

PREVENTION AND INTERVENTION PROGRAMMES FOR VIOLENT YOUTH IN EUROPE

A study carried out
on the initiative of the Evens Foundation
and the University of Antwerp,
and financed by the Evens Foundation



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FOREWORD

Serious violent behaviour by young people has long been the subject of concern in various European countries. The response to it varies greatly. In some countries, children who commit serious crimes are deemed responsible for their actions, and specific criminal law has been developed, with appropriate juvenile prisons. In other countries, the interventions are based on youth protection. Evidence is increasing that placement and imprisonment do not prevent re-offending. There are even indications to the contrary.

The Evens Foundation is devoted to the promotion of a harmonious society in Europe. To contribute to the prevention of violent behaviour and to the effective care of violent young people, the Foundation took the initiative in 2009 to finance a scientific research project on the subject, in the context of its science prize.

The Foundation asked the Youth Mental Health department of the Collaborative Antwerp Psychiatric Research Institute, Antwerp University (CAPRI) to draw up European policy recommendations for implementing effective care in Europe for young persons who present serious violent behaviour, based on an inventory of existing evidence-based care programmes and on the UN Convention on the Rights of the Child.

In this way, the Evens Foundation hopes to bring about social change by providing recommendations and examples of good practice to policymakers and professionals, who in turn can put these into practice.

This publication represents the results of this research, carried out under the direction of Prof. Dirk Deboutte (CAPRI) in collaboration with the European Association for Forensic Child and Adolescent Psychiatry, Psychology and other involved

Professions (EFCAP) and with the helpful cooperation of European experts in the field of evidence-based youth care: Dr Rémy Barbe (Hôpitaux universitaires de Genève), Dr Guillaume Bronsard (Psychiatrie de l'enfant et de l'adolescent, Marseille), Prof. Theo Doreleijers (VU University Medical Centre Amsterdam) and Prof. Robert Vermeiren (Leiden University Medical Centre). The report is aimed at policymakers at the local, national and European level and at professionals engaged in youth care on a day-to-day basis.

This report:

- Outlines the current state of youth criminality in Europe
- Identifies risk factors that trigger violence in young people
- Evaluates effective prevention and intervention programmes
- Makes specific policy recommendations

Most prevention and intervention programmes that have proved their effectiveness come from the United States. Europe clearly has a backlog to make up in this respect. We hope that this publication will be a valuable tool for an effective care policy for violent young people in Europe and a stimulus to research in this field.

Evens Foundation

**Department of Youth Mental Health,
Collaborative Antwerp Psychiatric Research Institute,
Antwerp University**

August 2010

"Proceeding from its ceaseless ambition to fight the causes of violence, discord and aggression in our society, with this scientific research project the Evens Foundation seeks to contribute to building a harmonious intercultural society in Europe, with respect for 'the other'."

THE EVENS FOUNDATION

The Evens Foundation initiates, develops and supports projects that encourage citizens and states to live together harmoniously in a peaceful Europe. It promotes respect for diversity, both individual and collective, and seeks to uphold physical, psychological and ethical integrity.

The Foundation sets up its own sustainable projects, awards two-yearly prizes and enters into partnerships in projects and initiatives of general benefit that correspond to its philosophy. The Foundation is active in the field of Sustainable Peacebuilding in Europe, Peace Education and Media Education. Prizes are awarded in the field of Peace Education, Media Education, Visual Arts, and Science.



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EFCAP

The European Association for Forensic Child and Adolescent Psychiatry, Psychology and other involved Professions (EFCAP-EU) is a federation of national associations for forensic youth mental health professionals. Its board consists of national representatives from most European countries.

The main aims of EFCAP are to:

- Improve the assessment and treatment of children and adolescents who find themselves in the justice system, as well as of their families
- Improve facilities for and facilitate joint international research
- Promote international training and education

Since 1995, EFCAP has organised scientific meetings within the congresses of the European Society for Child and Adolescent Psychiatry (ESCAP), the International Academy of Law and Mental Health (IALMH) and the European Association of Psychology and Law (EAPL).

In 2008, the first EFCAP international congress was held, in Amsterdam. The second congress takes place in Basel from 7 to 10 September 2010. At these congresses, contributors from European countries and further afield submit papers for discussion and share their practical experiences and insights.

