, anxiety, interpersonal problems and symptoms of Post Traumatic Stress Disorder in a group of College students. Results further indicate that participants exposed to parental aggression scored higher on scales of anger, and reported higher levels of inter-personal conflict. Ferguson and Lynskey (1997)
examined the relationship between retrospective self-reports of physical and other abuse in childhood and subsequent adjustment difficulties at age 18 years in a longitudinal study of 1265 birth cohorts in New Zealand. At age 18 years participants reported on their parents use of physical punishment during their childhood using a five point Likert scale. They were also assessed for mental health, substance use, and offending behaviour. The offending records of participants were then followed for approximately five years. Results confirm a relationship between all the dependent variables and physical abuse as a child. This relationship remained significant when other confounding (social) variables were controlled. According to official records, participants who reported high levels of parental abuse were over-represented on all levels of offending behaviour, particularly violent offending.

A form of family violence which until recently has had little attention in the literature is that of abuse of parents by their children, in particular its relationship to the cycle of violence. Browne and Hamilton (1998) investigated the relationship between maltreatment during childhood, parental tactics as determined by the Conflict Tactic Scale (Straus, 1979) and the tactics employed by young adults during a disagreement with their parents. Four hundred and sixty nine students from what the authors describe as a middle class university in the United Kingdom took part in this study. Results indicate that (according to self-report) 14.5% of the participants in this study reported using violent tactics against their parents (usually mother) in the year prior to the survey. Approximately four percent of the participants reported using severe violence against one or both parents in the previous year. The conflict tactics used by participants were found to be significantly related to the conflict tactics of their parents, and of participants’ self-report of physical abuse in early childhood (Browne & Hamilton, 1998). Physical abuse as a child was also found to be related to elder abuse by Hornick, McDonald and Robertson (1992) who conclude that whilst the phenomenon is multi-factorial, the cycle of violence is a common thread that runs through the majority of cases of elder abuse.

It is important to note that the use of college students as participants is widespread in the social sciences, primarily because of their availability. However, in most instances this presents a methodological problem, as college students are not
necessarily representative of the general population (Kaplan, 1987). The use of college students may well present a problem to the research of child abuse, and results of such studies should therefore be interpreted cautiously.

Child abuse, particularly physical and sexual abuse, is reported in the literature as being related to running away and other status offences in children and early adolescents (Holden & Richie, 1991; Schwartz, Rendon, & Hsieh, 1995). Kaufman and Widom (1999) examined the inter-relationship between childhood victimisation, running away and delinquency, and whether running away mediates or moderates this relationship. Using a matched cohort design, participants with a documented record of abuse and a control group of participants were interviewed as young adults. Results indicate that being abused or neglected increases the risk of running away from home, and that childhood abuse and running away increases the risk of juvenile offending, chronic runaways being at greatest risk of arrest. However, the overall effect of running away was strongest for the non-abused and non-neglected participants than for the abused and neglected. Similar results were found for other status offences such as school avoidance, under-aged drinking, and smoking.

Dembo et al. (1991) examined the relationship between child maltreatment and subsequent juvenile delinquency in a population of delinquent males and females. Their results show mild to moderate relationships between the various predictor variables and the different offence categories, with physically abused participants involved in the more serious offending behaviour, including offences against the person. In a later longitudinal study by Dembo et al. (1992a), 399 juvenile offenders entering a correctional facility between 1986 and 1987 were assessed to determine their history of physical abuse, sexual abuse, marijuana use and criminal record. At follow-up participants who had a substantiated history of childhood abuse were over-represented in subsequent delinquent behaviours, with physically abused males being involved in more serious crimes against the person. Similarly, Dembo, Williams, Wothke, Schmeidler and Brown (1992b) report a clear relationship between childhood physical abuse and subsequent alcohol and other drug use, and juvenile crime, particularly violent crime. A relationship between level of physical abuse and severity of violent
offending has also been reported by Lewis, Shannok, Pincus and Glasser (1979) who found that 75% of the more violent youth incarcerated in a juvenile detention facility had been victims of severe physical abuse in the family home. Follow up studies (1985, 1986, 1989) suggest that a childhood history of severe abuse and of witnessing family violence is significantly associated with ongoing violent behaviour in adulthood.

Other findings have been somewhat more equivocal (Thornberry, et al, 2001, cited above). Bolton, Reich and Gutierrez (1977) compared 774 abused delinquents with 900 non-abused delinquents and reported that the abused participants were less likely than their non-abused counterparts to engage in violent acts. They were far more likely to engage in status offences such as under age drinking and watching "R" rated movies. Subsequent follow-up however, saw a reversal of this situation, and found that abused delinquents had engaged in more serious and more frequent violent acts by the age of eighteen (Gutierrez & Reich, 1984). Kratkoski (1982) found similar histories of violence perpetrated by abused and non-abused incarcerated male delinquents, however, he noted that the history of abuse was not obtained routinely and had to be determined from a variety of clinical reports. Given the reluctance noted by Widom and Ames (1994) and Blackburn (1993) of many delinquents and adult offenders to reveal histories of abuse when asked, much less to volunteer such information, it is quite likely that abuse in this sample was under-stated. Famularo, Kinscherff, Fenton and Bolduc (1990), compared the child abuse record of status offenders with that of juvenile criminal offenders in a group of adolescents presenting to a local court. Results indicate that 55% of status offenders and 45% of delinquents had a recorded history of maltreatment, with the majority reporting physical abuse. However, further analysis indicates that the percent of delinquents who had been physically abused was significantly greater among those convicted of violent crime (27%) compared with that of the non-violent delinquents (14%). Thus, Famularo et al. conclude that maltreatment may contribute significantly to delinquent behaviour.

Brown (1984) has reviewed the literature pertaining to the relationship between child maltreatment and juvenile delinquency, and found a significant relationship between emotional abuse, neglect and subsequent delinquency, but no relationship
between physical abuse and delinquency. However, as there was no consistency in the definition of physical abuse, or in the methodology in the studies reviewed by Brown, the results may be spurious.

In summary, the review of the literature on the effects of physical abuse on juveniles seems to point to the conclusion that physically abused children develop into antisocial juvenile offenders, particularly violent offenders who act out their hostility in and on the community. It seems reasonable to conclude therefore that abused violent offenders will report higher levels of juvenile delinquency compared with non-violent offenders.

The effects of physical abuse on adults

The relationship between physical abuse as a child and juvenile offending, particularly violent offending has been discussed above. It is generally assumed that juvenile violent offending results in a high probability of violent offending in adulthood (Volavka, 1995; Widom, 1993; 1996). Violent offenders are reported to have committed their first violent offence early in their delinquent career, (Harstone & Hanson, 1984) and to have an early age of onset of offending behaviour (Piper, 1985).

Research involving several different methodologies has demonstrated a strong relationship between physical abuse as a child, and familial and non-familial violence as an adult (Appel & Holden, 1998; Malinosky-Rummell & Hansen, 1993). Lewis, Mallouh and Webb (1990) state that there is good evidence to support the concept that adult violent criminality is associated with a history of severe child abuse.

Lisak, Hopper and Song (1996) report that from a sample of five 595 men who were administered self-report assessments of childhood physical and sexual abuse, perpetration history, gender rigidity, and emotional constriction, 11% reported sexual abuse alone, 17% reported physical abuse alone, and 17% reported both sexual and physical abuse in childhood. Of the 257 men who reported engaging in some form of
abuse themselves, 126 reported perpetration in either physical or sexual abuse. Of the 126 perpetrators, just over 70% reported having been abused in childhood, with most of them physically abused. Similar results have been reported by Milner, Robertson and Rogers (1990) who found that abuse in childhood increases the potential for parental physical abuse in the next generation.

Gross and Keller (1992) assessed whether some of the correlates of learned helplessness such as depression, low self-esteem, and long-term attribution style are consequences of chronic physical and psychological child abuse. Two hundred and sixty university students were identified as physically abused, psychologically abused, both physically and psychologically abused and not abused according to self-reports of parental discipline. Results indicate that psychological abuse contributes most significantly to the development of low self-esteem, depression and maladaptive attribution style. Physical abuse did not contribute significantly to the development of these variables. However, there were significant differences between non-abused and those who were both physically and psychologically abused, with most of the effect coming from psychological maltreatment. These results raise the point that seldom does the maltreatment of children involve one domain; most abused children are maltreated in several ways by a process of both omission and commission (Easteal, 1996). However, physical abuse has been clearly related to adult violent offending in males (Christensen, Brayden, Dietrich, McLaughlin and Sherrod, 1994).

Monahan and Steadman (1994) examined the relationship between child abuse and subsequent psychiatric phenomenon and found that physical abuse was related to depressive illness, particularly in women. They found that physically abused males were more likely to be associated with acting out, personality disorders. Read (1998) examined the medical records of 100 consecutive admissions to an acute psychiatric unit in New Zealand. From this examination of the records, patients were divided into no abuse, sexual abuse, physical abuse or physical and sexual abuse categories. Four measures of psychiatric disturbance were recorded; suicidal ideation, length of admission, use of the Mental Health Act and use of intensive care during admission. The results indicate that childhood abuse, particularly physical abuse, is associated with
the severity of psychiatric disturbance, as measured in this study. Read (1998) goes on to comment that results raise the question of whether child abuse may have a causative role in the most serious psychiatric conditions previously thought to be biological in aetiology.

A number of studies have addressed the specific issue of child abuse in the background of homicide offenders. Duncan, Frazier, Litin, Johnson and Barron (1958) studied six adult murderers and found that four had been the victim of severe physical brutality at the hands of their caregivers. Similarly, Satten, Menninger, Rosen and Mayman (1960) reported extreme childhood physical abuse in the background of four murderers out of the eight studied. In a study of 54 homicidal offenders Tanay (1969) found that 67% had a history of severe corporal punishment. However, in contrast to these findings Clinard and Meier (1992) examined the case records of 163 offenders in a State penitentiary and found no difference between murderers and non-violent offenders in the levels or severity of family violence and childhood physical abuse.

Cummings (1993) examined the childhood history of physical abuse among capital offenders, other violent offenders and non-violent offenders, and found that capital offenders reported the earliest onset of physical abuse, more chronic and the most serious levels of physical abuse than either of the other groups. Violent offenders were higher on all measures of physical abuse compared with non-violent offenders. Whilst the results support the concept of the cycle of violence, the total number of participants was low (56 in total), and relied on official records of physical abuse which are known to be unreliable and subject to under-reporting (Tomison, 2000).

In a sample of 187 women and 104 men, Meesters, Muris and Esselink (1995) studied the relationship between perceived parental discipline behaviours and individual differences in self-report of hostility. Results indicate that participants who scored high on hostility perceived more rejection and over-protection and less emotional warmth from their parents (both mother and father in two parent families) compared with the
low-hostile participants. Parental rejection was found to be the best predictor of hostility for both males and females.

An important study of the relationship between childhood abuse and offending behaviour as an adult is Widom (1989). Using a prospective cohorts design, official criminal histories of a sample of 908 substantiated and validated cases of physical and sexual abuse and neglect from years 1967-1971 were compared with those of a matched control group of 667 individuals with no record of abuse or neglect. Abused and neglected participants had higher rates of adult criminal record compared with controls, and a larger number of arrests as an adult in comparison with controls. Abused and neglected participants also had a higher frequency of arrests for violent offences as an adult, particularly for males. In a more recent study by Widom (1993), physically abused, sexually abused and neglected participants were investigated separately, and results indicate that physically abused males were involved in higher levels of the more serious violent offending compared with the non-abused comparison group.

Luntz and Widom (1994) investigated the relationship between childhood physical abuse and an adult diagnosis of Antisocial Personality Disorder. A group of abused and neglected children (established from official records) from 1967 to 1971 and a matched control group were followed prospectively into young adulthood when they were interviewed utilising structured and semi-structured questions, rating scales and a psychiatric assessment. Four hundred and sixteen abused and/or neglected males participated in this study with 283 participants in the comparison group. Childhood victimisation was a significant predictor of Antisocial Personality Disorder, particularly for those participants who were physically abused. The results remained robust when socio-demographic variables were controlled.
In a community based longitudinal study of 639 families with children aged between one and 11 years, Johnson, Cohen, Brown, Smailes and Bernstein (1999) investigated whether childhood maltreatment is associated with the development of personality disorders. At follow-up fourteen years later they found that abuse, as a child was associated with an elevated rate of DSM-IV Antisocial and Depressive personality symptoms by late adolescence or young adulthood. They further found that when age of child, parental education, parental substance misuse, parental mental health, sexual abuse and neglect were controlled, physical abuse was associated with elevated symptom levels of antisocial, borderline, passive-aggressive, schizotypal and total number of personality disorders.

In a study of the intergenerational transmission of abuse, Haapasalo and Aaltonen (1999) compared the background personal history of childhood physical abuse of 25 mothers under supervision of the child protection services for substantiated physical abuse of their own children with that of 25 mothers who had no contact with the child protection service. Information about childhood physical, sexual, and psychological abuse was gathered from a structured interview, as was information regarding their own parenting practices. Whilst there were no significant differences between the groups in the reports of childhood physical abuse, the intergenerational transmission of abuse hypothesis was supported by the finding that the mothers' own abusive experiences predicted child abuse, regardless of the mothers' group status. Maternal physical abuse was found to predict child physical abuse, whilst mothers' childhood psychological abuse predicted child psychological abuse. A further point of interest to emanate from the Haapasalo and Aaltonen, (1999) study was the confirmation of the level of under-reporting inherent in official records.

Kaufman and Zigler (1987) point out that the expected association between childhood experience of physical abuse and subsequent next generational abuse is not always evident, raising the question of protective factors against the effects of physical abuse (Cicchetti & Aber, 1980; Moran & Eckenrode, 1992; Widom, 1989, 1991). There has been little research examining the factors that seem to buffer many individuals from the potential to repeat the pattern of child abuse in their own parenting style. A factor
that appears fairly consistently in the literature as a major contributor to the buffer effect is that of social support both as an abused child, and subsequently as a parent (Egeland, Jacobvitz, & Sroufe, 1988; Hunter & Kilstrom, 1979; Widom, 1989, 1991). What these and other studies in the field have in common is that the cycle of violence appears to be buffered or broken when the abused child has one parent or other reliable adult who was non-abusive and utilised inductive discipline rather than corporal punishment.

Caliso and Milner (1994), for example, examined the role of social support in the discrimination of physical child abusers and non-abusers. Parental discipline style and family social supports were assessed for matched groups of physical child abusers with a personal history of physical abuse, physical child abusers without a history of physical abuse, and non-physical abusers who had not been physically abused. Both parental history of physical abuse and family social supports were found to discriminate between the groups, however, parental discipline style provided the highest level of discrimination between the groups, and this was not enhanced by the inclusion of social support factors (Caliso & Milner, 1994). Contrary to the researcher’s expectations, none of the social support factors were able to distinguish between the abused and abusing group from the non-abused and abusing group. Whilst a number of methodological issues may have impacted on these results (such as a reported ceiling effect for all groups on the data collection process, participant selection, and low participant numbers), there does appear to be some protective factor around the concept of social buffers.

Green (1998) states that the three major determinants that increase the probability of the cycle of physical abuse are, exposure to aggression (direct and vicarious), exposure to stressors, and little or no access to constructive resources. Studies of high-risk populations such as single mothers have examined these determinants. The conclusion is that from 47 to 70% of mothers with a history of severe physical abuse were physically abusing their own children at the time of participation in the studies. Furthermore, abused mothers were involved in violent relationships, and were socially isolated with little supports (Egeland, Jacobvitz, & Papatola, 1987; Herrenkohl, Herrenkohl, & Toedtlter, 1983). To test the valency of
these determinants, Coohey and Braun (1997) included variables from all three categories in a study of eighty one physically abusive mothers referred by a child protection agency for parenting skills training, and one hundred and forty eight non-abusive mothers matched on socio-demographic variables attending parenting training at other community facilities. Results were in the expected direction. The probability of mothers physically abusing their child varied with the number of emotional resources available (listening, help with important decision making, companionship), the number of stressors experienced, and the mothers' exposure to aggression in their own childhood and exposure to intimate relationship abuse. However, further analysis indicated that exposure to aggression as a child and exposure to domestic violence were the most potent factors for predicting whether a mother physically abused her child (Coohey & Braun, 1997).

Whilst most studies examining the intergenerational transmission of violence focus on one generation to the next, Doumas, Margolin and John (1994) examined the cycle of violence across three generations in 181 community based families. Their study investigated the extent to which child abuse and marital abuse in the family of origin are predictive of child abuse and marital abuse in the second generation, and the third generation, and whether such abuse in the second generation is also predictive of abuse in the third generation. In females the only significant predictor was for those exposed to inter-parental violence being victims in their own intimate relationships. For males on the other hand, exposure to aggression in the family of origin was predictive of aggressive behaviour across all three generations.

Volavka (1995) proposes a four-stage developmental model to demonstrate the relationship between physical abuse in childhood and subsequent violent offending as an adult. This model is summarised as a means of integrating the literature on the effects of abuse on children, juveniles and adults discussed above.
Stage 1

Parental effectiveness breaks down in repeated disciplinary confrontations. The child learns that aversive behaviours such as whining, crying, yelling or hitting will turn off parental demands for compliance with various requests (e.g., a request for help with domestic tasks). These exchanges between the child and other family members are termed coercive. These coercive confrontations gradually increase in frequency and in amplitude and the likelihood of hitting increases. Children who learn that physical aggression in family interactions brings desired results will resort to it with increasing frequency. The child will eventually coerce the family to reduce supervision; and this gives the child an opportunity to associate with similarly deviant peers in the street. This process would appear consistent with the concept of social learning theory to be discussed below.

Stage 2

This stage is linked to the child starting school. The abrasive coercive style, which these children have learned at home, leads to a failure in the development of social relationships with their peers. Furthermore, they soon fail academically because they avoid schoolwork, both home and school based, by using the coercive techniques learned in the pre-school years at home. These children may become rejected by their parents, teachers and schoolmates, with the exception of other children from similar backgrounds.

Stage 3

This stage focuses on the child's response to these multiple rejections. By now the only peers who will not reject them are those who are similarly placed. Association with similarly deviant peers may lead to truancy, substance misuse and juvenile delinquency. This again would appear consistent with the concept of social learning theory.
Stage 4

Juvenile delinquency is likely to develop into anti-social, violent adult behaviour. Volavka (1995) suggests that this model typically describe the family environment in which capricious violent punishment is the predominant management strategy and suggests that this model contributes to an understanding of the intergenerational transmission of violence. Superimposed upon this model are a number of psycho-social consequences of abuse, such as increased anger and hostility, learned helplessness, and a developing antagonism towards figures of authority (Widom, 1989, 1991) discussed below, that may contribute to the intergenerational transmission of hostile violence.

Physical abuse and offenders

Widom (1991) reports that the consequences of child abuse include physical injuries, psychological trauma, emotional, social and developmental delay, and that these problems persist through adolescence into adulthood. Child abuse is also related to offending behaviour, and is considered an important criminogenic marker (Blackburn, 1993; Kruttschnitt & Dornfield, 1991). There is a long history of focus on the family and its relationship to offending behaviour (Loeber & Dale, 1997), and a comprehensive array of family characteristics have been linked to offending (Bartol, 1991; Hollin, 1991; Le Blanc, 1992), particularly abuse within the family (Lewis, 1993).

Ireland and Widom (1994) examined the relationship between early childhood abuse (emotional, neglect, physical) and subsequent arrests for alcohol and/or drug-related offences. After controlling for relevant demographic characteristics, they found that childhood maltreatment is a significant predictor of adult arrests for alcohol and/or other drug offences (but not for adolescent arrests). This relationship was particularly evident in physically abused participants.

In a review of correctional files of over 600 male prisoners, Dutton and Hart (1992) found that males who report physical abuse in childhood were three times more
likely to commit violent offences as adults compared with those who reported other forms of maltreatment (such as neglect or emotional abuse). In a later study, Dutton and Hart (1993) examined three groups of incarcerated offenders: non-violent offenders, stranger-violent offenders, and family-violent offenders. This study found significant differences between the three groups on the basis of their reports and records of abuse in their family of origin. Whilst the non-violent group reported the least amount of physical abuse in childhood, and the stranger-violent group moderate rates of physical abuse, family-violent offenders were the most likely group to have been physically abused as children. As in many of the articles reviewed here, the definition of physical abuse employed in the study was unclear.

Beck-Sander (1995) compared the childhood sexual and physical abuse histories of adult to child sex offenders and violent offenders. Results indicate that violent offenders reported a higher level of physical abuse compared with child sex offenders, and that physically abused offenders scored higher on the scales employed in this study (physically abused violent offenders scored a high desire for control, and an external locus of control). Beck-Sander concludes that physical abuse in childhood is a particular risk factor for violent offending, particularly against children.

Myers, Scott, Burgess and Burgess (1995) assessed 25 homicidal children and adolescents using a diagnostic interview for children and adolescents, record review and perusal of other relevant documentation to investigate diagnostic, behavioural correlates and offence history. Ninety six percent of the participants were found to have a DSM III (R) psychopathology (largely untreated). Myers et al. found that 90% of the participants in this study (18/20) had an official history of abuse by a family member. The most common form of abuse was emotional abuse (83%), followed by physical abuse (55%). Eighty percent of the participants in this study had a prior criminal record before their index (homicide) offence, with all but one participant having a prior conviction for violence against the person. The number and severity of the previous violence was related to a history of physical abuse as a child.

Rivera and Widom (1990) examined the relationship between childhood abuse and subsequent violent offending in a prospective study of validated cases of physical
abuse and neglect that were compared with a matched control group who had no reports of physical abuse or neglect. Results indicate that early childhood victimisation increases the risk of (males) becoming violent offenders during adulthood compared with controls, but that there was no difference between the groups during adolescence. Also of interest in their study was that differences between the groups related to Afro-Americans, but not to white-Americans. Rivera and Widom suggest that this result may be an artefact of Afro-Americans being over-represented in arrest and incarceration rates. In an earlier study Widom (1989) found evidence to support the cycle of violence hypothesis for males (but not for females). Arrests for violent offences occurred in nearly sixteen percent of the physically abused participants, compared with approximately eight percent of participants in the control group. Widom concludes that early childhood abuse and neglect is related to long term consequences for violent criminal behaviour, though she also notes that this is not an inevitable pathway.

In a follow-up to Widom's (1989) study, Widom and Maxfield (1996) found that abused and neglected children, both males and females, have a higher likelihood of arrests for delinquency, adult criminality and violent criminal behaviour than matched controls. Widom and Maxfield concluded that the increase in age of participants since the 1989 study accounted for the over-representation of females, many of whom were by now parents themselves. Those who had experienced physical abuse as a child were over-represented in official records for having abused their own children compared with the females in the control group. This adds further support to the concept of the cycle of violence, although the link is not inevitable.

A number of studies have reported a relationship between child abuse, regardless of perpetrator (Mother, father, other direct caregiver), and subsequent offending as an adult (Blankertz, Cnaan, & Freedman, 1993; Luntz & Widom, 1994; Rosenthal, Motz, Edmonson & Groze, 1991; Wilson & Hernstein, 1985). However, other studies have found the cycle of violence contingent upon the perpetrator (Hilberman & Munson, 1977, 1978; Park, 1975). Truscott (1992) examined the relationship between the experience of parental abuse and the later expression of (hostile) violence in a sample of 65 consecutive (male) admissions to a Young Offenders Unit, and 25 matched high
school boys. Participants were administered a number of personality and intelligence tests, and the Conflict Tactic Scale (CTS). Results indicate a strong and significant relationship between childhood abuse and violent behaviour as a juvenile, but only in the context of the abuse being perpetrated by the father. There were no significant differences between the groups of adolescent offenders when the perpetrator was the mother. Furthermore, there was no relationship in these samples between the witnessing of physical abuse of others and the index offence of participants.

Hamalainen and Haapasalo (1996) employed a retrospective design study to compare self-reports of childhood abuse in a sample of incarcerated violent and property offenders. There were no significant differences between the two groups in their self-reports of abuse. However, there was a significant difference between homicide offenders compared with property offenders in their reports of abuse. There were a number of methodological issues that may have influenced these results. For example, participant numbers were low (only 34 in total), and the interviewers apparently were not blind to participant offence status or abuse history.

Whilst Cummings (1993) found evidence for the intergenerational transmission of violence, she reports that the outcome of an abusive childhood is influenced more by the perception of the victim to the legitimacy of the discipline than the actual discipline itself. Cummings studied three groups of incarcerated offenders; murderers, violent offenders and non-violent offenders utilising self-report of parental disciplinary style. Her study included several items that addressed the respondent's perception of the punishment, focussing on their sense of whether the punishment was deserved or undeserved and the fairness of the level of punishment. Whilst participant numbers were not particularly high (54 participants between the three groups), there was a clear trend for participants in the murder and violent offender group to view disciplinary practices reported from their childhood as being unfair, unjust and more excessive compared with participants in the non-violent offender group. Non-violent offenders in Cummings (1993) study reported that they considered their parental discipline, at all levels, to be reasonable and fair, and that non-violent offenders were more likely to blame themselves, and take on the "victim blaming" (Len, 1988) perspective. Non-
violent offenders in the Cummings study are reported to consider their parents as legitimate figures of authority, and that their parents’ actions, including physical abuse, were always right.

It seems clear from the literature review that physical abuse in childhood is related to subsequent violent offending, and that this offending is primarily motivated by anger. Children who experience physical abuse are likely to develop into hostile angry adults who are violent in their interpersonal relationships, both intimate and otherwise.

Physical abuse and anger

As defined by Novaco (1994), anger is a “subjective emotional state, entailing the presence of physiological arousal and cognitions of antagonism, and is a causal determinant of aggression” (p. 32). Huesmann and Eron (1989) report that aggression is a deeply engrained personality trait that may have some genetic and physiological determinants, but is fundamentally a learned set of behaviours. Aggressive behaviour emerges early in life and is shaped by the child’s life experiences, particularly those in the early developmental stages of infancy and pre-school years. Huesmann and Eron present a model in which aggression is represented internally as a collection of specific scripts for social behaviour emphasising aggressive responding, and an associative structure relating the scripts to each other, to external cues and to outcome expectancies.

Once established, the result is a set of cognitive structures that promote consistent forms of instrumental and hostile (anger motivated) aggression over time and across social scenarios (Huesmann & Eron, 1989). According to their model, learning is the most important contribution to aggressive behaviour in humans, and that for the developing child who is exposed to or observes aggression towards others, is rewarded for his-her own aggression, or is the subject of aggression, has a high probability of behaving aggressively in their social interactions by the age of adolescence.
Heightened aggression is one of the most commonly reported findings in studies of physically abused children’s interactions with peers and others (Cicchetti & Carlson, 1990). Fatout (1993) reports that the roots of aggressive behaviour can be traced to the normal developmental cycle of the child. However, for those children who have been physically abused these developmental milestones are grossly and adversely affected, particularly when considering anger and aggression (Greene & Coles, 1994).

Cornell, Peterson and Richards (1999) examined the validity of trait anger as a predictor of aggressive behaviour among juvenile offenders. The Novaco Anger Scale (NAS) and the State-Trait Anger Expression Inventory (STAXI) (Spielberger, 1991) were presented to 65 incarcerated adolescent males. These young males were then followed for three months during which time their behaviour was rated by clinicians and direct care staff in terms of participants physical and verbal aggression. The results support the predictive validity of self-report of anger in identifying juvenile offenders’ risk for violence in institutions. Of particular interest to the current study is the fact that in the Cornell et al. (1999) study, participants who scored higher on trait anger were over-represented in having a childhood history of physical discipline and abuse according to official records.

Hoglund and Nicholas (1995) found a relationship between an abusive family environment and proneness to shame, guilt and anger in college students. Those exposed to emotional abuse and neglect scored higher on scales of shame and hostility compared with students who did not report abuse, whilst those exposed to physical abuse scored higher on scales of overt hostility and a tendency to experience anger, including anger in the absence of specific provoking situations. Furthermore, those students who reported physical abuse during childhood were more inclined to act out their anger compared with (non-abused) control group, and were more impulsive compared with non-abused and emotionally abused students. Avakame (1998) found that self-control significantly mediated the effects of childhood physical abuse.
Evidence exists for the intergenerational transmission of violence, although the mechanisms for this transmission are not clear (Schellenbach, Trickett & Susman, 1991; Tomison, 1996). Kaufman and Zigler (1987) have concluded from their literature review that the intergenerational transmission of violence rate is approximately thirty percent (plus or minus five percent). Whilst this indicates that possibly seventy percent of people physically abused as children do not apparently go on to abuse their own partners, children or others, the literature does indicate that abused adults are over-represented in the subsequent maltreatment of their own children. For example, Tomison (1996) refers to the Australian National statistics on officially substantiated cases of child maltreatment where the abuse rate is quoted as 0.6 percent of the population of children aged under sixteen years. This may well be an underestimate of the true incidence of child maltreatment (reports to non-statutory authorities are not included and the non-report rate is unknown).

The intergenerational transmission of violence refers not only to the physical abuse of children, but includes violence to others both in and out of the home. What is unclear from the cycle of violence literature is the criminal history (rather than the record) of physically abused males, and their involvement in violent behaviour other than against children such as partners and strangers. If such behaviour were included in the intergenerational transmission of violence data, then the rate of transmission would probably be far higher.

Many studies lack control or comparison groups. In the case of offenders therefore, we do not know the frequency with which non-violent, otherwise comparable offenders report child abuse. In studies that do use comparison groups the numbers are often too small for relevant statistical analyses (Heide, 1992; Hotaling, Finkelhor, Kirkpatrick, & Straus, 1988; Lewis, Mallough & Webb, 1989). The current study will address this issue by examining the abuse history of one hundred violent offenders and compare their history with that of one hundred non-violent offenders.
The effects of witnessing physical abuse

Witnessing violence in the home is considered to be psychologically damaging as it teaches aggressive styles of social interaction, and leads to faulty social problem-solving skills (Straus, 2001). This is especially the case for young children in their early formative years. The mechanisms for this process have been discussed in Chapter Two. Social learning theory describes the primary source of models of aggressive behaviour for most children as being in the family home (Bookless-Pratz & Mertin, 1990; Hughes, 1988; Hughes, Parkinson, & Vargo, 1989). Violence witnessed by the child in the home presents a powerful reinforcer for gaining control, avoiding aversive stimuli, and generally meeting one's needs, and these children are likely to use similar behaviour in their interactions with others, especially within intimate relationships (Bandura, 1973, 1978, 1979, 1983, 1995; Davis & Carlson, 1987; Jaffe, Wolfe, Wilson, & Zak, 1986).

The witnessing of abuse by children in the family home, and its subsequent effect on their social interactions is described by Steinmetz (1977) as follows:

"The conflict resolution methods used by husbands and wives to resolve marital conflict are imitated by their children much in the 'monkey see, monkey do' manner when these children interact with their siblings and peers. Furthermore, when these children mature and marry, they appear to use these methods, which are a firmly entrenched part of their behaviour repertory, to resolve marital conflict, and, continuing the cycle of violence, transfer this method to their children in the form of the disciplinary techniques they utilise". (p. 118).

