

Review

# Reculer Pour Mieux Sauter: A Review of Attachment and Other Developmental Processes Inherent in Identified Risk Factors for Juvenile Delinquency and Juvenile Offending

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**Abstract:** The task of this paper is to identify the causes of juvenile delinquency and juvenile offending. The French proverb chosen for its title (Step back in order to jump better) reflects the inherent challenge in this task; that is, how far back must we step in order to gain a complete understanding of these causes? Do we commence with adolescence, childhood, birth, pregnancy, conception, or the young person's parents and their life experiences? How wide a net do we cast? Should we focus primarily on intra-individual factors, or the social ecologies in which young delinquents are found? Every story must have a beginning. In this story about young people who fall off the prosocial developmental trajectory, all sign posts point to attachment and the quality of the child's first attachment experiences. This review will examine, from attachment and other developmental perspectives, how many of the more proximal causes of delinquency and youth offending have their origins in the emotional deficits suffered in early life. We will argue that delinquent and offending behavior represent attempts to redress these deficits. Consequently, interventions that attempt to prevent offending and reduce recidivism that do not address attachment ruptures and other early deficits cannot expect satisfactory outcomes.

**Keywords:** juvenile delinquency; juvenile offending; developmental and psychodynamic precursors to crime; risk factors; prevention

# 1. Introduction: Pathways to Delinquency and Offending

# 1.1. Attachment Quality

Two theories propose a nexus between attachment quality and delinquency—social control theory [1] and attachment theory [2]. Both theories argue that delinquency will be low in young people who are securely attached to their parents and through them to prevailing prosocial norms, assuming that their parents are law-abiding.

Attachment does not occur in a social vacuum. Attachment quality is multi-determined, and includes the biological and social contexts into which both parents and their children are born. Bronfenbrenner's [3] social ecological model considers behavioural outcomes as products of continuous interactions within nested systems—individual, interpersonal, organizational, community, and intercultural domains. Parents need to facilitate their children's development within the widening ripples from family intimacy to the socially complex systems in which the child must learn to function. Innate characteristics of parents, their early life experiences, including relationships with their own caregivers interact with current life experiences that determine the level of psychosocial adjustment achievable, the ability to cope, and the risk of psychopathology, including delinquency and offending [4]. In this paper, juvenile delinquency is defined as antisocial behaviour for which the young person has not been charged with an offence. Antisocial behaviour includes misuse of public space, disregard for community safety, disregard for personal wellbeing, acts directed at others; and environmental damage. Juvenile offending constitutes criminal acts for which the young person has been convicted [5].

Fonagy [6] identified parental reflective function (PRF) (i.e., the capacity to reflect on one's own mental experiences as a parent and to use these reflections in the sensitive parenting of their children) as a key mediator of the quality of attachment that parents have with their children. PRF predicts the transmission of attachment styles better than parental sensitivity, genetics or behavioural modelling. Pre-natal levels of PRF also predict a child's attachment security at 18 months. PRF assists the child to internalize representations of its own mental states and to feel safe in exploring the parent's mind. PRF also facilitates play, which helps a child move from a subjective world where internal experience and external reality are assumed to be equivalent, to a mentalized world, where subjective experiences are recognised as a version of external reality. Further, experiencing PRF allows the child to develop an intentional stance, that is, the ability to understand others' mental states (thoughts, beliefs, feelings or desires), in order to make sense of and predict their actions. The hallmark of achievement of an intentional stance is the child's recognition that a person's behaviour may be based on a mistaken belief, a capacity that appears at around 3-4 years of age. Social maturity and capacity for empathy and rapport depend on our ability to understand each other's mental worlds. All of these factors contribute to the quality of parenting, which Stafford and Zeanah [7] succinctly summarized as comprising the provision of sustenance, stimulation, support, structure and surveillance.

In addition to parental reflective function, secure attachment is underpinned by parents' emotional acceptance of the child, commitment of time and energy, relationship continuity (predictable availability), warmth rather than rejection/hostility (overt or covert neglect and/or abuse), and management of difficult traits attributed to the child [8]. Strategic behavioural management through

which the child learns how to overcome unhelpful habits, to control impulsivity, and to develop the skills of assertiveness, negotiation, conflict resolution and other effective ways of behaving as a member of society, is also a critical factor in child rearing. Parents need developmentally appropriate expectations, a capacity to analyse situations, flexibility, support for the child's autonomy, and skills such as limit setting, redirection, and effective discipline to accomplish this task successfully.

The child's relationship with the primary caregiver is the most important mediator of the impact of personal characteristics (e.g., temperament, intelligence, sociability) and social inequalities on early child development. Although personality and temperament create interpersonal styles that constrain or enrich children's emotional and socio-cognitive development, the critical underlying factor is attachment, a process whereby children internalize cognitive and emotional representations of relationships experienced with their primary attachment figures [8].

Social inequalities, such as low SES, poverty, parental unemployment, insecure housing, family instability, domestic violence, single parenthood, and absence of a social network all amplify intrapsychic vulnerabilities that accrue from insecure attachment. However, Schore [9] concluded that social stressors related to attachment or 'relational' trauma, including serious and prolonged maternal misattunement, parental emotional and/or physical abuse or neglect, and parental psychopathology including substance abuse, mental illness and domestic violence, can lead to severe affect dysregulation and have "a more negative impact upon the infant brain than assaults from the nonhuman or inanimate, physical environment" ([9], p. 237). Without intervention, or the availability of compensatory attachment relationships, the child is likely to transfer these attachment insecurities and their consequences into their subsequent parenting of their own children [4,10]. One longitudinal study [11] showed that the quality of adolescent attachment to parents and the presence of verbal and physical abuse mediated between abuse in the preadolescent years and later violent delinquency. This relationship was amplified if the young person also had abusive relationships with friends.

The quality of attachment serves as an indirect form of parental control because stronger attachment predicts stronger internalization of parental moral codes which remain operative even when parents are not present. The term "parental control" is understood here to refer to parental monitoring as a proxy for parental engagement and attachment security because youth who feel more secure with their parents are more likely to disclose the nature of their activities and respond to parental guidance. Research shows a strong relationship between insecure and disorganized attachment and externalizing behaviours, which are precursors of delinquent and offending behaviour [12,13].

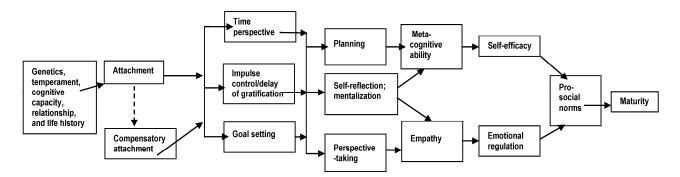
Disorganized attachment arises when the parent is perceived as both frightened and frightening to the infant, which makes it difficult for the infant to develop a coherent object representation of his caregivers. Disorganized attachment is expressed through aggressive behaviour that controls an unpredictable parent; and as a response to frightening and unpredictable behaviour in the context of deficiencies in affect regulation. To cope with this trauma, a conflicted state of anxiety, sometimes verging on panic caused by the parent's unpredictability and avoidance develops in relation to the caregiver. The infant either dissociates as a means of coping with intolerable emotional pain, or expresses profoundly divided states of mind with respect to attachment, in which the representations of both the "bad" frightening parent and the "good" idealized parent co-exist. Such children have great difficulty developing the capacity to self-soothe and self-regulate, with similar subsequent experiences re-triggering the original trauma. One way of coping is to avoid the feelings of trauma and panic and

become an aggressor, in which role they violate others in the way that they had been violated/traumatized in early life [14].