This research report will be presented at the Basel congress. The main author, Jan De Meulenaere, will elucidate the main topic of the report: prevention and intervention programmes for violent youth in Europe.

EFCAP-EU
www.efcap.org/

"In recent years,
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INTRODUCTION

European society today is concerned about the phenomenon of violence and crime committed by young people against others. While youth violence is a subject that receives wide coverage in the media, statistics, on the whole, do not point to a significant increase in juvenile crime. In fact, it can even be said to be stabilising (reference list: 4, 9, 12). Still, the overall prevalence of violent behaviours among the young remains high. According to the comparative statistics of the EU member states, juvenile delinquency accounts for an average of 11% of all crime, although it can rise to 21% in some countries (9). These high rates of violence and violence-related behaviours are a serious burden on the victims, their families and society in general because of their lifespan consequences and economic costs (3).

These behaviours are also harmful to the perpetrators; and they are associated with poorer all-round functioning and other risk-taking behaviours such as academic failure, substance abuse and risky sexual behaviour (1, 3). The widespread impact of these problem behaviours highlights the importance of preventing and treating them effectively.

Youth conduct problems have long been regarded as relatively intractable and resistant to treatment interventions. In recent years, there have been advances in the field of youth violence prevention and intervention, and there seems to be reason for some optimism now. There is a broad consensus that an approach is needed which is based on the 'public health' model (3, 7). Essentially, this model comprises two main components (4):

1. It aims to prevent violent offending among young people who are at risk.
2. It needs to respond effectively to offending once it has occurred.

To date, however, empirical evaluation in the field of youth-violence prevention and intervention programmes has been very limited; there are substantial gaps between the most frequently used strategies and the most rigorously evaluated ones (46).

The field of youth-violence prevention is complicated by the fact that several scientific disciplines and professional jurisdictions are involved. Each of these has different definitions (**see Box 1**), different concerns, and different views on approaches to its resolution. And yet, to adequately address youth violence, common viewpoints, research agendas and implementation plans should be worked out.

This report is written from a psychiatric point of view. The main psychiatric diagnosis referring to youth violence is the diagnostic category of 'Conduct Disorder' (CD). There is general consensus in literature that conduct disorder is one of the most common forms of psychopathology among children and adolescents (1, 25). Conduct problems are the most frequent reason for referral for psychiatric evaluation of children and adolescents, accounting for 30% to 50% of referrals in some clinics. Prevalence in the general population is estimated to be between 1% and 3.4% of children and adolescents (1, 25).

The ratio of boys to girls with conduct disorder is between 5:1 and 3,2:1 (1, 25), depending on the age range studied. Boys are affected more commonly at all ages, but, as children grow up, the gap between boys and girls closes. Gender-specific features, which become especially obvious in adolescence, include boys' tendency to exhibit more overt disruptive behaviour and girls' tendency to commit more covert (concealing) crimes (21, 25). In the most severely disturbed young people, these gender-specific differences vanish (25).