The effects on children of the observation of physical abuse and aggressive social interactions have been well documented in the literature. Some of these studies involve children who are reported to be witnesses, but not victims of abuse (Jaffe, Wolfe, Wilson, & Zak, 1985, 1986; Jonson-Reid, 1998), whilst others refer to children who are reported to be both victim and witness (Jouriles, Barling, & O'Leary, 1987; Mathias, Mertin, & Murray, 1995; O'Keefe, 1994, 1995). In many studies involving the witnessing of physical abuse however, whether the participants are observers or observer-victims is unclear (Rosenberg, 1987; Widom, 1997). The common theme emanating from these and other studies is that children exposed to domestic violence are
more aggressive in their social interactions with peers and adults compared with their counterparts who have not been exposed to such behaviour (Burton, Foy, Bwanausi, Johnson, & Moore, 1994; Fantuzzo & Lindquist, 1989; Wolfe & Jaffe, 1991; Wolfe, Zak, Wilson, & Jaffe, 1986), and generally have difficulty with social problem-solving (Rosenberg, 1987), and social information processing (Bahr, Dodge, Bates, & Pettit, 1992).

Aggression may be categorised along a number of different dimensions, such as physical-verbal, active-passive, overcontrolled-undercontrolled. Aggression may also be dichotomised according to the motivation of the perpetrator for the behaviour (Buss, 1961; Buss & Durkee, 1957; Goddard, 1996; Wolfe, 1987, 1991). Howells and Hollin (1993) discuss motivation for violence which may be instrumental, that is learned as an effective strategy for manipulating the environment, for obtaining material gains, or for preventing the aversive behaviour of others, or it may be motivated by hostile, anger based arousal. Howells and Hollin point out that many serious forms of violence, such as murder, manslaughter, spouse-abuse, rape, and the physical abuse of children appear to be acts of hostile motivated violence which occurs in response to environmental triggers, cognitive processes, physiological arousal and angry behaviours (Howells & Hollin, 1993; Novaco, 1985; Novaco & Welsh, 1993).

Individuals engaging in instrumental aggression are not generally seeking to harm the victim as an end goal in itself but rather they employ aggressive behaviour as a means to an end or a technique for obtaining various rewards (Browne & Herbert, 1997). Baron and Richardson (1994) present an example of instrumental violence when they refer to “groups of youths that cruise the streets looking for easy targets from whom to steal” (p. 74). The use of violence is employed when targets resist the attempt to steal, and the perpetrators resort to violence in order to achieve their goal. The fundamental motive for the thief in this case (though there are exceptions, see Indermaur, 1995), is economic gain, not the infliction of harm (Baron & Richardson, 1994). Hostile aggression on the other hand applies to those cases where the major goal of the perpetrator is to inflict pain and suffering on the victim, and is usually accompanied by high levels of arousal driven by anger and hostility (Blackburn, 1993).
Bandura (1983) regards the distinction between hostile motivated and instrumentally motivated aggression as unnecessary because he considers all manifestations of aggression as instrumental in achieving a desired goal. However, it seems reasonable to conclude from a review of the literature that there is empirical support for the concept of two types of aggression based upon the motive of the perpetrator (Baron & Richardson, 1994; Blackburn, 1993; Browne & Herbert, 1997; Howells & Hollin, 1993). Baron and Richardson (1994) conclude that regardless of the words that may be employed to describe aggression, there are clearly two kinds and they are motivated by different goals. Blackburn (1993) points out that the distinction between hostile/anger motivated aggression and instrumentally motivated is important, particularly in the context of treatment. Hare (1993) considers that instrumental violent offenders are typically psychopaths with an extensive history of offending behaviour, whilst reactive/hostile offenders are more criminogenically varied and less psychopathic. Those who offend instrumentally require a treatment process that manipulates the environmental contingencies, and addresses the belief systems supporting the use of violence. For the hostile-motivated offender emotional control and self-regulation are the primary targets for intervention (Blackburn, 1993). Blackburn (1993) concludes that the characteristics most strongly associated with instrumental violence are the presence of an identifiable goal, little or no provocation by the victim, and relatively low levels of arousal, such as anger, at the time of the offence. In contrast, hostile motivated violence, typically directed at family members, is associated most strongly with an apparent lack of goal-directed behaviour, little or no planning, and a greater level of emotional arousal at the time of the offence (Cornell, Peterson, & Richards, 1999).
Methodological Issues

There are a number of methodological issues apparent in the literature review pertaining to the study of child maltreatment, and these will be addressed in the current study. These issues are summarised below.

Many studies presented in the literature review fail to state clearly the type(s) of maltreatment being investigated. Many include two or more types of abuse, such as physical abuse and neglect rather than physical abuse or neglect. More recently investigators have studied physical abuse and neglect as two separate variables in the same population, given that the topography of each is different (Widom, 1989, 1991, 1994, 1997). With the focus of this study being the intergenerational transmission of violence, the emphasis is on the effects of physical abuse, with an acknowledgment that at times individuals may experience more than one form of abuse. Browne and Herbert (1997) report that there is methodological utility in examining physical abuse as a single factor.

The severity and the frequency of abuse (particularly physical abuse) was often unreported, as was the age of onset of abuse, all of which have been shown to be critical factors in the study of physical abuse and its consequences (Straus, 2001). In the current study the Physical Abuse Questionnaire developed by Andrews (1993) has been modified to include items that address both the severity and the frequency of physical abuse. Furthermore, the frequency and severity of physical abuse will be combined (see methodology) to develop a single index of the severity of physical abuse.

The age of participants at the time of the study may be an important variable to be controlled particularly where the participants are children (Thornberry, et al, 2001). A number of studies reviewed included children with an age range of two to 15 years. Given the variability of effects of abuse depending on the age of the child (Browne & Herbert, 1997; Cummings, 1993; Straus, 2001), participants should be matched in close
age groups when investigating pre-school and primary school aged children. This is less important when the participants are adults, but is an extra reason for obtaining information about age of onset of physical abuse. The Physical Abuse Questionnaire (Andrews, 1993) has been further modified to include the age of onset of physical abuse for all levels.

Socio-economic status was not discussed in many of the articles reviewed. When it was, there was often little detail, and therefore comparisons are difficult to make. Inter-parental conflict, separation and divorce have a profound effect on the behaviour of children, particularly young children (Wolfe, 1991), as does educational status and occupation. Social isolation is often one of the many consequences of separation and divorce, which removes a buffer for the effects of physical abuse on children. These are factors that were either under reported or poorly controlled in many of the studies reviewed. Participants in the current study were matched on many of the demographic variables considered important when studying offenders (Hollin, 1996).

Single group designs provide no opportunity to consider how abused or neglected children differ from those who are not maltreated. Furthermore, these studies provided no information on antecedents or consequences of abuse or neglect. As discussed by Goddard (1996) a "well implemented group comparison design may provide information on the behavioural characteristics that abused or neglected children are likely to exhibit, but not on behavioural antecedents or consequences of maltreatment" (p. 63). The limitations of each do not permit generalised conclusions, however, many studies appear to draw such conclusions. In the current study that examines the relationship between physical abuse in childhood and subsequent violent offending, non-violent offenders are used as the comparison group.

Many of the studies reviewed employed a retrospective design to examine the relationship between physical abuse in childhood and subsequent violent offending, as in the current study. Generally speaking retrospective studies rely on information gathered from official records, usually those held by government departments. This raises several problems for the social researcher in terms of the validity of the
information. There is a high level of inconsistency in the recording of information, both within and between agencies (Widom, 1989), and there may well be bias in the reporting and interpretation of information held on file (Watson & Russell, 1995). It is unknown how many cases of physical abuse occur in the community that goes unreported, but the rate is far higher than that indicated by official records (Indermaur, 1995). Violent offending is also grossly under-reported in the community (Blackburn, 1993), and the true rate is unknown. This presents limitations in the selection of participants, particularly for the non-violent offender comparison group. However, this issue was addressed in the current study by the provision of detailed criminal records for each participant from the Ministry of Justice. Whilst this did not eliminate the problem, it controlled for violence as best as possible.

As discussed above, there are limitations on the reliance of self-report or on reference to official records. Methodologically it would be appropriate to include self-report plus reference to official records, which was the plan in the current study. However, when the government department responsible for the relevant records was approached, they declined to make the records available to the researcher.

A major methodological advance in the study of violence in recent years has been the use of self-report retrospective data to avert the biases inherent in the reliance on official data (Brown, 1984). Although self-reports have been criticised because of problems associated with social desirability, exaggeration and forgetfulness, they have never the less received wide acceptance as the best available source of data collection in many situations (Shaw & Scott, 1991). A major criticism of retrospective studies, particularly in the area of child abuse and adult aggressive behaviour, is the issue of cause and effect. The retrospective nature of many studies examining the intergenerational transmission of violence makes it difficult to determine whether the aggressive (offending) behaviour developed before, or after the onset of physical abuse, raising the question of whether characteristics in the child, broader psycho-social issues, or indeed a combination of factors leads to an abusive response from parents (Brewin, Andrews, & Gotlib, 1993; Goddard & Stanley, 1994; Henggeler, McKee, & Borduin, 1989).
In an attempt to control for these problems, the Physical Abuse Questionnaire employed in the current study utilised a probing technique described by Andrew (1991, 1993) that explores child-parental interaction and discipline styles that may have occurred early in the respondents' development, before personality structures are defined. In this way, “with careful questioning involving techniques such as cued recognition, a distinction can be made between the respondents’ perceptions of the event, and what actually happened” (Andrews, 1991, p. 66). Andrews (1991) reports that there is sufficient evidence to support the semi-structured interview process inherent in the Physical Abuse Questionnaire as an appropriate tool to use in a biographical study utilising retrospective information, especially when that information is of a sensitive nature. Furthermore, Andrews (1993) reports that evidence suggests that non-trivial, factual information will be recalled with greater accuracy than incidental information. This is a vast improvement on self-report, self-completion questionnaire techniques that often involve the respondent making judgements rather than stating fact, and to their making impulse responses to brief cues.

The current study utilised Andrew's (1993) Physical Abuse Questionnaire that was modified to gain a clearer understanding of the frequency of the participant's reports of physical abuse, and the age of onset of the abuse in the context of different perpetrators (i.e., mother or mother substitute, father or father substitute, other person(s)). The current study addresses the issues of comparison groups and group size. The self-report of childhood physical abuse among a group of 100 violent offenders incarcerated in a maximum-security prison is compared with that of a similar number of non-violent offenders incarcerated in the same prison. The theoretical basis of this study is that of Social Learning Theory, discussed in the previous chapter.

**Aim of the study**

The aim of this study is to add a new dimension to the existing body of literature regarding child-rearing disciplinary practices and criminal behaviour in adulthood. More specifically, this study examines the magnitude of the relationship between
physical abuse in childhood and subsequent (violent) offending as an adult. This is an area that Cummings (1993) states is much in need of research.

Research hypotheses

**Hypothesis number 1**

*Violent offenders will report higher incidence, frequency and severity of physical abuse in childhood compared with non-violent offenders.*

**Hypothesis number 2**

*Of those who report having been physically abused as a child, participants in the violent offender group will score higher on measures of anger compared with participants in the non-violent offender group.*

**Hypothesis number 3**

*Of those who reported physical abuse in childhood, participants in the violent offender group will report higher levels of juvenile delinquency compared with participants in the non-violent offender group.*

**Hypothesis number 4**

*Participants in the violent offender group who report witnessing the physical abuse of others commit more instrumentally motivated violent offences compared with participants in the violent offender group who do not report witnessing the physical abuse of others.*

**Delimitations**

The sample in this study is limited in that participants are prisoners drawn from a maximum security prison within the Perth (Western Australia) greater metropolitan
area and may not represent the same characteristics as the general prison population. The sample may also differ from offenders who have been convicted of violent or non-violent offences and been sentenced to community based orders. Furthermore, this sample may differ from individuals who have committed violent or non-violent offences and have not been apprehended by law enforcement agencies, or have been apprehended and are awaiting trial.

Chapter 4 presents a detailed account of the methodological processes employed in this study.
CHAPTER 4

METHODOLOGY

Participants

Participants were selected on the basis of their offending behaviour; violent offenders and non-violent offenders. Violent offences were defined with reference to the Criminal Code of Western Australia (1995). The Criminal Code covers a comprehensive range of offences against the person which are summarised in Appendix 8. They include assault, with or without actual physical injury; threats of injury or death; robbery, with or without weapons; deprivation of liberty (not sexually based); manslaughter and murder. Violent sex offenders were excluded from this study on the basis that sexual offending may be related to different psycho-social experiences to that of the non-sexual violent offender (Blackburn, 1993), and may well therefore present as a confounding variable. Other offences excluded were assault not otherwise specified, assault against a public officer, disorderly conduct and possession of weapons. It was considered that these cases presented too much ambiguity with respect of violent behaviour.

Violent offenders were selected with a violent index offence that met the above mentioned criteria, plus at least one other previous conviction for a violent offence. This was to control for the possibility of a ‘one off’ violent offender who may never return to the justice system, and whose violent offence may be understood as situation specific (Indemaur, 1995).

Non-violent offences were defined by reference to the Criminal Code of Western Australia (1995), and included any offence that was not against the person. Non-violent offenders were therefore selected with an index offence or offences that
were not against the person, and who had at least one previous non-violent offence on their record. Prisoners with a non-violent index offence(s), and a previous record including violent offence(s) were excluded. The problem of selecting offenders based upon criminal record is discussed above in Chapter 3, and under limitations in Chapter 6. The Department of Justice, Research and Ethics Committee provided comprehensive National criminal records in an attempt to minimise this problem.

A list of prisoners who met the above criteria for violent and non-violent offenders from the maximum-security prison for adult males in outer metropolitan Perth, Western Australia, was provided to the researcher on behalf of the Research Committee of the Ministry of Justice (now called Department of Justice). A process of selection to quota (100 violent offenders and 100 non-violent offenders) led to initial interview of 231 prisoners for inclusion in this study. Thirty-one refused to participate, 24 violent and 7 non-violent offenders. Prisoners who refused to participate in the study were asked permission to include their demographic and offence history for comparison with that of participants. All agreed to this request. There were no remand status prisoners, and all had been sentenced for at least three months. This was to give time to adjust to their sentenced status, and reduce the potential for prisoners agreeing to participate in the study in the hope of influencing their legal status. Appellants were excluded on the same basis.

Within three months of sentence, prison officers formally assess all prisoners in Western Australian prisons, and a sentence plan is prepared. This plan focuses primarily on the prisoner’s transit through the security/placement process, and includes special conditions and/or program needs on which progress through the system, and subsequent release may be contingent. The sentence plan contains a comprehensive range of information such as socio-demographic data, index offence(s) and sentence details, previous criminal history from the Western Australian jurisdiction and Australia wide, legal statements, judge’s comments and special reports (psychological and psychiatric reports for example). Copies of these documents were collected from prison records following receipt of a copy of ethics approval from the Ministry of Justice (see
appendix 2) and signed consent from individual participants (a copy of the signed consent form was attached to the prisoners' file).

**Participant demographic data**

**Refusers, violent offender group**

Twenty-four prisoners who met the criterion of violent offender for the purpose of this study refused to participate when requested. Refusals were evenly distributed between the two research assistants (details of research assistants appear below). Refusers ranged in age from 19-51 with an average age of 25.9 years ($SD=6.27$ years). Seven (41%) were Aboriginal and 17 non-Aboriginal. Fifteen refusers were born in Western Australia, six in other Australian states and three overseas. Of the 24 violent refusers, 17 left school without formal qualifications, four had formal school leaving qualifications, two trade certificates and one a tertiary degree. Seven refusers were employed at the time of their index offence, whilst 17 were unemployed. Fifteen violent refusers were single at the time of their index offence, whilst two were married, five de facto, one divorced and one separated. Effective sentence was calculated according to the Sentencing Act of Western Australia (1995). The average length of effective sentence of violent refusers was 31.67 months, with a range of 7 to 68 months.

The level of violence was rated utilising parts of the Risk Assessment Scale (RAS, Ward & Dockerill, 1999). The RAS is a screening tool developed by the current researcher when employed by the Ministry of Justice, Western Australia, and was designed to complement the clinical process for predicting the risk of re-offending amongst violent offenders on behalf of the Parole Board of Western Australia. This scale subsequently became part of the selection process for violent offenders applying to participate in the Violent Offenders Treatment Programme. The RAS is an actuarial instrument comprising seven items, five of which pertain to the offenders index and previous violent offences, whilst the remaining two relate to alcohol and other substance misuse. For the purpose of the RAS, violence was divided into four levels depending on the injuries sustained by the victim (see Appendix 9). The categories include assault without bodily harm; assault with bodily harm; assault causing life-threatening injuries, assault resulting in death. This instrument has an inter-rater reliability of 0.82 (Ward &
Dockerill, 1999), with a classification rate of 70% and a predictive accuracy of 76%. The false positive rate is approximately 14%.

For the index offence, nine refusers committed assaults with no bodily harm, seven with bodily harm, six life-threatening injuries and two injuries causing death. The most serious previous offence was rated similarly: eight assault without injury, 12 with injury, two with life-threatening injuries and two injuries causing death. The average number of previous violent offences (excluding the index plus one criterion) was 5.22 with a range of 0 to 17. The average number of non-violent offences was 44.65 with a range of 3 to 176.

**Refusers, non-violent offender group**

Seven non-violent offenders refused to participate in this study when requested. They ranged in age from 19 to 42 with the average being 27.3 years ($SD=6.64$). One refuser was Aboriginal and six non-Aboriginal. Four were born in Western Australia, one in another Australian state whilst two were born overseas. Three refusers left school with no formal qualifications whilst two had year 10 qualifications, one a formal trade and one a tertiary qualification. Two refusers were employed at the time of their index offence whilst five were unemployed. At the time of index offence four refusers were single, one was married, one divorced and one separated. Effective sentence was calculated according to the Sentencing Act of Western Australia (1995). The average length of sentence of non-violent refusers was 17 months, with a range of 4 to 85 months. The average number of offences (other than the criterion of index offence plus one) of non-violent refusers was 34.2 with a range of 12 to 64 offences. Index offences included breaking and entering, possession of drugs with intent to supply, fraud and stealing as a servant. Alcohol was involved in the index offence of two refusers, whilst illicit drugs were involved in four. A table of offence history (4.1) appears below for the two groups of offenders who refused to participate.
### Table 4.1

A summary of offence history for violent offenders and non-violent offenders who refused to participate in the study

<table>
<thead>
<tr>
<th>Offence</th>
<th>Violent Offender</th>
<th>Non-Violent Offender</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Range</td>
</tr>
<tr>
<td>Misdemeanour</td>
<td>9.65</td>
<td>0 to 30</td>
</tr>
<tr>
<td>Failure to comply</td>
<td>3.13</td>
<td>0 to 12</td>
</tr>
<tr>
<td>Traffic Offences</td>
<td>21.65</td>
<td>0 to 141</td>
</tr>
<tr>
<td>Property</td>
<td>15.33</td>
<td>0 to 102</td>
</tr>
<tr>
<td>Money</td>
<td>0.35</td>
<td>0 to 3</td>
</tr>
<tr>
<td>Family</td>
<td>0.00</td>
<td>nil</td>
</tr>
<tr>
<td>Drugs</td>
<td>0.72</td>
<td>0 to 5</td>
</tr>
</tbody>
</table>
Participants, violent offender group

One hundred prisoners met the criteria for this study and volunteered to participate. Participants ranged in age from 20 to 51 with the average age being 29.5 years ($SD=7.97$ years). With regard to race, 30 were Aboriginal. Sixty-four were Western Australian by birth, 26 were born in other States of Australia, whilst 10 were born overseas. Thirty-eight violent offenders participating in this study completed year 10 at school, 26 completed year 9, and 14 completed year 8. Nine participants completed less than year eight, six of whom are reported to have never attended high school. Eight participants completed year 11, whilst five graduated from high school having completed year 12. Seventy-eight of participants had no formal qualifications, 17 had school qualifications, four had formal trade qualifications and one had a tertiary qualification. A summary of participants’ educational attainment is presented below in Table 4.3.

Sixty five reported that their usual occupation was unskilled, whilst 17 were semi-skilled, 16 trade and two professional/management. Twenty-three were employed at the time of their index offence, whilst 77 were unemployed. A summary of participants’ occupational details is presented below in Table 4.4. Sixty participants were single at the time of their index offence, whilst 10 were married, 24 were living in a de-facto relationship, five divorced and one separated. Seventy-eight reported that they maintain social support from close family (partners, parents, siblings, other blood relatives), friends, and/or support groups (prison visitors scheme, church groups), whilst 22 report no such support in prison.

According to official reports, alcohol was involved in the index offence of 35 participants, whilst for 35 alcohol was not related. For 30 participants the relationship between alcohol and index offence was unreported. The average age of first offence as reported in official records was 9.7 with a range of 7 to 11 years.

Effective sentence is the actual time a prisoner spends in prison, and is calculated in accordance with the Sentencing Act of Western Australia (1995). A
number of participants were sentenced to indeterminate sentences, and seven cases were excluded from this analysis as a result. The average effective sentence calculated in months was 29.34 with a range of 2 to 137 months.

The level of violence of the index offence was calculated utilising the Risk Assessment Scale (RAS, Ward & Dockerill, 1999). For 53 participants in the violent offender group, the index offence involved assault without bodily harm, whilst 24 were rated as assault with bodily harm, 11 the injuries were life-threatening and in 12 the assault led to the death of the victim. The level of harm for the index offence of participants in the violent offender group is summarised in Table 4.2.
Table 4.2
A summary of the index offence for participants in the violent offender group by level of harm to the victim

<table>
<thead>
<tr>
<th>Level of harm</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assault without bodily harm</td>
<td>53</td>
</tr>
<tr>
<td>Assault with bodily harm</td>
<td>24</td>
</tr>
<tr>
<td>Assault causing life-threatening injuries</td>
<td>11</td>
</tr>
<tr>
<td>Assault causing death</td>
<td>12</td>
</tr>
</tbody>
</table>
The most serious previous violent offences as determined by the RAS (Ward & Dockerill, 1999) were 54; 38; seven; and one respectively. The average number of violent offences (over and above the entry criterion of index offence plus one other discrete violent offence) was 3.86 with a median of 2, and a range of 0 to 25 offences.

Violent offenders had an average of 58.49 non-violent offences (as determined by the Criminal Code of Western Australia, 1995) on their record, with a range of 0 to 353 offences. A summary of offence history is presented in Table 5.5 below.

Participants, non-violent offender group

Originally 100 prisoners who met the criteria of non-violent offender volunteered for this study. However, it was later established that one prisoner had a number of violent offences on record under an alias. This prisoner was subsequently dropped from the study, leaving 99 participants in this group. Their ages ranged from 19 to 58, with an average of 30.4 years (SD=9.13 years). With regards to race, ten (10.1%) were Aboriginal and 89 (89.9%) non-aboriginal. Fifty-six (56.6%) participants were born in Western Australia, 17 (17.2%) were born in other States of Australia, and 26 (26.3%) were born overseas. Thirty-two (32.3%) participants, including three who were educated overseas, completed year 10 level of education, 23 (23.2%) completed year 9, whilst 11(11.1%) completed year 8. Three participants had qualifications equivalent to year 10 leaving from education facilities overseas. Five (5.04%) participants were educated in the special education system in Western Australia. The records of 28 participants did not have information regarding education level. With regards to actual qualifications, 69 (69.7%) had no formal qualifications, 20 (20.2%) had school qualifications, seven (7.1%) had trade qualifications and three (3%) had tertiary qualifications. A summary of the educational level achieved by participants in the non-violent offender group, together with that of participants in the violent offender group, is presented in Table 4.3
Table 4.3

**A summary of the educational level achieved by participants in the violent offender and non-violent offender groups**

<table>
<thead>
<tr>
<th>Educational Level</th>
<th>Non-Violent Offenders</th>
<th>Violent Offenders</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>No High School</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Less Than Yr 8</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Yr 8</td>
<td>11</td>
<td>11.1%</td>
</tr>
<tr>
<td>Yr 9</td>
<td>23</td>
<td>23.2%</td>
</tr>
<tr>
<td>Yr 10</td>
<td>32</td>
<td>29.3%</td>
</tr>
<tr>
<td>Yr 11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yr 12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special Education</td>
<td>5</td>
<td>5.1%</td>
</tr>
<tr>
<td>No Records Available</td>
<td>28</td>
<td>28.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>99</td>
<td>100%</td>
</tr>
</tbody>
</table>
Forty-two (42.4%) participants reported that their usual occupation was unskilled, whilst 31 (28.3%) were semi-skilled, three (3%) were artistic, 21 (21.2%) trade and two (2%) professional/management. Twenty-one (21.2%) were employed at the time of their index offence, whilst 78 (78.8%) were unemployed. A summary of the occupational skill level and employment status at the time of index offence for participants in the non-violent and violent offender groups is presented in Table 4.4.
Table 4.4

A summary of the occupational skill level and employment status for participants in the violent offender and non-violent offender groups

<table>
<thead>
<tr>
<th>Occupational status at time of index offence</th>
<th>Non-Violent Offenders</th>
<th>Violent Offenders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployed</td>
<td>78</td>
<td>77</td>
</tr>
<tr>
<td>Employment</td>
<td>21</td>
<td>23</td>
</tr>
<tr>
<td>Unskilled</td>
<td>42</td>
<td>65</td>
</tr>
<tr>
<td>Semi-skilled</td>
<td>31</td>
<td>17</td>
</tr>
<tr>
<td>Artistic</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Trade</td>
<td>21</td>
<td>16</td>
</tr>
<tr>
<td>Management/Professional</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>99</td>
<td>100</td>
</tr>
</tbody>
</table>

N 102
Fifty-nine (59.6%) were single at the time of their index offence, whilst 15 (15.1%) were married, 22 (22.2%) were living in a de-facto relationship, one (1%) was divorced and two (2%) separated. Eighty-three (83.7%) report regular social support in prison by partners, parents siblings, close friends, or support groups such as Salvation Army, whilst 16 (16.3%) do not report such support.

Alcohol was reported to have been involved in the index offence of four (4.04%) participants whilst in 79 (79.79%) alcohol was not related, and for 16 (16.16%) alcohol was not reported. Drugs other than alcohol were reported in 68 participants. According to official records, the average age of first offence was 13.9 with a range of 11 to 17 years.

Effective sentence is the actual time a prisoner spends in prison, and is calculated in accordance with the Sentencing Act of Western Australia (1995). Two participants were sentenced to indeterminate sentences, and these cases were excluded from this analysis. The average effective sentence calculated in months was 16.35 with a range of 4 to 96 months. Forty-three (43%) had drug related (non-violent) index offences, whilst for 32 (32%) the index offence was property related, 13 (13%) money, seven (7%) traffic, three (3%) non-compliance and two (2%) misdemeanours. Non-violent participants had an average of 32.62 non-violent offences (as determined by the Criminal Code of Western Australia, 1995) on their record over and above the selection criterion of index offence plus one further discrete offence. The range was from 0 to 202 such offences. A summary of offence history for violent and non-violent offenders who participated in this study is presented in Table 4.5.
Table 4.5

A summary of the offence history for participants in the violent offender group and the non-violent offender group

<table>
<thead>
<tr>
<th>Offence</th>
<th>Violent Offender</th>
<th>Non-Violent Offender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Misdemeanour</td>
<td>8.96 (0 to 67)</td>
<td>5.24 (0 to 26)</td>
</tr>
<tr>
<td>Failure to comply</td>
<td>4.72 (0 to 80)</td>
<td>1.80 (0 to 18)</td>
</tr>
<tr>
<td>Traffic Offences</td>
<td>13.61 (0 to 74)</td>
<td>19.23 (0 to 141)</td>
</tr>
<tr>
<td>Property</td>
<td>20.54 (0 to 303)</td>
<td>15.04 (0 to 102)</td>
</tr>
<tr>
<td>Money</td>
<td>7.33 (0 to 327)</td>
<td>3.47 (0 to 107)</td>
</tr>
<tr>
<td>Family</td>
<td>0.104 (0 to 2)</td>
<td>0.00 (nil)</td>
</tr>
<tr>
<td>Drugs</td>
<td>1.66 (0 to 24)</td>
<td>2.71 (0 to 12)</td>
</tr>
</tbody>
</table>
Comparisons between refusers and participants on demographic data

The demographic data for participants in the violent and non-violent groups were compared with those of the offenders who refused to participate in this study to examine for possible differences between the two groups that may impact on the generalisability of research results.

There were 24 refusers and 100 participants in the violent offender group. The mean age of refusers (25.9 years) was significantly lower than that of participants in the violent offender group (29.5 years, \( t=2.20 \) (122), \( p<.001 \)). Whilst there was no significant difference between refusers and participants on the basis of level of violence of index offence, refusers were significantly higher on level of violence for previous offences compared with participants (\( t=2.47 \) (122), \( p<.05 \)). There were no further significant differences between refusers and participants in the violent offender group on any other demographic variable.

With regards to the non-violent group, there were seven offenders who refused to participate in the study when requested, and 99 participants. Analysis indicated that participants in the non-violent offender group had significantly more drug offences on their record compared with refusers (\( t=3.48 \) (23), \( p<.01 \)), whilst all seven refusers in this group were unemployed at the time of their index offence (\( t=4.82 \) (98), \( p<.001 \)). There were no further differences between refusers and participants in the non-violent offender group.

Comparisons between participants' demographic data, violent offender group, non-violent offender group.

The Number of Aboriginal participants in the violent offender group (30) is significantly different to that in the non-violent offender group (10) (\( t(197)=3.60, p<.001 \)). The mean length of sentence (with 8 indeterminate sentences removed) in
months for violent offenders (29.34) is significantly different to that of non-violent offenders (16.35) ($t(189)=3.67$, $p<.001$). However, when participants in the violent offender group who were serving life-sentences of 15 years or more are extracted, there was no significant difference between the groups on the length of sentence. In terms of non-violent offences, participants in the violent offender group had significantly more offences on their official record compared with non-violent offenders ($t(197)=2.23$, $p<.05$).

There were some significant differences between participants in the violent offender group and non-violent offender group on the basis of their usual occupation. There were significantly more participants in the violent offender group whose usual occupation is of an unskilled nature compared with non-violent offenders ($t(105)=3.13$, $p<.01$), whilst there were significantly more non-violent offenders whose usual occupation was semi-skilled compared with violent offenders ($t(46)=2.83$, $p<.05$). Alcohol and/or other drugs are reported to have been related to the index offence of more violent offenders compared with non-violent offenders, however, this relationship was unreported in approximately one third of participants in the violent offender group, and therefore this comparison was not statistically compared.

There were no other significant differences between participants in the violent offender group and the non-violent offender group on the basis of the remaining demographic variables.