A recent meta-analysis explored the relationship between attachment to parents and delinquency using a sample of 55,537 young people from 74 studies. For both girls and boys, poor attachment to parents was significantly associated with delinquency. Stronger effect sizes were found for younger children, attachment to mothers, and same sex parent-child pairs. Positive links were strengthened if parental control was also present. Research has also shown that strong, supportive, prosocial peer friendships are also associated with lower levels of delinquency [15]. The authors concluded that "...attachment organization plays an important role in delineating the conditions under which the qualities of social relationships are likely to be linked to important psychosocial outcomes" ([15], p. 33). The authors cautioned that their analysis identified associations between parental attachment and delinquency, not causes, and that a significant contributor to attachment quality is the complex interactions that occur between parents and their children, who may affect parental behaviour in equal measure to the effect that parent's behaviour affects child behaviour and development. For example, some young people who subsequently engage in delinquent or offending behaviour are more likely to lie to their parents. The National Longitudinal Study of Adolescent Health found that lying to parents was robust predictor of delinquent behaviour. Young people who lie to their parents are more likely to be depressed and have low self-esteem, conditions that may arise as a result of unrepaired attachment ruptures. Lying, in turn, further erodes parent-child attachment, which is highly correlated with delinquent behaviour. Thus, there is a complex reciprocal interaction of child and parent factors that contribute to the association between attachment and delinquency [16]. These complex interactive directional effects cannot be determined by meta-analyses.

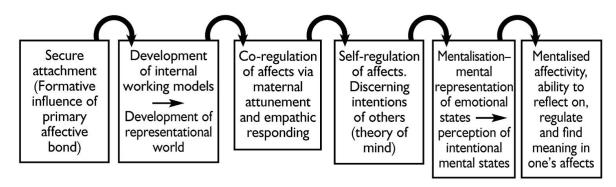
To summarise, an attachment relationship is only the first of many processes that need to be negotiated on the road to an autonomous, mature, and prosocial adulthood, but it provides the foundation for all of the other developmental challenges that must be mastered. Maturity also comprises age-appropriate self-awareness, and the capacity to regulate emotion and understand and comply with behavioural and social norms [17]. Internalized parental representations ideally provide a secure base for cognitive development and the development of social cognition and social competence [18,19]. The key factor for the development of secure attachment is the capacity for self-reflective function in at least one primary caregiver [20]. Mentors or other suitable adults can provide compensatory attachment experiences for young people deprived of secure parental attachment in early development [21]. Through this compensatory relationship, they have the opportunity to develop along a path parallel to those with adequate early attachments, and to master the component skills (delay of gratification, time perspective [22]; empathy and perspective-taking [23]; self-reflective function [24]; and the internalization of pro-social norms [17]) necessary to emerge as mature young adults into mainstream society. The pathways and elements required for the development of maturity as defined are presented in Figure 1.

Each of the components of this model has its own developmental process, beginning at attachment quality. Let us, by way of example, select one of the most important elements—the development of the capacity for self-reflection (mentalization) and chart its developmental stages. Figure 2 summarizes the process.



**Figure 1.** Model of temporal and causal relationships resulting in maturity [25].

**Figure 2.** Relationship between secure attachment and the development of the capacity for mentalized affectivity [8].



A large scale longitudinal analysis confirmed the causal significance of both distal and proximal factors in the transition to violent delinquent behaviour; in particular, a distal hedonistic value orientation showed the strongest association with violence when proximate pro-violence peer attachments and pro-violent norms were present [25]. Hedonism was defined as lack of a future orientation, focus on the present, fun- and leisure-seeking, disinterest in school, and absence of occupational aspirations. Thus, in the model in Figure 1, there is an absence of time perspective, impulse control/delay of gratification, goal-setting and planning, which would prevent these young people from moving to the next level of skill development required for the emergence of maturity. Young male offenders evince significant difficulties with all of the component elements that precede mentalization outlined in Figure 2, including the capacity for empathy assessed via their inability to correctly identify even basic emotions like fear and sadness. They were, however, more accurate in identifying intense anger compared with controls, a capacity associated with offence severity [26].

In another study, young male offenders, particularly violent offenders, also showed significant deficits in the capacity for mentalization [27]. One of the defining characteristics of violent young offenders is the absence of the necessary and sufficient conditions for secure attachment and prosocial development. This subgroup of young offenders tends to come from low income homes and have anti-social parents. They are aggressive, impulsive, and dishonest; they engage in under-age smoking and drinking, develop substance use and mental health problems and are in constant conflict with authority figures. They lack strong social ties, associate with anti-social peers, perform poorly at school, are truant, and engage in delinquent acts before progressing to offending. They are often victims of violence. They typically begin to offend before age 12 [28].

#### 1.2. Maltreatment

Maltreatment is the antithesis of secure attachment. For all the protections provided by secure attachment, parental misattunement and maltreatment create the risks. Early, chronic abuse and neglect disrupt both behavioral and neurological self-regulation [6]. Serious attachment problems, particularly those characterized by disorganized and fragmented mental representations of attachment figures are strongly associated with failure to develop the capacity for self-reflection, affect regulation, frustration tolerance and delay of gratification, the absence of which potentiate violent behavior [29]. Predictors of disorganized attachment include child maltreatment, parental psychiatric disorder, major depression, drug and alcohol abuse, and disorders of the self as a result of having been inadequately parented themselves [30].

Steele and Pollock [31] identified the common core characteristics of abusive parents as immature and dependent, socially isolated, with poor self-esteem, difficulty in seeking or obtaining pleasure, distorted perceptions of the child (including role reversal), fear of spoiling the child, belief in the value of punishment, and impaired ability to empathize with the child's needs and respond appropriately. If there are multiple children, the child selected for the worst abuse is more likely to have been the outcome of a more difficult and complicated pregnancy ending in birth by caesarean section, be premature and underweight, the "wrong" sex, or otherwise a disappointment to the mother, disabled or physically unattractive [32]. Parents of abused children often describe them as difficult, aggressive and acting out, or conversely, wary, compliant and inhibited. Parents who neglect a child describe the child as passive in infancy, with limited social responsiveness and with a significant developmental delay [33]. In both abusing and neglecting families, children were described as being out of control, unable to learn to manage their parents as can abused (but not neglected) children, unable to safely ignore their parents (as neglected children can), and as having numerous intellectual, physical and behavioral anomalies [31].