BOX 1. DIFFERENT CONSTRUCTS ARE USED IN THE FIELD OF YOUTH VIOLENCE PREVENTION

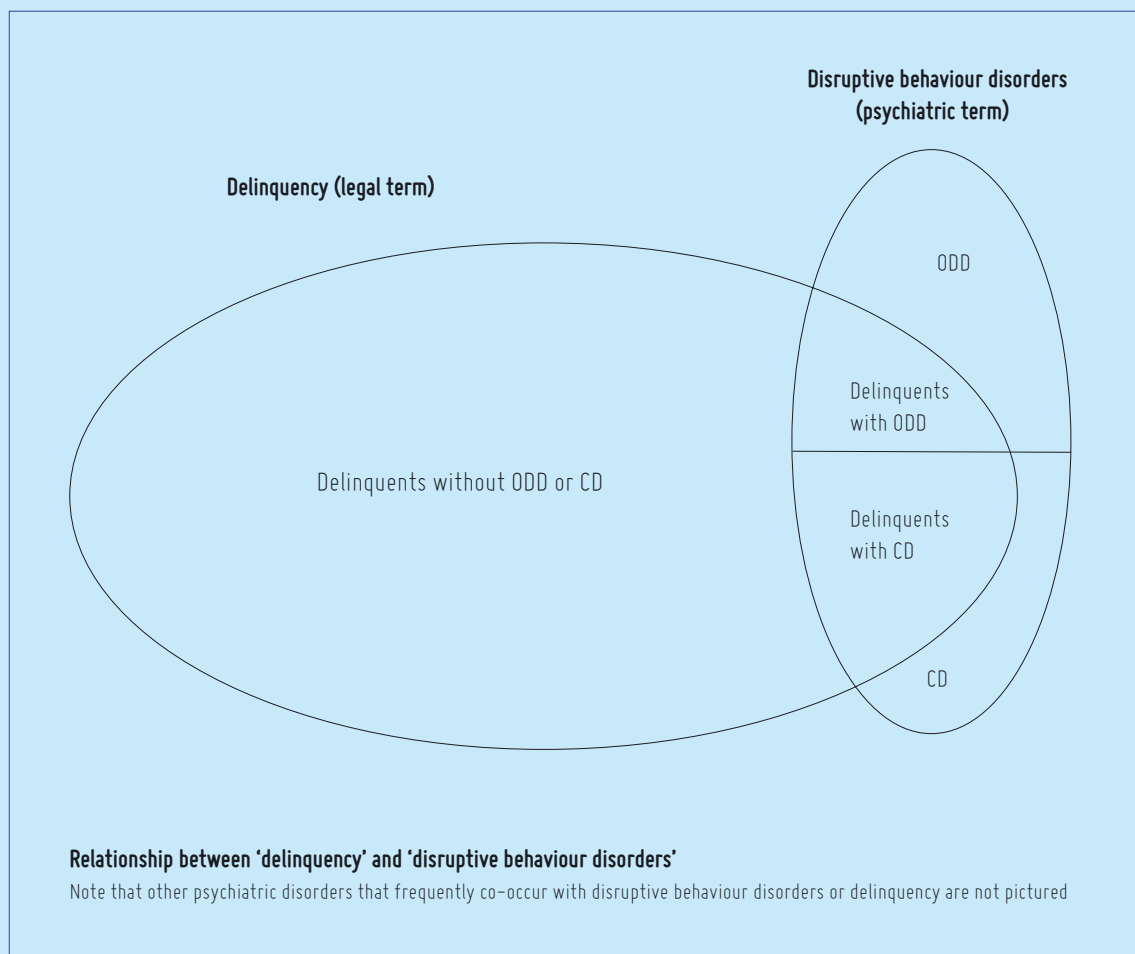
Many studies have investigated violence, delinquency and conduct disorder as overlapping constructs. These constructs are not identical but they share a lot of similarities and probably have a great number of risk factors in common

Violence: The intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation. (World Health Organisation, Global Consultation on Violence and Health, 1996)

Juvenile delinquency (legal term): The anti-social acts of children or persons under age which are illegal or lawfully interpreted as constituting delinquency (MeSH term retrieved from <http://ovidsp.ovid.com/ovidweb.cgi>)

Behaviour disorders (psychiatric disorder): Behaviours which are at variance with the expected social norm and which affect other individuals (MeSH term retrieved from <http://ovidsp.ovid.com/ovidweb.cgi>)

- Oppositional Defiant Disorder (ODD): A psychopathological disorder, usually beginning in childhood, consisting of negativism, disobedience, and hostile behaviour toward authority figures.
- Conduct Disorder (CD): a repetitive and persistent pattern of behaviour in which the basic rights of others or major age-appropriate societal norms or rules are violated. These behaviours include aggressive conduct that causes or threatens physical harm to other people or animals, nonaggressive conduct that causes property loss or damage, deceitfulness or theft, and serious violations of rules. ODD can be a precursor to CD, but only a small proportion of ODD children progresses to CD (2).



This report is written for policymakers and other involved professionals. It lists a number of recommendations for good practice in tackling youth violence. First, the magnitude of youth violence in Europe is described, followed by a review of risk and protective factors that have been found to contribute to the development of conduct problems. Finally, the report describes several prevention and intervention programmes that have been shown empirically to help prevent and treat youth conduct problems.