**Instruments**

The instruments used in this study included: -

1. Juvenile Delinquency Questionnaire (JDQ)
2. Physical Abuse Questionnaire (PAQ)
3. State-Trait Anger Expression Inventory (Spielberger, 1991)
4. Novaco Anger Scale (Revised) (Novaco, 1994)
1. Juvenile Delinquency Questionnaire (Appendix 6)

The Juvenile Delinquency Questionnaire (JDQ) is an adaptation of the Australian Self Report Delinquency Scale (Mak, 1993). At the time of selecting this protocol it was the only self-report instrument developed in Australia for Australian populations that examined delinquent activity. During the time of data collection for the present study, Carroll, Durkin, Houghton and Hattie (1996) adapted the Australian Self Report Delinquency Scale (ASRDS) for Western Australian adolescents. Had this been available at the commencement of data collection the Western Australian version would have been selected.

In the selection of items for the Self Report Delinquency Scale, Mak (1993) conducted unstructured interviews with separate groups of police, magistrates, community corrections staff, institutional staff, high school students and offenders. They were asked to describe types of criminal/status offences common amongst Australian adolescents. This yielded a high level of consistency, and a 40 item draft protocol was developed. One hundred and ninety nine year 11 and 12 high school students (mixed gender) were recruited from two public schools in Canberra, Australian Capital Territory (Mak, 1993). They were asked to complete the draft protocol anonymously and as openly and honestly as possible. The criteria for item inclusion were set by Mak (1993) at 5% positive response rate and a total item correlation of at least 0.20. A number of items failed to meet these criteria, and the protocol was reduced from 40 to the current 34 items, ensuring content validity.

The Australian Self Reported Delinquency Scale (ASRDS) measures individual differences in engagement in a list of 34 types of delinquent activity represented by nine sub-scales (cheat, status, fighting, vehicular, drugs, theft, harm, driving and disturb). Mak (1993) points out that this represents a wide range of culturally relevant, frequently occurring delinquent acts as reported by Australians, with item wording consistent with current Australian adolescent usage (p. 75).
The ASRDS provides a yes/no response format for the 34 items with additional items for official delinquency status (two items), and a social desirability or lie scale (four items). The former asks “have you ever been cautioned by the police without being charged?” and “Have you ever appeared before the children’s panel or court?” These two items provide a measure of self-report official delinquency status.

The lie scale includes four questions interspersed throughout the protocol (eg. “Have you ever failed to keep a promise?”), intended to reflect the respondents’ tendency to produce socially desirable responses; with a high score representing a low level of social desirability.

Scores from the ASRDS may be presented from each of the nine sub-scales separately to provide an assessment of involvement in specialised areas of offending, or as a composite score representing a global assessment of delinquency.

The ASRDS was administered to 391 male and 382 female high school students from nine high schools in Canberra, Australian Capital Territory to develop the sub-scales. Factor analysis initially produced eight factors, but subsequent analysis suggested that a nine factor solution better fit the data (Mak, 1993). Further scale/sub-scale analysis was conducted to examine whether the ASRDS could differentiate between groups with an official delinquent status from non-delinquents. Sixty three male and 40 female offenders appearing at the Children’s Court in Canberra, Australian Capital Territory were compared on their scores on the ASRDS with 103 students of similar age and socio-demographic background without a record of offending. The offender group reported significantly higher commission rates of delinquency than their non-offending counterparts on 30 of the 34 items, providing some evidence of concurrent validity of the ASRDS.

The ASRDS appears relatively robust in terms of psychometric properties. Carroll et al. (1996) report that the nine subscales of the ASRDS have items loading on each factor ranging from 0.31 to 0.75, with the average keyed factor loading of the sub-scales as follows: - cheating (0.61); status (0.68); fighting (0.58); stealing motor
vehicles/parts (0.59); drug use (0.46); theft (0.55) harming others (0.44); driving offences (0.66); and, acts of vandalism/disturbance (0.73).

Mak (1993) reports that the point-biserial correlation coefficient between self-reported official delinquency (as measured by the combined score for the police warnings and appearance in court scales), and extent of delinquent involvement (as measured by the ASRDS) was 0.49 (p<0.001) for males, and 0.46 (p<0.0001) for females. Mak comments that this suggests that the ASRDS has construct validity.

The age of onset asks the respondent to say when they first began to engage in a particular delinquent behavior, and the interviewer is encouraged to use prompts (“was it in primary school, secondary school?” “early primary school, late primary school?” for example). The objective is to ascertain a precise chronological age when offending began.

Frequency ratings were determined in consultation with the literature which focuses on the assessment of ‘risk’ for community based clients in the correctional setting, both adults and juveniles (Indermaur, 1995). Frequency ratings were divided using a Likert type scale such that they reflected the ‘one off offender at one end of the spectrum, and the ‘recidivist’ at the other.

Finally, the ASRDS (Mak, 1993) asks the respondent to answer each item in the context of the immediate preceding year. This was modified for the JDQ and asks participants (who in this study were all over the age of 18, and in adult correctional facilities) to answer each item on the basis of their experience before their 18th Birthday (“before you were 18 years of age did you ever----?”). Whilst there may be an inherent recency/primacy effect across both experimental and control groups, the effects are minimised by the introduction of well considered probing, following the guidelines of Andrews (1991 discussed above.
For the purpose of this pilot study the JDQ elicited the following scores:-

1. An overall composite score of all factors summed.
2. Nine separate factor scores.
3. Age of onset/composite score.
4. Age of onset/factor scores.

The psychometric properties of the Juvenile Delinquency Questionnaire are unknown at this time.

2. Physical Abuse Questionnaire (Appendix 7)

The Physical Abuse Questionnaire (PAQ) was developed by Andrews (1991), and modified by the present author for the purpose of this study. Andrews examined the long term psychological consequences of physical and sexual abuse experienced in childhood and adulthood in community samples of working class women in London, U.K. Her investigations involved semi-structured interviews and investigator based ratings of abuse and its sequelae.

The physical abuse component of Andrews' (1991) semi-structured interview schedule was based on the Conflict Tactics Scale (CTS; Straus 1979; Straus, Gelles & Steinmetz, 1980). The CTS was designed to measure the use of reasoning, verbal aggression, and violence in conflict resolution by individuals (mainly men) in intimate relationships. For the purpose of this study, and that of Andrews, only the violence component was utilised, containing the following elements: -

1. Threw something at another person.
2. Pushed, shoved or grabbed another person.
3. Slapped another person.
4. Kicked, bit, or punched with fist.
5. Hit with object (such as a stick, strap, bat, cord etc).
6. Beat up another person.

7. Threatened another with knife or gun.

8. Used a knife or gun against another person.

9. Other severe violence (such as burned, tortured, etc)

These elements were subdivided according to Andrews (1991) to form the basis for the levels of physical abuse utilised in this study. Elements two and three were rated as mild abuse; elements four, five and six were rated as moderate abuse; and elements seven, eight and nine were rated as severe abuse. Element one was rated according to whether the object reached the target (the participant), and the level of harm experienced if and when it did.

The PAQ addresses each of these elements separately to identify if abuse has occurred (yes/no), at what age the particular abuse began (in whole years), and the frequency with which it occurred on a Likert type scale. This is repeated for each parent/caregiver, and any other person identified in the initial probing of the document. Further probes are used throughout the PAQ, for example, under bruising, “how badly were you bruised?” “did you ever suffer multiple bruising at any one time?”.

Many of these probes are in addition to those recorded by Andrews (1991), and are intended to give a clearer insight into the actual seriousness of the abusive behaviour rather than the respondent’s initial perceptions per se. The PAQ also contained items that covered injuries causing bleeding, incisions or fractures to the skeletal system. Furthermore, it explored incidents that required medical attention or hospitalisation, and similar incidents requiring such attention which was then denied.

For the purpose of this study, the PAQ elicited the following scores:

1. Severity of abuse (3 levels; mild, moderate and severe).
2. Age of onset, as per above classification.

3. Frequency of abuse, as per above classification.

4. Perpetrators of abuse (mother/substitute, father/substitute, other relative, teacher, peer, other).

As discussed above in Chapter 3, the principles underlying the concept of intergenerational transmission of violence would predict that the more serious levels of physical abuse reported in childhood would subsequently be associated with more serious levels of violent offending (Cummings, 1993). In order to test this assumption an abuse severity index was developed. This was done in order to provide another perspective on the abuse data by providing an aggregate index of abuse.

The Abuse Severity Index (ASI)

The three levels of physical abuse used in the ASI; minor, marked and severe, were based on the Conflict Tactic Scale (Gelles and Straus, 1987), and represent the level of physical injuries sustained by the victim of the reported abuse. Social learning theory would suggest that during the early developmental stages of childhood, the frequency with which the individual is exposed, either directly or indirectly, to the control of the environment by the use of physical means, the more likely it is that they will themselves utilise such tactics to control their environment. This is the fundamental premise of the intergenerational transmission of violence. As level of harm and the frequency of reported physical abuse both contribute to the severity of abuse in the context of this study, these scores were combined to present an Abuse Severity Index (ASI). The rationale for the development of this index was to present a consistent rating of the extent of physical abuse reported by each participant, and to provide a quantitative basis for the analyses of the physical abuse data. The ASI was not intended to establish a qualitative scale of severity of physical abuse.
Weightings of 1, 2, and 3 were introduced to the frequency scores at the minor, marked and severe levels of harm respectively to increase the range of distribution, and also to reflect increasing severity of the harm inflicted. These were then summed for each participant separately for each reported perpetrator; father (or father substitute), mother (or mother substitute) and/or person other than direct caregiver, yielding an ASI score in the range of 0 to 24. The three ASI scores were then aggregated to form a Composite Abuse Severity Index (CASI). The mean CASI score for the whole group (199) participants was 14.51, with a Standard Deviation of 12.44, and a range of 0 to 60.

The psychometric properties of the PAQ are unknown at this stage.

3. State-Trait Anger Expression Inventory (STAXI) (Spielberger, 1991)

The STAXI is a concise measure of the experience and expression of anger. The experience of anger is measured by two components:

STATE (S-ANGER). This is a self report measure of subjective feelings of anger which usually relate to the feelings at the time of assessment, but may be retrospective (Spielberger, 1991) This section also includes reports of concomitant muscular tension, and autonomous nervous system arousal of varying intensity; tension, annoyance, irritation, fury and rage (10 items). Generally this item measures the level of arousal at the time of reporting, and is unrelated to the cycle of violence. It is therefore not included in this study.

TRAIT (T-ANGER) This is a self report measure of the respondent’s disposition to perceive situations as threatening, annoying, or frustrating. It also measures the tendency for such situations to result in state-anger and anger expression (ten items). There are two sub-scales; Angry temperament (T-ANGER/T) which measures the respondents tendency to experience and express anger without provocation (four items), and angry reaction (T-ANGER/R) which measures the respondents experience/expression of anger when criticised unfairly (four items).
EXPRESSION OF ANGER SCALE

The anger expression scale measures four components:

a. ANGER-OUT (AX/OUT)

This is a measure of the respondent's anger that is directed out towards other people or objects, and involves manifestations of aggressive behaviour (eight items).

b. ANGER-IN (AX/IN)

This is a measure of anger directed inwards, and involves the holding or suppression of anger (eight items).

c. ANGER-CONTROL (AX/CON)

This is a measure of the respondents' attempts to control the expression of anger (eight items).

d. ANGER-EXPRESSION (AX/EX)

This is a general index of the frequency of anger expressed, regardless of direction (in/out). It is measured on a scale derived from the above protocol, and is determined by the following formula:

e. \[ AX/IN + AX/OUT - AX/CON + 16 \]

This scale has had little psychometric research, and caution is therefore noted concerning its interpretation.

Each item on the STAXI is measured on a four-point Likert-type scale of intensity of angry feelings or frequency of anger expression. Norms are available for
normal adults, high school students, college students and for prison inmates. The sample sizes for the norms seem satisfactory (Spielberger, 1991).

Raw scores are converted to ‘T’ scores (mean=50, standard deviation = 10) to compare with most relevant norms (Appendix A in the manual). According to the manual, ‘T’ scores above the 75th percentile tend to be associated with experience and expression of anger interfering with optimal social functioning (p.5 of manual). T-Anger, AX/IN and AX/OUT ‘T’ scores below the 25th percentile reflect a person likely to experience and express low anger, or to suppress anger experience and expression.

Factor analytic studies (Spielberger, 1991) support the scale structure. Scales appear to have adequate internal consistency. Support for the validity of the STAXI scales is provided by correlation with other scales (such as the Buss-Durkee Hostility Inventory), and by its ability to correctly identify hypertensive patients (Spielberger, 1991). The STAXI manual outlines the series of studies that resulted in the current scale structure and reports internal consistency for the sub-scales ranging from .73 to .91 (Spielberger, 1991). Jacobs, Latham and Brown (1988) reported test-retest reliability for the Anger/Expression scales over a two-week period with a college sample ranging from .64 to .81. Independent support for the structure of the STAXI was reported by Fuqua et al (1991) using principal axis factor analysis with data from 455 college students. Each of the 24 Anger/Expression items loaded on the correct factor corresponding to the Anger/Control, Anger/In, and Anger/Out scales, although a few items had secondary loadings on an incorrect factor.


The NAS measures two components of anger:

NAS(R), Part A

This section contains the clinically orientated scales; and each scale contains four sub-scales with four items in each. Participants are required to respond to each item on a three point Likert-type scale; “never true” through to” always true”.

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i. Cognitive Domain.

This scale measures cognitive attention and expectations that mediate the experience of anger. The four sub-scales of this domain are Attentional Focus, Suspicion, Rumination, and Hostile Attitude.

ii. Arousal Domain.

This scale measures the self-reported physiological correlates of anger. The sub-scales are Intensity, Duration, Somatic Tension, and Irritability.

iii. Behavioral Domain.

This scale measures the behavioural responses and response inclination in relation to angry or frustrating events. The sub-scales are Impulsive Reaction, Verbal Aggression, Physical Confrontation, and Indirect Expression.

NAS(R), Part B, Trigger Domain

This section measures self-report anger intensity and generality across a range of provoking situations. Each item requires a response on a four-point Likert-type scale ranging from “not at all angry” through to “very angry”. There are five sub-scales; Disrespectful Treatment, Unfairness/Injustice, Frustration/Interpretation, Annoying Traits, and Irritations. Each sub-scale contains five items.

Psychometric research on the most recent NAS (1994) (as used for this study) was conducted on a clinical sample. Internal consistency is reported by Novaco (1994) as satisfactory in all but two sub-scales; Attentional Focus and Suspicion ($r=0.38$ and $r=0.39$ respectively). Support for the validity of the NAS was provided by correlations in the predicted direction with clinician ratings of aggressive behaviour (eg., moderate positive correlation between the Hostile Attitude sub-scale and violent crimes against the person), and with the Spielberger State-Trait Anger Expression Inventory (STAXI, 1989).
Preliminary analysis utilising college students and an earlier version of the NAS (Novaco, 1988) provides tentative support for the psychometric properties of the NAS. Adequate internal consistency for the two parts of the NAS was found (Novaco, 1994). Significant correlation with existing measures of anger and aggression, including the Buss-Durkee Hostility Inventory and the STAXI, provide tentative support for the concurrent validity. At the time of this study the NAS (1994) had not yet been adequately researched with offender populations.

**Procedure**

**Research assistants**

Given the conflict of interest between the role as an employee conducting clinical risk assessments for the Parole Board of Western Australia, and other releasing authorities, and the role of researcher with the same pool of violent and non-violent offenders, it was decided to utilise research assistants to conduct the interviews for this study.

Two research assistants were selected; one a mature aged female undergraduate student reading psychology at Edith Cowan University, Western Australia, and the other a post-graduate, male Masters student in a Forensic psychology program at the same University. Both have had experience working in the prison environment at the time of selection. The mature aged student had over four years experience running groups for violent and other offenders in both the prison and community environment for the Ministry of Justice, Western Australia. Her experience also included interviews of offenders for inclusion in other treatment programs run by the Ministry of Justice.

The other research assistant had completed two placements with the Alternatives to Violence Program and Sex Offender Treatment Unit, Ministry of Justice, Western Australia, at the time of selection for this study. His experience included work with group and individual programs for violent offenders as well as individual assessments for these programs. Furthermore, his experience included risk assessments for the various releasing authorities in the Ministry of Justice, Western Australia.
Research assistant training

The training of research assistants took place in March 1996, and involved a number of sessions as detailed below.

During the initial training session research assistants were given a brief overview of the project followed by an introduction to the interview schedules and anger questionnaires. During the next four sessions the training focussed on each of the four assessment instruments separately, and at the completion of each of these sessions the research assistant was invited to take a copy of the relevant document, and having further familiarised themselves with the document, to administer this to a volunteer. Research assistants were given a letter from the researcher giving a brief overview of the project, the role of the research assistants, and the process of training prior to collecting data from the participants. Research assistants were given a card with the researcher’s name and contact telephone number, and informed they could invite their volunteers to contact the researcher should they have any queries, or more importantly, should they feel at all distressed by the experience.

This stage of training led to a number of minor, mainly organisational, changes to the juvenile delinquency and physical abuse questionnaires.

The sixth training session involved two parts: -

1. A discussion about the process of calling up prisoners in a maximum security setting, seeking informed consent for participation, and subsequent interviewing and debriefing.

A list of potential participants organised by the researcher was given to the research assistants, together with an up to date copy of prison musters which provides information about prisoner location within the prison, but did not include details of offence (of which the research assistants were blind throughout the process of data collection). From this, research assistants were given clear details as to how to call
prisoners to the place of interview, and given instructions about security and management issues inherent in this process.

At this point a number of personal safety and security issues were discussed in a manner designed to raise their awareness, but not undue anxiety. This included emergency procedures, protocols and contact numbers.

The next stage of training involved rehearsal for actually requesting prisoners to be research participants for this project. The major emphasis at this stage was on the issue of informed consent. A participant consent form prepared by the researcher was discussed with research assistants (see Appendix 3), and this formed the structure for requests for prisoners' participation in this study, and included the consent form. The vulnerability of prisoners to coercion was stressed, and training focussed on the necessity for consent to be on as open and informed basis as possible, without jeopardising the integrity of the research.

Training then focussed upon the interview itself, and included the order of presentation of the four questionnaires, how to address questions arising during the interview/assessment, and how to close the interview. At this point training emphasised the potential for participants to be left feeling upset or otherwise distressed by the probing nature of the physical abuse questionnaire in particular. Therefore, each interview is concluded by a debriefing, and prisoners given information about the resources available should they wish to discuss these issues at a later date. Research assistants were instructed to terminate any interview in which the participant appeared unduly upset, and to then focus on debriefing. They were further instructed to contact the Special Needs Team (SNT), with the consent of the participant, should an interview be terminated in this way. SNT is a team of psychologists and social workers who work in the prison environment. Their duties include counselling of prisoners, particularly in times of stress or crisis. Generally speaking, SNT is well regarded by prisoners, and referral is not considered to be an issue. The manager of SNT was consulted during the developmental phase of this project, and his endorsement is included in Appendix 4.
2. Role-playing full interviews with the research assistants alternating between interviewer and interviewee, whilst supervised by the researcher.

In the second phase of the sixth training session the research assistants were given a full set of questionnaires, and asked to role-play interviewing each other, from call-up to their office through to debriefing, whilst the researcher supervised. In order to protect their personal confidentiality research assistants were asked to mix fact with fiction. Where possible, issues arising were addressed as they arose, but if it was considered that to do so would interfere with the flow of the interview too much, they were noted and left until the end.

At the completion of this section of training the researcher debriefed the research assistants (both at change over and at completion), and any remaining questions addressed. By the completion of this session, both research assistants reported that they felt confident to move on to practice interviewing with offenders. Practice interviews provided an opportunity to test both the interview process, and the test protocols, particularly the physical abuse and juvenile delinquency interview schedules.

Practice interviews

Participants

Ten offenders from a community based correctional facility volunteered to take part in the practice interviews. The mean age of participants was 23.7, the range 18.4 to 37.0 years (SD=5.46). There were two Aboriginal and eight Caucasian participants.

Seven out of the 10 participants were released from prison on parole for offences including property offences, traffic offences, assault occasioning bodily harm, armed robbery, breaking and entering, and going armed in public.

The remaining three participants were on probation for offences including traffic offences, breaking and entering, resisting arrest, assaulting a public officer, and stealing.
with violence. All participants had a previous criminal record, including offences against the person. Six out of the 10 had substantial juvenile records.

Participants were recruited from a Skills Training for Aggression Control (STAC) program run during mid April to mid May 1996 at a Community Corrections Centre, Western Australia. STAC is a cognitive-behavioural skills development program for violent offenders based on the Novaco (1985) model of anger and its management. The program includes 10 half-day sessions, and is run on the basis of two sessions per day per week for five weeks.

Having discussed the rationale for the interviews with the STAC facilitator, the research assistants were invited into the first of the five sessions to address clients and recruit participants. They were each provided with a consent form (appendix 5) which formed the basis for recruitment on an informed basis. In particular, the voluntary nature of participation was emphasised together with the fact that acceptance or refusal to participate would have no bearing on their progress through the STAC program, and that no correspondence or report writing would be involved.

Prospective participants were assured of confidentiality, and that documents would be identified by number only, and that hard copies would be kept securely locked in a filing cabinet on University property. All 10 men enrolled in the STAC program agreed to participate in the practice interviews, and signed consent forms accordingly.

Process (practice interviews)

Participants were randomly assigned by the researcher for initial interview, half to one research assistant, and half to the other, which were then reversed for the follow up interview, approximately two weeks later. Interviews were conducted at the Community Corrections Centre, two participants per research assistant per group contact day.
The Juvenile Delinquency Questionnaire (Appendix 6) was administered first, followed by the Physical Abuse Questionnaire (Appendix 7). The instructions were read verbatim to participants, and the research assistants then checked that these had been understood. Questions about the process were invited, and addressed using the format of the consent form. Participants were reminded that they could withdraw at any time during interview, and to let the research assistants know if they were feeling upset or otherwise distressed.

The physical abuse questionnaire was left until last as this was considered by the researcher to be the most likely to stir painful memories, and would better facilitate debriefing due to (an interview) recency effect. Support counselling by the researcher was made available, and this information formed part of the debrief process. To date, no such request has been made.

Procedure, main study

Prisoners were selected from the list of violent and non-violent offenders discussed above, and invited to attend by the research assistants for an interview on an individual basis, and all those invited agreed to attend. Upon arrival and introduction, the purpose of the request for interview was explained in accordance with the format of the consent form in Appendix 3. The emphasis at this stage of the procedure was to provide as much information as possible for the prospective participant to make an informed decision on whether or not they wished to participate in the study, whilst minimising the likelihood of biasing their responses should they decide to do so.

Great care was taken by the research assistants to minimise the appearance of coercion. Prisoners are in many ways a vulnerable group, and their rights are easily jeopardised. Therefore, the voluntary basis of participation was emphasised, as was the fact that their acceptance or refusal to participate would have no effect on their progress through the prison system, or upon their eligibility for early release from prison on parole. Prospective participants were informed that the information gathered during the interview would be held securely at the University in the strictest of confidence, and
that no names would be used in the analyses, or write up of the study. They were informed that data would be analysed by use of numbers, not names.

Those who agreed to participate were asked to sign the consent form prior to the commencement of formal interview/assessment. This process served the additional function of assessing participants' literacy skills; the STAXI and the NAS(R) necessitating a reading age of approximately (Australian) year 6. No participants were eliminated on this basis.

Interviews were conducted utilising research instruments in the following order; STAXI, NAS(R), Juvenile Delinquency and Physical Abuse Questionnaires. There were no reports by research assistants of any participant becoming unduly upset or distressed such that the interview had to be terminated. However, at the completion of each and every interview participants were debriefed by the research assistants, and two participants reported that they would like follow-up for the issues raised in the physical abuse questionnaire, and referral was made to the Special Needs Team (as discussed above).

Analyses

The STAXI was scored according to the manual (Spielberger, 1991) whilst the JDQ was scored according to Mak (1993) and the NAS (R) according to Novaco (1994). Data from the PAQ was entered directly into the computer, a Hewlett Packard, XE2 Omnibook. All statistical analyses were conducted utilising Statistical Package for Social Sciences (SPSS) 6.0 for Windows.

Descriptive statistics include raw data and percentages of participants whilst comparisons include means, standard deviations, Z statistics, t-tests and chi-square statistics. Inferential statistics include Pearson Product Moment correlation coefficients, multiple regression analysis and one-way multivariate analysis of variance (MANOVA). According to Tabachnick and Fidell (1989), MANOVA can be utilised "to evaluate differences among centroids for a set of dependent variables when there are
two or more levels of independent variables”. The procedure “deals with correlations among the dependent variables and the entire analysis is accomplished within a preset level for type 1 error” (Tabacknick & Fidell, 1989, p24). The multivariate tests of significance determine whether there are significant group differences on a linear combination of the dependent variable. Of the several statistical techniques available to do this, Pillai's criterion is considered to have acceptable power, and be the most robust statistic against violations of assumptions (Bray & Maxwell, 1985), and this criterion was employed in all multivariate analyses.

MANOVA is contingent upon a number of pre-conditions, and these are assessed by SPSS 6.0, and will be discussed in the results section according to Tabacknick and Fidell (1989, pp 421-424).

The present chapter discusses the methodological process utilised for this study, including the selection of participants, the instruments employed in the study, the selection and training of research assistants and the process of data collection and analyses. Chapter 5 will present the results of statistical analyses of the four research hypotheses.
CHAPTER 5

RESULTS

Outline

This chapter addresses the four research hypotheses in sequential order, presenting first a description of results for participants in the whole group, violent offender group and non-violent offender group, followed by results of statistical comparisons between the two groups. All of the statistical analyses in this chapter were carried out using the Statistical Package for the Social Sciences (SPSS) version 6.0 for Windows on a Hewlett Packard Omnibook computer. A discussion of these results will follow in Chapter Six.

Research hypotheses

Hypothesis number 1

Violent offenders will report higher incidence, frequency and severity of physical abuse in childhood compared with non-violent offenders.

A number of descriptive statistics are presented for the whole group of participants, violent offenders and non-violent offenders examining the level of reported physical abuse, the frequency of the abuse and the results of a new scale that combines the two (CASI). Further descriptive statistics examine the severity and frequency of the reported physical abuse by the perpetrator. Furthermore, there is a description of the age of onset of the reported physical abuse with a comparison between the groups. Also included are a number of inferential statistics that explore for differences between participants in the violent offender group and the non-violent offender group on the severity of abuse, the frequency of abuse and the relationship between the perpetrator of
abuse, level of abuse and offender group. Multiple regression analysis examine the relationship between group status (violent offender/non-violent offender) and Abuse Severity Index for father, mother and other perpetrators, and the index offence of violent offenders by the Abuse Severity Index for father, mother and other perpetrator. Hypothesis 1 would predict that participants in the violent offender group would score higher on all but one of these variables compared with participants in the non-violent offender group. The age of onset of physical abuse is predicted to be lower for participants in the violent offender group compared with those in the non-violent offender group.

Whilst there was a general trend for participants in the violent offender group to report higher levels of physical abuse in childhood on measures of incidence, frequency, severity and a lower age of onset when compared with participants in the non-violent offender group, the results failed to reach statistical significance. The majority of participants (175, 87.9%) reported a history of abuse as defined in this study. This includes 90 (90%) participants in the violent offender group and 85 (85.9%) participants in the non-violent offender group. Twenty-four (12.1% of all) participants reported disciplinary practices that excluded physical abuse in childhood as defined in this study.

When minor levels of abuse are removed, 151 (75.9%) participants reported physical abuse at marked or severe levels. No difference was found between the number of participants in the violent offender and non-violent offender groups at these higher levels of abuse. (76 and 75 respectively). A total of 51 participants; 28 in the violent offender group and 23 (23.2%) in the non-violent offender group, reported a history of severe abuse in childhood.

A one-way multivariate analysis of variance (MANOVA) was conducted to determine whether there were significant differences between participants in the violent offender group and non-violent offender group in their reports of levels of physical abuse. There were three dependent variables: number of incidence of minor physical abuse, marked physical abuse and severe physical abuse; and one independent variable,
participant groups (violent offender group and non-violent offender group). Conceptually and theoretically these dependent variables are related and thus MANOVA was the analysis of choice (Kaplan, 1987).

Data screening

The data for each dependent measure by group were screened using the Explore option and included the selection of the outliers facility. An examination of the skewness and kurtosis statistics indicated that the distributions across groups were relatively normal. Multivariate outliers were tested using the Regression analysis option, requesting Mahalanobis distance, utilising participant number as the dependent variable, and minor, marked and severe abuse as the independent variables (Norusis, 1993). Given that there were three independent variables in this analysis, the critical chi-square value at \( p < .001 \) is 16.2. An examination of the newly created variable revealed that one case exceeded the critical value. The analysis was re-run excluding the outlier with marginal impact upon results. The MANOVA was therefore conducted with the inclusion of the outlier. A linear relationship between all pairs of dependent variables is assumed on the basis that each is a measure of level of physical abuse reported by participants.

The univariate tests for homogeneity of variance for each of the dependent measures indicate that homogeneity of variance has not been violated for minor physical abuse and marked physical abuse. However, for severe physical abuse, the Bartlett-Box F and Cochrans C tests were significant. Subsequently, the univariate F tests should be interpreted at a more conservative alpha level. The remaining screening statistics indicate that assumptions regarding multicollinearity, singularity, cell size equality and homogeneity of variance were not violated, and the MANOVA was continued.

The multivariate tests of significance statistic utilising Pillai’s criterion indicate that there were no significant differences between participants in the violent offender group and the non-violent offender group on their reports of physical abuse in childhood. \( F(3,171) =1.446, p = .231 \). Univariate analysis of variance to explore for
group differences in minor, marked and severe levels of reported physical abuse was therefore not conducted.

Of those participants who reported physical abuse in childhood, 135 (65 violent offenders and 70 non-violent offenders) reported that they were abused by their father or father substitute, 109 (60 violent offenders and 49 non-violent offenders) by their mother or mother substitute and 57 (35 violent offenders and 22 non-violent offenders) reported that they were abused by a person(s) other than their direct caregiver. Seventy-six (38.2%) of the participants reported that they were abused by both their mother and father, whilst 26 (13.07%) participants reported that they had been abused by both their father and mother (or parent substitute), and also by a person(s) other than their direct caregiver.

Of these, 39 participants in the violent offender group, and 37 (37.2%) participants in the non-violent offender group reported that they were abused by both their mother and father (substitutes), whilst 17 participants in the violent offender group and 10 (10.1%) in the non-violent offender group reported being physically abused by mother (or substitute), father (or substitute) and a person(s) other than their direct caregiver. A summary of the number of participants in the violent offender group and non-violent offender group reporting physical abuse by perpetrator appears in Table 5.1.
Table 5.1

Number of participants in the violent offender group and non-violent offender group reporting physical abuse in childhood, by perpetrator of the abuse.