Disorganized attachment has been strongly associated with the development of peer aggression, externalizing behaviors, delinquency and offending [29]. Violent young people attract a variety of diagnoses, including oppositional defiant disorder (ODD), attention deficit disorder (ADD), ADD with hyperactivity (ADHD), conduct disorder (CD), and eventually, as adults, antisocial personality disorder (ASPD) [34]. These "diagnoses" are merely descriptors of the end behaviors that have resulted from the highly unsatisfactory early life experiences that hinder the development of the critical capacities just described. The aetiology of these disorders reflects the same complex processes outlined in Figure 1.

It may seem intuitively obvious that children who have been abused may become delinquent or violent adolescents and adults. This pattern, in which abusive parents abuse children who in turn become abusive, delinquent or violent has been termed "the cycle of violence" [35]. However, there is not a direct path from abuse to delinquency or offending. This is evident from the fact that not all maltreated children become delinquent or criminal. These vulnerable young people follow complex developmental trajectories to the delinquent or offending endpoint [36]. Notwithstanding, maltreated children and adolescents are significantly over-represented in populations of young offenders who engage in serious acts of delinquency and who commit violent crimes. They initiate delinquent behavior earlier and are at higher risk of becoming adult offenders. The more serious the maltreatment, the more likely they are to commit violent crimes and to be repeat recidivists [28].

There is still debate as to the nature of the relationship between abuse and delinquency, with social learning, strain and control theories all offering explanations. A review of the complex processes necessary to support the development of prosocial maturity outlined in Figure 1 suggests that deficits at any point along this trajectory may derail a young person's development (although not all constructs are equally important). For example, because measures of child abuse are highly negatively correlated with measures of self-control [37], impulse control, ability to delay gratification, goal-setting, perspective-taking, planning and self-reflection, these impairments are all implied as possible causal links between child abuse and delinquency. Alternatively, parental abuse can be viewed as impairing attachment, which either impedes the internalization of prosocial norms or encourages the internalization of anti-social norms modelled by abusing parents, who are likely to be operating at the edges of mainstream society by virtue of mental illness, substance abuse, poverty, unemployment and insecure housing.

A large, prospective cohort study compared 908 young people who had court records of substantiated abuse and neglect with a group of 667 characterized as non-abused and non-neglected (by virtue of their non-appearance on court records) young people matched on date of birth, race, sex, and approximate social class between 22 and 26 years after first data collection. Results indicated that the abused and neglected groups were 1.9 and 1.6 times, respectively, more likely to be arrested for violent offences than the comparison group. By the age of 32 years, 49% of the abused and neglected group had been arrested for a non-traffic offence compared with 38% of the comparison group [35].

These differences are not large and point to the fact that substantiated court records may be a blunt instrument for assessing functional parenting. It is likely that significant numbers in the matched comparison group would have shared significant risk factors with the abused group and experienced parental deficits and forms of maltreatment that did not reach the attention of child welfare agencies or the courts. Population studies and studies with more nuanced measures are needed to differentiate young people whose attachment history leaves them vulnerable to negative outcomes, such as anti-social behaviour, offending, substance abuse and mental health problems. Young offenders, previously described as "affectionless psychopaths", are now understood to suffer severe reactive attachment disorders (RAD). In an original series of young offenders studied by Bowlby [38], 86% had experienced prolonged separation from their primary caregivers, often through state action to remove them from home due to abuse or neglect. As a consequence, many endured multiple care placements, many of which were suboptimal. In a comparison group of non-offending youth, only 10% had experienced any form of parental separation. In a more recent study, 66% of children with RAD had experienced separation due to maltreatment from primary caregivers compared with none of the comparison group [39]. Although the evidence is compelling, further research is needed to establish a nexus between RAD and psychopathy, if indeed, one exists.

# 1.3. Intervening Factors between Maltreatment, Delinquency and Offending

A number of intervening factors play important roles in the nexus between early experience of abuse and offending [40]. Offending becomes more likely if maltreatment has resulted in young people running away from home, and developing mental health problems including substance abuse, school disengagement, and attachment to deviant peer networks, including gang membership [41,42]. Thus, maltreatment sets up a cascade of risk and vulnerability that gathers momentum via the synergistic

interactions among risk factors. The stronger nexus between female maltreatment and offending than male maltreatment and offending is also worthy of note [43].

## 1.3.1. Homelessness

Research confirms the high rates of emotional, physical and sexual abuse, and emotional and physical neglect among young people who have run away from home to escape intractable family conflict, violence, and abuse [44]. Homelessness becomes an additional risk for this group, as does offending, which is often triggered when young people begin to associate with delinquent peer groups who are street-wise and already engaging in delinquent and offending behavior. For most young people in this demographic, crime begins as theft of daily necessities like food, clothes and toiletries in order to sustain themselves [45] and progresses to more serious offences involving weapons and violence. Other elements in the cascade of risk accruing to running away from home include substance abuse, promiscuity and prostitution, which expose young people to a range of sexually transmissible infections and sexual exploitation and abuse. Low self-control was a significant predictor of both criminal behaviour and substance abuse in a sample of 400 homeless street youth. Low self-control influenced the level of association with deviant peers, the adoption of deviant values, and the length of unemployment and homelessness [44].

## 1.3.2. Mental Health Problems

Maltreatment frequently, if not ubiquitously, results in mental health problems in young people. Those who have experienced or repeatedly witnessed abuse are likely to develop comorbid mental health problems including substance abuse disorder, anxiety, depression, PTSD (Post-Traumatic Stress Disorder) [46,47] and increased risk of self-harm and suicide [48]. Most (*i.e.*, 65%–75%) young people in the juvenile justice system have one or more diagnosable mental disorders [49] compared with 29% of a comparable general adolescent population [50]. Two cross-sectional Australian studies [50] similarly showed that mental health concerns, cognitive and social deficits, and problem behaviours are pervasive in young offenders (e.g., Conduct Disorder (58%), emotional distress (depression and anxiety) (59%), cognitive deficits (67%), delinquent peers (77%), school failure (79%), weekly drug use (69%), regular binge drinking (10%), daily cannabis use (35%), weekly use of amphetamines (9%) or opioids (5%), and problem gambling (5%) [49]).

A mental health profile of these same 800 young offenders serving community orders showed that 40% scored in the severe range for psychopathology on the *Adolescent Psychopathology Scale-Short Form* (APS-SF) (predominantly Substance Abuse (26%) and Conduct Disorder (19%)); 17% had comorbid conditions. Although the sample showed higher rates of externalizing disorders, as expected, 25% scored in the high/very high range for psychological distress as assessed on the *Kessler-10*. High reported rates of child abuse and neglect on the *Childhood Trauma Questionnaire* were associated with more severe externalizing pathology. In a sample of 242 incarcerated young offenders, 8% of the sample had considered suicide in the year prior to the study; 8% had attempted suicide, 44% of which occurred in detention, and 9% had self-harmed, 75% while in detention. Past emotional abuse, current psychological distress, and depersonalization disorder were significant risk factors for suicidal ideation. Past physical abuse and current psychological distress were significant risk factors for

self-harm ideation. Suicidality and self-harm co-occurred in this population [48]. In the young offender population, suicide has been identified as the leading cause of mortality after drug-related deaths [48].