Several serious conditions co-occur with conduct disorders (e.g., ADHD, specific developmental disabilities, affective disorder, anxiety disorder and substance abuse). Some of these require additional treatment. This report does not discuss treatment of these comorbid disorders. Nor does it discuss some types of violence (such as sexual violence, hooliganism, gang-related violence) that require a specific approach.

This report is based on a systematic review of the scientific literature and meetings of European experts. The list of references for this report was developed by searching the Medline and PsycINFO online systems (from 1989 to October 2009), by reviewing the bibliographies of review articles, and by asking experts in this field for source materials. The following topics were reviewed: exp/Conduct Disorder and (prevention or intervention or program\$ or treatment or care or therapy). ab. Abstracts generated by these searches were reviewed for relevance. All articles from 2000–2009 were included; between 1989 and 1999, only review articles were included.

"A small percentage, about 5%, account for most (50-60%) crimes committed by young people."

PREVALENCE OF YOUTH VIOLENCE IN EUROPE

Finding out the real prevalence of youth violence presents many problems. Several approaches to measuring youth violence are widely used. The most common ones are arrest reports, youth self-reports, and victim self-reports (3,12).

The first approach relies on official crime statistics collected by the justice system, typically arrest reports. These reports appear to be more objective but they are not a good general measure for youth violence since many offences remain undetected and arrests are made in less than half of reported crimes (12). Self-reports ask young people to offer confidential information about violent acts they have committed or been the victims of during a given period of time. They are designed to overcome the drawbacks of violence measures based on official records. However, self-reports also have limitations since their validity depends on how accurately young people or victims in general report their experiences (12). Both types of measures have both advantages and limitations, and understanding how to interpret them can contribute to the measuring of youth violence.

The majority of adolescents, about 80%, commit some sort of anti-social acts, mostly between the ages of 14 and 18 (12), that are not usually considered as serious crimes. A small percentage, about 5%, account for most (50-60%) crimes committed by young people (29). Since there are no international standards on how crime statistics should be produced and presented, comparisons between countries that are based on their respective juvenile crime statistics call for prudence. Different countries produce these statistics differently, which makes international comparisons difficult (4).

Keeping in mind the limitations created by such differences, existing research and statistics show a rapid rise in juvenile crime up to the 1990s (4, 12). Recent data, however, show a leveling-off of this trend (4, 9, 12). Nevertheless, the prevalence of youth violence remains high: in Europe overall, an average of 11% of all crime is committed by youths (9).

Moreover, it should be noted that the so-called 'dark figure' of crime (i.e. the number of offences not reported to the official social-control authorities, i.e. the police and the courts) consists mostly of crime committed by minors. This is mainly because the offences are generally not serious and because the victims are often minors themselves, and are less likely to contact the appropriate authorities (12).

Regardless of the picture provided by the statistics at any given time, there is clearly a widespread perception in European countries that juvenile delinquency is on the rise, and that the offences committed by minors are becoming more serious (4). In these circumstances, the public is less tolerant of youth violence and is calling for more stringent control mechanisms, leading many countries to toughen their youth legislation (4). On the other hand, there has been a widespread development of new approaches not only to crime but also to crime prevention.

All this serves to underline the need for international cooperation in order to facilitate European-level measures to deal with this phenomenon, and also for well-designed information policies to tackle the over-dramatised perception of the problem.

SOCIO-CULTURAL DIFFERENCES IN JUVENILE DELINQUENCY

Different rates of violent juvenile delinquency among ethnic sub-groups have been observed for some time (11, 13). These observations have provoked public-policy debates and various competing explanations. Theories based on arrest policy, loss of community cohesion, socio-economic disparity, deviant cultural values and attitudes toward violence have been proposed (11, 13). However, conclusions about the differences in serious juvenile offending among these groups remain controversial and no single theory has fully addressed the reasons for these variations. Study results reveal that there is no difference in the prevalence of psychiatric or conduct disorders in immigrant youth compared to native youth (13). Yet a Belgian study found that they follow different trajectories within the youth care system: immigrant young people are under-represented in mental health care but over-represented in the juvenile justice system (13).

