Violent behaviour: aetiology and treatment issues

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Citation for published version (APA):

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Chapter 1
General introduction
Factors associated with violent behaviour: an integrated cognitive – behavioural approach to the aetiology and treatment of violence
Introduction

The studies reported in this thesis focus on several aspects of the relationship between environmental and psychological variables and criminal behaviour, which play an important role in the assessment and treatment of violent offenders. The relationship between environmental variables (traumatic experiences, parental rearing) and the development of deviant behaviour (criminal behaviour, insecure attachment and personality disorder pathology) will be examined. Furthermore, the focus will be on the treatment of violent offenders who are, on the basis of judicial grounds, referred to a forensic psychiatric clinic for treatment in order to reduce the risk of re-offending in the future. In this respect attention will be directed toward the assessment of psychiatric and personality pathology and to the measurement of treatment outcome.

In this general introduction a brief review of the literature on these topics is outlined. In the first paragraph of this introductory chapter theories on the development and continuation of deviant and criminal behaviour are presented. The second paragraph deals more specifically with the role of two environmental variables on the development of deviant behaviour, namely parental rearing styles and traumatic experiences. In the third paragraph empirical findings with respect to the relationship between mental disorders and personality disorders on the one hand and deviant (criminal) behaviour on the other hand are addressed. In the fourth paragraph an integrated model of the development of criminal behaviour is presented. The fifth paragraph addresses the measurement of the effects of treatment of violent behaviour and the difficulties that are encountered in this area. And in the sixth paragraph the effects of treatment of violent offenders are discussed. Finally, in the seventh paragraph the research questions of the present thesis are discussed, followed by a summary of the chapters of this thesis in paragraph eight.

1.1 Integrated theories on the aetiology of deviant and criminal behaviour

When examining the literature on aggression, violence and criminal behaviour, it appears that several definitions exist of these concepts. With respect to aggression there appears to be no single, universal definition. The causes for this diversity are related to differences in semantics and aetiological theories of aggression. Aggression refers to several behavioural systems with different causes, functions and (neuro)physiological features. Definitions of aggression refer to openly violent behaviour, threats of violence but also to behaviour that is not harmful to others.

Several classifications of aggression exist. Ramirez (1985) for example proposes the following classification based on animal studies: (1) aggression between species, or predatory violence (e.g. animals catching a prey), (2) aggression within species, which refers to all kinds of aggression that is related to social interactions (intermale aggression, territorial aggression, maternal
aggression, and (3) indiscriminating or reactive aggression, which is primarily defensive (fear induced aggression). In order to judge and treat, in other words, to evaluate the nature of aggressive or violent behaviour and label it as a crime or not, it is necessary to have insight into the motives of the violent behaviour. In case of defensive aggression, a conviction is less likely. However, the intention to hurt someone that is not defensive in nature, is more complicated. Revenge, hate, jealousy, greed, power, status, admiration, lack of moral judgment, psychiatric disorder, famine, poverty and addiction are all variables that can motivate violent and aggressive behaviour that occurs in social situations.

A general definition of crime is ‘violation of the rules that are set by the state, persons, groups or organizations’. Standards and values have their influence on the definition of crime. For example, in some cultures the murder of an adulterous wife by her husband is not considered a crime, but justified. In other cultures however this deed is considered a crime, and sentencing the offender to death is justified. Judicial differences and adaptations or changes of standards and rules make the concept of crime a dynamic concept. Homosexuality for example was once considered a crime in Western countries. An illustrative example from The Netherlands is that ‘soft’ paedophilia did not lead to a so-called ‘Ter Beschikking Stelling van de Staat’ (TBS) order (by court enforced admission into a forensic psychiatric hospital) in the seventies, whereas nowadays this type of behaviour is no longer excluded from a TBS order (van Emmerik, 1993).

Several classifications of criminal behaviour exist (e.g. Lewis, 1990). The following classification is generally applied within the Dutch TBS system (van Emmerik, 1993):

1. Sexual component
   a. Victim younger than 16 years
   b. Victim older than 16 years
   c. none

2. Aggressive component
   a. Material damage only
   b. during the crime, the victim was unconscious, powerless, in a dependent position or seduced
   c. threat of violence
   d. physical injury
   e. arson, life-threatening
   f. death
   g. none

3. Property component
   a. yes
   b. no
In the present thesis no intention is made to disentangle the concepts of aggression, violence and crime and to come to general definitions, nor to be exhaustive on the classifications with respect to these concepts. The previous short introduction was merely intended to direct attention toward the complexity of defining the behaviour that is the subject of the present thesis. In general the violence and crime that is referred to concerns interpersonal violence that is considered criminal by the courts of most Western and non-Western countries. The violent behaviour can be observed by others. The victims feel either mentally, emotionally or physically threatened by the offender. The behaviour trespasses the general standard of legitimate behaviour and is not defensive in nature. As a consequence of indistinct definitions, the concepts violent, criminal, delinquent, antisocial, deviant and aggressive are all referred to when reviewing the literature.

In the literature, several theories from different theoretical backgrounds are found on the aetiology of deviant criminal behaviour. There appears to be no single theory that can fully explain this developmental process. The process seems to be multi-faceted with different factors and interaction of factors being of influence at different stages of this process.

In this paragraph sociologically and behaviourally oriented integrated theories are presented in which important aspects with respect to the developmental process of deviant behaviour will be addressed. From these theories some directions with respect to the treatment of criminal behaving individuals can be obtained, as will be discussed.