Another recent study reported that over 60% of 291 incarcerated young offenders had significant histories of childhood abuse and/or neglect, with females 10 times more likely to report having experienced multiple forms of abuse in the severe range than males. Twenty percent (20%) also suffered PTSD, with females (40%) significantly more likely to receive this diagnosis than males (17%). PTSD was seven times more likely to occur in young people who had experienced three or more types of child maltreatment in the severe range [47]. Failure of criminal justice systems to take account of the severely traumatized population that enters their facilities is no longer acceptable or defensible, as all current research on young offenders points to an indisputable nexus between maltreatment, psychiatric morbidity and subsequent delinquency and offending.

#### 1.3.3. Substance Abuse

Harmful or hazardous alcohol use is associated with numerous risk factors, which have been categorized as social, attitudinal and intrapersonal [51]. In one young offender population, those living in rural areas who grew up without their biological fathers, and who dropped out of school were at significantly increased risk of alcohol abuse [52]. Young people aged 15–16 years who misused alcohol were three times more likely to commit violent offences. The association between alcohol misuse and violent juvenile offending arises from the shared risk factors common to both alcohol abuse and violent offending, which spans parental, family, peer affiliation and other social factors [53] One study of 242 incarcerated young offenders found that a head injury that resulted in unconsciousness was significantly associated with severe violent offending but not with offending involving moderate or mild violence [49]. When various factors are combined, the risk of violent offending increases [54]. The triad of a past head injury with learning disability and behavioural problems significantly predicted violent offending [55]. Head injuries increase disinhibition of aggressive impulses, especially in combination with harmful or hazardous alcohol use [55]; thus, a head injury may exacerbate the criminogenic effects of alcohol abuse [56]. Although this Australian sample [49] revealed high levels of behavioral disturbance and high need for treatment, only 18% had been offered treatment while supervised within the juvenile criminal justice system and only 10% reported willingness to engage in any treatment for their substance abuse [57].

# 1.3.4. Gang Membership

Gang membership is now understood to be a critical factor in the cascade of risk that we have been discussing. For example, a study of psychopathology in youth gang members found increased rates of Post-Traumatic Stress Disorder (1.77 odds), current substance abuse (2.58 odds), Oppositional Defiant Disorder, (1.24 odds) and Conduct Disorder (4.05 odds) in gang members compared with non-gang-affiliated youth (0.70 odds) [42]. Holmes [58] argued that gang membership is an extreme form of normal peer attachment. During adolescence, young people begin to loosen their attachment ties to parents and transfer these to peers and mentors such that the peer group becomes the secure base. As development proceeds, couplings occur within the peer group from which intimate sexual relationships evolve. These same processes operate in extreme forms with gang formation, which is

more likely to occur in boys whose fathers are absent. According to general strain theory [59], social barriers that prevent youth from achieving positively valued goals through legitimate means can lead to violent offending when concurrent risk factors such as low parental warmth, and low parental involvement/monitoring are operating. Gang membership can provide the self-respect that has eluded the young person in mainstream society, create bonds between members that were absent or ruptured in their families of origin, school or community, and endow status and power otherwise unattainable through more socially acceptable means. Gangs often form in socially disadvantaged areas and around cultural and racial affiliations [42,60].

Sadly, contact with the juvenile justice system increases the access of young offenders to delinquent networks, including induction into delinquent and criminal gangs. Longitudinal studies of young offender peer associations demonstrated that once a young person starts to engage in delinquent acts, he is subsequently more likely to spend time socializing with other delinquents, not necessarily because he is searching for like-minded peers, but because non-delinquent young people avoid law-breakers and do not allow their admission into prosocial peer networks [61].

Rebellon [62] examined the role of social learning theory and social reinforcement in increasing and maintaining delinquent behaviour among gang members. Results indicated that delinquency increases the social attractiveness of and attention paid to the delinquent, and that delinquents increase their delinquent acts in proportion to their need for peer attention. Once established, criminal conduct may be maintained simply because it provides rewards, both economic and psychological (e.g., status, popularity, thrill-seeking), in the absence of punishment, at least until the young person is apprehended. However, young people are less likely to engage in crime if they perceive there to be a high risk of apprehension [63].

Research shows very few differences between adolescent male and female gang members in terms of risk factors. Data from the National Longitudinal Study of Adolescent Health [50] indicated that the same factors—parental social control, quality of attachment, and involvement, school safety, peer fighting, age, and race similarly—influence boys' and girls' gang involvement [41,60].

Below is a detailed case study that underscores the etiological role of disordered attachment and the presence of other developmental risks for youth offending discussed in the preceding sections of this paper. The case was selected to show how even seemingly intact, middle class families who send their children to private schools can produce young people who commit crime, including violent crime. Such cases might remain incomprehensible without the perspective of attachment theory [64].

# 2. A Case Study: Lanh, 16 Years Old

# 2.1. Offence

Lanh served a six month custodial sentence following his conviction for aggravated assault occasioning grievous bodily harm. He committed his offence in company of a gang comprising five other young people. During a dispute with a rival gang, Lanh shot a young male unknown to him. Lanh freely admitted that he had shot the young male although he denied that the weapon was his and that he did not know who owned it. Lanh could not offer a coherent account as to why he had shot the young person, but said that he did not plan it and did not know he was going to do it; he just felt like

doing it at the time he saw the firearm. The court decided in sentencing that he had no intention to kill or harm and that he had formed no intent to act maliciously. Rather, he had acted impulsively to gain peer respect from gang members.

# 2.2. Background

Lanh, 16, is the elder of two siblings—he has a brother aged 11. Lanh's parents immigrated to Australia from Vietnam before Lanh was born. They own a small business in which they work long hours seven days a week. The family is financially secure and live in a middle class suburb. Lanh attends a private school and was in year 11 at the time of the offence. The school reported good school attendance and a strong academic record. However, Lanh was considered a loner at school—he did not play sport or music and no specific friends could be identified.

# 2.3. Family

Lanh's family declined to attend any of the court mandated sessions or to talk over the phone, citing heavy responsibilities with their business. They also declined the offer of a home or workplace visit. Lanh's mother reluctantly provided some developmental history, which was unremarkable. However, she indicated that Lahn had been frequently left in the care of others because his parents were working long hours in their business. Lanh was expected to achieve at a high level and his mother made it clear that anything other than excellence would not be tolerated. There was no time for sport, music, a part-time job after school or on weekends, and no time for friends.

# 2.4. Conditions of Release

Supervision conditions required Lanh to live with his parents, regularly attend school, adhere to a curfew, attend all supervision and therapy sessions, and not to associate with any of the peers involved in the offence.