Furthermore, European countries are confronted with a large number of foreign minors (some of them unaccompanied) from around the world, seeking asylum in Europe (10). Those young people are a very delicate issue for the general public and politicians, since they are associated with delinquency. Strategies should be developed and implemented to address their specific needs (2, 10, 39). Traditional prevention and intervention approaches will most likely not succeed with these young people.

"Violent behaviour rarely appears spontaneously."

A DEVELOPMENTAL PERSPECTIVE ON YOUTH VIOLENCE

This report views violence from a developmental perspective. Violent behaviour rarely appears spontaneously. It typically has a long developmental pathway and there is usually a strong continuity in violence through childhood, adolescence, and adult life (1, 2, 3, 27, 28). The findings from longitudinal studies carried out by Moffitt and Caspi (the Dunedin Study), Loeber (the Pittsburgh studies), and Tremblay (the Quebec study) have enabled researchers to identify a number of developmental trajectories and relevant risk factors.

It is now widely accepted that the emergence of violent behaviour is the result of a complex interaction between a genetically vulnerable individual and his environment (see Fig. 1) (3, 15, 17, 19, 31). From this perspective, apparent maladaptation can often be understood as adaptation to harmful environmental conditions. This is also reflected in the psychodynamic perspective on violence, in which violence is seen as an individual's attempt to deal with a damaging environment and, as such, a sign of the struggle to keep going in unbearable conditions (20).

Dodge presented a general model which asserts that the process through which the environment exerts its influence on conduct-disorder-related aggressive behaviour is the way that the brain processes noxious environmental stimuli during episodes of social interaction (19). This processing involves three interrelated systems: the neural system, the autonomic arousal system and the information-processing system (19). Individual differences in the susceptibility of the brain are shaped by genetic variation, early environmental influences, and their interaction (15, 19, 31).

The mechanisms through which genetic and environmental factors operate remain elusive.

Complex genetic and environmental processes give rise to biological and environmental risk factors (15, 31). The way these risk factors interact can best be explained by the Risk-Protection Model.

RISK-PROTECTION MODEL

The Risk-Protection Model asserts that violence is the end product of a chain of events over the course of a child's development, where individual and environmental risk and protective factors accumulate and interact with each other (1, 2, 3, 6, 16, 23, 33, 42, 63). Identifying risk and protective factors and understanding when in a child or adolescent's life they occur, and how they exert their effects, enables scientists to develop prevention and intervention programmes that can be put in place at the right time to have the most effect.

RISK FACTORS FOR YOUTH VIOLENCE

A risk factor is any characteristic that is associated with an increased chance that a young person will become violent (1, 3, 6, 25). Having a risk factor does not mean a person will be violent; it just means that he or she is more likely to be violent than a similar person without that factor. No single factor or set of risk factors can predict with absolute certainty that a young person will become violent. The greater number of risk domains that apply in the history of a person, the higher the risk of violent behaviour. It is the accumulation of risk and the interaction among risks that leads to conduct disorder (1, 6, 16, 63). The types of risk factors that have been examined commonly include the characteristics of individual children and young people, their families, their schools, their peers and the communities they live in (see Table 1) (3, 6, 16, 23). Knowledge of risk factors on its own is of limited value. Risk factors that have causal significance and are preventable or alterable through intervention are of greatest practical relevance (3, 20, 30). Risk factors that are not plausible causal factors, or that are not readily preventable or alterable, may remain useful for selecting at-risk populations for selective preventive interventions (3, 20, 30).

Risk factors for violence are not static. The strength of a risk factor changes depending on when it occurs over the course of development. Some factors come into play during childhood or earlier, whereas others do not emerge until adolescence (3, 6, 23). Most of the risk factors that come into play during childhood are found in the individual and family domain, whereas, during adolescence, peers and community take a more prominent role.

Substance use and the availability of drugs in the community are important risk factors for violence (3, 4, 23, 25, 28). This merits the particular attention of all policymakers, given that the majority of violent adolescent offenders use alcohol and illicit drugs (28). The question as to whether substance use causes young people to become violent has been extensively studied, but literature suggests that the onset of CD precedes or coincides with the onset of substance use disorder (3, 25).