Nietzel and Susman (1987) summarize three global theories that explain the development of criminal behaviour. The first one stems from the environmentalists who ascribe criminal behaviour to the role of environmental influences. The second one concerns the individualistic oriented theories, biological as well as psychological. The third one consists of the sociological/psychological theories which can be regarded as a synthesis of the first two. This third global theory can be divided in two, namely the control theories and the direct-learning theories. The control theories assume that people will show antisocial behaviour unless they are taught not to do so (e.g. Gottfredson and Hirschi, 1990). According to this theory, moral development fails to control antisocial behaviour to which the individual is tempted. The direct-learning theory assumes that violent behaviour is directly learned. Traditional operant conditioning theories, social learning theory and social labelling theory are examples of direct learning theories, in which different learning mechanisms are described.

More integrated behaviourally formulated theories are those of Feldmann (1977) and Wilson and Herrnstein (1985). Feldmann distinguishes several variables in his integrated learning theory that lead to deviant behaviour. These variables are individual differences in conditionability, problematic learning histories as a consequence of operant and respondent processes and social
labelling. In the theory of Wilson and Herrnstein (1985) the main principle is that behaviour is determined by its consequences. Non-criminal as well as criminal behaviour have positive consequences. The ratio of gain and loss will determine whether or not the behaviour will be displayed. Individual differences influence operant and respondent learning processes, as well as the perception of these ratios. Individual differences are consciousness, impulsivity and perception with respect to relationships. Constitutional factors have their influence on intelligence, arousal and impulsivity, which in turn contribute to criminal behaviour. Further, it is assumed that social factors like inadequate parental rearing, enhance criminal behaviour.

Marshall and Barbaree (1990) present an integrated learning theory on the aetiology of sexual crimes committed by men, which seems also applicable to other kinds of offences.

"Biological inheritance confers upon males a ready capacity to sexually aggress which must be overcome by appropriate training to instill social inhibitions toward such behaviour. Variations in hormonal functioning may make this task more or less difficult. Poor parenting, particularly the use of inconsistent and harsh discipline in the absence of love, typically fails to instill these constraints and may even serve to facilitate the fusion of sex and aggression rather than separate these two tendencies. Sociocultural attitudes may negatively interact with poor parenting to enhance the likelihood of sexual offending, if these cultural beliefs express traditional patriarchal views. The young male whose childhood experiences have ill-prepared him for a prosocial life may readily accept these views to bolster his sense of masculinity. If such a male gets intoxicated or angry or feels stressed, and he finds himself in circumstances where he is not known or thinks he can get away with offending, than such a male is likely to sexually offend depending upon whether he is aroused at the time or not. All of these factors must be taken into account when planning treatment of these men." (Marshall and Barbaree, 1990, page 270).

Nietzel and Susman (1995) derive several principles from the theories that provide a behavioural conceptualisation of criminality. The authors do not suggest that a single criminogenic influence exists, but .. ‘that there are several causal paths a person may travel to behaving criminally.’ (page 524). Four behaviourally based aetiological principles are distinguished that have important implications concerning optimal intervening into problems of crime and delinquency. Firstly, much crime is the result of interactions between situations that are tempting to behave criminal and individuals with poor prosocial skills and/or attitudes, cognitions, and motivations for antisocial behaviour. Secondly, criminal behaviour is often valued as rewarding by the perpetrator, because
short-term positive reinforcement for crime is more probable than long-term punishment. Thirdly, early environmental influences enhance criminal behavior later on in life, namely (1) violence and physical abuse within the family directed either toward a child or spouse, and (2) the failure of parents to control initial impulsive and acting-out behaviour of their child. Fourthly, modelling with peer pressure may influence and increase delinquency and criminal behaviour. Also, the criminal justice system itself, by processing and labelling of offenders, increases the association of ‘beginning’ criminals with serious offenders.

Kaplan (1995) summarizes the literature on the aetiology of deviance from an integrated sociological and behavioural perspective, which addresses three main questions in this respect, namely what factors are important in the (1) predisposition, (2) acting out and (3) continuation of deviant behaviour?

Deviant behaviour can be either motivated or unmotivated. In case of motivated deviant behaviour the individual can either be motivated to deviate from normative behaviour or he may be unaware or considers it irrelevant that another group judges the behaviour to be deviant. In case of unmotivated deviant behaviour, the individual would behave in harmony with prevailing standards if he was able to do so.

The motivated deviant behaviour depends on dispositions that in their turn are determined by the individual’s prior commitment to the normative system that disapproves of such behaviour and by the failure to achieve what was expected of the individual according to conventional standards. The psychological distress as a result of failures to achieve for example parental acceptance or occupational success leads to deviant behavioural reactions. When the individual distances himself from the conventional values, his self-worth and self-attitudes may be enhanced by avoiding future failure and avoiding recognition of such failure. In case of unmotivated deviance, the individual lacks consensually valued traits or is unable to behave according to consensual standards. Examples are lack of social skills and coping as the result of inadequate socialization experiences, the occurrence of life events, and inadequate social support systems.

Whether or not the deviant behaviour is displayed depends on the strength of the motives to commit the act and of those not to commit the act and on the situational context and opportunities to perform the act. Whether or not the deviant behaviour is continued or displayed again, depends on the positive reinforcement of the deviant behaviour, the strength of social controls and opportunities for deviance. The discontinuation of the deviant behaviour is determined by the absence of positive reinforcement, adverse consequences and changes in needs and opportunities.