#### 2.5. Assessment

A psychological assessment while in custody found Lanh had average cognitive ability. Attention Deficit Hyperactivity Disorder, sexual abuse, trauma history, significant psychopathology and substance abuse were excluded. There were, however, significant elevations in scales assessing anxiety and mood disturbance. In view of his offence and his lack of empathy for his victim, nascent Antisocial Personality Disorder was considered.

At his first therapy session post custody, Lanh was well-groomed, tall and slim, and appeared fit and healthy. He was reluctant to attend the session and avoided eye contact with the therapist. Lanh was not a strong historian and was evasive in his responses to questions. His flat affect and withdrawn and disinterested demeanour masked a high level of anxiety. He was defiant and hostile in both his verbal and nonverbal communication. Lanh had no access to his motivation or feelings about the shooting. He was remorseful about his actions insofar as he had to spend time in custody and that it resulted in further rejection by his family, about which he felt significant shame and guilt. However, he could not reflect on the impact of his actions on the injured young male, whom he dismissed in a

callous and unemotional manner. When challenged emotionally, Lanh would stare into space in a dissociative way. Checking with him at these times revealed that he was in a perceptually altered, probably depersonalised state, although he was still aware of his surroundings. There was no amnesia or thought disorder, but he showed little evidence of formal operational thinking.

## 2.6. Case Formulation

Lanh's attachment style was assessed as highly insecure—avoidant, and perhaps disorganzied. From birth, Lanh had multiple caregivers and little contact with his mother who was constantly working in the family business. Although they may appear calm and content, evincing an apparent lack of distress, avoidant young people have elevated heart rates and circulating cortisol (stress hormone). In each of his assessments, Lanh had been identified as experiencing anxiety in the severe range. Lanh learnt that any attempts to gain acknowledgement from his mother were futile and, hence, his attachment-seeking behaviours had been diverted into a deviant peer group. Lanh gradually became absorbed into a "collective" identity with the gang, which overwhelmed his attempts to find his own identity and an authentic sense of self. Lanh was eventually able to describe a sense of a "false" self when he was interacting with the gang. Although he viewed them as "cool" and desirable, he experienced gang members as "alien" to himself, who were not bound by the same cultural values that he and his family lived by.

False-self behaviour is the outcome of interpersonal processes that do not validate the child's true self, thus resulting in the child's alienation from the core or "true" self. Parents provide the initial scaffolding for their child's development of a sense of self, directing those aspects of the child's experience that parents wish to codify in the child's self-concept. This process can potentially misrepresent the child's actual experience of self, resulting in alienation from his inner experiences that constitute the true self. Thus, the origins of the false-self lie in parental intrusiveness, whereby children comply with a conditionally loving or supportive parent. Such children develop contingent self-esteem—they only feel worthwhile when they meet the demands of externally imposed standards [8].

At the time of the offence, Lanh was new to the group and was trying very hard to gain acceptance and to fit in. His need for belonging was strong because his sense of belonging in his family was so tentative and based almost solely on his academic performance and ability to please his parents. Avoidantly attached children engage in defensive processes, such as idealisation, intellectualisation, repression, depersonalization, dissociation and denial in order to cope with chronic emotional deprivation [28]. Lanh exhibited the last three of these defences in his assessment interview.

Mothers of avoidant children are characterised by inhibition of emotional expression, verbal and physical rejection of their children, aversion to physical contact, and insensitivity to their children's emotional signals and overtures. This description is consistent with Lanh's mother's presentation. She was unable to see her son, only the son that she wanted and expected, that is, a wish-fulfilling son. Lanh's role in the family to was to make his parents proud. They were angry and openly hostile towards him because he had let them down. His mother said at one point "He failed us, he has humiliated us". Following his arrest, Lanh's parents disowned him and were absent throughout all the stressful legal proceedings. They did not visit him while he was in detention. Lanh's mother's evinced a dismissing state of mind with respect to attachment. Like all dismissing parents, she was

compulsively focused on her external image and presentation. She minimized the importance of intimate relationships and appeared hostile and competitive with the therapist. Lanh's father remained a shadowy figure, who hid behind the language barrier and the overbearing presence of his wife, who lacked empathy and could not tolerate transgression or vulnerability in either herself or her son. She, answering for both her husband and herself, would not engage in any form of therapy for her son, instead externalizing his problem to something intrinsic in him rather than issues arising in the intersubjective field of family relationships. When contacted by phone to discuss Lanh, his mother said, "How could he do this to us?", and "What kind of a child is this?" Their shame about his behaviour was expressed by rejecting and disowning him. His mother's bond with her son was sufficient to meet his basic care needs for food, accommodation, and education. However, there was no safe base and no felt security for this boy in his family. Lanh's attachment to his parents was anxious and avoidant. Lanh expressed a strong wish that they attend therapy and he was bitterly disappointed when they repeatedly refused to engage in any way with the therapeutic process.

#### 2.7. Treatment Formulation

Without his family to buffer him, the therapeutic aim was to support Lanh's development of a more secure sense of self and to help him to effectively negotiate adolescence without an increase in his disordered conduct and antisocial acting out. This included a carefully controlled group intervention to help Lanh experience positive peer relationships and to develop social skills that would build a positive peer group and support the development of an authentic sense of self. Anger, shame and emotional isolation were considered to be closely connected to Lanh's offending, and these elements were addressed in his individual sessions. It was also hoped that Lanh might be able to find some extracurricular activity that his supervising Juvenile Justice Officer could proactively support though the supervision process and that Lanh's parents might agree to. Lanh identified an interest in learning to play the guitar which tends to be a solitary, often internalised activity, although there was a school band.

## 2.8. Treatment

In the absence of parental/family involvement in Lanh's therapy, the primary and initial task of the therapeutic engagement was to address the identified anxiety and mood symptoms, using cognitive behavioural therapy whilst simultaneously offering Lanh the opportunity to make use of various psychodynamic therapeutic media such as drawing, sand play and other reflective tools for the contained expression of anger, shame and guilt considered to be essential elements arising out of his serious attachment disorder, and the parental rejection that had impaired the development of Lanh's capacity for mentalisation and reflective functioning that were continuing to limit Lanh's emotional and psychological development during adolescence.

#### 2.9. Outcome

A therapeutic alliance was eventually established, although Lanh stated that the therapist was not helping him. He viewed the sessions, which he reliably attended, as protection against going back into custody. The transference, as might be expected, was hostile, anxious and dependent. Nonetheless,

Lanh valued the time that was devoted to him, the therapist's presence and reliable availability and the predictability of the sessions. He also acknowledged a feeling of acceptance for who he was without the burden of imposed expectations. Lanh attended 12 sessions over a six month period, which spanned the supervision period prescribed by the court.

Sadly, Lanh's parents were not only uncooperative in their son's therapy process; they actively blocked his attendance wherever possible, citing the needs of the family business and their requirement that their son contribute to its management. For this reason, Lanh was able to attend only two group sessions. His parents resisted the idea of allowing Lanh to learn to play the guitar, claiming that they wanted no distractions from his work in the business and his successful completion of his secondary schooling.