<table>
<thead>
<tr>
<th>Source of Abuse</th>
<th>Violent Offenders</th>
<th>Non-Violent Offenders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Father</td>
<td>65</td>
<td>70</td>
</tr>
<tr>
<td>Mother</td>
<td>60</td>
<td>49</td>
</tr>
<tr>
<td>Other</td>
<td>35</td>
<td>22</td>
</tr>
<tr>
<td>Father + Mother</td>
<td>39</td>
<td>37</td>
</tr>
<tr>
<td>Father + Mother + Other</td>
<td>17</td>
<td>10</td>
</tr>
</tbody>
</table>
A total of 11 participants (seven violent offenders and four non-violent offenders) who reported marked and severe levels of abuse were abused by a person/s other than direct caregivers including teacher, scoutmaster, and blood relatives. Three participants in the violent offender group and one participant in the non-violent offender group reported that the severe abuse was perpetrated by person(s) other than their direct caregiver.

A one-way multivariate analysis of variance (MANOVA) was conducted to determine whether there were differences between participants in the violent offender group and non-violent offender group in the reported perpetrator of physical abuse based on the severity of abuse. There were three dependent variables; abused by father or father substitute, abused by mother or mother substitute and abused by person/s other than direct caregiver; and one independent variable, participant groups (violent offender group and non-violent offender group). Conceptually and theoretically these dependent variables are related and thus MANOVA was the analysis of choice.

Data screening

The data for each dependent measure by group were screened using the Explore option and included the selection of the outliers facility. An examination of the skewness and kurtosis statistics indicated that the distributions across groups were relatively normal. Multivariate outliers were tested using the Regression analysis option, requesting Mahalanobis distance, utilising participant number as the dependent variable, and abuse by father (or father substitute), abuse by mother (or mother substitute) and abuse by person/s other than direct caregivers as the independent variables (Norusis, 1993). Given that there were three independent variables in this analysis, the critical chi-square value at $p < .001$ is 16.2. An examination of the newly created variable revealed that two cases exceeded the critical value (16.5 and 17.05 respectively). The analysis was re-run excluding the outliers with marginal impact upon results. The MANOVA was therefore conducted with the inclusion of the outliers. A linear relationship between all pairs of dependent variables is assumed on the basis that
each is a measure of level of physical abuse reported by participants, and was confirmed using scatterplots among pairs of dependent variables across groups.

The univariate tests for homogeneity of variance for each of the dependent variables indicate that abuse by father and abuse by mother have not violated this assumption at the .01 alpha level. However, for abuse by other/s, the Bartlett-Box F and Cochrans C tests were significant. Subsequently, univariate F tests should be interpreted at a more conservative alpha level. Tests for equality of cell size and multicolinearity were well within normal limits.

The multivariate tests of significance statistic utilising Pillai's criterion indicate that there were no significant differences between participants in the violent offender group and the non-violent offender group in their reports of the perpetrators of physical abuse in childhood, \( F(3,171) = 2.14, \ p=.097 \). Univariate analysis of variance to explore for possible differences between participants in the violent offender group and non-violent offender group in their reports of abuse by father, abuse by mother and abuse by others was therefore not conducted.

The age of onset of physical abuse in childhood reported by participants was recorded for father (or father substitute), mother (or mother substitute) and person(s) other than direct caregiver. When abuse was not reported for any/all perpetrators this was recorded as missing data in the variable 'age of onset'. The mean age of onset of reported physical abuse perpetrated by father (or father substitute) was 8.65 years \( (SD= 3.15) \), with the range spanning 2 to 16 years for participants in the violent offender group, whilst for participants in the non-violent offender group, the mean age of onset was 9.15 years \( (SD= 3.40) \) and the range spanning 3 to 16 years.

In those cases where the mother (or mother substitute) was the perpetrator of the reported physical abuse, the mean age of onset was 7.99 years \( (SD = 3.18) \) with the range spanning 1 to 15 years for participants in the violent offender group, and 7.46 years \( (SD = 3.17) \) with the range spanning 1 to 17 years for participants in the non-
violent offender group. When other than direct caregivers were the perpetrators of the reported physical abuse the mean age of onset was 5.71 years ($SD = 3.02$) with the range spanning 3 to 16 years for participants in the violent offender group, and 8.64 years ($SD = 3.56$) with the range spanning 4 to 15 years for participants in the non-violent offender group.

The differences between the age of onset of reported physical abuse in childhood perpetrated by father, mother and/or person(s) other than direct care-giver for each group of participants were examined by means of a oneway analysis of variance (oneway ANOVA). This was considered the most appropriate statistical procedure given the problems inherent with missing data when using other forms of analyses. There were three dependent variables; age of onset of abuse by father or father substitute, age of onset of abuse by mother or mother substitute, and age of onset of abuse by person(s) other than direct caregivers. The independent variable or factor was group of participants, with two levels; violent offender group and non-violent offender group. The Bonferroni technique was applied to the alpha level of .05 to account for familywise Type One errors. With three levels of dependent variable this equals .017. Results indicate that there were no significant differences between participants in the violent offender group and the non-violent offender group in the age of onset of reported physical abuse. The results of these analyses appear below in Table 5.2.
Table 5.2

Results of a one way analysis of variance with three dependent variables; Age of onset, abuse by father, age of onset, abuse by mother, and age of onset, abuse by person/s other than direct caregiver by participant group; violent offender, non-violent offender

<table>
<thead>
<tr>
<th>Age of onset of abuse by</th>
<th>$F$</th>
<th>$df$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Father</td>
<td>1.004</td>
<td>1,133</td>
<td>0.32</td>
</tr>
<tr>
<td>Mother</td>
<td>0.593</td>
<td>1,108</td>
<td>0.44</td>
</tr>
<tr>
<td>Other person/s</td>
<td>1.614</td>
<td>1,55</td>
<td>0.21</td>
</tr>
</tbody>
</table>

Note. Alpha level, corrected for familywise errors = 0.017

The frequency of physical abuse reported by participants was calculated separately for the three groups of perpetrators; father or substitute, mother or substitute and person(s) other than direct caregiver, for each of the three levels of abuse severity; minor, marked and severe.

Abuse perpetrated by the father or father substitute

At the minor level 112 (64%) participants reported physical abuse as defined in this project, with 24 reporting between four and nine such incidents and 57 (32.6%) reporting a frequency of 10 or more incidents.

One hundred and eight (61.7%) participants reported physical abuse at the marked level, with 20 (11.4%) reporting between four and nine such incidents and 62 (35.4%) reporting a frequency of 10 or more incidents. At the severe level, 37 (21.1%) participants reported a frequency of between four and nine incidents, whilst 28 (16%) reported a frequency of severe physical abuse on 10 or more occasions.
Abuse perpetrated by the mother or mother substitute

One hundred and two (58.3%) participants reported physical abuse by the mother or mother substitute at the minor level. This includes 14 (8%) at a frequency between four and nine incidents and 56 (32%) at a frequency of 10 or more incidents.

At the marked level, 73 (41.7%) participants reported physical abuse by their mother or mother substitute. Of these, 12 (6.9%) reported a frequency of between four and nine incidents, whilst 42 (24%) reported a frequency of 10 or more such incidents. Fifteen (8.6%) participants reported physical abuse by their mother or mother substitute at the severe level. Of these, three (1.7%) reported a frequency of between four and nine such incidents, whilst six (3.4%) reported an incidence of 10 or more.

Person(s) other than direct caregiver

At the minor level, 45 (25.7%) participants reported physical abuse. Of these, 13 (7.4%) reported a frequency of between four and nine incidents, whilst 23 (13.1%) reported 10 or more such incidents. Forty-seven (26.9%) participants reported marked levels of physical abuse, with seven (4%) reporting between four and nine such events and 27 (15.4%) reporting 10 or more events. Eleven (6.3%) participants reported severe levels of abuse by person(s) other than their direct caregiver. Of those, six (3.4%) reported a frequency of severe physical abuse on 10 or more occasions. Comparisons between participants in the violent offender group and non-violent offender group for the frequency of reported physical abuse are presented in Tables 5.3a to 5.3i below.
Tables 5.3a to 5.3c

Frequency of physical abuse perpetrated by father or father substitute.

Table 5.3a

**Frequency of MINOR abuse by groups of participants**

<table>
<thead>
<tr>
<th>Count</th>
<th>Violent Offender</th>
<th>Non-violent Offender</th>
<th>Row Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5.4</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>13</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>22.3</td>
</tr>
<tr>
<td>3</td>
<td>13</td>
<td>11</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>21.4</td>
</tr>
<tr>
<td>4</td>
<td>31</td>
<td>26</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>50.9</td>
</tr>
<tr>
<td></td>
<td>58</td>
<td>54</td>
<td>112</td>
</tr>
<tr>
<td></td>
<td>51.8%</td>
<td>48.2%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Note: For 63 cases count = 0.
Table 5.3b

**Frequency of MARKED abuse by groups of participants**

<table>
<thead>
<tr>
<th>Count</th>
<th>Violent Offender</th>
<th>Non-violent Offender</th>
<th>Row Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6.5</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>14</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>17.6</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>18.5</td>
</tr>
<tr>
<td>4</td>
<td>33</td>
<td>29</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>57.4</td>
</tr>
<tr>
<td></td>
<td>51</td>
<td>57</td>
<td>108</td>
</tr>
</tbody>
</table>

Note. For 67 cases count = 0.
Table 5.3c

Frequency of SEVERE abuse by groups of participants

<table>
<thead>
<tr>
<th>Count</th>
<th>Violent Offender</th>
<th>Non-violent Offender</th>
<th>Row Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>18.9</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5.4</td>
</tr>
<tr>
<td>4</td>
<td>14</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>75.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Column</th>
<th>19</th>
<th>18</th>
<th>37</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>51.4%</td>
<td>48.6%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Note. For 138 cases count = 0.
Table 5.3d to 5.3f

Frequency of physical abuse perpetrated by mother or mother substitute

Table 5.3d

**Frequency of MINOR abuse by groups of participants**

<table>
<thead>
<tr>
<th>Count</th>
<th>Violent Offender</th>
<th>Non-violent Offender</th>
<th>Row Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6.9</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>13</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>24.5</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>13.7</td>
</tr>
<tr>
<td>4</td>
<td>30</td>
<td>26</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>54.9</td>
</tr>
<tr>
<td></td>
<td>57</td>
<td>45</td>
<td>102</td>
</tr>
<tr>
<td>Column Total</td>
<td>55.9%</td>
<td>44.1%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Note. For 73 cases count = 0.
Table 5.3e

Frequency of MARKED abuse by groups of participants

<table>
<thead>
<tr>
<th>Count</th>
<th>Violent Offender</th>
<th>Non-violent Offender</th>
<th>Row Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8.2</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>17.8</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>16.4</td>
</tr>
<tr>
<td>4</td>
<td>23</td>
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<td>42</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>57.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Column</th>
<th>42</th>
<th>31</th>
<th>73</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>57.5%</td>
<td>42.5%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Note. For 102 cases count = 0.
Table 5.3f

Frequency of SEVERE abuse by groups of participants

<table>
<thead>
<tr>
<th>Count</th>
<th>Violent Offender</th>
<th>Non-violent Offender</th>
<th>Row Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20.0</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20.0</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20.0</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>40.0</td>
</tr>
<tr>
<td>Column Total</td>
<td>11</td>
<td>4</td>
<td>15</td>
</tr>
<tr>
<td>Total Percentage</td>
<td>73.3%</td>
<td>26.7%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Note. For 160 cases count = 0.
Tables 5.3g to 5.3i

Frequency of physical abuse perpetrated by person/s other than direct caregiver

Table 5.3g

Frequency of MINOR abuse by groups of participants

<table>
<thead>
<tr>
<th>Count</th>
<th>Violent Offender</th>
<th>Non-violent Offender</th>
<th>Row Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8.9</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>11.1</td>
</tr>
<tr>
<td>3</td>
<td>8</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>28.9</td>
</tr>
<tr>
<td>4</td>
<td>16</td>
<td>7</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>51.1</td>
</tr>
<tr>
<td></td>
<td>29</td>
<td>16</td>
<td>45</td>
</tr>
<tr>
<td>Total</td>
<td>64.4%</td>
<td>35.6%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Note. For 130 cases count = 0.
Table 5.3h

Frequency of MARKED abuse by groups of participants

<table>
<thead>
<tr>
<th>Count</th>
<th>Violent Offender</th>
<th>Non-violent Offender</th>
<th>Row Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12.8</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>14.9</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>14.9</td>
</tr>
<tr>
<td>4</td>
<td>19</td>
<td>8</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>57.4</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>17</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>63.8%</td>
<td>36.2%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Note. For 128 cases count = 0.
### Table 5.3i

**Frequency of SEVERE abuse by groups of participants**

<table>
<thead>
<tr>
<th>Count</th>
<th>Violent Offender</th>
<th>Non-violent Offender</th>
<th>Row Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>27.3</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>18.2</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>1</td>
<td>6</td>
<td>54.5</td>
</tr>
<tr>
<td></td>
<td><strong>Column</strong></td>
<td><strong>Total</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>4</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>63.6%</td>
<td>36.4%</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>

**Note.** For 164 cases count = 0.
As discussed above in Chapter 3, the principles underlying the concept of intergenerational transmission of violence would predict that the more serious levels of physical abuse reported in childhood would subsequently be associated with more serious levels of violent offending (Cummings, 1993). In order to test this assumption an Abuse Severity Index was developed (ASI, see chapter 4 for details of the development of this index). This was done in order to provide another perspective on the abuse data by providing an aggregate index of abuse.

The Abuse Severity Index (ASI)

Multiple regression analyses were conducted with the level of violence of index offence for participants in the violent offender group the dependent variable, and the abuse severity index (ASI) scores for father (or substitute), mother (or substitute) and person(s) other than direct caregivers for participants in the violent offender group the independent variables. The results of these analyses failed to reach statistical significance, and it is therefore concluded that the level of physical abuse reported by participants in this study is not predictive of the level of violence in participants convicted of offences against the person. The results of these analyses are presented in Table 5.4.
Table 5.4

Results of multiple regression analysis with level of violence (violent offender group, n=100) the dependent variable, and the Abuse Severity Index scores for father or father substitute, mother or mother substitute, and person/s other than direct caregiver the independent variables

<table>
<thead>
<tr>
<th></th>
<th>Unstandardised b coefficients</th>
<th>Standardised coefficients</th>
<th>t</th>
<th>Significance (p)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>constant</td>
<td>2.013</td>
<td>.161</td>
<td>12.485</td>
<td>.000</td>
</tr>
<tr>
<td>Mother-index</td>
<td>-.032</td>
<td>.016</td>
<td>-.199</td>
<td>-1.958</td>
</tr>
<tr>
<td>Father-index</td>
<td>-.014</td>
<td>.017</td>
<td>-.082</td>
<td>-.811</td>
</tr>
<tr>
<td>Other index</td>
<td>.007</td>
<td>.013</td>
<td>.053</td>
<td>.520</td>
</tr>
</tbody>
</table>

145
Pearson product-moment correlation coefficients were calculated comparing participants CASI scores with number of offences, length of sentence and aboriginality. Results indicate that participants of Aboriginal descent reported more serious levels of physical abuse in childhood as measured by their CASI score compared with participants of non-Aboriginal descent ($r = .178$, $p < .05$). The remaining correlations were non-significant.

Finally, multiple regression analysis with participant group (violent offenders, non-violent offenders) as the dependent variable, and father (or substitute), mother (or substitute) and person(s) other than direct caregiver the independent variables was conducted to determine whether physical abuse reported as a child predicts subsequent violent offending. The results failed to reach statistical significance, and it is therefore concluded that physical abuse as reported by participants in this study does not predict violent offender status. The results of these analyses are presented in Table 5.5.
Table 5.5
Results of multiple regression analysis with participant group (violent offender, non-violent offender) the dependent variable, and father, abuse index; mother, abuse index; other, abuse index the independent variables

<table>
<thead>
<tr>
<th></th>
<th>unstandardised coefficients</th>
<th>standardised coefficients</th>
<th>t value</th>
<th>significance (p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(constant)</td>
<td>1.209</td>
<td>0.190</td>
<td>6.365</td>
<td>0.000</td>
</tr>
<tr>
<td>Father-index</td>
<td>-0.068</td>
<td>0.076</td>
<td>-0.895</td>
<td>0.372</td>
</tr>
<tr>
<td>Mother-index</td>
<td>0.092</td>
<td>0.071</td>
<td>1.290</td>
<td>0.199</td>
</tr>
<tr>
<td>Other-index</td>
<td>0.142</td>
<td>0.079</td>
<td>1.807</td>
<td>0.072</td>
</tr>
</tbody>
</table>
Given the null results of the analyses comparing childhood physical abuse reported by participants in the violent offender group with those of the non-violent offender group, a post-hoc analysis of Power (Buchner, Faul, & Erdfelder, 1997) was conducted on the Composite Abuse Severity Index scores. The power statistic ($1 - \beta$)=0.7014, and the effect size ($d$)=0.3541. With a Type 1 error rate of .05 and a sample size of 199, there is a 70% chance (.701 probability) of finding a statistically significant effect with the observed difference in means. The effect size of .354 is between Cohen’s small effect (.20) and medium-sized effect (.50).

**Summary**

The results of the descriptive statistics show a trend for participants in the violent offender group to score higher on all measures of physical abuse in childhood compared with participants in the non-violent offender group. However, the results of multivariate statistics were non-significant, and further univariate analyses examining differences between the groups on measures of physical abuse were not conducted.

**Hypothesis number 2**

Of those who report having been physically abused as a child, participants in the violent offender group will score higher on measures of anger compared with participants in the non-violent offender group.

For the purposes of this study, participants in the violent offender group who report physical abuse during childhood are expected to score higher on Trait Anger, Anger/Out, Anger/Expression, and lower on Anger/Control as measured by the State-Trait Anger Expression Inventory (STAXI) compared with participants in the non-violent offender group who have reported physical abuse in childhood. They are also expected to score higher on the three sub-domains of the Novaco Anger Scale-Revised (NAS(R)), section A, (Cognition, Arousal, Behaviour), and on the composite score of the NAS(R), section B. In this section the means and standard deviations are presented
for the whole group of participants, the violent offender group and the non-violent offender group. These are then compared with the published norms for the STAXI and the NAS(R). The mean scores and standard deviations for participants who reported physical abuse were then compared with those who did not report abuse. Correlation coefficients were then calculated to examine the relationship between participants’ score on the CASI with those of their scores on the STAXI and the NAS(R). A MANOVA was calculated to examine differences between participants in the violent offender group and non-violent offender group in their scores on the STAXI and NAS(R) anger scales.

Results of the STAXI

The mean raw scores and standard deviations for the sub-scales of the STAXI were calculated for the whole group of participants, violent offender group, and non-violent offender group. These scores were then converted into T scores ($M=50$, $SD=10$), and percentile ranks utilising the norms for adult males (STAXI manual, Appendix A, Spielberger, 1994) and prisoner norms (STAXI manual, Appendix B, Spielberger, 1994). State Anger, a sub-scale on the STAXI which measures the respondents self-report of level of anger at the time of assessment is not of interest in this study, and has not been included in any analyses. For participants in the violent offender group, most mean scores were within one standard deviation from the mean compared with published (prisoner) norms, with no score more than one and a half standard deviations. Mean scores for participants in the non-violent offender group were all within a standard deviation of the published (prisoner) norms. Participants in both the violent offender group and the non-violent offender group scored significantly different from that of the published (Adult) norms on all measures. A summary of the mean scores and standard deviations for participants as a whole group, violent offender group and non-violent offender group together with T scores and percentile ranks from norms for adult males and prisoners are presented below in tables 5.6a to 5.6c.
Table 5.6a
Mean scores and standard deviations on STAXI sub-scales for whole group of participants together with T scores and percentile ranks utilising Adult male and Adult prisoner norms from STAXI manual. (Spielberger, 1994).

<table>
<thead>
<tr>
<th>Staxi Sub-</th>
<th>Mean raw</th>
<th>SD</th>
<th>Adult males, norms</th>
<th>Adult prisoners, norms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scales</td>
<td>score</td>
<td></td>
<td>% ile</td>
<td>T score</td>
</tr>
<tr>
<td>Trait Anger</td>
<td>19.27</td>
<td>6.20</td>
<td>63</td>
<td>53</td>
</tr>
<tr>
<td>T Anger-t</td>
<td>7.26</td>
<td>3.06</td>
<td>69</td>
<td>56</td>
</tr>
<tr>
<td>T Anger-r</td>
<td>8.18</td>
<td>2.59</td>
<td>38</td>
<td>48</td>
</tr>
<tr>
<td>Ax/In</td>
<td>17.51</td>
<td>4.58</td>
<td>85</td>
<td>57</td>
</tr>
<tr>
<td>Ax/Out</td>
<td>15.88</td>
<td>4.49</td>
<td>77</td>
<td>55</td>
</tr>
<tr>
<td>Ax/Con</td>
<td>22.54</td>
<td>5.82</td>
<td>26</td>
<td>43</td>
</tr>
<tr>
<td>Ax/Ex</td>
<td>26.84</td>
<td>10.70</td>
<td>87</td>
<td>61</td>
</tr>
</tbody>
</table>
Table 5.6b

Mean scores and standard deviations on STAXI sub-scales for participants in the violent offender group together with T scores and percentile ranks utilising Adult male and Adult prisoner norms

<table>
<thead>
<tr>
<th>STAXI sub-scales</th>
<th>Mean raw score</th>
<th>SD</th>
<th>Adult males, norms % ile</th>
<th>T score</th>
<th>Adult prisoners, norms % ile</th>
<th>T score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trait Anger</td>
<td>19.87</td>
<td>6.29</td>
<td>70</td>
<td>55</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>T Anger-t</td>
<td>7.55</td>
<td>2.94</td>
<td>83</td>
<td>60</td>
<td>65</td>
<td>54</td>
</tr>
<tr>
<td>T Anger-r</td>
<td>8.37</td>
<td>2.68</td>
<td>38</td>
<td>48</td>
<td>45</td>
<td>48</td>
</tr>
<tr>
<td>Ax/In</td>
<td>17.88</td>
<td>4.58</td>
<td>85</td>
<td>57</td>
<td>55</td>
<td>52</td>
</tr>
<tr>
<td>Ax/Out</td>
<td>16.28</td>
<td>4.73</td>
<td>77</td>
<td>55</td>
<td>65</td>
<td>52</td>
</tr>
<tr>
<td>Ax/Con</td>
<td>21.35</td>
<td>5.98</td>
<td>16</td>
<td>40</td>
<td>these scores</td>
<td></td>
</tr>
<tr>
<td>Ax/Ex</td>
<td>28.81</td>
<td>10.72</td>
<td>91</td>
<td>64</td>
<td>not in</td>
<td>manual</td>
</tr>
</tbody>
</table>
Table 5.6c

Mean scores and standard deviations on STAXI sub-scales for participants in the non-violent offender group together with T scores and percentile ranks utilising Adult male and Adult prisoner norms

<table>
<thead>
<tr>
<th>Staxi Sub-scales</th>
<th>Mean raw</th>
<th>SD</th>
<th>Adult males, norms</th>
<th>Adult prisoners, norms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>score</td>
<td></td>
<td>% ile</td>
<td>T score</td>
</tr>
<tr>
<td>Trait Anger</td>
<td>18.77</td>
<td>6.11</td>
<td>63</td>
<td>53</td>
</tr>
<tr>
<td>T Anger-t</td>
<td>6.99</td>
<td>3.17</td>
<td>69</td>
<td>56</td>
</tr>
<tr>
<td>T Anger-r</td>
<td>8.05</td>
<td>2.52</td>
<td>38</td>
<td>48</td>
</tr>
<tr>
<td>Ax/In</td>
<td>17.24</td>
<td>4.56</td>
<td>74</td>
<td>55</td>
</tr>
<tr>
<td>Ax/Out</td>
<td>15.61</td>
<td>4.22</td>
<td>77</td>
<td>55</td>
</tr>
<tr>
<td>Ax/Con</td>
<td>23.63</td>
<td>5.47</td>
<td>32</td>
<td>45</td>
</tr>
<tr>
<td>Ax/Ex</td>
<td>25.22</td>
<td>10.38</td>
<td>80</td>
<td>58</td>
</tr>
</tbody>
</table>
A series of 'Z' statistics were conducted comparing the scores of participants in the whole group, violent offender group and non-violent offender group, with those of the published norms. At the alpha level of 0.01 (with Bonferoni correction for familywise error) the critical Z value with a two-tailed analysis is 2.58. For two of the STAXI sub-scales of interest to this study (Anger/Control and Anger/Expression), there were no published norms for prisoners. Of the remaining two sub-scales of interest to this study (Trait Anger and Anger/Out), participants in the whole group, violent offender group and non-violent offender group scored significantly lower than the reported norms for Trait Anger, however, there were no significant differences in T-scores between participants and those of the published norms for Anger/Out. The results of the comparisons between participants in the total group, violent offender group and non-violent offender group and the published norms for prison inmates is presented below in Table 5.7.

Table 5.7

A summary of results of 'Z' statistics comparing the mean scores of participants in the whole group, violent offender group and non-violent offender group with those of the STAXI T score published norms for prison inmates.

<table>
<thead>
<tr>
<th>Staxi sub-scales</th>
<th>Whole group</th>
<th>Violent offenders</th>
<th>Non-violent offenders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trait Anger</td>
<td>-3.89***</td>
<td>-2.62**</td>
<td>-4.01***</td>
</tr>
<tr>
<td>Trait Anger temperament</td>
<td>0.03</td>
<td>0.81</td>
<td>0.72</td>
</tr>
<tr>
<td>Temperament</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trait Anger Reaction</td>
<td>-5.75***</td>
<td>-4.07***</td>
<td>-4.87***</td>
</tr>
<tr>
<td>Anger Expression In</td>
<td>-1.42*</td>
<td>-0.56</td>
<td>-1.66*</td>
</tr>
<tr>
<td>Anger Expression Out</td>
<td>-1.60*</td>
<td>-0.69</td>
<td>-1.74*</td>
</tr>
</tbody>
</table>

*p<.05 *, p<.01 **, p<.001 ***.
The mean scores on the STAXI sub-scales for participants in the violent offender and non-violent offender groups were calculated separately for those who reported physical abuse in childhood and for those who did not. A summary of these results appears in Table 5.8.

Table 5.8

**Mean scores and standard deviations on the STAXI sub-scales for abused and non-abused participants in the violent offender and non-violent offender groups**

<table>
<thead>
<tr>
<th>STAXI scales</th>
<th>Violent offender group</th>
<th>Non-violent offender group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Abused (n=90)</td>
<td>Not abused (n=10)</td>
</tr>
<tr>
<td></td>
<td>mean</td>
<td>SD</td>
</tr>
<tr>
<td>T Anger-t</td>
<td>7.54</td>
<td>2.97</td>
</tr>
<tr>
<td>T Anger-r</td>
<td>8.34</td>
<td>2.68</td>
</tr>
<tr>
<td>Ax/In</td>
<td>17.72</td>
<td>4.71</td>
</tr>
<tr>
<td>Ax/Out</td>
<td>16.22</td>
<td>4.90</td>
</tr>
<tr>
<td>Ax/Con</td>
<td>21.49</td>
<td>6.06</td>
</tr>
<tr>
<td>Ax/Ex</td>
<td>28.46</td>
<td>11.17</td>
</tr>
</tbody>
</table>

154
Table 5.8 reveals a consistent difference between the non-abused, non-violent offenders and the remaining three groups (abused non-violent offenders, non-abused violent offenders, abused violent offenders), however, very low numbers in both non-abused groups meant that a 2 by 2 analysis of variance examining these differences was not possible (Hinkle, Wiersma & Jurs, 1998). Therefore, a series of $t$ tests were conducted comparing scores for participants in the violent offender group with those of the non-violent offender group on the four STAXI scales of interest in this study (Trait Anger, Anger/Control, Anger/Out and Anger/Expression), with Bonferroni correction to adjust for familywise error ($\alpha=0.0125$). Results indicate no significant difference between the groups on any of the four variables; however, there was a trend for participants in the non-violent offender group to score higher on Anger/Control. A summary of the results of the $t$ tests appears below in Table 5.9.

Table 5.9

**Summary of results of t tests comparing participants in violent offender and non-violent offender groups on STAXI scales**

<table>
<thead>
<tr>
<th>STAXI scales</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trait Anger</td>
<td>0.64</td>
<td>.523</td>
</tr>
<tr>
<td>Anger/Out</td>
<td>0.55</td>
<td>.581</td>
</tr>
<tr>
<td>Anger/Control</td>
<td>-2.39</td>
<td>.018</td>
</tr>
<tr>
<td>Anger/Expression</td>
<td>1.65</td>
<td>.101</td>
</tr>
</tbody>
</table>

*Note.* degrees of freedom = 173
Results of the NAS(R)

The mean scores and standard deviations were calculated for participants in the violent offender group, non-violent offender group and the whole group on the Novaco Anger Scale-Revised (NAS(R)). Part A of the NAS(R) (clinical scales) include the three domain scores Cognition, Arousal and Behaviour, and the respective sub-domain scores, whilst part B (Trigger domain) includes a composite score, and scores on the five sub-domains. A summary of the scores for participants in the whole group, violent offender group and non-violent offender group is presented in Table 5.10.
Table 5.10

Mean scores and standard deviations for participants in the whole group, violent offender group and non-violent offender on the scales and sub-scales of the NAS (R)

<table>
<thead>
<tr>
<th>NAS (R)</th>
<th>Whole group (n=199)</th>
<th>Violent offenders (n=100)</th>
<th>Non-violent offenders (n=99)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part A</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>COGNITION</td>
<td>30.46</td>
<td>4.95</td>
<td>31.49</td>
</tr>
<tr>
<td>Attention/focus</td>
<td>8.43</td>
<td>1.43</td>
<td>8.62</td>
</tr>
<tr>
<td>Ruminating</td>
<td>7.71</td>
<td>1.84</td>
<td>7.87</td>
</tr>
<tr>
<td>Hostile attitude</td>
<td>6.99</td>
<td>1.97</td>
<td>7.27</td>
</tr>
<tr>
<td>Suspicion</td>
<td>7.32</td>
<td>1.41</td>
<td>7.73</td>
</tr>
<tr>
<td>AROUSAL</td>
<td>28.26</td>
<td>6.13</td>
<td>28.69</td>
</tr>
<tr>
<td>Intensity</td>
<td>7.26</td>
<td>1.84</td>
<td>7.45</td>
</tr>
<tr>
<td>Duration</td>
<td>7.03</td>
<td>2.04</td>
<td>7.27</td>
</tr>
<tr>
<td>Somatic tension</td>
<td>6.83</td>
<td>1.79</td>
<td>6.82</td>
</tr>
<tr>
<td>Irritability</td>
<td>7.14</td>
<td>1.73</td>
<td>7.15</td>
</tr>
<tr>
<td>BEHAVIOUR</td>
<td>28.01</td>
<td>6.28</td>
<td>28.58</td>
</tr>
<tr>
<td>Impulsive reaction</td>
<td>6.74</td>
<td>2.29</td>
<td>6.85</td>
</tr>
<tr>
<td>Verbal aggression</td>
<td>7.82</td>
<td>1.95</td>
<td>8.00</td>
</tr>
<tr>
<td>Physical confrontation</td>
<td>7.59</td>
<td>1.58</td>
<td>7.86</td>
</tr>
<tr>
<td>Indirect expression</td>
<td>7.60</td>
<td>1.97</td>
<td>5.87</td>
</tr>
<tr>
<td>Part B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRIGGER composite</td>
<td>58.53</td>
<td>14.50</td>
<td>59.18</td>
</tr>
<tr>
<td>Disrespectful treatment</td>
<td>11.57</td>
<td>3.14</td>
<td>11.78</td>
</tr>
<tr>
<td>Unfairness/injustice</td>
<td>13.19</td>
<td>2.92</td>
<td>13.32</td>
</tr>
<tr>
<td>Frustration/interpretation</td>
<td>12.06</td>
<td>3.41</td>
<td>12.13</td>
</tr>
<tr>
<td>Annoying traits</td>
<td>11.24</td>
<td>3.79</td>
<td>11.28</td>
</tr>
<tr>
<td>Irritations</td>
<td>10.48</td>
<td>3.23</td>
<td>10.67</td>
</tr>
</tbody>
</table>
Participant scores were then compared with those of the norms published by Novaco (1991). It should be noted that the published norms were all conducted utilising clinical or student populations, and involved low participant numbers. However, the purpose of these comparisons is to evaluate how the sample in this study fits within what is known using the Novaco scale, and later analyses will compare NAS(R) scores of participants in the violent offender group with those in the non-violent offender group, not with published norms. To date no norms have been published utilising prisoner populations.