This summation of aetiological theories on deviant and violent behaviour is far from exhaustive and was not meant to be so. The intention was to present some common integrated models for the development and continuation of deviant
behaviour. The models clearly show that not one single theory exists that is able to explain the development and continuation of violent and deviant behaviour. This also implies that, when treating violent offenders, developmental, antecedents and consequences of the violent behaviour that are specific for the individual offender, need to be taken into account. These factors not only refer to the state of mind (psychopathology) of the offender but also to biological, environmental and circumstantial or situational factors.

Two of these early life experiences, both environmental in nature, that are considered important in the treatment of violent offenders, are discussed in more detail in the next paragraph, namely parental rearing styles and traumatic experiences. Parental abuse and traumatic experiences are often subject in the treatment of violent offenders and may complicate treatment of violent behaviour when the influences of traumatic childhood experiences on the offenders psychological and social functioning are not recognized.

1.2 Early environmental variables associated with criminal behaviour and personality pathology

Inadequate parental rearing styles as well as early traumatic experiences both have been found important contributors to later deviant, pathological behaviour (Luntz and Spatz Widom, 1994). The role of parental rearing styles has been examined in relation to various kinds of disorders (e.g. Parker, 1983). Even when genetic variables are accounted for, a considerable proportion of variance in adolescent and adult psychiatric symptomatology is accounted for by problematic parental behaviour (Mulder, Joyce and Cloninger; 1994). The same is found with respect to delinquency (Loeber and Stouthamer-Loeber, 1986) and adult antisocial behaviour (Cadoret, Yates, Troughton, Woodworth and Stewart, 1995). The influence of genetics on delinquency is found to be greater among early-onset delinquency than among late-onset delinquency (e.g. Taylor, Iacono and McCue, 2000). For late-starters, environmental influences (antisocial behaviour of the peer group) are found to be more important.

The functional aspects of child rearing, referring to the way a child is treated by its parents, rather than the structural aspect of child rearing, like absence of a parent, or family size and composition, have been found significantly related to problems of the child later on in life (e.g. McCord, 1979; Goetting, 1994). With respect to these functional aspects, two dimensions are found to be important, namely care and protection (Parker, Tupling and Brown, 1979). A combination of these two dimensions results in a four-way typology of parental rearing styles, which is presented in figure 1.1.

Empirical studies showed that a combination of low care and high protection is associated with various mental disorders later on in life (e.g. Zweig-Frank and Paris, 1991; Parker 1983).
Several mechanisms may explain the relationship between childhood abuse and parental rearing styles on the one hand and criminal behaviour on the other hand. A mechanism by which the abuse-crime relationship is explained stems from the attachment theory (Ainsworth, Blehar, Waters and Wall, 1978; Bowlby, 1984). This theory states that parents or primary caregivers who are not consistently sensitive or responsive towards the child’s signals of anxiety, enhance the development of an insecure mental representation of attachment. In general, attachment representations enable children to anticipate their caregivers’ behaviour, to interpret it and to adapt their own behaviour to that of their caregivers. In this way a basis for internal working models for attachment later on in life is formed. These internal working models of attachment, which are conceptually similar to cognitive schemata from a cognitive theoretical point of view (Beck, 1976; Perris, 1988), are a blueprint for how to value and react to others later on in life. Empirical studies showed that adults with psychopathological disorders and other forms of deviant behaviour are often characterized by an insecure attachment style (e.g. Rosenstein and Horowitz, 1996) or an attachment style that is not clearly developed or resolved due to traumatic experiences (Allen, Hauser and Borman-Spurrell, 1996).

From a theoretical point of view individuals who show delinquent or antisocial behaviour are assumed to have a dismissing attachment style, which is characterized by downplaying the importance of close relationships, restricted emotionality, an emphasis on self-reliance, and a lack of clarity or credibility in discussing relationships (Bowlby, 1977; Wright and Cameron, 1997). Empirical studies have found that individuals with antisocial and criminal behaviour are
insecurely attached (IJzendoorn, van Feldbrugge, Derks, de Ruiter, Verhagen, Philipse, van der Staak, Riksen-Walraven, 1997), though findings concerning the relationship between specific types of insecure attachment and violent behaviour are conflicting. In the study of Allen et al (1996) some evidence was found that antisocial adults are characterized by a dismissing attachment style, whereas in the study of IJzendoorn et al (1997) the dismissing attachment style was not more prevalent in a group of hospitalized offenders than other insecure attachment styles.

As attachment is believed to be a mediator in the relationship between inadequate parental rearing and violent behaviour, Luntz-Weiler and Spatz-Widom (1996) suggest that the relationship between childhood victimization and violence in some individuals may be mediated through psychopathy. As a reaction to the findings of their prospective study that childhood abuse and/or neglect was related to psychopathy and that psychopathy was predictive for later violence, the authors propose five mechanisms that may explain the relationship between childhood abuse and future violent behaviour. The first mechanism that explains this relationship is that abuse leads to the development of coping styles that might be adequate for coping with the abuse, but are inadequate for well functioning later on in life. Secondly, abuse leads to bodily changes, which in turn lead to psychopathy. Bodily changes that are involved are desensitisation to painful or anxiety provoking experiences and a decrease of emotional and physiological responsiveness to the needs of others. Thirdly, the child has a biological disposition to seek external stimulations and sensations to which the parents react inadequately or abusive. In turn, the child reacts with antisocial behaviour to the behaviour of the parents. Fourthly, problem behaviours are the by-product of child abuse or neglect. Abuse and neglect may lead to changed environments or family conditions, which in turn predispose to psychopathy. Fifthly, childhood victimization, psychopathy and violence are the result of some other (biological or genetic) factor.