Lanh lived in an emotional, social and financial vacuum in which his parents exerted brutal and uncompromising control over all his movements. He worked in the family business without any financial or psychological recognition of his efforts. He was not permitted to socialize. When he was not working in the business, he was studying. Lanh suffered ongoing emotional abuse of an extreme kind. This adolescent had to negotiate his identity formation in an emotional wasteland and it became apparent as therapy progressed that he was demonstrating a schizoid personality process.

Lanh did manage to successfully complete his Higher School Certificate (the final secondary school examination needed to gain entry to university in Australia) and there was no further contact with the criminal justice system in the 12-month follow-up period.

# 3. Implications for Policy, Programming and Practice

The three key components of successful programs are the specificity of treatment, the degree of researcher involvement in the design and implementation of treatment, and the amount and quality of treatment delivered [65]. High dose, research-monitored treatments can achieve effect sizes for recidivism reduction of 30% compared with 1% reduction in low dose, non-researcher monitored, low quality programs. An authoritative meta-analysis of programs investigating the impact of treatments in the criminal justice system to reduce drug-related crime found that offenders assigned to a treatment condition were 41% more likely to show a reduction in criminal behaviour compared with controls. Forty-four of 52 studies reported significant reductions in crime. Treatment was more effective for juvenile than adult offenders. Overall, the study provided convincing support that high-intensity, high quality programs result in proportionally greater gains than low-intensity, low quality programs [66].

# 3.1. The Importance of Responsivity

Pessimism about treatment efficacy is associated with the observation that by the time young people have established offending and substance-abusing profiles, the complexity of their lives and the extensive psychological damage suffered are major restraining influences on the effectiveness of any form of treatment. Successful interventions for young people who are delinquent or who offend are responsive to the cognitive, social and psychological characteristics and needs of individual young people [67]. Arguments for the effectiveness of responsivity are often made, but not systematically implemented, and have largely ignored juveniles [68,69].

Even though the elevated levels of both externalizing and internalizing psychopathology in young offenders have been repeatedly established in juvenile justice systems internationally, mental health services appropriate to the level of need are lacking. For example, only 28% of juvenile detention centres in the USA offer onsite mental health care [70]. Many researchers in the field are now calling for developmentally appropriate treatments to address both the risks and needs of young offenders [71].

Rehabilitation practices that are structured to meet institutional or organisational objectives without considering the mental health problems and cognitive limitations of young people are unlikely to engage and motivate their young clients or to demonstrate ecological validity. More importantly, they are unlikely to result in the development of prosocial internal working models that are needed to assist the trajectory out of offending and substance abuse [72]. Without a suitable means to help the young person make sense of what they are experiencing, rehabilitation programs fail to promote internalisation and integration of the lessons they try to teach. Responsivity requires within-program flexibility to permit the individualisation of elements to match the readiness and learning style of each young person participating.

How a young person develops the ability to integrate daily activities and the skills necessary for effective life management remain an unsolved problem in young offender programs. Typically, literacy levels are low [50], and self-reflective capacity maturity or deficient in this group [73]. Since psychological theory posits that people develop habitual patterns of behaviour via the iterative construction of cognitive schemata, a program that fails to support internalization of prosocial skills and attitudes will achieve little in the way of long-term development [74]. Recent research has pointed to the importance of providing cognitive scaffolding [75] to young people to support the development and maintenance of prosocial values. This is a particularly important aspect of rehabilitative programs for this population given strong evidence that significant numbers are either intellectually disabled or functioning in the range of intellectual disability [76].

Further, programs that require young people to engage with the community often do not have an activities component that teaches life skills. Community service orders alone are ineffective in reducing recidivism. "Diverting young offenders *from* the criminal justice system is not a sufficient response to offending if they are not at the same time diverted *to* something that is going to challenge their offending behavior" ([77], p. 20). Figure 3 provides a template of a possible treatment program for violent offending that captures all the necessary responsivity elements outlined in this paper.

**Figure 3.** A sample program template for addressing violent offending in young offenders.

# **Programming Model for Violent Juvenile Offenders**

Aim: to develop skills for managing violent behaviour, to promote reflective functioning and ability to contain and manage emotional arousal.

SCREENING—An initial screening is conducted to determine suitability of inclusion into program. This screening identifies young people with intellectual disabilities and learning difficulties who require a different model. The screening also identifies instrumental offenders who require a separate module focussing on moral reasoning and consequential thinking Phase 2 Phase 3 Phase 1 Phase 4 **Engagement** Skills acquisition & rehearsal Initial assessment Relapse prevention & motivation 1. Demonstrate the value of 1. Needs based (LSI-R) Stage 2 Stage 1 developing skills to deal with 2. Violence Assessment Advanced module (for young Relapse prevention modules: 1. Develop cognitive violent behaviour -Identify high risk situations 3. Readiness for treatment people with longer sentences behavioural skills in Novaco 2. If engagement is low, 4. Escape/Absconding risk and/or higher risk). -Apply skills to prevent relapse mostly group based, generic consider pre-treatment assessment Focuses on increasing skills program. module to enhance and furthering role-playing 5. Treatment goal assessment 2. MST (group & individual, engagement 6. Assess the capacity for and rehearsing focuses on individual needs Focus both general, and group work identified in assessment focused on specific vulnerabilities based on needs assessment. Action: Advanced role-playing Action: Develop strategies Action: Conduct assessment Action: Provide engagement **Action**: Instruct in cognitive behavioural skills and and rehearsal of cognitive for dealing with high risk of behaviour and other activities and motivational that would intensively rehearse those behavioural skills. situations. capacities exercises. skills. MST targets: Follow-up strategies: contraindicate suitability for Literacy -Mentoring/ buddy program program and/or group work Targets: Life skills Arousal reduction -Process & goal acquisition Health evaluation Impulse control Problem solving Peer development (Psycho)Education Vocational/education Development of Intermediate, Proximal and Distal Evaluation & Research Outcomes Pre-Release/Discharge Planning To Ensure Appropriate Community Follow-Up (Possible Linkages with New Community Forensic Mental Health Service)

# 3.2. Intervention Programs for Troubled Youth

A wide range of interventions have been developed and trialled with young offenders, with varying results. Approaches include family based systems therapies, parenting training, social skills training, life skills training programs, service learning and mentoring programs, and wilderness and boot camps. Below follows a review of some of the interventions that have been developed to assist in the rehabilitation of this difficult group of young people. The focus will be on those that have a conceptual framework based in attachment theory. However, this section begins with a brief discussion of models that do not work. High on this list are programs based on boot camps and other military style residential treatment programs for adolescents with conduct disorder or who are in the early phases of their criminal offending careers. Intuitively, programs that provide elements that have been missing in the lives of young offenders such as structure, monitoring, goal-directed activities, and alternative educational environments should be effective in reducing delinquent or criminal behaviour. However, intuition is not always a good guide. Research has consistently shown that tougher sentencing, longer incarcerations, changes to Young Offenders Acts in various jurisdictions and boot camps that have no rehabilitative component are not effective in reducing recidivism in young offenders. For a comprehensive review of the evidence, see Henggeler & Schoenwald [78]. However, recent similar programs that focused on rehabilitation and skill building such as High Intensity Training (HIT) for young offenders aged 18-21 significantly reduced their re-conviction rates in a 2-year follow up. Although this advantage attenuated over time, the overall re-conviction rate remained lower by an average of 3.35 convictions at 10 years compared withyoung offenders who had not engaged in HIT [79].