The published norms present mean scores and standard deviations for NAS(R), part A and B, together with scores for the Cognitive, Arousal and Behaviour domains. A summary of these scores together with those of participants in the whole group, violent offender group and non-violent offender group is presented below in Table 5.11.
<table>
<thead>
<tr>
<th>NAS(R) Norms</th>
<th>Part A Domains</th>
<th>Part A</th>
<th>Part B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cognitive</td>
<td>Arousal</td>
<td>Behaviour</td>
</tr>
<tr>
<td></td>
<td>Means</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>California State Hospital patients. (N=158)</td>
<td>31.0</td>
<td>5.8</td>
<td>30.5</td>
</tr>
<tr>
<td>Carstairs State Hospital (Scotland). (N=119)</td>
<td>28.7</td>
<td>5.8</td>
<td>27.8</td>
</tr>
<tr>
<td>St. Andrew's Hospital Psychiatric Patients. (N=80)</td>
<td>33.1</td>
<td>3.7</td>
<td>31.5</td>
</tr>
<tr>
<td>Hawaii Vietnam Vets. Anger/PTSD R Project. (N=73)</td>
<td>38.2</td>
<td>4.9</td>
<td>39.1</td>
</tr>
<tr>
<td>UCI Students. (Spring 1993). (N=159)</td>
<td>29.3</td>
<td>4.2</td>
<td>28.2</td>
</tr>
<tr>
<td>UCI Students. (Fall/Winter 93-94. (N=211)</td>
<td>29.3</td>
<td>4.3</td>
<td>27.6</td>
</tr>
<tr>
<td>Participants; Whole group. (n=199)</td>
<td>30.5</td>
<td>4.9</td>
<td>28.3</td>
</tr>
<tr>
<td>Participants; Violent offenders. (n=100)</td>
<td>31.5</td>
<td>5.2</td>
<td>28.7</td>
</tr>
<tr>
<td>Participants; Non-violent offenders. (n=99)</td>
<td>30.3</td>
<td>4.8</td>
<td>28.0</td>
</tr>
</tbody>
</table>
A series of 'Z' statistics were conducted comparing the scores of participants in the whole group, violent offender group and non-violent offender group, with those of the published norms. At the alpha level of 0.01 (with Bonferoni correction for familywise error) the critical Z value with a two-tailed analysis is 2.58. Results indicate that participants in this study differed significantly compared with Novaco's norms on most scales measured by the NAS(R). Whilst most results were in the direction of participants in this study scoring higher than those of the published (clinical) norms, those comparing the UCI Student population presented mixed results. On two of the three sub-domains, NAS(R) part A, participants scored significantly lower than the published norms. A summary of the results for the whole group, violent offender group and non-violent offender group is presented below in Tables 5.12a to 5.12c.
Table 5.12a

A summary of results of ‘Z’ statistics comparing the mean scores of participants in the whole group with those of Novaco’s published norms

<table>
<thead>
<tr>
<th>Norms from</th>
<th>Novaco Anger Scale-Revised</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cognitive domain</td>
<td>Arousal domain</td>
<td>Behaviour domain</td>
<td>Total</td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td>Part A</td>
<td>Part B</td>
<td>Part B</td>
<td>Part B</td>
<td></td>
</tr>
<tr>
<td>California State Hospital patients</td>
<td>-1.27</td>
<td>-4.56***</td>
<td>0.51</td>
<td>-2.09*</td>
<td>-5.48***</td>
</tr>
<tr>
<td>Carstairs State Hospital</td>
<td>4.39***</td>
<td>1.04</td>
<td>0.38</td>
<td>3.68***</td>
<td>1.62</td>
</tr>
<tr>
<td>St Andrew’s Hospital</td>
<td>10.00***</td>
<td>-7.62***</td>
<td>-7.21***</td>
<td>-9.96***</td>
<td>-7.82***</td>
</tr>
<tr>
<td>Hawaii Vietnam veterans</td>
<td>-22.00***</td>
<td>-27.69***</td>
<td>-20.44***</td>
<td>-25.09***</td>
<td>-9.60***</td>
</tr>
<tr>
<td>UCI Students-Spring 1993</td>
<td>4.00***</td>
<td>0.29</td>
<td>7.50***</td>
<td>5.00***</td>
<td>-6.51***</td>
</tr>
<tr>
<td>UCI Students-Fall/winter 93-94</td>
<td>4.00***</td>
<td>2.00*</td>
<td>8.92***</td>
<td>6.30***</td>
<td>-6.55***</td>
</tr>
</tbody>
</table>

*p<.05*, *p<.01*, *p<.001***
### Table 5.12b

A summary of results of ‘Z’ statistics comparing the mean scores of participants in the violent offender group with those of Novaco’s published norms.

<table>
<thead>
<tr>
<th>Norms from</th>
<th>Novaco Anger Scale-Revised</th>
<th>Part A</th>
<th>Part B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cognitive domain</td>
<td>Arousal domain</td>
<td>Behaviour domain</td>
</tr>
<tr>
<td>California State Hospital patients</td>
<td>0.86</td>
<td>-2.65**</td>
<td>0.00</td>
</tr>
<tr>
<td>Carstairs State Hospital</td>
<td>4.83***</td>
<td>1.32</td>
<td>1.07</td>
</tr>
<tr>
<td>St Andrew’s Hospital</td>
<td>-4.32***</td>
<td>-4.75***</td>
<td>-4.10***</td>
</tr>
<tr>
<td>UCI Students-Spring 1993</td>
<td>5.24***</td>
<td>1.00</td>
<td>6.32***</td>
</tr>
<tr>
<td>UCI Students-Fall/winter 93-94</td>
<td>5.12***</td>
<td>2.20*</td>
<td>7.50***</td>
</tr>
</tbody>
</table>

*p<.05*, *p<.01***, *p<.001***
Table 12c

A summary of results of ‘Z’ statistics comparing the mean scores of participants in the non-violent offender group with those of Novaco’s published norms

<table>
<thead>
<tr>
<th>Norms from</th>
<th>Novaco Anger Scale-Revised</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Part A</td>
<td>Part B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cognitive domain</td>
<td>Arousal domain</td>
<td>Behaviour domain</td>
<td>Total</td>
<td>Total</td>
</tr>
<tr>
<td>California State Hospital</td>
<td>-1.21</td>
<td>-3.68***</td>
<td>-1.69</td>
<td>-2.35*</td>
<td>-4.20***</td>
</tr>
<tr>
<td>Carstairs State Hospital</td>
<td>2.76**</td>
<td>0.29</td>
<td>-0.53</td>
<td>1.75</td>
<td>0.78</td>
</tr>
<tr>
<td>St Andrew’s Hospital</td>
<td>-7.57***</td>
<td>-5.93***</td>
<td>-6.06***</td>
<td>-8.06***</td>
<td>-5.97***</td>
</tr>
<tr>
<td>Hawaii Vietnam veterans</td>
<td>-16.12***</td>
<td>-20.18***</td>
<td>-15.31***</td>
<td>-19.01***</td>
<td>14.23***</td>
</tr>
<tr>
<td>UCI Students-Spring 93-94</td>
<td>2.38*</td>
<td>-0.40</td>
<td>4.21***</td>
<td>2.35*</td>
<td>-5.08***</td>
</tr>
<tr>
<td>UCI Students-Fall/winter 93-94</td>
<td>2.33*</td>
<td>0.80</td>
<td>5.19***</td>
<td>3.21**</td>
<td>-5.13***</td>
</tr>
</tbody>
</table>

p<.05*, p<.01**, p<.001***
The mean scores and standard deviations on the NAS(R) scales and sub-scales for participants in the whole group, violent offender and non-violent offender groups were then calculated separately for those participants who reported physical abuse in childhood and for those who did not report physical abuse. Visual inspection of the results indicate that for the violent offender group, participants who reported physical abuse scored lower on the NAS(R) sub-scales compared with those who did not report abuse, whilst for the non-violent offender group, participants who reported physical abuse scored higher on these sub-scales compared with those who did not report abuse. The mean score on the three sub-domains (Cognition, Arousal, Behaviour) for non-abused non-violent offenders was lower than that of any of the remaining three groups. However, given the low number of participants in the non-abused sub-groups (non-abused violent offenders, non-abused non-violent offenders) a 2 by 2 analysis of variance was not possible (Hinkle, Wiersa & Jurs, 1998). A summary of the means and standard deviations for abused, non-abused violent and non-violent offenders appears in Table 5.13.
Table 5.13
A summary of results on the NAS(R) scales and sub-scales comparing participants in the violent offender group with those in the non-violent offender group who reported physical abuse in childhood with those who did not report such abuse

<table>
<thead>
<tr>
<th>NAS (R)</th>
<th>Violent offender group</th>
<th>Non-violent offender group</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n=100)</td>
<td>(n=99)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Abused (n=90)</td>
<td>Not abused (n=10)</td>
<td>Abused (n=85)</td>
</tr>
<tr>
<td>COGNITION</td>
<td>30.66 5.16</td>
<td>32.40 3.75</td>
<td>30.28 4.86</td>
</tr>
<tr>
<td>Attention/focus</td>
<td>8.55 1.47</td>
<td>8.80 1.40</td>
<td>8.36 1.36</td>
</tr>
<tr>
<td>Rumination</td>
<td>7.76 1.79</td>
<td>8.30 1.49</td>
<td>7.60 1.92</td>
</tr>
<tr>
<td>Hostile attitude</td>
<td>7.14 2.13</td>
<td>8.80 2.31</td>
<td>6.89 1.69</td>
</tr>
<tr>
<td>Suspicion</td>
<td>7.20 1.44</td>
<td>7.30 1.64</td>
<td>7.42 1.42</td>
</tr>
<tr>
<td>AROUSAL</td>
<td>28.44 6.31</td>
<td>28.80 6.88</td>
<td>28.39 6.04</td>
</tr>
<tr>
<td>Intensity</td>
<td>7.43 1.91</td>
<td>7.10 1.37</td>
<td>7.15 1.85</td>
</tr>
<tr>
<td>Duration</td>
<td>7.17 6.31</td>
<td>7.40 2.88</td>
<td>7.04 6.04</td>
</tr>
<tr>
<td>Somatic tension</td>
<td>6.78 1.72</td>
<td>6.90 1.85</td>
<td>6.94 1.90</td>
</tr>
<tr>
<td>Irritability</td>
<td>7.07 1.79</td>
<td>7.40 1.90</td>
<td>7.26 1.71</td>
</tr>
<tr>
<td>BEHAVIOUR</td>
<td>28.63 6.28</td>
<td>28.10 6.30</td>
<td>27.84 6.51</td>
</tr>
<tr>
<td>Impulsive reaction</td>
<td>6.89 2.31</td>
<td>6.50 2.32</td>
<td>6.80 2.35</td>
</tr>
<tr>
<td>Verbal aggression</td>
<td>8.06 2.04</td>
<td>7.50 2.01</td>
<td>7.73 1.86</td>
</tr>
<tr>
<td>Physical confront.</td>
<td>5.89 1.64</td>
<td>5.70 1.25</td>
<td>5.82 1.61</td>
</tr>
<tr>
<td>Indirect expression</td>
<td>7.80 1.92</td>
<td>8.40 1.58</td>
<td>7.48 2.05</td>
</tr>
<tr>
<td>Part B</td>
<td>58.87 14.64</td>
<td>61.80 14.64</td>
<td>58.14 14.72</td>
</tr>
<tr>
<td>TRIGGER composite</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disrespect treat</td>
<td>11.78 3.29</td>
<td>11.80 3.29</td>
<td>11.44 3.05</td>
</tr>
<tr>
<td>Unfairness/injust.</td>
<td>13.32 2.91</td>
<td>13.20 2.35</td>
<td>13.16 2.98</td>
</tr>
<tr>
<td>Frustration</td>
<td>12.04 3.44</td>
<td>12.90 3.76</td>
<td>12.00 3.48</td>
</tr>
<tr>
<td>Annoying traits</td>
<td>11.12 3.89</td>
<td>12.70 3.95</td>
<td>11.24 3.82</td>
</tr>
<tr>
<td>Irritations</td>
<td>10.60 3.23</td>
<td>11.20 2.82</td>
<td>10.31 3.36</td>
</tr>
</tbody>
</table>
A one-way multivariate analysis of variance (MANOVA) was conducted to determine whether there were differences between abused participants in the violent offender group and non-violent offender group in their scores on the NAS(R). There were four dependent variables; Cognition domain, Arousal domain, Behaviour domain from part A, and Trigger composite, part B; and one independent variable, physically abused participants (violent offender group and non-violent offender group). Conceptually and theoretically these dependent variables are related and thus MANOVA was the analysis of choice.

Data screening

The data for each of the four dependent measures by group of abused participants were screened using the Explore option and included the selection of the outliers facility. An examination of the skewness and kurtosis statistics indicated that the distributions across groups were relatively normal. Multivariate outliers were tested using the Regression analysis option, requesting Mahalanobis distance, utilising participant number as the dependent variable, and Cognitive domain, Arousal domain, Behaviour domain and Trigger composite score as the independent variables (Norusis, 1993). Given that there were four independent variables in this analysis, the critical chi-square value at $p < .001$ is 18.47. The new variable created by this process revealed no outliers. A linear relationship between all pairs of dependent variables is assumed on the basis that each is a measure of level of physical abuse reported by participants, and was confirmed using scatterplots among pairs of dependent variables across groups. The remaining screening tests were within normal limits.

The multivariate tests of significance test whether there are significant group differences on a linear combination of the dependent variables. The results of this statistic utilising Pillai’s criterion, indicate that there were no significant differences between participants in the violent offender group who reported physical abuse and those in the non-violent offender group who reported physical abuse in their scores on the NAS(R) ($F(4,170)=0.48$, $p=.748$). Univariate analysis of variance exploring for possible differences between abused participants in the violent offender group and abused participants in the non-violent offender group in their scores on the NAS(R)
Cognitive domain, Arousal domain, Behaviour domain and Trigger composite was therefore not conducted.

Pearson product moment correlation coefficients were calculated to examine the relationship between participants self report of physical abuse in childhood as measured by their Composite Abuse Severity Index (CASI) score, and their State-Trait Anger Expression Inventory (STAXI) and the Novaco Anger Scale-Revised (NAS-R) Domain scores.

For the STAXI, results indicate a significant correlation (alpha level of .0125 with Bonferoni correction for family-wise error) between participants CASI score and Trait-Anger ($r=.249$), Anger Expression-Out ($r=.276$) and Anger Expression-Composite ($r=.264$). These correlations are all significant at $p<.001$. Participants score on the CASI was not significantly correlated with their score on Anger Expression-Control ($r=.116, p=.103$).

On the NAS-R part A, participants' scores on the CASI were significantly correlated with their score on the Behavior Domain ($r=.245, p<.001$), but not significantly correlated with their score on Cognition ($r=.138, p=.052$) or Arousal ($r=.141, p=.047$). Participants CASI score was not significantly correlated with their NAS-R, part B Composite score ($r=.026, p=.174$).

Correlation coefficients were also calculated to examine the relationship between STAXI and NAS-R Domain scores with that of participant group status (violent offender, non-violent offender). There was a significant correlation between group status and scores on the STAXI, Anger Expression-Control Domain, with participants in the violent offender group scoring lower on this measure ($r=.186, p<.0125$ with Bonferoni correction). There were no significant correlations on the remaining STAXI Domains, or with the NAS-R Domains. A summary of the results of these correlation coefficients is presented in Figure 5.1, page 190 below.
Summary

Participants in the violent offender group and non-violent offender group scored significantly lower on Trait Anger, Anger Expression-In, and Anger Expression-Out on the STAXI compared with the published norms for prisoners (Spielberger, 1994). There are no published norms for prisoners for the NAS(R). Comparisons between Novaco’s (1991) published norms for military veterans, mental health patients and students reveal consistent differences compared with the participants in this study. When means and standard deviations are examined for abused and non-abused violent and non-violent offenders, non-abused, non-violent offenders score consistently lower on all sub-scales of the NAS(R) and on Trait Anger on the STAXI, however, low numbers in the non-abused groups prevent statistical analysis of these differences (Thornberry, et al, 2001). Correlation coefficients indicate a relationship between physical abuse (as determined by the scores on the Composite Abuse Severity Index) and anger (Trait-Anger, Anger Expression-Out, Anger Expression-Composite on the STAXI, Behaviour Domain on the NAS(R)). Finally, there was a significant correlation between participants in the violent offender and non-violent offender groups and their scores on the STAXI, participants in the violent offender group scoring lower on Anger Expression-Control. The results of the MANOVA indicate no significant differences between abused participants in the violent offender group and the non-violent offender group in their scores on the STAXI and the NAS(R), and therefore uni-variate analyses were not conducted.

Hypothesis number 3

Of those who reported physical abuse in childhood, participants in the violent offender group will report higher levels of juvenile delinquency compared with participants in the non-violent offender group.

Means and standard deviations were calculated for the Juvenile Delinquency Questionnaire (JDQ) and these are compared with the reported norms for delinquents and non-delinquents (Mak, 1993). Correlation coefficients were calculated to examine the relationship between participants’ score on the CASI with their composite score, and
the sub-domain scores of Fight and Harm on the JDQ, the JDQ composite score with participants group status, the age of onset of juvenile delinquency and group status, and finally, the composite score on the JDQ with the sub-scales from the STAXI and the NAS(R). A MANOVA was conducted with group status (Violent offender, non-violent offender) as the independent variable and the nine sub-domains of the JDQ the dependent variables.

The JDQ includes a social desirability or Lie Scale (Mak, 1993). There are four questions yielding a score in the range of 1 to 4, the higher the score the lower the participants' propensity for social desirability. A total of six participants (two in the violent offender group and four in the non-violent offender group) scored the minimum on this scale, whilst 11 participants (five in the violent offender group and six in the non-violent offender group) scored two. The majority of participants (63 in the violent offender group and 60 in the non-violent offender group) scored four, with 91.5% of participants (93 in the violent offender group and 89 in the non-violent offender group) scoring three or more on this scale. The juvenile records of those participants who scored one or two on this scale were checked, and appeared to substantiate the general details provided, and therefore all participants were included in the analyses of the JDQ. There are two, single item sub-scales in the JDQ, 'Warning' (have you ever been warned by the police, without being charged, for something that you did?) and 'Court' (have you ever appeared in the children's court for something that you did?). Whilst these items did appear on the JDQ, the scores were not used in the analyses.

The JDQ yields a composite score and nine sub-scale scores. Scores were calculated for participants in the whole group, violent offender group and non-violent offender group, and the means and standard deviations compared with Mak's (1993) norms. A summary of these scores appear in Tables 5.14a to 5.14c.
Table 14a
Means and standard deviations for composite score and domain scores on Juvenile Delinquency Questionnaire for participants in whole group together with Mak's (1993) norms for delinquents and non-delinquents

<table>
<thead>
<tr>
<th>Scales</th>
<th>Juvenile Delinquency Questionnaire</th>
<th>Norms (Mak, 1993)</th>
<th>Current study</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Delinquents (n=103)</td>
<td>Nondelinquents (n=103)</td>
<td>Whole group (n=199)</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Lie</td>
<td>3.63</td>
<td>0.61</td>
<td>3.29</td>
</tr>
<tr>
<td>Composite</td>
<td>13.89</td>
<td>7.44</td>
<td>6.19</td>
</tr>
<tr>
<td>Cheat</td>
<td>1.56</td>
<td>1.08</td>
<td>1.00</td>
</tr>
<tr>
<td>Status</td>
<td>2.17</td>
<td>0.97</td>
<td>1.40</td>
</tr>
<tr>
<td>Fight</td>
<td>0.86</td>
<td>0.77</td>
<td>0.14</td>
</tr>
<tr>
<td>Vehicle</td>
<td>0.60</td>
<td>0.76</td>
<td>0.08</td>
</tr>
<tr>
<td>Drugs</td>
<td>0.31</td>
<td>0.61</td>
<td>0.02</td>
</tr>
<tr>
<td>Theft</td>
<td>1.49</td>
<td>1.15</td>
<td>0.47</td>
</tr>
<tr>
<td>Harm</td>
<td>0.55</td>
<td>0.70</td>
<td>0.21</td>
</tr>
<tr>
<td>Driving</td>
<td>1.59</td>
<td>1.59</td>
<td>0.63</td>
</tr>
<tr>
<td>Disturb</td>
<td>1.93</td>
<td>1.50</td>
<td>1.15</td>
</tr>
</tbody>
</table>
Table 14b

Means and standard deviations for composite score and domain scores on Juvenile Delinquency Questionnaire for participants in violent offender group together with Mak's (1993) norms for delinquents and non-delinquents

<table>
<thead>
<tr>
<th>Scales</th>
<th>Norms (Mak, 1993)</th>
<th>Current study</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Delinquents (n=103)</td>
<td>Nondelinquents (n=103)</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Lie</td>
<td>3.63</td>
<td>0.61</td>
</tr>
<tr>
<td>Composite</td>
<td>13.89</td>
<td>7.44</td>
</tr>
<tr>
<td>Cheat</td>
<td>1.56</td>
<td>1.08</td>
</tr>
<tr>
<td>Status</td>
<td>2.17</td>
<td>0.97</td>
</tr>
<tr>
<td>Fight</td>
<td>0.86</td>
<td>0.77</td>
</tr>
<tr>
<td>Vehicle</td>
<td>0.60</td>
<td>0.76</td>
</tr>
<tr>
<td>Drugs</td>
<td>0.31</td>
<td>0.61</td>
</tr>
<tr>
<td>Theft</td>
<td>1.49</td>
<td>1.15</td>
</tr>
<tr>
<td>Harm</td>
<td>0.55</td>
<td>0.70</td>
</tr>
<tr>
<td>Driving</td>
<td>1.59</td>
<td>1.59</td>
</tr>
<tr>
<td>Disturb</td>
<td>1.93</td>
<td>1.50</td>
</tr>
</tbody>
</table>
Table 14c

Means and standard deviations for composite score and domain scores on Juvenile Delinquency Questionnaire for participants in non-violent offender group together with Mak's (1993) norms for delinquents and non-delinquents

<table>
<thead>
<tr>
<th>Scales</th>
<th>Juvenile Delinquency Questionnaire</th>
<th>Norms (Mak, 1993)</th>
<th>Current study</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Delinquents (n=103)</td>
<td>Nondelinquents (n=103)</td>
<td>Non-violent offenders (n=99)</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Lie</td>
<td>3.63</td>
<td>0.61</td>
<td>3.29</td>
</tr>
<tr>
<td>Composite</td>
<td>13.89</td>
<td>7.44</td>
<td>6.19</td>
</tr>
<tr>
<td>Cheat</td>
<td>1.56</td>
<td>1.08</td>
<td>1.00</td>
</tr>
<tr>
<td>Status</td>
<td>2.17</td>
<td>0.97</td>
<td>1.40</td>
</tr>
<tr>
<td>Fight</td>
<td>0.86</td>
<td>0.77</td>
<td>0.14</td>
</tr>
<tr>
<td>Vehicle</td>
<td>0.60</td>
<td>0.76</td>
<td>0.08</td>
</tr>
<tr>
<td>Drugs</td>
<td>0.31</td>
<td>0.61</td>
<td>0.02</td>
</tr>
<tr>
<td>Theft</td>
<td>1.49</td>
<td>1.15</td>
<td>0.47</td>
</tr>
<tr>
<td>Harm</td>
<td>0.55</td>
<td>0.70</td>
<td>0.21</td>
</tr>
<tr>
<td>Driving</td>
<td>1.59</td>
<td>1.59</td>
<td>0.63</td>
</tr>
<tr>
<td>Disturb</td>
<td>1.93</td>
<td>1.50</td>
<td>1.15</td>
</tr>
</tbody>
</table>
The mean scores and standard deviations for participants in the whole group, violent offender group and non-violent offender group were compared with those of Mak's published norms utilising ‘Z’ statistics. At the alpha level of .005 (corrected for Bonferoni family-wise error) with a two-tailed analysis, the critical ‘Z’ value is 2.81. Results show that on most sub-scales, the scores on the JDQ for participants in this study are significantly different from those of the published norms. A summary of the results of these comparisons appears in Table 5.15.
Table 5.15
A summary of results of ‘Z’ statistics comparing mean scores on the Juvenile Delinquency Questionnaire (JDQ) of participants in the whole group, violent offender group and non-violent offender group with Mak’s (1993) norms for Delinquents and Non-delinquents

<table>
<thead>
<tr>
<th>JDQ Scales</th>
<th>Delinquents</th>
<th>Non-delinquents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Whole group</td>
<td>Violent offenders</td>
</tr>
<tr>
<td></td>
<td>Z score</td>
<td>Z score</td>
</tr>
<tr>
<td>Lie</td>
<td>-8.00***</td>
<td>-0.39</td>
</tr>
<tr>
<td>Total</td>
<td>3.32***</td>
<td>4.19***</td>
</tr>
<tr>
<td>Cheat</td>
<td>0.75</td>
<td>0.45</td>
</tr>
<tr>
<td>Status</td>
<td>16.00***</td>
<td>13.09***</td>
</tr>
<tr>
<td>Fight</td>
<td>1.80</td>
<td>3.25**</td>
</tr>
<tr>
<td>Vehicle</td>
<td>1.82</td>
<td>13.13***</td>
</tr>
<tr>
<td>Drugs</td>
<td>27.25***</td>
<td>19.50***</td>
</tr>
<tr>
<td>Theft</td>
<td>11.13***</td>
<td>8.42***</td>
</tr>
<tr>
<td>Harm</td>
<td>6.40***</td>
<td>7.29***</td>
</tr>
<tr>
<td>Driving</td>
<td>7.18***</td>
<td>6.69***</td>
</tr>
<tr>
<td>Disturb</td>
<td>5.09***</td>
<td>-2.93**</td>
</tr>
</tbody>
</table>

*p<.05*, *p<.01***, *p<.001***
A one-way multivariate analysis of variance (MANOVA) was conducted to determine whether there were differences between participants in the violent offender group and non-violent offender group who had reported physical abuse in their scores on the JDQ. There were nine dependent variables; Cheat, Status, Fight, Vehicle, Drugs, Theft, Harm, Driving and Disturb; and one independent variable, physically abused participants (violent offender group and non-violent offender group). Conceptually and theoretically these dependent variables are related and thus MANOVA was the analysis of choice.

**Data screening**

The data for each of the nine dependent measures by group of abused participants were screened using the Explore option and included the selection of the outliers facility. An examination of the skewness and kurtosis statistics indicated that the distributions across groups were relatively normal. Multivariate outliers were tested using the Regression analysis option, requesting Mahalanobis distance, utilising participant number as the dependent variable, and the nine sub-scales on the JDQ as the independent variables (Norusis, 1993). Given that there were nine independent variables in this analysis, the critical chi-square value at p < .001 is 28.315. The new variable created by this process revealed no outliers. A linear relationship between all pairs of dependent variables is assumed on the basis that each is a measure of level of physical abuse reported by participants, and was confirmed using scatterplots among pairs of dependent variables across groups. The remaining screening tests were within normal limits.

The multivariate tests of significance test whether there are significant group differences on a linear combination of the dependent variables. The results of this statistic utilising Pillai's criterion, indicate that there were no significant differences between participants in the violent offender group who reported physical abuse and those in the non-violent offender group who reported physical abuse, in their scores on the JDQ, \( F(9,165)=0.068, \ p=.225 \). Univariate analysis of variance exploring for possible differences between abused participants in the violent offender group and
abused participants in the non-violent offender group in their scores on the nine sub-scales of the JDQ was therefore not conducted.

Pearson correlation coefficients were calculated to examine the relationship between participants' reports of physical abuse in childhood as measured by their CASI score, and their composite score on the JDQ. Correlation coefficients were also calculated comparing participant’s composite score on the JDQ with their group status (violent offender, non-violent offender), and with the age of onset of reported juvenile offending with physical abuse reported by Father (or substitute), mother (or substitute) and/or person(s) other than direct caregiver, as measured by their ASI scores.

Results indicate that for participants in the violent offender group there were significant correlation coefficients between the age of onset of juvenile offending as measured by the JDQ and their self report of physical abuse by their mother (or substitute) \(r=.31, p<.01\), and for person(s) other than direct caregiver \(r=.22, p<.05\) as measured by their ASI score. For participants in the non-violent offender group these variables were not correlated.

Results further indicate a significant correlation between participants CASI score and their composite score on the JDQ \(r=.364, p<.001\). Participants CASI scores were significantly correlated with JDQ sub-scales, Harm and Fight (.287 and .336 respectively, \(p< .001\)), of particular interest to this study as suggesting the early manifestation of the cycle of violence. Participants group status (violent offender, non-violent offender) was significantly correlated with their composite JDQ score \(r=.176, p=.012\). CASI scores were not significantly correlated with group status (violent offender, non-violent offender, \(r=-.138, p=.051\)).

Correlation coefficients were also calculated to examine the relationship between participants' self-report of juvenile offending as measured by their JDQ composite score and their anger profiles as measured by their STAXI and NAS-R
Domain scores. Results indicate a significant correlation (with Bonferoni correction) between JDQ Composite score and Domain scores for the STAXI and NAS-R.

A summary of the correlation coefficients is presented below in Figure 5.1. This figure represents the developmental theme inherent in this study commencing with the experience of physical abuse in childhood, and the development of angry, hostile acting out behaviour leading to juvenile delinquency and subsequent adult (violent) offending.