Another frequently found association is that between traumatic childhood experiences and parental neglect on the one hand and the development of borderline personality disorder pathology on the other hand (Silk, Lee, Hill and Lohr, 1995; Zweig - Frank and Paris, 1991). Borderline personality disorder in turn is found to be related to criminal behaviour (e.g. Ohayon, 1995; Teplin, Abram and McClelland, 1996; Shaw, Applegate and Rothe, 1996). Possibly, borderline personality disorder symptomatology is another variable that mediates the relationship between childhood abuse or neglect and criminal or deviant behaviour, as is psychopathy. This may be caused by the overlapping symptomatology of psychopathy and borderline personality disorder, like impulsivity and poor behavioural controls. In the next paragraph the relationships between mental disorders, personality disorders and criminal behaviour will be addressed in more detail.
1.3 Psychopathology and violent behaviour
Numerous studies have been conducted on the relationship between mental disorders and violent behaviour. Knowledge about these relationships may enhance the prevention of future violence, not only in subjects who have already committed violent acts, but also in individuals who are at risk of becoming a first offender.

Dietz (1992) distinguishes five general patterns of relationships between psychiatric disorders and crime: (1) crime as a reaction to psychotic symptoms, (2) crime to satisfy compulsive urges (paraphilia), (3) crime that reflects a personality disorder, (4) coincidence of crime and mental disorder, (5) real or simulated psychiatric disorder as a reaction to crime. Whether or not the relationship between psychiatric disorder and crime are reason to plead for insanity defence or diminished responsibility, depends on the criminal justice system. In general, category four and five are no reason to doubt responsibility, whereas category one is. Category two and three give reason to debate whether or not diminished responsibility for criminal acts is at stake. Dietz (1992) states that paraphilias motivate a crime, but do not cause a crime. Similar motives as compulsion are greed and jealousy. The paraphilia provides a motive for the crime, but does not affect the moral judgment of what is right or wrong. The same arguments apply to personality disorders. In the Netherlands, however, personality disorders can be a reason to classify someone as diminished responsible, but not as totally irresponsible for his offences.

When examining the diagnostic criteria of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; APA, 1994) it is not surprising that violence and some mental disorders are related, since violent behaviour is a diagnostic criterion of these disorders as seen in antisocial personality disorder, personality change due to a general medical condition (aggressive type), intermittent explosive disorder, conduct disorder and sexual sadism (Ohayon, 1995). Further, according to DSM-IV, violent behaviour may be observed as an associate feature in substance-related disorders, substance-induced psychotic disorder, delirium, dementia, bipolar disorders, delusional disorder, schizoaffective disorder, schizophrenia, schizophreniform disorder and borderline personality disorder (Ohayon, 1995).

Some studies in the past showed no (Teplin, Abram and McClelland, 1996) or only small (Wallace, Mullen, Burgess, Palmer, Ruschena and Browne, 1998) associations between violence and mental disorders. However, evidence has been growing that individuals with certain kinds of mental disorders have an elevated risk of becoming violent. For example, patients with a diagnosis of schizophrenia were found to have an increased rate of offending (Wessely, 1998) and violence was found to be more common among inpatients with psychotic disorders with delusional features than among patients with other mental disorders (Taylor, Leese, Williams, Butwell, Daly and Larkin, 1998). Furthermore, also the results of an epidemiological study showed that specific
psychotic symptoms referred to as threat/control override symptoms were significantly associated with violent behaviour (Link, Stueve and Phelan, 1998).

The findings with respect to delusions and violence though are still conflicting: in a recent study delusions were not found to increase the overall risk of violence a year after discharge from hospitalisation among individuals with a mental illness (Appelbaum, Clark Robbins, Monahan, 2000).

In general there is a tendency to be very careful with respect to drawing firm conclusions from studies on the relationship between violent behaviour and mental disorders based on selected samples for fear of enhancing the stigmatisation of the mentally disordered as being dangerous and violent (Arboleda-Florez, Holley and Crisanti, 1998). However, epidemiological studies also confirm the relationship between certain kinds of mental disorders and violence. In a review of five epidemiological birth cohort studies it is concluded that individuals who develop a major mental disorder are at increased risk of committing both violent and non-violent crimes (Hodgins, 1998).

A co-morbid substance abuse disorder increases the risk of offending among mentally ill (Modestin and Amman, 1995; Wallace et al, 1995). In an American study it was found that patients discharged from acute psychiatric inpatient facilities did report significantly more criminal offences than a matched non-patient control group. These differences, however, could fully be ascribed to a co-occurring substance abuse disorder and not to other disorders (Steadman, Mulvey, Monahan, Clark, Robbins, Appelbaum, Grisso, Roth and Silver, 1998). Swartz, Swanson, Hiday, Borum, Wagner and Burns (1998) found that the combination of medication non-compliance and substance abuse was a significant predictor of serious violent acts in the community among severely mentally ill individuals. Individuals with both alcohol and illicit drug abuse appeared to be at greatest risk of violence. In a review article Friedman (1998) concluded that psychopathology and mental health problems are less likely to predict the occurrence of either violent or criminal behaviour in the future than are either alcohol or drug abuse. A study among patients with psychotic disorders showed that patients with an additional diagnosis for substance abuse were significantly more likely to report any history of offence and recent hostile behaviour than patients without this additional diagnosis (Scott, Johnson, Menezes, Thornicroft, Marshall, Bindman, Bebbington and Kuipers, 1998).