FIG. 1. A simplified model of the mechanisms through which gene/environment interaction affects aggressive behaviour

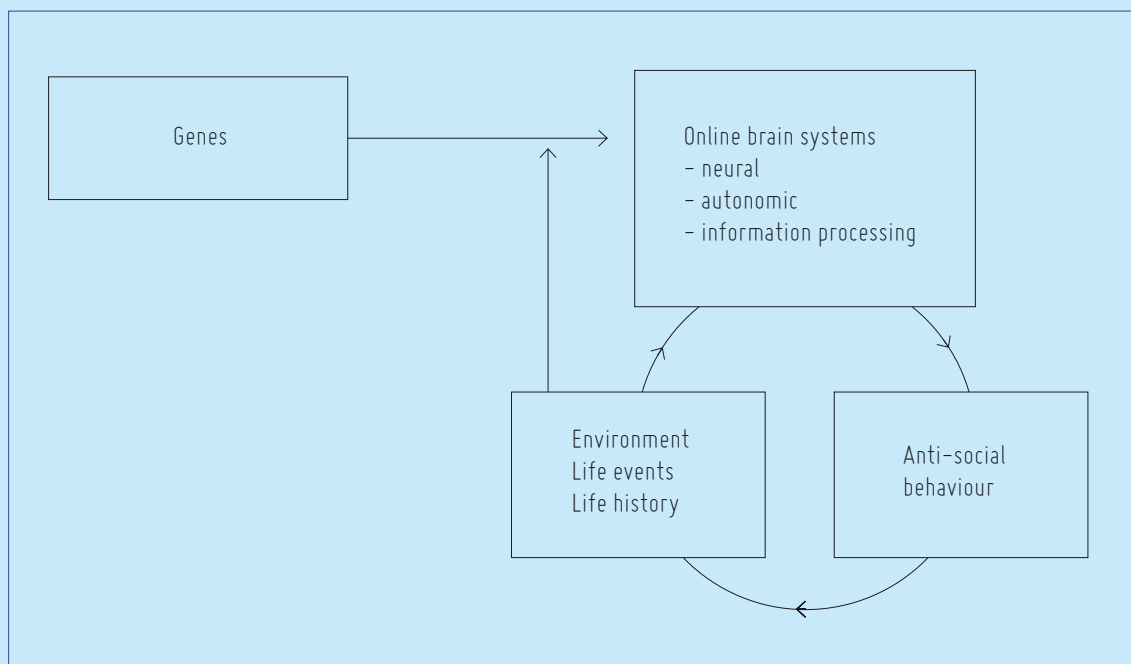


TABLE 1. Risk factors for youth violence, listed by domain

<u>INDIVIDUAL</u>	<u>FAMILY</u>	<u>SCHOOL</u>	<u>PEERS</u>	<u>COMMUNITY</u>
MALE GENDER	POOR FAMILY MANAGEMENT AND PARENTING PRACTICES	POOR PERFORMANCE IN SCHOOL	WEAK SOCIAL TIES	AVAILABILITY OF DRUGS
HYPERACTIVITY		ANTI-SOCIAL BEHAVIOUR	ANTI-SOCIAL/ DELINQUENT PEERS	NEIGHBOURHOOD CRIME
EARLY INITIATION OF VIOLENCE	POOR PARENT-CHILD RELATIONS	LOW SCHOOL COMMITMENT	GANG MEMBERSHIP	NEIGHBOURHOOD DISORGANISATION
AGGRESSION	ANTI-SOCIAL PARENTS			
SOCIAL COGNITION AND SOCIO-MORAL REASONING	ABUSIVE PARENTS	LOW EDUCATIONAL ASPIRATIONS		
ANTI-SOCIAL ATTITUDES	PARENT SUBSTANCE ABUSE			
PSYCHOLOGICAL CONDITION (E.G., RISK-TAKING, IMPULSIVITY, LOW INTELLIGENCE)	LOW FAMILY SOCIO-ECONOMIC STATUS			
SUBSTANCE USE				

"Aggression is unlearned, not learned. With age, the young human learns to regulate these natural aggressive behaviours."

Most likely, the relationship between CD and substance use is bidirectional, with each worsening the expression of the other. Drug use may lead to the continuation of violence rather than its onset, while the risk of drug use may lie more in the characteristics of the context in which substance use and violence are likely to occur than in any direct effect of drugs on behaviour (3). However, these findings are not conclusive.