Summary

Results from the Social Desirability scale were significantly lower than Mak’s norms for delinquents and non-delinquents, which would suggest that results from the JDQ might be interpreted with some confidence. Participants’ composite scores and nine sub-domains were generally higher than Mak’s published norms, including those for delinquents. The differences reached statistical significance on Composite and seven of the nine sub-scales compared with the published norms for delinquents. Participants in the violent offender group scored significantly higher than the published norms for delinquents on the sub-domains Fight and Harm whereas participants in the non-violent offender group scored lower than the published norms for fight (this did not reach statistical significance), and higher than the published norms for Harm (significant at \( p< 0.05 \)). Correlation coefficients indicate a relationship between childhood physical abuse, juvenile delinquency, and scores on the anger domains. The results of a MANOVA failed to support the hypothesis that abused violent offenders would score higher on the JDQ compared with abused non-violent offenders, and therefore subsequent uni-variate analyses were not conducted.
Figure 5.1. A summary of the correlation coefficients examining the relationship between self reports of physical abuse in childhood, self reports of juvenile delinquency, anger profile and offender status (violent offender, non-violent offender) using a developmental model.
Hypothesis number 4

*Participants in the violent offender group who report witnessing the physical abuse of others commit more instrumentally motivated violent offences compared with participants in the violent offender group who do not report witnessing the physical abuse of others.*

The motivation for the index offence of violent offenders were divided into Hostile motivated or Instrumentally motivated as determined by two research assistants who consulted court transcripts and other relevant documentation. Descriptive statistics include the numbers of participants in the violent offender group who reported that they witnessed the physical abuse of others during their childhood, the level of harm and the frequency of the reported abuse, and the perpetrator of that abuse. Details of the number of instrumentally motivated and hostile motivated index offences are compared with those participants who report witnessing the physical abuse of others with those who did not. Statistical analyses utilising non-parametric statistics are employed to examine whether participants who report witnessing the physical abuse of other people is related to violent offending rated as instrumentally motivated. Correlation coefficients examine the relationship between witnessing the physical abuse of other's, the motivation for (violent) index offence, and scores on anger scales.

One hundred and twenty one participants (65 participants in the violent offender group and 56 participants in the non-violent offender group) reported witnessing the physical abuse of others, whilst 78 participants (35 in the violent offender group and 43 in the non-violent offender group) reported that they did not witness the physical abuse of others during childhood. Nine participants (one violent offender and eight non-violent offenders) reported witnessing the physical abuse of others, whilst reporting no physical abuse to themselves.
The severity of the physical abuse of others witnessed and reported by participants in this study was measured by the three levels; Minor, Marked and Severe found in the Physical Abuse Questionnaire (PAQ). Twenty-three (11.6%) participants reported having witnessed minor physical abuse, whilst 68 (34.2%) reported witnessing marked and 31 (15.6%) reported having witnessed severe levels of physical abuse of others. A total of 91 participants (45.7%) reported having witnessed the physical abuse of others at the marked to severe levels as defined in this project. There was little difference between the number of violent offenders and non-violent offenders in their reports of the severity of witnessed physical abuse of others at the minor and marked levels. Eighteen participants in the violent offender group and 12 participants in the non-violent offender group reported having witnessed the physical abuse of others at the severe level. A summary of the severity of the abuse witnessed by participants in the violent offender and non-violent offender groups is presented in Table 5.16.
Table 5.16

Number of participants in the violent offender group and the non-violent offender group witnessing physical abuse of others at minor, marked and severe levels

<table>
<thead>
<tr>
<th>Number of Participants</th>
<th>Level of witnessed physical abuse</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minor</td>
</tr>
<tr>
<td>Violent offenders</td>
<td>12</td>
</tr>
<tr>
<td>Non-violent offenders</td>
<td>11</td>
</tr>
</tbody>
</table>

The frequency with which participants reported witnessing the physical abuse of others range from seven (3.5%) participants at only once, to seventy (35.18%) at the high level of frequency (more than 10 occasions). There was little difference in the number of participants in the violent offender group and the non-violent offender group in the lower frequencies of witnessing physical abuse of others. However, at the highest frequency rating there were more participants in the violent offender group compared with participants in the non-violent group (43 and 28 participants respectively). The number of participants in the violent offender group and non-violent offender group by frequency of witnessed physical abuse is presented in Table 5.17.

Table 5.17

Frequency of physical abuse witnessed of others by number of participants in the violent offender group and non-violent offender group

<table>
<thead>
<tr>
<th>Number of Participants</th>
<th>Frequency of abuse witnessed of others</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>once</td>
</tr>
<tr>
<td>Violent offenders</td>
<td>2</td>
</tr>
<tr>
<td>Non-violent offenders</td>
<td>5</td>
</tr>
</tbody>
</table>
The average age of onset for all participants who reported witnessing the physical abuse of others was 7.66 years, with the mean age for participants in the violent offender group being 7.18 (SD=3.12), and that of participants in the non-violent offender group being 7.86 (SD=3.31). There were no significant differences between participants in the violent and non-violent offender groups for the age of onset of witnessed physical abuse. \( t(120)=0.072, p=.583 \).

Overall, seventy-two (36.2%) participants reported witnessing a parent (parent substitute) physically abusing a sibling, whilst 41 (20.6%) reported witnessing the physical abuse of one parent (parent substitute) by another parent (parent substitute). Of these, 22 (52.38%) involved father (father substitute) to mother (mother substitute), 17 (40%) mother (mother substitute) to father (father substitute) and two (5%) involved both parents (parent substitutes) of each other. In total, 120 of the 121 participants who reported witnessing the physical abuse of others did so in the domestic environment involving close relatives or other relationships, particularly in the marked to severe levels of abuse. A summary of the reports of witnessing physical abuse of others for participants in the violent and non-violent groups for the three levels of abuse appears in Table 5.18.
Table 5.18

Number of participants in the violent offender group and the non-violent offender group who report witnessing physical abuse of others, by perpetrator/victim

<table>
<thead>
<tr>
<th>Perpetrator / victim</th>
<th>Participant group</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Violent offender</td>
<td>Non-violent offender</td>
<td></td>
</tr>
<tr>
<td>Caregiver of sibling</td>
<td>35</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>Caregiver of caregiver, father</td>
<td>14</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Caregiver of caregiver, mother</td>
<td>10</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Caregiver of caregiver, both</td>
<td>2</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Uncle of cousin</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Institution staff of other</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Uncle of brother</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Not applicable</td>
<td>35</td>
<td>43</td>
<td></td>
</tr>
</tbody>
</table>
Research question four examines the relationship between the exposure of participants in the violent offender group to the physical abuse of others during their developmental years, the vicarious learning inherent in such experiences and the possible links to the motivation for their violent offending. It is anticipated that the index offence of participants in the violent offender group who have been exposed to the abuse of others will be instrumentally motivated rather than hostile motivated.

The court transcripts, police records of interviews and other participant documents were examined by two research assistants who rated these records independently. The research assistants were instructed to examine the records and to classify the index offence/s as hostile·motivated or instrumentally motivated according to the evidence presented to the court at the time of trial.

Hostile motivated violence was defined as a response to anger-inducing conditions, such as perceived threats or insults, physical attack, or personal failure, and is characterised by the intense and (often) disorganising emotion of anger (Bartol, 1991). Anger is defined as an arousal state elicited by certain stimuli, particularly those evoking attack or frustration. Feshbach (1964) defines instrumental violence as behaviour that begins with competition, or the desire to acquire the possessions of others, at any cost. There is usually no intent to harm others, however, when someone or something interferes with the perpetrator's goal-directed behaviour, the perpetrator may feel forced to act out, or risk losing the desired goal.

The inter-rater reliability between the two raters for instrumentally motivated index offence, hostile motivated index offence and unclear motivation was calculated to be 0.87. The motivation for the index offence(s) of 22 participants was unclear, and they were therefore excluded from further analysis. A summary of the results appears in Table 5.19.
Table 5.19
Motivation (hostile/instrumental) of index offence of participants in violent offender group

<table>
<thead>
<tr>
<th>Index offence/s</th>
<th>Violent offenders (n=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hostile motivated/instrumental</td>
<td>Number of participants</td>
</tr>
<tr>
<td>Instrumental</td>
<td>51</td>
</tr>
<tr>
<td>Hostile</td>
<td>27</td>
</tr>
<tr>
<td>Unable to differentiate</td>
<td>1</td>
</tr>
<tr>
<td>One instrumental/one hostile</td>
<td>4</td>
</tr>
<tr>
<td>Violence directly at authority</td>
<td>8</td>
</tr>
<tr>
<td>One hostile/one authority</td>
<td>1</td>
</tr>
<tr>
<td>One instrumental/one authority</td>
<td>1</td>
</tr>
<tr>
<td>One hostile/one instrumental/one authority</td>
<td>1</td>
</tr>
<tr>
<td>Not specified</td>
<td>6</td>
</tr>
</tbody>
</table>
As can be seen in Table 5.20, the index offence(s) of 51 participants in the violent offender group was rated as instrumentally motivated, whilst the index offence(s) of twenty-seven participants was rated as hostile motivated. These cases were then examined to include their self-reports of witnessing the physical abuse of others, and the results are summarised in Table 5.20.

Table 5.20

<table>
<thead>
<tr>
<th>Number of participants in violent offender group who reported witnessing or not witnessing the abuse of others by the motivation (instrumental versus hostile) for their index offence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Index offence</strong></td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>Instrumentally motivated violence</td>
</tr>
<tr>
<td>Hostile motivated violence</td>
</tr>
</tbody>
</table>

The difference between the number of participants whose index offence was rated as instrumentally motivated versus those whose index offence was rated as hostile motivated were examined using non-parametric statistics. For those who witnessed the abuse of others there was a significant difference in the motivation of the index offence ($\chi^2(1, n=48)=5.33, p=.021$), whilst for those who did not report witnessing the abuse of others there was no significant difference in the motivation of their index offence ($\chi^2(1, n=30)=2.13, p=.144$). There was a significant difference between the number of participants who reported witnessing the physical abuse of others compared with those who did not when the index offence was rated as instrumentally motivated ($\chi^2(1, n=51)=4.72, p=.034$). The frequency with which participants in the violent offender group reported witnessing the physical abuse of others was compared with the motivation for index offence. Results indicate that those participants who witnessed the
abuse of others at the higher levels of frequency were convicted of violent offences that were rated as instrumentally motivated ($\chi^2(4, n=78) = 13.34, p = .0202)$.

Pearson product moment correlation coefficients were calculated to examine the relationship between participants' self-report of witnessing the physical abuse of others in childhood and their scores on the State-Trait Anger Expression Inventory (STAXI), the Novaco Anger Scale-Revised (NAS-R) Domain scores and the JDQ composite scores (alpha level of .0125 with Bonferroni correction for family-wise error).

There was a significant correlation between witnessing the physical abuse of other people and participants' score on the STAXI, Trait Anger ($r = .285, p < .01$), with participants who witnessed the physical abuse of others scoring higher on this domain. There was also a significant correlation between witnessing the abuse of others and STAXI, Anger Expression/Control ($r = .325, p < .001$), with participants who witnessed the physical abuse of other people scoring higher on this domain. There were no significant correlations between participants' who reported witnessing the physical abuse of other people and their scores on the NAS(R).

Correlation coefficients were also calculated to examine the relationship between STAXI and NAS(R) domain scores with that of motivation of index offence (instrumental, hostile). The results indicate a significant correlation between index offence/motivation and scores on The STAXI, Anger Expression/Control ($r = .160, p < .05$), with participants' in the violent offender group whose index offence was rated as instrumentally motivated scoring higher on this domain compared with those whose index offence was rated hostile motivated. There were no other significant results.
Overall Summary

The results of these analyses indicate that there were no significant differences between participants in the violent offender group and non-violent offender group in their reports of physical abuse in childhood, their self-reports of anger or their self-reports of juvenile delinquency, though there were non-significant trends toward the violent offender. Participants in the violent offender group who witnessed the abuse of others during their developmental years were convicted of instrumental violence as determined by their index offence at a level of statistical significance. Furthermore, their scores on the anger scales utilised in this study suggest that instrumentally violent offenders have better control of their anger. A discussion of these results will now be presented in Chapter Six.
CHAPTER 6

DISCUSSION AND CONCLUSIONS

Introduction

The main purpose of this study was to examine the concept of the cycle of violence in the context of incarcerated offenders. The cycle of violence model would predict that violent offenders would report higher levels of physical abuse in childhood compared with non-violent offenders. Social learning theory (Bandura, 1973, Bandura & Walters, 1989) provides the theoretical basis for the study. One hundred violent offenders and 99 non-violent offenders participated in the study, and trained research assistants who were blind to participants’ offender status conducted interviews on childhood discipline and abuse and juvenile delinquency. Participants’ also completed anger protocols. Data were then examined at both the descriptive and interpretive levels, comparing results from the violent offender and non-violent offender groups.

This chapter will present a discussion of these results, the limitations of the study, followed by the implications for further research. Finally, any conclusions that may be drawn from the results of this study will be discussed.

Discussion

Demographic variables

This study focussed on participant demographic variables that are thought to be linked to criminal behaviour (Bartol, 1995), and a description of these variables is
presented in chapter four, including a comparison between offenders who refused to participate in this study when invited, and those who agreed, and comparisons between participants in the violent offender group with those in the non-violent offender group (details of consent are discussed above in Chapter Four).

There were few differences between refusers and participants on the basis of demographic variables. Violent offenders were more inclined to refuse to participate in the study when invited compared with non-violent offenders. Amongst the violent offenders, refusers were generally younger than participants and their criminal record revealed a higher level of previous convictions for violence. Among the non-violent offenders, all refusers were unemployed at the time of their index offence, which was significantly different to the non-violent participant group. However, this may well be an artefact of the low number of non-violent refusers ($n = 7$).

Participants in the violent offender group were over-represented on a number of demographic variables compared with those in the non-violent offender group. Thirty percent of the participants in the violent offender group were of Aboriginal decent, whilst only ten percent from the non-violent offender group were Aboriginal. This compares with an Aboriginal population of between four and five percent in Western Australia (Beresford & Omaji, 1996). On a State-wide prison census day held in the middle of data collection for this study, there were a total of 753 Aboriginal prisoners, or approximately 50% out of a total prison muster of 1,502. The majority of these Aboriginal detainees were from remote and rural parts of Western Australia, placed in regional, low security facilities, and typically convicted for minor offences. Of interest to this discussion is the fact that Aboriginal offenders were clearly over-represented within the violent offender group of participants and between participants in the violent offender and the non-violent offender groups who volunteered from the State’s metropolitan maximum security prison facility.

According to official records, participants in the violent offender group left school at an earlier age, and achieved less well academically compared with those in the
non-violent offender group. Of those who were employed at the time of their index
offence, participants in the violent offender group were employed in less skilled
occupations compared with those in the non-violent offender group. This finding is
consistent with the high number of Aboriginal participants in the violent offender group,
and the low rate of school retention and social disadvantage experienced by indigenous
people in Australian society (Beresford & Omaji, 1996). Disregarding offenders
sentenced to indeterminate sentences, the sentences of participants in the violent
offender group were approximately twice as long when compared with those in the non­
violent offender group. Furthermore, participants in the violent offender group
registered their first offence at a much earlier age (average age being 9.7 years)
compared with that of non-violent offenders (average age being 13.9 years).

Participants in the violent offender group had many more non-violent offences
on their record compared with those in the non-violent group. Whilst the mean number
of previous convictions were skewed by extremes in both groups of participants, violent
offenders still recorded higher numbers of non-violent convictions compared with non­
violent offenders when these outliers were removed.

In summary, there were very few differences between participants in the violent
offender group and non-violent offender on the basis of demographic variables,
however, participants in the violent offender group were generally poorly educated,
occupationally unskilled and were generalist offenders who began their offending career
in early to mid primary school. These are factors, discussed in chapter four, that were
predicted by the cycle of violence model, however, the remaining results failed to
support that model.

**Intergenerational transmission of violence (cycle of violence)**

The cycle of violence hypothesis predicts that children who experience physical
abuse, particularly during the early developmental years, will become violent as adults,
and on this basis will be over-represented in offender populations who have been
convicted for violent index offence(s). The cycle of violence hypothesis was not
supported in this study involving 199 male offenders admitted to a maximum security prison facility in Western Australia. There were no significant differences between participants in the violent offender group and non-violent offender group in their self reports of physical abuse in childhood including the frequency, severity, Composite Abuse Severity Index (CASI) score, age of onset, or perpetrator of the reported abuse.

While the current study confirms the doubt raised by others (Capaldi & Patterson, 1996; Langeland & Dijkstra, 1995; Moore et al., 1990; Olsen & Widom, 1993; Weeks & Widom, 1998) about the intergenerational transmission of violence, it differs from them in respect of the high incidence of participants’ self report of physical abuse. Even among studies that have found evidence for the cycle of violence (such as Cummings, 1993; Widom, 1989), the reported incidence of physical abuse in childhood was much lower than that reported by participants in the current study. Almost nine out of 10 participants across both groups reported physical abuse in childhood as defined in this study. Even at the more serious levels of abuse (marked and severe), three out of four participants reported physical abuse, whilst at the severe level, which includes skeletal fractures, burns and lacerations, one out of four participants reported physical abuse. Just over half of the participants reported physical abuse involving life threatening, or potentially life-threatening behaviour (attempted suffocation or strangulation for example). In contrast to studies that have reported a relationship between the level of physical abuse and seriousness of (violent) offending (Corvo & Carpenter, 2000; Cummings, 1993; Mezzich, Coffman & Mezzich, 1991; Trickett, 1993), the current study found no significant relationship in the severity of reported physical abuse and the level of harm (or injuries sustained by the victim) perpetrated by the violent offender group in their index offence.

According to Grusec and Lytton (1988), the repeated exposure of children to reinforcement schedules involving corporal punishment will lead to adults who utilise the same physical means to control their environment. On this basis it was anticipated that violent offenders in this study would not only report harsher physical abuse, but also more frequent abuse. More than half of the participants in this study reported that physical abuse occurred on 10 or more occasions. There were no significant differences
between participants in the violent offender group and the non-violent offender group in terms of the frequency of their reported physical abuse. This would seem to contradict the utility of social learning theory as a rationale for intergenerational transmission of violence.

In terms of the perpetrators of physical abuse, parent (or parent substitute) and other family members accounted for approximately 92% of the abuse reported by participants in this study. When minor levels of abuse are removed, family members accounted for approximately 96% of reported physical abuse, especially at the higher levels of frequency (more than 10 occasions). Furthermore, many participants reported that both of their parents, (or parent substitutes) physically abused them and about one in 10 participants reported that they were physically abused by both their parents and by a person(s) other than their direct caregiver, usually another family member.

There were no significant differences between participants in the violent offender group and the non-violent offender group on the basis of the perpetrators of reported physical abuse. Though the difference in reports of multiple perpetrators is not statistically significant, the direction of the difference is consistent with the cycle of violence hypothesis. This result is similar to that of Weeks and Widom (1998) who found that violent and non-violent adult male felons did not differ in the extent to which they reported childhood (before the age of twelve) physical abuse, but they did differ on the basis of perpetrators of abuse, violent offenders being abused by multiple perpetrators, typically both parents.

Widom (1991) reports that having one parent who is protective of the child reduces the potential for the continuity of the cycle of violence when abused by the other parent. Similarly, Feerick (1998) reports that having one parent who is nurturing and with whom an attachment process develops during the early critical phase of development is one of a number of factors which protect the individual from the cycle of violence. The cycle of violence hypothesis would therefore have predicted that participants in the current study who reported physical abuse perpetrated by both
parents (and/or others) would be more likely to repeat or perpetuate the intergenerational transmission of violence compared with those who reported physical abuse by only one caregiver. Whilst it is not clear that participants who reported physical abuse by one caregiver did indeed experience a second caregiver who behaved in a protective manner, it does appear that the cycle of violence hypothesis is unsupported in this study in the context of the perpetrators of physical abuse.

**Composite Abuse Severity Index**

The Composite Abuse Severity Index (CASI), introduced in Chapter Four, was developed to represent a single measure of physical abuse combining the severity of reported abuse with the frequency of the reported abuse. Mild, moderate and severe physical abuse was weighted by factors of one, two and three respectively (as per O'Keefe 1994) to account for increasing levels of harm to the victim, and these weighting's served as multipliers for the frequency rating recorded for each perpetrator, father, mother and person(s) other than direct caregiver, to produce the Abuse Severity Index (ASI). The ASI scores were then summed to produce the Composite Abuse Severity Index (CASI).

The development of the abuse index was based on the rationale that the intergenerational transmission of violence is presumed to be a product of both the level of harm and the frequency of the abuse experience according to social learning theory. Therefore the ASI and CASI scores should be higher amongst participants in the violent offender group.

Results of analyses comparing ASI scores for father, mother and person(s) other than direct caregiver failed to reach statistical significance, though there was a trend for participants in the violent offender group to be over-represented, particularly when the perpetrator was the father or person(s) other than the direct caregiver. The CASI scores failed to predict offender status of participants in the current study, and so did not support the cycle of violence hypothesis. Furthermore, the CASI score did not predict the level of violence for the index offence of participants in the violent offender group. This is in contrast to Cummings (1993) who found that the level of physical abuse
(based on injuries sustained, but not frequency of abuse) reported by homicide and other violent offenders was related to the level of harm of their index offence. However, as discussed above, there are some definitional concerns in the Cummings study, which make direct comparisons problematic.

**Age of onset of physical abuse**

It was anticipated that participants in the violent offender group would report earlier onset of physical abuse compared with the non-violent group. There is both empirical and qualitative evidence that the younger the child at the onset of physical abuse, the more likely the intergenerational transmission of violence (Gelles & Straus, 1995; Straus, 2001). As discussed in Chapter Three, there are several possible reasons for this phenomenon. For example, the younger the child at the onset of physical abuse, the less opportunity for other models of social interaction to influence the individuals' social development, particularly if the child is not being adequately protected by another parent. Many families who report violence in the home are socially isolated, both in terms of family and community supports, and this reduces the opportunity for pro-social modelling. Furthermore, the earlier the onset of physical abuse, the longer the window of modelling the cycle of violence. The child who experiences physical abuse at a young age is less mature, and less able to cope with the complex, violent domestic environment, and less able to cope with the consequences of that experience. The preschool years have been shown to be a critical phase of development in terms of parent-child attachments, usually to the primary caregiver (Boris, Zeanah, Larrieu, Scheeringa & Heller, 1998; Kobayashi, Sales, Becker, Figueredo & Kaplan 1995; Mikulincer & Florian, 1999; Moncher, 1996; Richters & Volkmar, 1994). The onset of physical abuse during this period may seriously disrupt the attachment process, and according to the literature (Blizard & Bluhm, 1994; Bowlby, 1977; Pistole & Tarrant, 1993; Waters, Merrick, Treboux, Crowell, & Albersheim, 2000), increase the probability of the intergenerational transmission of violence. Widom (1989; 1991; 1994) reports that in a sample of approximately 900 abused and neglected participants, the presence of a secure parent figure to whom an early (within the first two years of age) attachment had been formed constituted a buffer from the intergenerational transmission of violence process.
There were no significant differences between participants in the violent offender group and non-violent offender group on the basis of the age of onset of reported physical abuse. Nonetheless, some interesting points emerge. The abuse is reported to have started at an earlier age among participants in the violent offender group when the perpetrator was father or another caregiver, but earlier among participants in the non-violent group when the perpetrator was the mother.

The difference between the groups in the age of onset of physical abuse, whilst not statistically significant, was greatest when the perpetrator was a person(s) other than the direct caregiver, with participants in the violent offender group reporting earlier age of onset. They included primarily other members of the family, including siblings, grandparents, aunts or uncles and cousins. This raises the question of the extent to which the cycle of violence process is influenced by the child’s perception of the legitimacy of the discipline, regardless of the severity. Cummings (1993) reports that children are likely to perceive the discipline of parents as substantially more legitimate than that of other individuals, including other family members.

There may be a number of reasons why the results of the current study failed to support the cycle of violence hypothesis. First, the results may reflect the fact that there is no difference between participants in the violent offender group and the non-violent offender group on the basis of their reports of physical abuse in childhood. Indeed, the results of post-hoc analysis indicate reasonable power, and a fairly good-sized effect, thus providing support for the acceptance of the null hypothesis. Second, the Abuse Severity Index may not be sufficiently sensitive to identify inherent differences between the groups. Based upon the clear null results, it can reasonably be concluded that the two groups of offenders who participated in this study did not differ in terms of their reports of physical abuse in childhood, and that the cycle of violence hypothesis is therefore not supported. However, while not reaching statistical significance, the direction of the difference in all measures of physical abuse is consistent with the intergenerational transmission of violence.
Anger scales

Of the two anger scales utilised in this study, only the State-Trait Anger Expression Inventory provides norms for prisoner populations. The norms for the Novaco Anger Scale (Revised) are based on clinical and student populations, as discussed above in Chapter Five. Whilst the multiple tests employed to compare participants in this study with those of the published norms increases the risk of an elevated Type One error rate, the results generally fit with theoretical expectations based upon the populations from which the published norms were drawn.

It was predicted that violent offenders would be further differentiated from non-violent offenders on the basis of their results on the anger scales. With the exception of Anger Expression/Control (STAXI), there were no significant differences between the groups on the basis of scores on the remaining anger scales, though again, there were trends towards participants in the violent offender group scoring higher on the anger scales compared with those in the non-violent offender group. It is of interest to note the consistent trend for non-abused, non-violent offenders to score lower on scales of anger as measured by both the STAXI and the NAS(R). Unfortunately the number of participants in both groups of non-abused offenders (violent offenders, non-violent offenders) was very low (10 and 14 respectively), compared with that of the abused offenders (90 and 84 respectively) and therefore statistical analysis comparing these groups was not possible. However, these results do reflect the trend throughout this study supporting the intergenerational transmission of violence, but this trend was not statistically significant.

When anger is considered in the context of the null results for physical abuse and the cycle of violence, then the lack of significant differences between the groups on anger scales makes more sense. The results of this study suggests that non-violent offenders present with the same anger characteristics as violent offenders, but have better control and have learned more socially appropriate ways of managing their anger, including more effective problem solving skills.
Whilst there were no significant differences between the groups on the anger scales, the CASI score (an aggregate of level and frequency of physical abuse) was positively correlated with group scores on all the anger scales of interest to this study, except Anger/Control. These results suggest that the experience of physical abuse in childhood may contribute to the development of pervasive personality characteristics (Trait Anger), and to the development of cognitions that may misinterpret external social cues, to hyper-vigilence (arousal) and behavioural responses in which the individual acts out anger in the form of physical and/or verbal violence.

This applies equally to participants in the violent offender group and the non-violent offender group. Whilst participants in the non-violent offender group were without violent offences on their official record, their scores on the two sub-scales of the JDQ pertaining to violence (Harm, Fight) were not significantly different from that of the violent offender group. Participants from both groups in this study scored significantly higher than the published norms for delinquent and non-delinquent populations. Furthermore, their CASI scores correlated significantly with their scores on the JDQ sub-scales Harm and Fight, suggesting some evidence for the cycle of violence.

**Juvenile Delinquency Scales**

Participant scores on the social desirability scale of the JDQ indicate that the results can be interpreted with some confidence. Results reveal that participants had a substantial criminal history before their contact with the adult system, and that physically abused participants reported an earlier onset of juvenile delinquency compared with non-abused participants. It should be noted however, that the numbers of non-abused participants in both groups were low, and the uneven distribution of participants may have eroded statistical power. Whilst the CASI scores were positively correlated with Composite JDQ scores, there were no significant differences between the groups.

A high correlation between scores on the JDQ and those of the Anger scales (STAXI and NAS-R), and participants’ CASI scores suggests that physical abuse in
childhood may contribute to the development of anti-social behaviours. The results of these analyses suggest that participants in this study who report physical abuse in childhood engage in status offences (including school avoidance) from an early age, they become angry and resentful, and vent their rage in, and on the community, where they increasingly engage in anti-social behaviour. What has not been established is what the factors are that lead to violent versus non-violent behaviour in adulthood.

According to the results of the anger scales utilised in this study, Anger Expression-Control is negatively correlated with violent offending, but not with the seriousness of index offence. Participants in the non-violent offender group scored higher on Anger Expression-Control (STAXI) compared with participants in the violent offender group. Whilst participants in the violent offender and non-violent offender groups presented with similar anger profiles, non-violent offenders in the current study would seem to have developed better problem-solving and other social skills to manage their anger, as discussed above.

Witnessing abuse

Social learning theory contributes to an understanding of the concept of intergenerational transmission of violence, and this phenomenon is particularly evident with an examination of the offending behaviour of offenders who report having witnessed the physical abuse of others. It was anticipated a priori that there would be a sub-group of participants in this study who did not report physical abuse to their person, but who reported witnessing the physical abuse of others during their developmental years.

Results from the current study indicate that only nine participants (all but one from the non-violent offender group) reported witnessing the abuse of others whilst not being abused themselves at any time during their developmental years, thus strong tests of this hypothesis were not possible. Of those who were abused, 60% reported witnessing the abuse of others, whilst 40% did not. Many participants (34%) reported witnessing the physical abuse of others at the marked level, with approximately 16% reporting witnessing abuse at the severe level. Almost half of the total number of
participants in this study reported witnessing the physical abuse of other people during their early developmental years, the majority within the family home.

In the context of social learning theory, the frequency of physical abuse is just as important as the severity of physical abuse in the intergenerational transmission of violence, as this reflects the opportunity for reinforcement schedules that are likely to increase the cycle of violence. Some commentators (Loeber & Hay, 1997, for example) note that physical aggression is such a powerful social reinforcer that few such schedules are required. However, intermittent, repeated reinforcement is also a powerful agent of social control that is likely to maintain behavioural outcomes. Only six percent of the participants in this study reported witnessing the abuse of others as a single, one-off event. Six out of 10 reported that the abuse of others was witnessed on 10 or more occasions. Of these, six out of 10 were from the violent offender group.

When the perpetrator-victim profile is examined, it is interesting to note that the majority of the reported incidents involved a parent (or substitute) to sibling (36.4%), whilst one in five participants reported abuse of one parent (or substitute) to the other parent (or substitute). Of these, just over half involved father to mother, whilst a surprising 40% reported abuse of father by mother. This phenomenon has been cited in the literature but few report such high levels of "husband bashing" (Butler, Radia & Magnatta, 1994; McKernan, 1994; Rosenbaum, 1996).