Substance abuse disorders are often found (60%) among patients who are referred for treatment of personality disorders: especially among borderline and antisocial personality disorder (Skodol, Oldham and Callaher, 1999). Vice versa antisocial personality disorder is relatively often found (39%) among substance-dependent treatment patients (Flynn, Craddock, Luckey, Hubbard and Dunteman, 1996).

With respect to the relationship between personality pathology and violence, a legal classification of psychopathic disorder was found to be
associated with conviction after discharge from a special high security hospital in England (Buchanan, 1998).

In the DSM classification, the psychopathic disorder is not defined as a distinct personality disorder. The DSM-IV (APA, 1994) classification distinguishes ten formal personality disorders that are, based on global similarities, divided into three clusters. Cluster A, the eccentric cluster, comprises the paranoid, schizoid and schizotypal personality disorders. Cluster B, the dramatic cluster, consists of the antisocial, borderline, narcissistic and histrionic personality disorders. And cluster C, the fearful cluster, consists of the avoidant, dependent and obsessive-compulsive personality disorders. The depressive and passive-aggressive personality disorder are not formal but suggested categories, and are as a consequence not assigned to one of the three clusters. In the DSM-III-R (APA, 1987) classification the three clusters consist of the same personality disorders as in the DSM-IV classification, except for cluster C to which in the DSM-III-R classification also the passive-aggressive personality disorder was assigned. The sadistic and self-defeating personality disorders were suggested categories in DSM-III-R. As aforementioned the psychopathic disorder is not distinguished in the DSM classification. However, it comprises several features of all cluster B disorders in the DSM classification.

In a longitudinal study it was found that cluster A and cluster B personality disorders and paranoid, narcissistic and passive aggressive personality disorder symptoms during adolescence may increase risk of violent behaviour that persists in early adulthood (Johnson, Cohen, Smailes, Kasen, Oldham, Skodol and Brook, 2000).

The studies above all focus on specific psychopathological disorders and criminal behaviour that may increase the risk of criminal behaviour. Though certain patient populations seem to be at risk of behaving violently, in a large US study it was found that prisoners either with or without prior mental hospitalisation were at higher risk of committing a violent act in the future than psychiatric patients either with or without a history of prior arrests (Cirincione, Steadman, Robbins and Monahan, 1994). These results imply that prior criminal behaviour is more predictive for future violent behaviour than psychiatric disorders are.

There are some indications that disorders during childhood are associated with deviant and criminal behaviour later on in life. Vitelli (1996) found that 41% of a sample of adult inmates was either treated or assessed for attention-deficit hyperactivity disorder (ADHD) during childhood and that 63% met the criteria for childhood conduct disorder. A significant comorbidity was found between conduct disorder and ADHD, but only conduct disorder was predictive for adult criminality. A study among substance abusing boys with behavioural problems who were admitted to a residential program, showed that subjects with ADHD had more conduct disorder symptoms, earlier onset of conduct disorder, more substance dependence diagnoses and more comorbid depression and
anxiety (Thompson, Riggs, Mikulich and Crowley, 1996). In a clinical population of substance abusers it was found that polysubstance abusers reported increased hyperactivity, impulsivity, distractibility and aggressive conduct in childhood, increased attentional problems, a higher rate of antisocial personality disorder and a greater number of current and lifetime antisocial personality disorder symptoms when compared to alcoholics without polysubstance abuse (Brown and Nixon, 1997). In a retrospective Canadian study it was found that compared to a wide range of life experiences, drug use during adulthood was the best predictor of a continuing adult criminal career among male delinquents (Ouimet and Le Blanc, 1996).

Rutter (1984) reports that adult antisocial personality disorder is often preceded in childhood by conduct disorder, but that only a minority of individuals with conduct disorder develop anti-social personality disorder as an adult. Sandberg (1996) concludes on the basis of a review article on ADHD that the overlap with conduct disorder is high. Further, ADHD is the result of the interaction between biologically, often genetically vulnerabilities, and environmental influences like strained interactions with care-givers and disrupted primary attachments.

More knowledge about the associations between mental disorders and deviant criminal behaviour indirectly contributes to the knowledge about the mechanisms that are involved in this process. With respect to the aetiology of personality disorders, Coid (1999) found four patterns of association among male and female subjects in maximum security hospitals and prisons. The first group is labelled disorders of character development, secondary to an adverse early environment: antisocial, self-defeating and paranoid. The second group is labelled disorders of temperament, secondary to constitutional aetiology: avoidant, dependent, schizoid and schizotypal personality disorder. The third one comprises a mixed disorder of constitutional and environmental aetiology, namely the borderline personality disorder. For the narcissistic, histrionic, compulsive and passive-aggressive personality disorder no aetiological associations were established. Research in this area is relatively new, but considered important, since it may contribute to the treatment of violently behaving individuals.

1.4 Model for the development of violent behaviour
The topics that were discussed in the former three paragraphs are integrated in the model that is shown in figure 1.2. The model represents a developmental process of violent behaviour and is to be read from left to right. In the upper row of blocks that are connected by arrows, the developmental process is summarized. Beneath this row, the process is described in more detail. It starts with biological and genetic predispositions (Cloninger, 1987) and early (traumatic) childhood experiences (social and behavioural learning theories), that are believed to interact with each other. For example, biological or genetic
influences may predispose the child to ADHD or mental retardation, which are referred to in the model as early childhood problems (e.g. problems that are present at birth or at a young age). Parents who are not responsive to a child’s needs or who are emotionally and/or physically abusing the child, will enhance the problems the child already experiences. As a consequence of inadequate parenting (either or not in combination with other traumatic experiences) the child will not develop a secure attachment style (Ainsworth et al, 1978; Bowlby, 1984) or will develop inadequate cognitive schemata (Perris, 1988; Beck and Freeman, 1990) which in turn will lead to the development of personality pathology and other forms of mental problems. The model also shows that the problems early on in life do not necessarily lead to an insecure attachment style: not all criminal behaving individuals are insecurely attached or were ‘inadequately’ raised by their parents. Early childhood problems, biological predispositions or temperamental factors may also lead directly to the problems later on in life.