Life Skills Training programs may provide effective prevention and rehabilitation for young substance abusers [80]. Various modes of delivery of these programs have been tried. Those that target resilience-building and use mentoring to support the reintegration of young people into main-stream society, and that are intensive and multisystemic with appropriate long term follow-up [80] have the best outcomes. Alternative approaches use short-term residential settings with follow-up and mentoring programs. Several reports [81] have identified a number of such programs, but note with concern that few have been formally evaluated. Further, success of such programs depends on the quality of the mentors. There are few intensive mentoring training programs for people wishing to take on this role, inadequate supervision with respect to their mentoring relationship with young people and no process or outcome evaluations of their involvement with young people. Nonetheless, teaching young people life skills to escape a cycle of offending and substance abuse has promise if all the necessary identified components are present in the program.

There has been a rapid expansion of the use of mentoring programs in the past decade, with 5,000 mentoring programs serving about three million young people in the United States alone [82]. The 2003 National Crime Prevention Report [83] indicated that mentoring worked well when it engaged young people in activities that were needs-based and developmentally appropriate. A recent meta-analysis, comprising 73 outcome studies of mentoring effectiveness found small (c. 9 percentile points) positive gains in behavioural, social, emotional, and academic domains for participants and no change or a decline in functioning in these domains for comparable young people not participating in the programs. Children and adolescents show comparable gains. Adult mentors, older peer mentors and group mentoring demonstrated comparable outcomes [84]. However, there are few long-term follow

up studies to provide information about the sustainability of the benefits, including important questions about whether it reduces offending in the young offender population. Mentoring programs unsurprisingly show larger effects for more disadvantaged young people. Males show greater benefit, as do those whose needs have been closely matched with programming, and for whom there is a good fit between mentor and mentee. Mentor selection, support and training are also important for positive outcomes.

Service Learning is defined as a character-building, values-based education program that provides opportunities for young people to develop academic skills, self-esteem and prosocial values through service to the community. Service Learning uses mentoring via a caring, supportive adult relationship along with training and guided self-reflection. The proposed effects of such programs is argued to be mediated through individual, dyadic (mentor-young person), programmatic, and contextual variables [84]. The aims of Service Learning are to extend young people's rehabilitation into the community, through experiencing other cultures and lifestyles; promote self-reflection through the use of self-reflective diaries; develop empathy and connection with others through engagement in meaningful, needs-based activities, teamwork and improved communication, and; foster leadership, team building, collaboration and civic responsibility through the act of helping others [85].

As yet, there are few studies that explore the theoretical mechanisms whereby mentoring and service learning programs may work. There have been recent calls for better understanding of the developmental processes related to service-learning [86] and to situate service learning theory within appropriate broader contexts such as, for example, community psychology, positive psychology, and positive youth development [87]. We would like to add attachment theory to the list of possible theoretical lenses. There has been a tendency in this literature to oversell the benefits of service learning in the absence of solid research-based evidence. Indeed, some critics have observed quasi-religious fervour and groupthink in proponents, processes that disallow critical analysis and evaluation of service learning programs [88].

Attachment as a psychological process has a great many functions, one of which is the socialization of natural aggression [89] and the internalization of social norms, which represent a form of indirect parental control [90]. Several studies have shown the absence of secure attachment representations in serious young offenders (see [1]). Failure of attachment results in a failure of the capacity to mentalise, that is, to understand and articulate one's own and others' subjective experiences. The failure results in an inability to make behaviour predicable and meaningful. This process whereby secure attachment promotes mentalisation is encapsulated in Figure 3. Acting out impedes mentalisation; failure of mentalisation leaves young people vulnerable to the expression of uncontained anger that may erupt into violence and criminal offending. Inability to mentalise has been observed in criminal offenders [91]. The meta-analysis discussed earlier provided empirical support for the proposed relationship between poor attachment to parents, particularly mothers, and delinquency in both boys and girls [1]. The review concluded that attachment quality should be a target for interventions that aim to reduce offending and recidivism in young people. Indeed, attachment-based treatment programs have shown the greatest promise in reducing problem behaviours associated with conduct disorder, antisocial behaviour, delinquency and offending [92] Attachment-based treatment programs have also been effective in working with depressed and suicidal adolescents [93]. The focus of such treatments is to facilitate corrective attachment episodes via relational reframing and the encouragement of the expression of emotions and unmet attachment needs. Most of the research base for the effectiveness of

attachment-based programs has been conducted on young children at risk. It is to these programs that we will now turn our attention.

# 3.3. Early Intervention: Reculer Plus Loin

The quality of early care giving and the emotional bonds that parents establish with their children are critical to healthy, prosocial development. These bonds underpin the quality of attachment that the child forges with his parents, and influence all subsequent development that occurs throughout childhood and adolescence. Cognitive development is built on the scaffolding of social and emotional development, of which attachment quality is the foundation [94]. Prevention needs to begin with assessment of the infant-mother (parent) bond as early as possible in identified vulnerable populations, using a template of the kind found in Figure 4 to identify areas of need.

Child Needs	Normal	Vulnerable	Chronic Need	Parent Resources	Appropriate	Vulnerable	Chronic Problem
Physical Care and Safety, Development				Responsive Caregiving and Protection			
Empathic attention Attachment Relationship				Reflective Function Bonding			
Emotional and behavioural self-regulation				Emotional Availability Strategic Behaviour Management			
Role model Cultural education Quality of social env	ironm	ent		Ability to transmit community values			
Other: (describe)				Other: (describe)			

Figure 4. A generic template for assessing the parent-child relationship.

This model illustrates a way of understanding the multi-faceted tasks of parenting, from physical care through to facilitation of engagement with the extra-familial environment. Effective parenting, as an activity that is shared more explicitly with the wider community as the child grows (described in Bronfenbrenner's social-ecological model), responds smoothly to the child's needs as they change from the total dependence of infancy to the increasing independence of adolescence. As the child grows, each particular area of need depends on the resolution of earlier needs (one may conceive of this parenting model as a type of Maslow hierarchy of needs). The extent to which each preceding need is unmet indicates potential chronic handicaps to development and successful social integration. Plans for intervention can be developed by exploring the areas of match and mismatch between the child's specific needs, and available parental resources. Such a model facilitates an understanding of the responsivity required by programs to address the habilitation needs of young offenders.