One hundred and twenty out of 121 participants in this study who reported witnessing the physical abuse of others did so in the context of the family home, with family members being the perpetrator, and siblings often being the victim. Whilst this trend is not surprising given the intense and intimate nature of the family home (Buzawa & Buzawa, 1990), the almost 100% result is unexpectedly high compared with figures cited in the literature (Funder, 1995; Gillham, 1994), and adds some credence to the concept that the family home may not be a safe place, particularly for children.
The results of the rating of participants in the violent offender group on the basis of the motivation for their violent index offence indicate that there were more offences rated as instrumental compared with hostile motivated, at a ratio of almost two to one. Of those whose violent offence was rated as instrumental, more than six out of 10 reported having witnessing the abuse of others. Of particular interest to this discussion is the fact that the frequency of the reported physical abuse witnessed by participants in the violent offender group was significantly related to violent offending rated as instrumental. This would seem to lend support to the concept of vicarious learning of (physical) aggression as a means of controlling or manipulating social interaction. In terms of anger scales, instrumentally violent offenders scored higher on Anger Expression/Control compared with hostile violent offenders. There were no significant differences between the groups on any of the remaining anger scales. This is similar to the anger profile of participants in the non-violent group, and may contribute to lack of statistical support for the intergenerational transmission of violence. Future studies could examine this phenomenon by defining more clearly the concept of hostile motivated versus instrumentally motivated violence and developing more formal processes for determining motivation. However, Bushman and Anderson (2001) argue that the instrumental versus hostile distinction has outlived its utility, and should be replaced by a Knowledge Structure approach, including the concepts of 'Scripts' and 'Schemas'. They argue that the flexibility of content and the “automaticity” of operation of knowledge structures address the inherent difficulties of the hostile-instrumental dichotomy. Whilst the concepts of hostile motivated violence and instrumentally motivated violence may not be as mutually exclusive as implied in the present study, the results highlight the fact that violence is not always a product of anger, and suggests that children in particular, are very susceptible to the process of vicarious learning. Furthermore, the treatment needs of hostile motivated and instrumentally motivated violent offenders are quite different (Blackburn, 1993; Howells & Hollin, 1993), and it is therefore of great clinical utility to investigate motivation for violent behaviour more thoroughly.

**Forensic and clinical implications**

The results of the current study suggest a strong relationship between physical abuse in childhood and subsequent criminal offending. One of the primary clinical
issues arising from this study is the importance of early intervention into families where children are at risk of physical harm or other abuse, as many participants reported physical abuse reaching as far back into their childhood as they could remember. To the extent that there is a cycle of violence, then the sooner the cycle is broken the better the outlook for the child, the family and the community in general. It seems imperative that government and other community agencies work together to identify families at risk of child abuse and other family pathologies that impact on the child’s development and may subsequently contribute to offending behaviour, particularly violent offending behaviour. The pre-school child is at particular risk, as discussed in Chapter Three. The challenge is for community agencies to connect with vulnerable families who may generally present as insular and poorly motivated for change. Fraser, Armstrong, Dadds and Morris (1999) found evidence for the ability of prevention and early intervention programs to successfully target parents who are likely to adjust poorly to the parenting role during the first two years, including families targeted as high risk of physical child abuse. Early results from Fraser et al.’s study suggests that addressing the needs of targeted families on a case by case basis is impacting positively on family dynamics and the psycho-social development of the children.

Once the child reaches school age, the school should provide an environment in which the abused child can learn more socially acceptable ways of coping with complex inter-personal relationships, and may provide a milieu that protects the child from the adverse effects of abuse in the home. Zingraff, Leiter, Johnsen and Myers (1994) report that physically abused children are more at risk of juvenile delinquency when compared with sexually abused, neglected and emotionally abused children. However, they found that this risk level might be reduced to statistically insignificant levels when interventions were introduced into the school that promoted school retention and classroom performance. This again highlights the need for early detection and intervention of abused children, and poor school performance may function as an early warning sign possibly indicating the presence of physical abuse in the home.

Specific individual, dyadic and family characteristics that impact on the disciplinary practices in the family home have been discussed in previous chapters, that
with appropriate interventions, may remediate or prevent the many negative outcomes of child maltreatment, in particular, criminal offending behaviour. The investigation of disciplinary practices and effects of childhood abuse, particularly physical abuse, is an important component of the clinical-forensic assessment of offenders in the judicial system. The results of this study would suggest that physical abuse in childhood is a general criminogenic factor, not one specifically related to violent offending. Results from the study provide strong support for a clinical approach to treatment of offenders based upon an individual needs analysis model (Howells & Hollin, 1993) rather than the cause-effect approach inherent in the cycle of violence model.

**Limitations of the study**

Whilst a thorough examination of criminal records, departmental files and police reports was conducted to determine offender status for the current study, the level of unreported violence among both groups of participants is unknown. Most incidence of violence, particularly domestic violence, go unreported (Browne & Herbert, 1997). This raises the question of whether participants in either group, particularly the non-violent offender group, may have a history of violence that has not come to the attention of the authorities, and therefore official records. By definition, participants in the non-violent offender group had no evidence of violent offences on their criminal record. However, for two of the domain scores on the JDQ related to violence (Fight, Harm), participants in the non-violent offender group scored above that of the non-delinquent norms (Mak,1993) and higher than the delinquent norms (Mak, 1993) on the Harm domain. It remains unclear whether participants in the non-violent offender group were smarter than those in the violent offender group and did not get caught for violent offending, or whether their higher score on Anger-Control (STAXI) suggests that since adolescence they have developed the pro-social skills inherent in managing anger. This may account for anger motivated violence, but does not relate to instrumental violence.

A second limitation of this study relates to the veracity of self-report recall in the collection of data pertaining to participants' history of physical abuse in childhood, in particular, the opportunity to check the accuracy of the reports. The issues inherent in
self-report for the collection of participant information is discussed in detail in Chapters Three and Four above, including the strengths and limitations of self-report and the reliance on memory for personal (childhood) historic events. Of interest to this discussion is the lack of opportunity provided to the author to check the accuracy of the information provided by participants of their reports of physical abuse. It was the intention in this study to check the responses of participants on the Physical Abuse Questionnaire against official records held by a Western Australian Government agency. Unfortunately, despite numerous approaches, the agency considered the request inappropriate, and permission was denied. Consequently there is no way of knowing the accuracy of participant responses. However, this may well have been more of an issue had there been few reports of physical abuse by participants, or indeed, had there been statistically significant differences between participants in the violent offender group and the non-violent offender group in their self reports of physical abuse in childhood.

The third limitation in this study relates to the position of the researcher in the Western Australian Prison system at the time data was collected that may have influenced which prisoners volunteered for the study. Research assistants were utilised to conduct the interviews with participants in order to minimise the possibility of this effect. However, at the point of obtaining informed consent of prisoners for participation in this study, the researcher’s name was identified on the consent form. Most prisoners who were approached to participate in this study knew the researcher. What effects this may have had on prisoners’ decision to participate, or on the responses of participants is unknown. Cummings (1993) suggests that prisoners are more likely to be involved in research when they know the researcher. In this context it is important to note that both the refusers and participants also knew the two research assistants.
Finally, the current study examined the relationship between physical abuse as a child and subsequent violent offending. The results of this study can only be considered in the context of those who participated, although the 100 participants from the violent offender group represents almost 20% of the (Casuarina Prison) population from which data was collected. However, the population of violent offenders who volunteered to participate may be very different from the remaining violent offenders in the prison at the time, or from violent offenders in other prison facilities in the Western Australian prison system. Also unknown to the present study is how this group of violent offenders compares with other violent offenders not yet before the judicial system.

**Future research**

Whilst the results of this study do not support the concept of intergenerational transmission of violence, a number of questions have evolved that may contribute to a clearer understanding of the concept if addressed in future research. First, does the offender’s perception of the physical abuse contribute to the cycle of violence? That is, does the victim’s perception of the fairness of the discipline, regardless of the severity, impact on the potential for the abuse (violence) to be transmitted to the next generation. Cummings (1993, discussed in Chapter Three) found that whilst violent offenders were more likely to have been physically abused in childhood compared with non-violent offenders, it was the participants’ perception of the justification for the discipline, regardless of the severity, that most clearly distinguished the groups of offenders.

Second, the concept of intergenerational transmission of violence has as its focus parental styles that involve the use of physical punishment and/or abuse in the discipline of children. By definition, other forms of child abuse such as sexual abuse, emotional abuse and neglect are generally excluded in research designs that examine the relationship between victim (of physical discipline/abuse in childhood) and perpetrator of violent offending, as they were in this study. However, Bernburg and Thorlindsson (1999) state that “the child should be viewed as being nested within a complex of interconnected systems that encompass individual, family and extra-familial factors” (p. 205).
447). Ney, Fung and Wickett (1994) report that less than five percent of child maltreatment occurs as a single form. With this in mind, future research should focus on the various forms of parental abuse, including physical, emotional, neglect and sexual. Neglect appears to contribute to the potential for the intergenerational transmission of violence (Widom, 1989), as does emotional abuse (Widom, 1994). Future research should consider all aspects of parental abuse and neglect to examine for their possible contribution, individually and in combination, to the intergenerational transmission of violence.

Third, attachment theory may contribute to an understanding of the cycle of violence, as discussed in Chapter Three, and further research should examine if the lack of, or faulty, attachment is the common factor that differentiates violent offenders from non-violent offenders who have been physically abused in childhood. A review of the literature by Kaufman and Zigler (1987) pertaining to the cycle of violence phenomenon concluded that approximately 30% of males who experience abuse in childhood will go on to perpetuate the physical abuse of others, primarily in the domestic environment. This begs the question, what are the protective factor(s) that further differentiate those who perpetuate the cycle of violence compared with those who do not. Attachment or bonding to a significant adult, particularly during the very early developmental years, may well be such a protective factor that reduces the risk of the intergenerational transmission of violence (Howes & Segal, 1993; Rankin & Wells, 1990; Thompson, 2000). Given the high number of participants in the current study, who report physical abuse in childhood, it may be useful to explore the possible relationship between attachment and the cycle of violence among violent and non-violent offenders.

Finally, given the high proportion of Aboriginal participants in the violent offender group and considering the findings of the recently released report of the Gordon Enquiry (Gordon, Hallahan & Henry, 2002) that found high levels of child abuse, including physical abuse among Western Australian Aboriginal families, it is likely that cultural factors play a significant role in the cycle of violence in this subgroup. However, since the purpose of this study was to evaluate the intergenerational transmission of violence among offenders in general, specific cultural variables were
Conclusions

The results of this study do not support the concept of the cycle of violence. Violent offenders were not statistically over-represented on any measure of self-report of physical abuse in childhood when compared with non-violent offenders, and the severity of reported physical abuse was not related to the level of violence perpetrated by violent offenders. Whilst non-abused, non-violent offenders scored lower on many of the sub-domains of both the STAXI and the NAS(R) compared with other participants, anger did not differentiate violent offenders from non-violent offenders on any measure, with the exception of the sub-scale Anger-Expression/Control, on which non-violent offenders scored significantly higher. This suggests that non-violent offenders have the same enduring experiences of anger as do violent offenders, but have learned more socially appropriate means of managing their anger. Furthermore, there were no significant differences between violent offenders and non-violent offenders on the basis of their self-reports of anti-social behaviour as a juvenile. The witnessing of the physical abuse of other people was high among participants in this study, both violent offenders and non-violent offenders, many reporting severe levels of abuse at high levels of frequency. This seems to lend support to the developmental relationship of growing up in violent home environment and subsequent generalist offending discussed above.

However, there appeared to be a clear relationship between the report of physical abuse in childhood and offending behaviour for both groups of participants. The level of physical abuse as measured by the CASI score was related to Trait Anger (and other anger driven characteristics), and to delinquent behaviour according to their self-reports on the JDQ. Likewise, scores on the anger scales and those of juvenile delinquency appeared to be related for participants’ in both the violent offender and non-violent offender groups. Thus, whilst a relationship between physical abuse in childhood and subsequent violent offending was not found, a relationship between physical abuse and offending behaviour is suggested by the results of the current study.
If there is such a phenomenon as the cycle of violence, then it may well be a product of more general forms of abuse, such as emotional abuse, neglect, sexual abuse and physical abuse, probably in some combination, together with other psycho-social factors, such as temperament of the child, family poverty, social dislocation and isolation, and interference in the parent-child bonding process. However, physical abuse does seem to be a factor contributing to generalist offending by participants in the current study, given the pervasiveness of their experiences based on self-report. Physical abuse is therefore of interest on the basis of prevention, early detection, and as part of a comprehensive approach to rehabilitation based upon individual needs. An intervention based on reducing the effects of physical child abuse would be likely to reduce levels of non-violent as well as violent offending (McLaren, 1988). The challenge is to first reduce the levels of child abuse in the community in general and second, to detect as early as possible those children who have been abused, and to provide support and family intervention to reduce the sociological and criminogenic effects of child abuse.
REFERENCES


under stress. 7th Australasian Conference on Child Abuse and Neglect, Perth, Western Australia.


Sentencing Act (Western Australia) 1995. Western Australian Government Publication.


APPENDICES
Appendix 1 - Approval to conduct the study: Edith Cowan University correspondence
Dear John

I am pleased to advise that your PhD research proposal entitled "The intergenerational transmission of violence? The self report of physical abuse among violent and non-violent offenders" was considered by the Faculty Higher Degrees Committee and will be forwarded to the University Doctoral Studies Committee for consideration of formal approval once ethical clearance has been received.

This approval means that the Faculty Higher Degrees Committee believes that you have developed the proposal to a stage where worthwhile research can be conducted on your topic. It does not guarantee successful examination of your research thesis.

You should not proceed to conduct the research and prepare your thesis until you have received approval from the University Research Ethics Committee. As soon as your proposal has been approved by the UCCER it will be forwarded to the University Doctoral Studies Committee for approval. When you commence your data collection you should be guided by the information contained in the University booklet "Information for Honours, Masters and Doctoral candidates on Research Policies and Procedures". Please obtain confirmation from the Faculty Librarian that the format in which you intend to present your thesis is consistent with University requirements.

Once your proposal is approved by the UCCER you may apply for a postgraduate student research grant and you will find the necessary form enclosed. Advice to applicants appears on the reverse of the form, but if you should have any queries please contact the Faculty Administrative Officer on 400 5731.

Your supervisor will be asked to consult with you in recommending examiners for your thesis. It is important that this is done well before you submit the thesis, so that arrangements can be made to have your thesis examined without unnecessary delay. Therefore would you please ensure that this is finalised at least six weeks before you submit your thesis. Your supervisor has the required proforma on which these details should be provided.

I wish you every success with your research.

Your sincerely,

FRANCIS LOBO
Chairperson
Faculty Higher Degrees Committee

cc Supervisor
Dear Mr Dockerill

Re: Ethics Approval

Code: 95-152

Project Title: The Intergenerational Transmission of Violence? The Self Report of Physical Abuse in Childhood Among Violent and Non-Violent Offenders.

This project was reviewed by the Committee for the Conduct of Ethical Research at its meeting on 24 November 1995.

I am pleased to advise that the project complies with the provisions contained in the University's policy for the conduct of ethical research, and has been cleared for implementation.

Period of approval is from 1 March 1996 to 31 October 1996.

Yours sincerely

Rod Crotthers
Executive Officer
28 November 1995

Please note: Students conducting approved research are required to submit an ethics report as an addendum to that which they submit to their Faculty's Higher Degrees Committee.

cc: A/Professor Kevin Howells, Supervisor
    A/Professor Steve Barrie, Academic Registrar
    Mrs Gerrie Sherratt, Secretary H.D.C.
6 March 1996

Mr John Michael Dockerill

Dear Mr Dockerill

It is with pleasure that I write on behalf of the Doctoral Studies Committee who, at its meeting on 1 March 1996, approved the PhD proposal you submitted on 6 October 1995: The Intergenerational Transmission of Violence? The Self Report of Physical Abuse Among Violent and Non-Violent Offenders: and which was endorsed by the Chairperson of the Faculty of Health & Human Sciences Postgraduate and Higher Degrees Committee on 25 October 1995.

Approval is given for your supervisory team to consist of:

AssocProf Kevin Howells Principal Supervisor
Dr Julie Thacker Supervisor

Your study has been determined as part-time with expectation of completion in Semester 2, 1997. Should you wish to vary this you should apply formally through your Principal Supervisor. The examination requirements on completion are to be as laid down in Division 4 of Part VI: Edith Cowan University (Admission, Enrolment and Academic Progress) Rules 1996.

I have enclosed an extra signed copy of this letter and I would be glad if you could sign both copies and return one to the Academic Registrar as a formal record of your acceptance of the above conditions for proceeding with your Thesis.
Finally, could I take this opportunity to offer you the best wishes of the Doctoral Studies Committee for your research and the development of your Thesis.

Yours sincerely

[Signature]

Professor Brian Lawrence  
Chairperson - Doctoral Studies Committee

I accept the above conditions for proceeding with my PhD Thesis

[Signature]  
Dated this--day of APRIL--1996
27 November 1995

Mr John Dockerill

Dear John

Your application for Postgraduate Support Funding was considered at a recent meeting of the Faculty Higher Degrees Committee and funding was approved as follows:

Research Assistant - 250 hours @ $13.16 per hour + 13% oncosts  
(payroll tax, workers' compensation and superannuation guarantee charge)

Total funding $3718 to be paid over two semesters.

To access these funds please contact Mrs Gerrie Sherratt on 400 5731. Payment is usually made through the University payroll system. For other methods of payment you will need to produce receipts or invoices for all expenditure.

I wish you every success with your research.

Yours sincerely

[Signature]

Associate Professor Francis Lobo
Chairperson, Higher Degrees Committee
Faculty of Health and Human Sciences
Phone 400 5750
Fax 400 5751
E-mail F.Lobo@cowan.edu.au
Appendix 2 - Approval to conduct the study: Ministry of Justice correspondence
File No 96/01756

Mr John Dockerill
Special Needs Team
Casuarina Prison

Dear Mr Dockerill,

Your application to undertake the research project "The Intergenerational Transmission of Violence: Self report of Physical Abuse Among Violent & Non-Violent Offenders" was approved by the Ministry's Evaluation and Research Committee on the 13 March 1996.

I wish you well with the research and look forward to reading your dissertation.

Yours sincerely,

Dr Robert E Fitzgerald
EXECUTIVE DIRECTOR
STRATEGIC AND SPECIALIST SERVICES

April 1996
RE: My proposed research examining the relationship between physical abuse and violent offending.

Following our recent discussion regarding the above research proposal, I request written confirmation of your approval for referring offenders to your team, should they feel any negative consequences arising from their participation.

I would not anticipate that many participants will feel unduly upset by the physical abuse protocol which is based upon a gentle probe semi-structured interview format, but should they do so, referral to your team seems most appropriate.

Most offenders already know of the Special Needs Team, and by and large have no difficulty utilizing the services. All participants will be informed that the service is there should their participation leave them feeling upset.

Thanking you in anticipation.

John Dockerill
CLINICAL PSYCHOLOGIST
ALTERNATIVES TO VIOLENCE UNIT

7 November 1995
RE: MY PROPOSED RESEARCH USING OFFENDERS AS PARTICIPANTS

Following our discussion of 31 October 1995 re - my proposed research being part of the requirements of the Doctor of Philosophy, Forensic Psychology course, I would appreciate written confirmation of your support for my research. Details of the project are contained in the proposal which has been approved by the Higher Degrees Committee, Edith Cowan University; a copy of which has been previously furnished to you.

I would also appreciate your consideration of my nominating you as my Ministry Supervisor, as you are the most experienced and informed clinician working in the field of violent offending.

John Dockerill
CLINICAL PSYCHOLOGIST
ALTERNATIVES TO VIOLENCE UNIT

2 November 1995

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John

As discussed, I will be happy to be the Ministry supervisor. Does the University have a statement of their expectations of such a role?
Appendix 3 - Participant Consent Form
ASSESSMENT PROJECT FOR PROGRAM DEVELOPMENT

My name is (Sofia / Bruce). Mr. John Dockerill who works for the Alternatives to Violence Unit, Casuarina Prison, has appointed me to work on a project. This project is part of the work John is doing for a course: Doctor of Philosophy, Forensic Psychology, and is not part of his work on the Alternatives to Violence Unit.

The project is designed to obtain information that may contribute to the improvement of existing programs for prisoners, which are designed to help them make changes and not return to prison. In particular John is looking at how certain experiences as a child can affect our adult behavior.

To do this he has put together a set of questionnaires that may help to show what the requirements are for new programs, and how the existing ones might be improved. If you are willing to participate, my job is to complete the questionnaires with you now.

Your participation is totally voluntary and if you decide not to participate, this will not affect your progress through the prison system in any way. No report or information will be given to anybody. You are perfectly at liberty, and within your rights, to refuse to participate.

However, if you do agree to participate, this too will not affect your progress through the prison system and no reports or information will be given to anyone except Mr Dockerill. The main advantage of participation is that the results from your help may contribute to the general improvement of programs for prisoners.

All information gathered from this project will be treated with total respect and the strictest confidence. Information will be looked at using numbers only, and no names or other identifying marks will be used in the written paper. I am happy to answer questions you may have at the end of the interview, but should you have questions or concerns later, please feel free to contact members of the special needs team, who are aware of this project.

Please be advised that this project has the approval of Edith Cowan University and the Ministry of Justice.
Thank-you for your attention. Would you please indicate in the space below whether or not you are willing to participate.

I have been informed about the above named project and request for my participation.

I agree to participate in this project.

*SIGNED: ___________________________ DATE: ________________

I do not wish to participate.

*SIGNED: ___________________________ DATE: ________________

* PLEASE ASK PARTICIPANTS TO SIGN IN THE APPROPRIATE SPACE
Mr Rob Rademakers
A/MANAGER SPECIAL NEEDS TEAM

RE:
My proposed research examining the relationship between physical abuse and violent offending.

Following our recent discussion regarding the above research proposal, I request written confirmation of your approval for referring offenders to your team, should they feel any negative consequences arising from their participation.

I would not anticipate that many participants will feel unduly upset by the physical abuse protocol which is based upon a gentle probe semi-structured interview format, but should they do so, referral to your team seems most appropriate.

Most offenders already know of the Special Needs Team, and by and large have no difficulty utilizing the services. All participants will be informed that the service is there should their participation leave them feeling upset.

Thanking you in anticipation.

John Dockerill
CLINICAL PSYCHOLOGIST ALTERNATIVES TO VIOLENCE UNIT

7 November 1995
Appendix 5 - Consent Form, Practice Interviews
CONSENT FORM, PRACTICE INTERVIEWS

Before concluding this section of the program, I would like to ask you for your assistance. One of our colleagues, Mr John Dockerill, who works for the Alternatives to Violence Unit, is looking at ways of making anger management programs more effective, and more appropriate to the needs of participants. In particular, he is looking at the relationship between certain parenting styles, discipline styles, and subsequent behaviour as an adult. This is part of John’s study at Edith Cowan University for a Doctor of Philosophy, Forensic Psychology Degree.

After carefully looking at ways of gathering information that might be useful in developing new programs, John has produced two questionnaires. In order to see if they will do what they are supposed to, John has asked us to try them and make constructive comments about them. We are asking you to help us do that.

Your participation is totally voluntary, and will not affect your completion of this course, your progress through your sentence, and absolutely no information will be given to any one else. The only purpose of this exercise is to see if the questions are clear and can be understood easily. No names are required at all, only numbers. John will have no idea who the numbers relate to, and once the question papers have been looked at they will be destroyed.

What we would like to do is talk to you one by one using the questionnaires. Both Sophia and Bruce will be talking to you in turn and separately at the beginning and end of this course. This will mean each participant will have two interviews, and each interview will last about 20 to 30 minutes.
We hope you feel comfortable about participating in this exercise. If you do not that is perfectly OK. If you do, we will ask you to sign at the bottom of a copy of this information to say that this has been explained to you, and that you agree to participate. If, after completion of this exercise you have any questions, or any concerns, please feel free to contact a member of the Special Needs Team, who are aware that this is taking place.

Thankyou for agreeing to participate.

Sophia McMallum
Bruce Watt

for

John Dockerill
Clinical Psychologist
Student Ph.D.
Forensic Psychology

The information presented above has been explained to me and:

I agree to participate in the exercise.

* SIGNED: ___________________________ DATE:_________

I do not wish to participate in this exercise.

* SIGNED: ___________________________ DATE:_________

* Please ask the participant to sign the appropriate space.
Appendix 6 - Juvenile Delinquency Questionnaire
JUVENILE DELINQUENCY QUESTIONNAIRE

INSTRUCTIONS FOR INTERVIEWER

Each question pertains to an activity the offender may have participated in before the age of 18.

Commence each question by asking the respondent if he engaged in the activity.

If no, circle "no", and proceed to the following question.

If "yes", circle "yes". Proceed to part "a" of the question - at what age did the respondent first engage in the activity. Try to find the age to the nearest quarter of a year. This may require some prompting. For example, if the reply is 9-years-old, ask was that when you first turned nine, when you were nine and a quarter, nine and a half, or nine and three quarters (record as 9.00, 9.25, 9.50 and 9.75 respectively). If the respondent cannot provide an answer in quarter years, then use default of .50; for example, 9.50.

If participant has difficulty recalling the age, use cues. For example, did this first occur in primary school or high school; beginning of high school or end of high school.

After part "a" proceed to part "b". Ask how frequently, while under the age of 18, did he engage in the activity. Read out the five possible responses, record response and proceed to the next question.
INSTRUCTIONS FOR THE RESPONDENT

I am going to ask some questions about activities you may have participated in before the age of 18.

For each question answer "yes" if you engaged in the activity before your eighteenth birthday and "no" if you did not.

For activities which you did engage in before the age of 18, I will ask what age you were when you first engaged in the activity and how often you participated in that activity. If you have difficulty remembering, please provide an estimate to the best of your knowledge.

Please answer each question as honestly as possible.
JUVENILE DELINQUENCY QUESTIONNAIRE

Circle appropriate response.

1. Before you were 18 did you ever drive an unregistered car?
   No .. go to Q 2.
   Yes .. ask below.
   a) At what age did you first drive an unregistered/unlicensed car?
      Age - years
   b) How many times did you drive an unregistered/unlicensed car?
      1, 2-3, 4-10, 11-20, 21+

2. Before you were 18 did you ever drive a motor car or a motor bike on the road without drivers licence or a learners permit?
   No .. go to Q 3
   Yes .. ask below.
   a) At what age did you first drive a motor car or a motor bike without a drivers licence or a learners permit?
      Age - years
   b) How many times have you driven a motor car or a motor bike on the road without a licence or a learners permit?
      1, 2-3, 4-10, 11-20, 21+

3. Before you were 18 did you ever drive a motor car or a motor bike when drunk or over the legal alcohol limit?
   No .. go to Q 4.
   Yes .. ask below.
   a) At what age did you first drive a motor car or a motor bike when drunk or over the legal alcohol limit?
      Age - years
   b) How many times have you driven a motor car or a motor bike when drunk or over the legal alcohol limit?
      1, 2-3, 4-10, 11-20, 21+
4. Before you were 18 did you ever race with other vehicles while driving a car or a motor bike on the road?

No .. go to Q 5
Yes.. ask below.

a) At what age did you first race with other vehicles while driving a car or a motor bike on the road?

Age – years

b) How many times did you race with other vehicles while driving a car or a motor bike on the road?

1, 2-3, 4-10, 11-20, 21+

5. Before you were 18 did you ever take and drive a motor car or a motor bike that belonged to someone else without the owner's consent?

No .. go to Q 6.
Yes .. ask below.

a) At what age did you first take and drive a motor car or a motor bike that belonged to someone else without the owner's consent?

Age – years

b) How many times did you take and drive a motor car or a motor bike that belonged to someone else without the owner's consent?

1, 2-3, 4-10, 11-20, 21+

6. Before you were 18 did you ever steal things or parts out of a motor car or a motor bike?

No .. go to Q 7.
Yes .. ask below.

a) At what age did you first steal things or parts out of a motor car or a motor bike?

Age – years

b) How many times did you steal things or parts out of a motor car or a motor bike?

1, 2-3, 4-10, 11-20, 21+
7. Before you were 18 did you ever steal a bicycle or parts from a bicycle
No .. go to Q 8.
Yes .. ask below.
   a) At what age did you first steal a bicycle or parts from a bicycle?
      Age - years
   b) How many times did you steal a bicycle or parts from a bicycle?
      1, 2-3, 4-10, 11-20, 21+

8. Before you were 18 did you ever see an "R" rated film at the cinema?
   No .. go to Q 9.
   Yes .. ask below.
   a) At what age did you first go to see an "R" rated film at the cinema?
      Age - years
   b) How many times did you go to see an "R " rated file at the cinema’?
      1, 2-3, 4-10, 11-20, 21+

9. Before you were 18 did you ever fail to keep a promise?
   No go to Q 10.
   Yes .. ask below.
   a) At what age did you first fail to keep a promise?
      Age - years
   b) How many times have you failed to keep a promise?
      1, 2-3, 4-10, 11-20, 21+

10. Before you were 18 did you ever buy beer, wine, spirits or other kinds of liquor?
    No .. go to Q 11.
    Yes .. ask below.
    a) At what age did you first buy beer, wine, spirits or other kinds of liquor?
       Age – years
    b) How many times did you buy beer, wine, spirits or other kinds of liquor?
       1, 2-3, 4-10, 11-20, 21+
11. Before you were 18 did you ever drink alcohol in a public place; for example, a disco, pub, tavern or bistro?

   No .. go to Q 12.
   Yes" ask below.

   a) At what age did you first drink alcohol in a public place; for example, a disco, pub, tavern or bistro?

   Age – years

   b) How many times did you drink alcohol in a public place; for example, a disco, pub, tavern or bistro?

   1, 2-3, 4-10, 11-20, 21+

12. Before you were 18 did you ever go onto a bus, or into a cinema, swimming pool, disco etc., without paying the proper fee?

   No .. go to Q 13.
   Yes" ask below.

   a) At what age did you first go onto a bus, or into a swimming pool, disco etc., without paying the proper fee?

   Age – years

   b) How many times did you go onto a bus, or into a cinema, swimming pool, disco etc., without paying the proper fee?

   1, 2-3, 4-10, 11-20, 21+

13. Before you were 18 did you ever not attend classes or wag school?

   No .. go to Q 14.
   Yes .. ask below.

   a) At what age did you first fail to attend classes or wag school?

   Age – years

   b) How many times did you not attend classes or wag school?

   1, 2-3, 4-10, 11-20, 21+
14. Before you were 18 did you ever run away from home (at least overnight)?

No .. go to Q 15.
Yes .. ask below.

a) At what age did you first run away from home (at least overnight)?

Age – years

b) How many times did you run away from home (at least overnight)?

1, 2-3, 4-10, 11-20, 21+

15. Before you were 18 did you ever shoplift from supermarkets, department stores or other shops?

No .. go to Q 16.
Yes" ask below.

a) At what age did you first shoplift from supermarkets, department stores or other shops?

Age – years

b) How many times did you shoplift from supermarkets, department stores or other shops?

1, 2-3, 4-10, 11-20, 21+

16. Before you were 18 did you ever steal money of less than $10 (in one go) from shops, school locker rooms, home, people's milk money, etc.?.

No .. go to Q 17.
Yes" ask below.

a) At what age did you first steal money of less than $10 (in one go) from shops, school, locker rooms, home, people's milk money, etc.?