The personality pathology features that are described in the model refer primarily to cluster B personality disorder and psychopathic features. The features are divided in three parts: (1) directed towards self, (2) directed towards others and (3) behavioural. This distinction is not exclusive, but it may be useful in localizing the areas the personality problems occur in, also for treatment purposes. The distinction also reflects the distinction between ‘concept of self’ and ‘concept of others’ that is made with respect to attachment representations. And it also roughly corresponds with the factors that are distinguished in psychopathy: (1) affective – interpersonal and (2) social deviant behaviour. The affective component of the first factor of psychopathy then refers to ‘directed toward self’ and the interpersonal component to ‘directed toward others’.

The coping and lack of social skills that are characteristic of these personality types are likely to enhance mental, interactional, relational, occupational or financial problems, which may result in chronic stressful living conditions, like conflicting relationships or social isolation (diathesis-stress model). The coping and social skills are mentioned separately in the model since cognitive-behavioural treatment of violent offenders focuses most often on these aspects of functioning, as will be discussed in more detail in paragraph 1.6.

Personality pathology, certain mental disorders and substance abuse disorders alone or in interaction with each other were found to be related to violent behaviour. Chronic stressful circumstances and stressful life events, which may have been caused by the offender himself as a consequence of his pathology, as well as intoxication and the availability of a potential victim may facilitate or trigger violent behaviour. Whether or not a person ‘decides’ to act violently also depends on the gains and losses of acting violently. For example, individuals with certain cluster B features or psychopathic traits are in general not inhibited to act violently by empathy for potential victims. Self-centeredness most often prevails. And individuals with threat/override control symptoms are
incapable of judging the situation correctly, which may provide them a motive to behave violently, since they feel threatened. And impulsive individuals are likely to act without thinking over the consequences of their behaviour beforehand.

The model is not meant to be exhaustive, nor does it imply that all variables/blocks are present in every violently behaving individual. The holistic model, however, can be useful in the assessment and treatment of individual offenders, since it shows the areas in which the person experiences or has experienced problems and it also offers theory based explanations for the development of violent behaviour. The model is dynamic, which means that the way in which the problems are grouped vary across individuals. The arrows that are drawn in the model are arbitrary and vary across individuals. Arrows may be bi-directional, indicating that the influence between problem-areas is reciprocal. The relationships between the several areas of functioning, are specific for the individual and are not only helpful in deciding what problems need to be treated, but also in which order this should be done.

It may be necessary for offenders who have committed several kinds of (violent) crimes, to distinguish between these crimes in the model, since the routes to these different kinds of offences may follow different paths. For example, an offender who has committed several armed robberies, may be motivated to do so because he has to obtain money to pay for his addiction and is not inhibited by moral objections or empathic considerations to do so. The drug addiction is assumed to be an exponent of his personality pathology (borderline and antisocial features). And the personality pathology is assumed to be the result of conduct disorder in interaction with inadequate parental rearing. The same offender has also raped two women, both times after he had major arguments with his latest girlfriend. The offender himself was sexually abused by some older boys when he was eleven. He never talked about it and alcohol and drug abuse tempered his feelings about it. Whenever after a fight his girlfriend threatened to leave him, he was confronted with emotional states that reminded him of his sexual abuse. He consumes lots of alcohol to feel better, wanders around town, and rapes a passing woman in an alley. It is clear that the sexual offences and the non-sexual violent offences are the result of different developmental processes and therefore should be approached as two different problem areas. Nevertheless, both types of offences may share some factors in their developmental process, for example, certain personality traits like lack of remorse or empathy, which may facilitate the final ‘decision’ to act violently.

In the present thesis some areas in the model and their relationship with violent and deviant behaviour are examined in more detail. These areas are greyed in the model.
Figure 1.2 holistic developmental model of violent behaviour
1.5 The measurement of the effects of treatment of criminal behaviour

In the studies on the effects of treatment of violent or criminal behaviour, a distinction must be made with respect to clinical and criminogenic outcome variables (Hollin, 1998). Clinical variables refer to personal factors like social and coping skills, anger disposition and personality pathology, whereas criminogenic variables are related to crime, like recidivism, nature and number of offences.

Studies on the effects of treatment of violent, criminal behaviour most often report on re-offending as the only outcome measure. Recidivism can be measured using several sources: self-report, informant report, arrest or conviction. All measures have some sort of shortcoming. Self-report may lead to an underestimation of the true recidivism rate, because subjects do not report truthfully on this delicate matter voluntarily. Informant report on the other hand may lead to an underestimation since not all crimes may be known to the informant. Arrest rate may give an overestimation of the true crime rate, since some offences may not have been committed. These false positives are also referred to as type I error (Repucci and Clingempe1, 1978). Conviction on the other hand is likely to result in an underestimation of the true crime rate (false negatives or type II error). Because of the disadvantages of choosing only one measure of recidivism, it is argued to use several sources and measures (Furby, Weinrott and Blackshaw, 1987).