A number of early intervention programs for at-risk children have been developed along these lines and some have shown promise in establishing or re-setting positive developmental trajectories for children at risk of coming into contact with the criminal justice system. Some of the key programs that have a strong research base demonstrating effectiveness are summarized below.

The U.S. Department of Health and Human Services (DHHS) [95] reviewed 35 early childhood home visiting programs through the application of rigorous research quality criteria to ascertain program effectiveness (see against eight specified outcomes—maternal health, child health, child development and school readiness, reduction in child maltreatment, enhanced parenting practices, reductions in juvenile delinquency, family violence and crime, and family economic self-sufficiency, and linkages and referrals. Only 14 programs met DHHS criteria and even the best of these had only modestly positive outcomes.

The most successful of the programs studied was the Nurse Family Partnership (NFP). Designed for first-time, low-income mothers and their children, the NFP program is delivered through one-on-one home visits by trained public health registered nurses, beginning in the 28th week of the mother's pregnancy and continuing until the child's second birthday. Attachment theory, human ecology and self-efficacy theories provide the conceptual scaffolding of this intervention. There were 134 studies up to 2012 assessing various components of this program of which 28 met eligibility criteria for quality and were reviewed—18 of these studies were considered of high quality [96] undertook one of the early high quality follow up studies of NFP in which they examined outcomes for participating mothers 15 years after the program end. Findings indicated reductions in the number of subsequent pregnancies, the use of welfare, child abuse and neglect, and criminal behaviour by these low-income, unmarried mothers. Their children showed less behavioural impairment due to substance abuse, and fewer arrests for criminal conduct. In a revised analysis of this study [97], results indicated, compared with the control group, participating children had 48% fewer officially verified incidents of child abuse and neglect, 59% fewer self-reported arrests and 57% fewer self-reported convictions and probation violations [98] found that a NFP program had similar effects for white semi-rural and African-American women. Both groups showed a reduction in number of subsequent pregnancies, the time interval between pregnancies and mean months on welfare payments. A follow up of these children at 12 years of age showed reduced use of cigarettes, alcohol, and marijuana relative to their control group. They were also less likely to report internalizing disorders that met the borderline or clinical threshold. NFP children also performed better at school using standardized tests of reading and maths. However, there was no difference between treated and untreated children with respect to externalizing disorders. Follow up of these groups is needed to ascertain whether these effects reduce later contact with the criminal justice system [99].

Two further studies that followed up enrolled infants into adolescence were encouraging. The first [100] found that child maltreatment was significantly associated with the onset of problem behaviours in the comparison group not receiving the NFP program while the treated group experienced less child maltreatment and subsequently fewer conduct problems and antisocial behaviours that are precursors to criminal offending among children and youth born into at-risk families. The subsequent study [101] followed up infants enrolled in a NFP program 19 years later. The NFP program achieved reductions in female but not male crime. Girls also experienced other program benefits but boys did not fare well on any of the specified outcomes.

Healthy Families America (HFA) is another early intervention program whose specific goals include reducing child maltreatment, increasing utilization of prenatal care, improving parent—child interactions, and promoting children's school readiness. In addition to home visitation, HFA offers parent support groups and father involvement programs. There have been 170 studies conducted on this program, but only 48 met DHHS standards, of which only 12 were rated of high quality. The randomized controlled trials of this intervention showed early promise but the effects appear to diminish after one year post implementation. One significant difference between NFP and HFA is that the latter program uses paraprofessionals to deliver the program [102] Similar disappointing results were reported for the Hawaii Healthy Start [103] and several other translational programs deriving from HFA (e.g., in Alaska and San Diego).

A range of other early (preschool) intervention programs have been developed, implemented and evaluated, but results suggest that few have significant or sustainable results that would warrant continued funding. Examples include *The Home Instruction Program for Preschool Youngsters* (HIPPY), *Even Start-Home Visiting* (birth to age 5) [104], The *Attachment and Biobehavioral Catch-Up (ABC) Intervention* [105] which did not meet the DHHS criteria for high quality research evidence, and the *Parents as Teachers* (PAT) program [106].

Attachment-based interventions that are implemented with highly skilled clinicians appear to fare better [107]. One such attachment-based intervention, the Video-feedback Intervention to promote *Positive Parenting and Sensitive Discipline* (VIPP-SD) [108] has been demonstrated in a randomized controlled trial to reduce overactive problem behaviours in children identified at high risk of developing externalizing behaviours through teaching their parents how to enhance their sensitivity and to promote sensitive discipline of their children.

# 3.4. School Based Intervention—Head Start

Children from socioeconomically disadvantaged backgrounds (low SES) commence school with social and cognitive handicaps from which they do not spontaneously recover. Rather, the handicaps compound over time into school failure, special class placement, grade repetition, loss of motivation, truancy, and early school drop-out. It was hoped that early intervention for this population would narrow the cognitive advantage of higher SES children and give lower SES children a better start to their education. Accordingly, in 1965, the then US president Lyndon B. Johnson implemented Head Start, the most intensive and extensive compensatory education program for disadvantaged preschool children ever undertaken.

The assessed outcomes of enhanced learning experiences during the preschool years indicated significant positive effects on social and cognitive development that persisted into the school years, although there was some attenuation of early benefits if programs were discontinued [94]. There was considerable variability across studies, with some study sites showing no gains compared with others that demonstrated significant positive improvement in children's capacity to learn; fortunately, the majority of outcomes fell into the second group. Children from low SES tended to benefit most from early education programs. Programs that have provided services for parents and encouraged parental involvement in their child's program as well as modules that improved the quality of the early home

learning environment in addition to centre-based intervention resulted in enhanced benefits for participating families.

#### 4. Conclusions

Despite these valiant efforts, we have a long way to go as a society in terms of the quality of care that we bestow upon our children. Population studies show that between a third and a half of all children are insecurely attached [89]. While only a small fraction of insecurely attached children progress to offending, those with serious attachment problems are more likely to become chronic users of health care, to experience unemployment or under-employment, and to have difficulty in establishing intimate relationships, among other vulnerabilities. The evidence is in; we need to continue to invest in the very early stages of the lifespan in vulnerable sectors of society in order to reduce the unsustainable costs incurred later in development if we fail to act early.

## **Author Contributions**

Dianna Kenny conceived, designed and wrote the article; Susan Blacker provided the material for the case study; Mark Allerton provided additional text on parenting capacity and Figure 4.

#### **Abbreviations**

ADD: Attention Deficit Disorder;

ADHD: Attention Deficit Hyperactivity Disorder;

ASPD: Antisocial Personality Disorder;

CD: Conduct Disorder;

DJJ: Department of Juvenile Justice;

ID: Intellectual disability;

JO: Juvenile (Young) offender(s);

NSW: New South Wales, Australia;

ODD: Oppositional Defiant Disorder;

PRF: Parental reflective function;

PTSD: Post-Traumatic Stress Disorder;

RAD: reactive attachment disorders;

RIGs: Representations of interactions that have generalized;

SES: Socioeconomic status.

# **Conflicts of Interest**

The authors declare no conflict of interest.

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