Age – years

b) How many times did you steal money of less than $10 (at one go) from shops, school, locker rooms, home, people's milk money, etc.?

1, 2-3, 4-10, 11-20, 21+
17. Before you were 18 did you ever steal money of $10 or more in one go?

No .. go to Q 18.
Yes" ask below.

a) At what age did you first steal money of $10 or more in one go?
   Age - years

b) How many times did you steal money of $10 or more in one go?
   1, 2-3, 4-10, 11-20, 21+

18. Before you were 18 were you ever late for school, a meeting, an appointment, etc. ?

No .. go to Q 19.
Yes .. ask below.

a) At what age were you first late for school, a meeting, an appointment etc. ?
   Age - years

b) How many times were you late for school, a meeting, an appointment, etc?
   1, 2-3, 4-10, 11-20, 21+

19. Before you were 18 did you ever break into a house or a building with the intention of
stealing something; for example, money, exam papers or other things?

No .. go to Q 20.
Yes .. ask below.

a) At what age did you first break into a house or a building with the intention of stealing
something; for example, money, exam papers, or other things?
   Age – years

b) How many times did you break into a house or a building with the intention of stealing
something; for example, money, exam papers, or other things?
   1, 2-3, 4-10, 11-20, 21+
20. Before you were 18 did you ever cheat or steal food, drinks, or other goods from dispenser machines; for example, by tilting or banging the machines, or using the "wrong" coins?

No .. go to Q 21.
Yes .. ask below.

a) At what age did you first cheat or steal food, drinks, or other goods from dispenser machines; for example, by tilting or banging the machines, or using the "wrong" coins?

Age – years

b) How many times did you cheat or steal food, drinks, or other goods from dispenser machines; for example, by tilting or banging the machines, or using the "wrong" coins?

1, 2-3, 4-10, 11-20, 21+

21. Before you were 18 did you ever obtain free games from coin operated space invaders or other games machines (not including reward of good performance by machines in the form of bonus games)?

No .. go to Q 22.
Yes" ask below.

a) At what age did you first obtain free games from coin operated space invaders or other games machines (not including reward of good performance by machines in the form of bonus games)?

Age – years

b) How many times did you obtain free games from coin operated space invaders or other games machines (not including reward of good performance by machines in the form of bonus games)?

1, 2-3, 4-10, 11-20, 21 +

22. Before you were 18 did you ever purposely mess up other people's property; for example, turning on water taps in peoples gardens, letting off firecrackers in mail boxes, burning rubbish bins, etc. ?

No .. go to Q 23.
Yes .. ask below.

a) At what age did you first purposely mess up other people's property; for example, turning on water taps in peoples gardens, letting off firecrackers in mail boxes, burning rubbish bins etc. .

Age – years
b) How many times did you purposely mess up other people's property; for example, turning on water taps in peoples gardens, letting off firecrackers in mail boxes, burning rubbish bins etc.

1, 2-3, 4-10, 11-20, 21+

23. Before you were 18 did you ever purposely damage property by starting a fire?

No .. go to Q 24.
Yes .. ask below.

a) At what age did you first purposely damage property by starting a fire?

Age – years

b) How many times did you purposely damage property by starting a fire?

1, 2-3, 4-10, 11-20, 21+

24. Before you were 18 did you ever purposely damage things in public places; for example, telephone boxes, street signs, road lamps, etc. ?

No .. go to Q 25.
Yes .. ask below.

a) At what age did you first purposely damage things in public places; for example, telephone boxes, street signs, road lamps, etc.?

Age - years

b) How many times did you purposely damage things in public places; for example, telephone boxes, street signs, road lamps, etc.?

1, 2-3, 4-10, 11-20, 21+

25. Before you were 18 did you ever purposely damage school desks, windows, or other school property; for example, kicking holes in the wall?

No .. go to Q 26.
Yes .. ask below.

a) At what age did you first purposely damage school desks, windows, or other school property; for example, kicking holes in the wall?

Age – years

b) How many times did you purposely damage school desks, windows, or other school property; for example, kicking holes in the wall?

1, 2-3, 4-10, 11-20, 21+
26. Before you were 18 did you ever put graffiti on walls, toilet doors, bus panels, or in public places?

No .. go to Q 27.
Yes" ask below.

  a) At what age did you first purposely damage school desks, windows, or other school property; for example, kicking holes in the wall?

    Age – years

  b) How many times did you purposely school desks, windows, or other school property; for example, kicking holes in the wall?

    1, 2-3, 4-10, 11-20, 21+

27. Before you were 18 did you ever do something that your parents did not want you to do?

No .. go to Q 28.
Yes .. ask below.

  a) At what age did you first do something that your parents did not want you to do?

    Age – years

  b) How many times did you do something that your parents did not want you to do?

    1, 2-3, 4-10, 11-20, 21+

28. Before you were 18 did you ever take part in a fist fight in which a group of people was against another group?

No .. go to Q 29.
Yes" ask below.

  a) At what age did you first take part in a fist fight in which a group of people was against another group?

    Age – years

  b) How many times did you do something that your parents did not want you to do?

    1, 2-3, 4-10, 11-20, 21+

29. Before you were 18 did you ever purposely hurt or beat up someone?

No .. go to Q 30.
Yes .. ask below.

  a) At what age did you first purposely hurt or beat up someone?
30. **Before you were 18 did you ever use a weapon of some sort; for example, knife, stick, chains, or bottle in a fight?**

No .. go to Q 31.
Yes .. ask below.

a) At what age did you first use a weapon of some sort; for example, knife, stick, chains, or bottle in a fight?

Age – years

b) How many times did you use a weapon of some sort; for example, knife, stick, chains, or bottle in a fight?

1, 2-3, 4-10, 11-20, 21+

31. **Before you were 18 did you ever use or threaten to use force to get money or things from another person?**

No.. go to Q 32.
Yes .. ask below.

a) At what age did you first use or threaten to use force to get money or things from another person?

Age – years

b) How many times did you use or threaten to use force to get money or things from another person?

1, 2-3, 4-10, 11-20, 21+

32. **Before you were 18 did you ever use marijuana (also called grass, dope, or hash)?**

No .. go to Q 33.
Yes .. ask below.

a) At what age did you first use marijuana (also called grass, dope, or hash)?

Age – years

b) How many times did you use marijuana (also called grass, dope, or hash)?

1, 2-3, 4-10, 11-20, 21+
33. Before you were 18 did you ever use LSD (also called acid)?

No .. go to Q 34.
Yes .. ask below.

a) At what age did you first use LSD (also called acid)?

Age – years

b) How many times did you use LSD (also called acid)?

1, 2-3, 4-10, 11-20, 21+

34. Before you were 18 did you ever abuse barbituates (also called barbs) by not properly following medical advice?

No" go to Q 35.
Yes .. ask below.

a) At what age did you first abuse barbituates (also called barbs) by not properly following medical advice?

Age – years

b) How many times did you abuse barbituates (also called barbs) by not properly following medical advice?

1, 2-3, 4-10, 11-20, 21+

35. Before you were 18 did you ever force someone to do sexual things with you when that person did not want to?

No" go to Q 36.
Yes" ask below.

a) At what age did you first force someone to do sexual things with you when that person did not want to?

Age – years

b) How many times did you force someone do sexual things with you when that person did not want to?

1, 2-3, 4-10, 11-20, 21+

36. Before you were 18 did you ever trick someone on the telephone; for example, false restaurant booking, give false reports of fire alarm, bombs, etc?

No .. go to Q 37.
Yes" ask below.
a) At what age did you first trick someone on the telephone; for example, false restaurant booking, give false reports of fire alarm, bombs, etc?

Age - years

b) How many times did you trick someone on the telephone; for example, false restaurant booking, give false reports of fire alarm, bombs, etc?

1, 2-3, 4-10, 11-20, 21+

37. Before you were 18 did you ever make abusive phone calls; for example, saying nasty or obscene things?

No .. go to Q 38.
Yes" ask below.

a) At what age did you first make abusive phone calls; for example, saying nasty or obscene things?

Age - years

b) How many times did you make abusive phone calls; for example, saying nasty or obscene things?

1, 2-3, 4-10, 11-20, 21+

38. Before you were 18 were you ever warned by the police (but without being charged) for something that you did?

No .. go to Q 39.
Yes" ask below.

a) At what age were you first warned by the police (but without being charged) for something that you did?

Age - years

b) How many times were you first warned by the police (but without being charged) for something that you did?

1, 2-3, 4-10, 11-20, 21+

39. Before you were 18 did you ever appear in the Children's Court for something that you did?

No .. finish.
Yes .. ask below.

a) At what age did you first appear in the Children's Court for something that you did?

Age - years
b) How many times did you appear in the Children's Court for something that you did?
1, 2-3, 4-10, 11-20, 21+

40. Before you were 18 did you ever tell a lie to someone?

No.....Finish.
Yes .. ask below.

a) At what age did you first tell a lie to someone?
   Age – years

b) How many times did you tell a lie to someone?
   1, 2-3, 4-10, 11-20, 21+

Finish. Thank you for your participation
Appendix 7 - Physical Abuse Questionnaire
PHYSICAL ABUSE QUESTIONNAIRE

INSTRUCTIONS FOR INTERVIEWER

The questions require responses regarding childhood experiences of physical abuse and observations of abuse. The questionnaire consists of four sections:

1. Introduction - General questions about parental punishment. If neither parent punished the respondent, or if no harm arose from the punishment, then move on to Part C. Otherwise proceed with Part A.

2. Both Part A and Part B inquire in more detail about the respondent's experience of parental physical abuse. If abused by only one parent, complete Part A only for that parent, then proceed to Part C. If abused by both parents, complete Part A first for Father and Part B for Mother before proceeding to Part C.

3. Part C requests information regarding the experience of physical abuse perpetrated by individuals other than the respondent's parents. If abused by more than one other person, ask "who hit or hurt you the most", then proceed asking questions about that individual only.

4. Part D commences with a question regarding the age of onset physical abuse. Remaining questions inquire about observations of family abuse in which the respondent was neither the instigator nor the victim. Elicit information regarding general observations of family violence for most questions except for questions 6Gb and 61 b. Ask about most serious example for the latter two questions.

Closed response questions and open-ended questions comprise the Physical Abuse in Childhood questionnaire. Closed response questions require circling the appropriate response then proceeding to the next appropriate question or section. For open-ended questions, record the participants' responses verbatim. Probe vague or ambiguous responses.

INSTRUCTIONS FOR THE RESPONDENT

I am going to ask some questions about your experiences of discipline from your parents and discipline from others, as well as who you saw being punished during childhood. Please try to answer all questions as honestly and accurately as possible. All information will be treated with the strictest of confidentiality, and stored by number, not names.
PHYSICAL ABUSE QUESTIONNAIRE

Circle appropriate response

1. Did your parents or caregivers ever punish you?
   - No .. Go to PART C.
   - Yes .. Go to Q2.

2. Which parent or caregiver did the punishing?
   - Mother
   - Father
   - Other (Please state)

3. In what ways were you punished? (Write response)
   Circle appropriate response

4. Did they ever hit you or hurt you in any way?
   - No .. Go to PART C
   - Yes .. Go to Q5.

5. Was it your Mother, Father or both who hit you?
   - Mother
   - Father
   - Other (Please state)
PART A

(If abused by more than one parent, complete PART A for Father and PART B for Mother)

Circle appropriate response

6. How often did it happen?

   Once, 2–3, 4 +

6a. What age did this punishment begin?

   ___ years-old

7. What did he/she actually do?,

Circle appropriate response

8. Did s/he throw something at you?

   No .. Go to Q9.
   Yes .. Go to Q8a.

   8a. What was thrown at you?

Circle appropriate response

9. Did s/he push or shove you?

   No .. Go to Q10
   Yes .. Go to Q9a.

   9a. What was the worst example you experienced of shoving?

Circle appropriate response

10. Did s/he hit you?

    No .. Go to Q11
    Yes .. Go to Q10a.

10a. Where on your body?
Circle appropriate response

11. Did she hit you with something?
   No .. Go to Q12
   Yes .. Go to Q11a.

11a. What with?

11b. Where on your body?

Circle appropriate response

12. Did s/he kick or punch you?
   No .. Go to Q13
   Yes .. Go to Q12a.

12a. Where on your body?

Circle appropriate response

13. Did s/he choke you?
   No .. Go to Q14
   Yes .. Go to Q13a.

13a. How?

Circle appropriate response

14. Did s/he burn you?
   No .. Go to Q15
   Yes .. Go to Q14a.

14a. Where on your body?
14b. What with?

*Circle appropriate response*

14c. Did you ever suffer multiple burns at anyone time?

No

Yes

14d. Do you have any scars as a result of this burning?

No

Yes

15. Did s/he use or threaten to use a weapon on you?

No .. Go to Q16

Yes .. Go to Q15a.

15a. What was the weapon?

*Circle appropriate response*

16. Were you ever injured in any way?

No .. Go to PART B

Yes .. Go to Q17.

17. Were you bruised?

No .. Go to Q18

Yes .. Go to Q17a.

17a. Where on your body?

*Circle appropriate response*

17b. Did you ever suffer multiple bruising at any one time?
18. Were you cut or did you bleed?
   No .. Go to Q19
   Yes .. Go to Q18a.

18a. Where on your body?

   Circle appropriate response

18b. Did you ever suffer from multiple cuts at any one time?
   Yes

18c. How often were you cut or did you bleed?
   Once, 2 – 3, 4 +

19. Did you have any broken bones?
   No .. Go to Q20
   Yes .. Go to Q19a.

19a. Which one(s)?

   Circle appropriate response

19b. How many times did you suffer broken bones?
   Once, 2 – 3, 4 +

20. Did you require medical attention?
   No .. Go to PART B
   Yes .. Go to Q20a.

20a. What happened?
Circle appropriate response

20b. Were you hospitalised?

   No .. Go to 20e
   Yes .. Go to Q20c.

20c. How often?

   Once, 2 – 3, 4 +

20d. What was the longest stay?

   1, 2-4, 5-10, 10+ Days

20e. Did you ever require medical attention and not receive it?

   No .. Go to PART B
   Yes .. Go to Q20f.

20f. What happened?
PART B

(Complete for Mother only if hit or hurt by both parents, otherwise proceed to PART C).

Circle appropriate response

21. How often did your Mother hit or hurt you?
   Once, 2 – 3, 4 +

22. What age did this punishment begin?
   ___ years-old

23. What did he/she actually do?

Circle appropriate response

24. Did s/he throw something at you?
   No .. Go to Q25.
   Yes .. Go to Q24a.

   24a. What was thrown at you?

Circle appropriate response

25. Did s/he push or shove you?
   No .. Go to Q26
   Yes .. Go to Q25a.

   25a. What was the worst example you experienced of shoving?

Circle appropriate response

26. Did s/he hit you?
   No .. Go to Q27
   Yes .. Go to Q26a.

   26a. Where on your body?
Circle appropriate response

27. Did s/he hit you with something?
   No .. Go to Q28
   Yes .. Go to Q27a.
27a. What with?
   27b. Where on your body?

Circle appropriate response

28. Did s/he kick or punch you?
   No .. Go to Q29
   Yes .. Go to Q28a.
   28a. Where on your body?

Circle appropriate response

29. Did s/he choke you?
   No .. Go to Q30
   Yes .. Go to Q29
   29a. How?

Circle appropriate response

30. Did s/he burn you?
   No .. Go to Q31
   Yes .. Go to Q30a.
   30a. Where on your body?
   30b. What with?
Circle appropriate response

30c. Did you ever suffer multiple burns at anyone time?

No

Yes

30d. Do you have any scars as a result of this burning?

No

Yes

31. Did s/he use or threaten to use a weapon on you?

No .. Go to Q32

Yes .. Go to Q31a.

31a. What was the weapon?

Circle appropriate response

32. Were you ever injured in any way?

No .. Go to PART C

Yes .. Go to Q33.

Circle appropriate response

33. Were you bruised?

No .. Go to Q34

Yes .. Go to Q33a.

33a. Where on your body?

Circle appropriate response

33b. Did you ever suffer from multiple bruising at any one time?

No

Yes
34. Were you cut or did you bleed?
   No .. Go to Q35
   Yes .. Go to Q34a.

34a. Where on your body?

Circle appropriate response

34b. Did you ever suffer from multiple cuts at anyone time?
   No
   Yes

34c. How often were you cut or did you bleed?
   Once, 2 – 3, 4 +

35. Did you have any broken bones?
   No .. Go to Q36
   Yes .. Go to Q35a.

35a. Which one(s)?

Circle appropriate response

35b. How many times did you suffer broken bones?
   Once, 2 – 3, 4 +

36. Did you require medical attention?
   No .. Go to PART C
   Yes .. Go to Q36a.

36a. What happened?
Circle appropriate response

36b. Were you hospitalised?
   No .. Go to Q37
   Yes .. Go to Q36c.

36c. How often?
   Once, 2 – 3, 4 +

36d. What was the longest stay?
   1, 2-4, 5-10, 10+ Days

37. Did you ever require medical attention and not receive it?
   No .. Go to PART C
   Yes .. Go to Q37a.

37a. What happened?
PART C (Ask all participants)

Circle appropriate response

38. Did anyone else punish you?
   No .. Go to Q56
   Yes .. Go to Q38a.

38a. Who was that?

39. In what ways did s/he punish you?

Circle appropriate response

40. Did s/he hit you or hurt you in any way?
   No .. Go to Q56
   Yes .. Go to Q40a

(If more than one other person punished the respondent, ask “who hit or hurt you the most?” then ask the following questions about that individual)

40a. What age did s/he first hit or hurt you?
   ___ years-old.

41. What did he/she actually do?

Circle appropriate response

42. Did s/he throw something at you?
   No .. Go to Q43.
   Yes .. Go to Q42a.

42a. What was thrown at you?
Circle appropriate response

43. Did s/he push or shove you?
   No .. Go to Q44
   Yes .. Go to Q43a.

43a. What was the worst example of shoving you experienced?

Circle appropriate response

44. Did s/he hit you?
   No .. Go to Q45
   Yes .. Go to Q44a.

44a. Where on your body?

Circle appropriate response

45. Did s/he hit you with something?
   No .. Go to Q46
   Yes .. Go to Q45a.

45a. What with?

45b. Where on your body?

Circle appropriate response

46. Did s/he kick or punch you?
   No .. Go to Q47
   Yes .. Go to Q46a.

46a. Where on your body?


**Circle appropriate response**

47. Did s/he choke you?
   
   No .. Go to Q48
   
   Yes .. Go to Q47a.

   47a. How?

**Circle appropriate response**

48. Did s/he burn you?
   
   No .. Go to Q49
   
   Yes .. Go to Q48a.

   48a. Where on your body?

   48b. What with?

**Circle appropriate response**

48c. Did you ever suffer multiple bums at anyone time?
   
   No

   Yes

48d. Do you have any scars from these bums?
   
   No

   Yes

49. Did s/he use or threaten to use a weapon on you?
   
   No .. Go to Q50

   Yes .. Go to Q49a.

   49a. What was the weapon?
Circle appropriate response

50. Were you ever injured in any way?
   No .. Go to Q56
   Yes .. Go to Q51.

51. Were you bruised?
   No .. Go to Q52
   Yes .. Go to Q51a.

51a. Where on your body?

Circle appropriate response

51b. Did you ever suffer from multiple bruising at any one time?
   No
   Yes

52. Were you cut or did you bleed?
   No .. Go to Q54
   Yes .. Go to Q52a.

52a. Where on your body?

Circle appropriate response

53. Did you ever suffer multiple cuts at anyone time?
   No
   Yes

53a. How often were you cut or did you bleed?
   Once, 2 – 3, 4 +
54. Did you have any broken bones?
   No .. Go to Q55
   Yes .. Go to Q54a.
54a. Which one(s)?

**Circle appropriate response**

54b. How many times did you suffer broken bones?
   Once, 2 – 3, 4 +

55. Did you require medical attention?
   No .. Go to Q56
   Yes .. Go to Q55a.
55a. What happened?

**Circle appropriate response**

55b. Were you ever hospitalised?
   No .. Go to Q55e
   Yes .. Go to Q55c.
55c. How often?
   Once, 2 – 3, 4 +
55d. What was the longest stay?
   1, 2-4, 5-10, 10+ Days
55e. Did you ever require medical attention and not receive it?
   No .. Go to Q56
   Yes .. Go to Q55f.
55f. What happened?
56. (Ask only if abused)
Having said that, what was the very first age as best you can remember, that you were physically abused? Was it (read out the following):

*Circle appropriate response*

Before school?

Yes .. (ask) Was that before the age of 1 or between 4 and 5?

During primary school?

Yes .. (ask) Was that before the age of 2 or when you were 9 or older?

During high school?

Yes

After high school?

Yes
PART D (All Respondents)

Circle appropriate response

57. Did you ever witness violence against other family members?

No .. Finish

Yes .. Go to Q57a.

57a. Who was this between?

Perpetrator(s)  Victim(s)

Circle appropriate response

57b. How often did it happen?

Once, 2 – 3, 4 +

Circle appropriate responses

58c. What did this involve? (read out):

 i. Throwing something? Yes  No
 ii. Pushing or shoving? Yes  No
 iii. Slapping? Yes  No
 iv. Hitting? Yes  No
 v. Kicking or punching? Yes  No
 vi. Burning? Yes  No
 vii. Choking? Yes  No
 viii. Use or threaten with weapon? Yes  No

Circle appropriate response

59. Was anybody injured in any way?

No .. Finish

Yes .. Go to Q60.
59a. Was anyone burnt?
   No .. Go to Q60
   Yes .. Go to Q59b.

59b. Where on the body?

59c. What with?

Circle appropriate response

59d. Did anyone ever suffer multiple burns at anyone time?
   No
   Yes

59e. Did any scars result from this burning?
   No
   Yes

60. Was anybody bruised?
   No .. Go to Q61
   Yes .. Go to Q60a.

60a. Where on their body?

Circle appropriate response

60b. Did anyone suffer multiple bruising at anyone time?
   No
   Yes

61. Was anybody cut or did anybody bleed?
   No .. Go to Q62
   Yes .. Go to Q61a.

61a. Where on their body?
Circle appropriate response

61b. How often were they cut or did they bleed?

Once, 2 – 3, 4 +

62. Did anyone have any broken bones?

No .. Go to Q63
Yes .. Go to Q62a.

62a. Which one(s)?

Circle appropriate response

62b. How many times did they suffer broken bones?

Once, 2 – 3, 4 +

63. Did anyone require medical attention?

No .. Go to Q64
Yes .. Go to Q63a.

63a. What happened?

Circle appropriate response

63b. Was anybody hospitalised?

No .. Go to Q63e
Yes .. Go to Q63c.

63c. How often?

Once, 2 – 3, 4 +

63d. What was the longest stay?

1, 2-4, 5-10, 10+ Days
63e. Did you ever require medical attention and not receive it?

No .. Finish

Yes .. Go to Q63f.

63f. What happened?

Thank you for your participation.
Appendix 8 - Violent Offences of Participants in Violent Offender Group: Index Offence Plus Offences from Record as per the Criminal Code of Western Australia
Violent Offences of Participants in Violent Offender Group: Index
Offence Plus Offences from Record as per the Criminal Code of
Western Australia

Willful Murder
Murder
Manslaughter
Robbery Whilst Armed
Robbery Whilst Armed and in Company
Assaulting a Public Officer
Unlawful Detention
Attempted Murder
Unlawful Wounding
Robbery in Company
Unlawful (Common) Assault
Unlawful Assault a Police Officer
Grievous Bodily Harm
Resisting Arrest
Going Armed in Public
Assault Occasioning Bodily Harm
Attempted Robbery Whilst Armed and in Company
Stealing With Violence
Assault Not Otherwise Specified
Unlawful Wounding
Attempted Robbery Whilst Armed
Threaten to Kill
Stealing with Violence and in Company
Robbery
Robbery Armed with Violence in Company
Carry Firearms to Cause Terror
Going Armed at Night to Commit Crime
Assault with intent to Resist Arrest
Riotous Behavior
Bodily Harm
Stealing with Violence Whilst Armed
Robbery with Violence
Deprivation of Liberty
Grievous Bodily Harm with Intent
Unlawful Killing (Motor Vehicle)
Robbery Whilst Armed with Violence
Attempted Unlawful Killing
Possess Weapon
Assault with Intent to Steal
Dangerous Driving Causing Grievous Bodily Harm
Stealing with Threats of Violence
Discharge Firearm to Cause Public Fear
Willfully Cause an Explosion
Aggravated Assault, Not Specified
Kidnapping
Threatening Violence
Going Armed so as to Cause Terror
Unlawful Wounding to Prevent Arrest
Unlawful Wounding with Intent to Cause Grievous Bodily Harm
Threatening Words
Demand Property with Threats and with Intent to Steal
Stupefy to Commit Indictable Offence
Willful Damage
Unlawful Possession of Firearm
Demand Money by Threat
Attempted Grievous Bodily Harm
Appendix 9 - Risk Assessment Scale (Ward & Dockerill, 1999)
# RISK ASSESSMENT SCALE

Please complete the treatment need assessment by rating each question in the right hand score line. See instructions overleaf.

<table>
<thead>
<tr>
<th>Question</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CURRENT VIOLENCE OFFENCE</td>
<td></td>
</tr>
<tr>
<td>Violence Without Bodily Harm</td>
<td>(Score 1)</td>
</tr>
<tr>
<td>Violence With Bodily Harm</td>
<td>(Score 2)</td>
</tr>
<tr>
<td>Injuries Life Threatening</td>
<td>(Score 3)</td>
</tr>
<tr>
<td>Injuries Causing Death</td>
<td>(Score 4)</td>
</tr>
<tr>
<td>2. MOST SERIOUS VIOLENT OFFENCE</td>
<td></td>
</tr>
<tr>
<td>Current Offence</td>
<td>(Score 1)</td>
</tr>
<tr>
<td>Violence Without Bodily Harm</td>
<td>(Score 2)</td>
</tr>
<tr>
<td>Violence With Bodily Harm</td>
<td>(Score 4)</td>
</tr>
<tr>
<td>Injuries Life Threatening</td>
<td>(Score 6)</td>
</tr>
<tr>
<td>Injuries Causing Death</td>
<td>(Score 8)</td>
</tr>
<tr>
<td>3. PREVIOUS VIOLENT OFFENCES</td>
<td></td>
</tr>
<tr>
<td>No Previous Convictions</td>
<td>(Score 3)</td>
</tr>
<tr>
<td>1 Previous Conviction</td>
<td>(Score 6)</td>
</tr>
<tr>
<td>2-3 Previous Convictions</td>
<td>(Score 9)</td>
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<tr>
<td>More than 3 Previous Convictions</td>
<td>(Score 12)</td>
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<tr>
<td>4. PREVIOUS NON VIOLENT OFFENCES</td>
<td></td>
</tr>
<tr>
<td>No Previous Convictions</td>
<td>(Score 1)</td>
</tr>
<tr>
<td>1 Previous Conviction</td>
<td>(Score 2)</td>
</tr>
<tr>
<td>2-4 Previous Convictions</td>
<td>(Score 3)</td>
</tr>
<tr>
<td>5 or More Previous Convictions</td>
<td>(Score 4)</td>
</tr>
<tr>
<td>5. AGE AT FIRST VIOLENT OFFENCE</td>
<td></td>
</tr>
<tr>
<td>Age 25 or More</td>
<td>(Score 1)</td>
</tr>
<tr>
<td>Age 21 – 24</td>
<td>(Score 2)</td>
</tr>
<tr>
<td>Age 15 – 20</td>
<td>(Score 3)</td>
</tr>
<tr>
<td>Age 14 or Below</td>
<td>(Score 4)</td>
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<tr>
<td>6. USE OF ALCOHOL</td>
<td></td>
</tr>
<tr>
<td>Non Drinker of Alcohol</td>
<td>(Score 1)</td>
</tr>
<tr>
<td>Occasional Use of Alcohol</td>
<td>(Score 2)</td>
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<tr>
<td>Moderate Regular Use of Alcohol</td>
<td>(Score 3)</td>
</tr>
<tr>
<td>Heavy Regular Use of Alcohol</td>
<td>(Score 4)</td>
</tr>
<tr>
<td>7. USE OF (ILICIT) DRUGS</td>
<td></td>
</tr>
<tr>
<td>Non User of Illicit Drugs</td>
<td>(Score 1)</td>
</tr>
<tr>
<td>Occasional User, Non-intravenous</td>
<td>(Score 2)</td>
</tr>
<tr>
<td>Moderate-Heavy User, Non-intravenous</td>
<td>(Score 3)</td>
</tr>
<tr>
<td>Intravenous Drug Use</td>
<td>(Score 4)</td>
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<tr>
<td>Poly Drug Use</td>
<td>(Score 5)</td>
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<tr>
<td>8. PSYCHIATRIC HISTORY</td>
<td></td>
</tr>
<tr>
<td>No Psychiatric History</td>
<td>(Score 1)</td>
</tr>
<tr>
<td>Previous Psychiatric Assessment</td>
<td>(Score 2)</td>
</tr>
<tr>
<td>Outpatient Treatment</td>
<td>(Score 3)</td>
</tr>
<tr>
<td>Inpatient Treatment</td>
<td>(Score 4)</td>
</tr>
</tbody>
</table>
INSTRUCTION SHEET

1. CURRENT VIOLENT OFFENCE

On the basis of the circumstances surrounding the offence determine which category the current violent offence falls into.
N.B. "Violence" means - intimidation through unlawful use of force.
E.g. Deprivation of liberty, armed robbery, sexual assault etc.

2. MOST SERIOUS VIOLENT OFFENCE

Examine the offenders’ criminal record and determine which offence was the most serious violent offence. If this is the current offence score 1 regardless of injuries/death. If a previous offence is the most serious, categorize it in the same manner as question 1.

3. PREVIOUS VIOLENT OFFENCES

Use the offenders’ criminal history to determine how many violent convictions have been recorded. DO NOT include offences committed at the same time as the current offence.

4. PREVIOUS NON VIOLENT OFFENCES

Use the offenders’ criminal history to determine how many non violent convictions have been recorded. DO NOT include offences committed at the same time as the current offence.

5. AGE AT FIRST VIOLENT OFFENCE

Use the offenders’ criminal history, social history, and Judge’s comments to determine the age of the offender when the first violent offence was committed.

6. USE OF ALCOHOL

Examine the offenders’ social history, Judge’s comments, and/or interview the offender to determine their use of alcohol. If no use is recorded or admitted then consider it non-use regardless of your personal opinion.

7. USE OF ILLICIT DRUGS

Examine the offenders’ social history, Judge’s comments, and/or interview the offender to determine their use of illicit drugs. If no use is recorded or admitted then consider it non-use regardless of your personal opinion.

8. PSYCHIATRIC HISTORY

Examine the offenders social history, Judge’s comments, contact your local SNT personnel, and/or interview the offender to determine if they have a psychiatric history. If none is recorded or admitted then classify as no psychiatric history regardless of your personal opinion.