Another concern is the type of offence that is reported on. Some studies report only on major offences (interpersonal violence), whereas others also include minor offences (traffic violations). Some studies showed that the type of offence is related to gender (Hiday, Swartz, Swanson, Borum and Wagner, 1998), type of mental disorder (DeJong, Virkunnen and Linnoila, 1992), the interaction of gender and mental disorder (Stueve and Link, 1998), and type of antecedents of offences (Howell, Reddon and Enns, 1997). This means that when interpreting the outcome of studies, it is important to know what kind of offences is reported on.

It is argued that recidivism is best assessed three to five years after treatment has ended, since most offences do not take place shortly after treatment has ended (Repucci et al, 1978). However, recidivism rates with a relatively long follow-up period may obscure the processes that have taken place meanwhile. Perhaps certain behaviours or skills have changed positively after treatment, but have not sustained over a longer period of time. Information on behaviours that are likely to change over shorter periods of time after treatment has ended, will contribute to the knowledge of how to address these problems in the future: perhaps post-release booster therapy sessions are sufficient to ‘revive’ certain behaviours or skills. Dropping certain kinds of therapies because of the premature conclusion that therapy does not have the desired effects in the long run, may be prevented this way.
When using recidivism as the only treatment outcome measure, the dynamics and processes that lead to a diminishing of recidivism rates remain unravelled. Studies examining the behavioural changes during and after treatment are rare, but very much wanted.

In the Netherlands, most assessment measures, either interviews, self-report questionnaires or observation scales, which are used within forensic psychiatric hospitals were designed for or developed in non-forensic and non-inpatients groups. Information about the reliability and validity of these measures among forensic groups are most often absent as are norms for forensic groups. Another problem is that most measures contain questions that can not be answered by individuals who are institutionalised or detained. This is considered a major problem and studies that are directed toward the development of reliable and valid measures for forensic patients and offenders are therefore very much needed.

1.6 Treatment of violent offenders
Most studies on the effectiveness of treatment of violent offenders has taken place in North America. In the US and Canadian treatment studies the focus has been primarily on the treatment of Axis I problems, whereas in The Netherlands, treatment of TBS patients has most often focused on personality disorders or Axis II disorders according to the DSM classification system (APA, 1994). However, psychiatric disorders or Axis I disorders, especially psychotic disorders are becoming more frequently diagnosed among TBS patients in the Netherlands (3% in 1978 and 27% in 1990) (van Emmerik, 1993; Panhuis, 1997).

An explanation for differences between the Dutch and US and Canadian situation is found in that in the US and Canada offenders with personality pathology are not qualified for treatment or an insanity plea (Dietz, 1992), whereas in The Netherlands they may be. Another explanation is found in differences in theories with respect to treating violent offenders, which implies that the populations in fact may not differ that much, but are described and approached differently. The fact that Axis I and Axis II disorders frequently co-occur as was discussed in paragraph 1.3 further supports the hypothesis that the violent offender in the Netherlands and the US are more alike than might be expected on the basis of the manner in which they are diagnostically assessed.

Van Beek and Mulder (1994) remark in this respect that the emphasis of intramural treatment of sexual aggressive offenders used to be on the personality disorder pathology (the violent offensive behaviour disappears when the disorder disappears). With the introduction of cognitive behavioural treatment, the goals of treatment became more focused on violent behaviour itself. The variables that trigger and control violent behaviour are emphasized. The goal of treatment is not to cure but to control the risk of reoffending. This trend also applies to other kinds of violent behaviour.
Recently there has been a new tendency to evaluate the treatment of patients with personality disorders (Shea, Pilkonis, Beckham, Collins, Elkin, Sotsky and Docherty, 1990; Greeven, 1997). The aim of the treatment is not to alter or cure the personality pathology, but rather to ‘direct these personality features in a more constructive way’ (Greeven, 1997). That personality pathology is important in the treatment of violent offenders is very much shown in many studies that found an elevated risk of reoffending for (sexually) violent offenders with psychopathic features (e.g. Rice, Harris and Cormier, 1992).

The conclusions to be drawn from several meta-analytic studies on the effectiveness of treatment outcome studies in general are that treatment reduces offending (roughly estimated about 10%) and that some treatments are more effective than others (Hollin, 1999). Several meta-analytic studies on the outcome of treatment of offenders showed that (cognitive) behavioural treatment is most effective in reducing recidivism (Andrews, Zinger, Hoge, Bonta, Gendreau and Cullen, 1990). Andrews et al (1990) state that .. ‘psychodynamic and nondirective client-centred therapies are to be avoided within general samples of offenders, since these therapies are designed to free people from the personally inhibiting controls of superego and society, but neurotic misery and overcontrol are not criminogenic problems for a majority of offender’. ‘Programming for groups is to be approached very cautiously because the opening up of communication within offender groups may well be criminogenic’ (Andrews, 1980).

In a meta-analytic study on the effectiveness of cognitive behavioural treatment for adult offenders it was concluded that treatments focusing on moral reasoning abilities as well as treatments focusing on thought processes both proved to be effective in reducing offences (Allen, MacKenzie and Hickman, 2001). The meta-analytic studies showed that treatment of offenders is an effective means of reducing offence rates, but that the effectiveness strongly depends on several factors like type of offender, target of treatment and type of treatment. With respect to type of offender, high and medium risk offenders are more likely to benefit than low risk offenders. And among sexual offenders, a meta-analytic study found that rapists and homosexual paedophiles had the highest recidivism rates of all types of sexual offenders (Maletzky and Steinhauser, 2002). With respect to the target of treatment, it should be aimed at influencing criminogenic factors. With respect to type of treatment it is believed that objectives of treatment have to be relevant for the individual offender. The main objective though is prevention of recidivism. Examples of intermediate objectives are enhancing social skills, reducing drug-dependence and changing antisocial attitudes.

A high percentage of offenders report a history of child abuse (Timmerman and Emmelkamp, 2001b), which is associated with interpersonal and sexual problems later on in life as well as with substance misuse, personality problems and anxiety and depressive symptoms (Fergusson and Mullen, 1999).
Mullen (2000) suggests that these problems are mediators between a history of child abuse and subsequent offending behaviour and that by ..‘disaggregating a history of child abuse into the components of adult disorder to which the abuse may have contributed, you transform an unchangeable piece of history into a group of current problems to which therapeutic efforts can be directed’, (page 308).

1.6.1. TBS and Forensic Psychiatric Centre Veldzicht

In the Netherlands, offenders who have committed their crimes (partially) under the influence of a mental disorder and as a consequence may be found to be diminished responsible for their criminal acts, can be given a so-called Ter Beschikking Stelling of the State (TBS) order by the court. A TBS order, however, is only given when serious crimes are involved and when the risk of re-offending is considered high. Up to now, the process of deciding on the degree of diminished responsibility and dangerousness with respect to future offending, is based on clinical practice and not on actuarial risk assessment methods. Also, it strongly depends on the specific court, if and how an assessment for diminished responsibility is done: either by a psychologist, psychiatrist, both of them, whether or not milieu-research is done by a social worker, or whether or not the offender needs to be assessed in a special forensic observation clinic.

Prior to the TBS order, most offenders serve a sentence in prison. The duration of this sentence depends on the severity of the crime or crimes that were committed, and on the severity of the mental disorder. When treatment is considered immediately necessary, and imprisonment is expected to worsen the mental state of the offender, the duration of the prison sentence may be shortened beforehand.

During the time the present study was conducted, the offenders were selected for a specific TBS clinic. This was done by a special selection centre where offenders were re-examined by specialized staff, who examined the problems of the patients and selected a clinic they thought could best handle and treat these problems. Another criterion was whether or not the security precautions of the clinic were appropriate or sufficient for this specific offender. Nowadays, patients are randomly assigned to one of the 10 TBS centres. Every two years the court decides, advised by the TBS centre, whether or not the TBS order has to be prolonged with one or two years. The mean duration of a TBS sentence is more than 6 years. For a more detailed description of the TBS system the reader is referred to van Marle (2000).

One of the TBS centres is Forensic Psychiatric Centre Veldzicht in Balkbrug. During the past decade the centre has grown from a 100 beds to 150 beds in 2003. Since the 1970’s treatment in Veldzicht has been based on cognitive behavioural principles. During the 1990’s therapy was mainly centred around the milieu on the wards on which the behavioural techniques created a
supportive operant environment (Jansen, 1997). On each ward lived 10 patients. An exception were the intensive care units (ICU), where fewer patients lived, so the staff could obtain better control over the patients and their interactions. Besides the patients on the ICUs and the psychiatric ward, all patients were randomly assigned to a regular closed ward. After a few years of intramural treatment, which varied across patients and was dependent on the progress the patients had made in treatment, they were transferred to the (pre)resocialisation ward, where they had to prove that they could maintain the progress they had made during intramural treatment, before they could eventually, with permission of the clinic and based on a decision by the court, return to society. Treatment consisted for a large part of educational and occupational activities. Further, social skills training and cognitive skills training were given and therapist and patient made an analysis of the offences and a relapse prevention plan. Psychotherapy was given, only when indicated.

Due to drastic reorganizations in the end of the 1990’s, treatment has changed. Nowadays, wards are specialized in the treatment of patients with specific problems or disorders: (1) psychiatric disorders, (2) mental retardation, (3) personality disorders, (4) addiction, (5) sexual offending, (6) extreme violent behaviour. As a consequence, treatment has also changed, since it has become more specialised and focused on these specific problems.

1.7 Research questions
In this thesis three aspects of the developmental theories on criminal behaviour and personality pathology are examined: parental rearing styles, attachment and traumatic experiences. Further, the effects of a cognitive-behavioural intramural treatment of forensic patients are examined. Special attention is given to the diagnostic tools and outcome of forensic inpatients and to the measurement of behavioural changes during the course of treatment.

The following research questions are addressed:
1. To what extent are criminally behaving individuals characterized by pathological rearing styles of the parents?
2. Is there a specific relationship between criminal behaviour and attachment styles?
3. Are specific traumatic events among criminally behaving individuals related to dissociation disorders and/or borderline personality pathology?
4. What are the effects of cognitive – behavioural intramural treatment for forensic patients?

1.8 Overview of contents
In Chapter 2 and 3 of this thesis the relationship between parental rearing styles and attachment styles on the one hand and criminal behaviour and personality pathology on the other hand are examined among prisoners, forensic patients and
normal controls. In Chapter 4 the relationship between traumatic experiences on the one hand and dissociative symptoms and borderline personality disorder symptoms on the other hand are examined among prisoners and forensic inpatients. Chapter 5 reports on the prevalence of personality disorders and psychiatric disorders among forensic inpatients that are treated in a highly secured forensic psychiatric clinic (FPC Veldzicht). Chapter 6 describes the development of an observation scale that measures behaviours considered relevant in the determination of the functioning of forensic psychiatric patients. In chapter 7 the results on the treatment of forensic psychiatric inpatients are reported. Finally, in chapter 8 the major findings of the studies are summarized and discussed.