PROTECTIVE FACTORS

Factors that reduce the likelihood of violence are called protective factors, but there is some disagreement about exactly what protective factors are (3, 6, 25, 33). They have been viewed both as the absence of risk (opposite ends of a continuum) and as something that interacts with risk factors to mediate outcomes. The evidence regarding protective factors against violence has not met the standards established for risk factors (3, 25). Therefore, we can not refer to protective factors, but rather to probable protective factors (such as high IQ, social skills, easy temperament, and a good relationship with at least one parent or with other important, adult, prosocial peers) (3).

RISK ASSESSMENT

The same set of risk and protective factors can have a different outcome, depending on an individual's resilience (32, 33, 42). Given this, assessing children and adolescents for potential violence requires an organised approach. Risk assessment should be based on clinical knowledge, an exhaustive diagnostic interview, and understanding of relevant risk and protective factors (1, 3, 6, 32, 42). Every child presenting with significant conduct problems merits a careful diagnostic assessment (1, 8, 37, 50). This evaluation also specifies secondary problems caused by the child's behaviour or comorbid disorders.

DEVELOPMENTAL TRAJECTORIES TO CONDUCT DISORDER

The subtyping of conduct disorder has been of great interest because of the need to detect those young people who are most likely to persist in anti-social behaviour, those who will proceed to higher levels of violent behaviour, and those who will desist from that behaviour (1, 22, 25, 27, 28, 32). Different criteria for subtyping have been proposed:

AGE OF ONSET

In recent decades, scientists have learnt that the risk factors associated with anti-social behaviour in general and violence in particular are evident from relatively early childhood. Based on the age of onset of conduct disorder, Moffitt identified two widely accepted trajectories: one in which violent behaviour appears before the age of 10 (life-course-persistent), and one in which it emerges after the age of 10 (adolescence-onset) (3, 22, 28, 29). Today, the evidence base suggests that a third subtype, childhood-limited CD, should be considered (14, 28). Longitudinal studies report on a group of children with elevated disruptive behaviour during childhood where the conduct problems do not continue from childhood into adulthood (14, 28). This reminds us that temporary conduct problems are ever-present in healthy young children.

The evidence base confirms that the distinction between a childhood-onset and adolescence-onset subtype is relevant, since it conveys differential information about patients' characteristic problems, course and prognosis (1, 22, 25, 28).

The life-course-persistent group whose anti-social behaviour begins in childhood shows a persistent and even lifelong involvement in violent behaviour. The adolescent-onset type fares relatively better. In this group, anti-social behaviour begins during adolescence through association with other delinquent youths or the seeking of social status through delinquent behaviours, but ceases in early adulthood. Their adult prognosis does, however, include substance abuse and crimes that remain largely undiscovered.

Most adolescents commit some delinquent act, but most of these are minor violations and a small number of these youths (around 5%), who are persistent offenders, account for the vast majority of serious delinquent acts. Both childhood-onset and adolescent-onset conduct disorder requires intervention, but it is useful to differentiate the subtypes because they are thought to require different intervention goals and approaches.

Recent longitudinal studies however, have provoked a shift in the understanding of the development of violence (30, 34, 35). Developmental researchers used to focus on how violent behaviour is acquired through learning processes. Yet aggression is relatively common in the first years of life and decreases subsequently in most children. Aggression is unlearned, not learned (20, 30, 34, 35). With age, the young human learns to regulate these natural aggressive behaviours. Tremblay draws the following conclusions from the available longitudinal data on the development of physical aggression from birth to adulthood (34):

- Most individuals have used physical aggression.
- The onset of physical aggression use generally occurs before 24 months of age.
- The frequency of using physical aggression declines steadily from the pre-school years to old age.
- Where individuals learn to use physical aggression, that learning generally occurs during the first 24 months after birth.
- Most individuals learn alternatives to physical aggression before school entry.
- A small proportion (approx. 3% to 5%) of individuals maintain high levels of physical aggression use from pre-school years to adolescence.
- The adolescents who most often use physical aggression tend to be among those who used physical aggression most often before adolescence.
- Successful prevention of physical aggression by adolescents may be cost-effective when targeted at high-risk pre-school children.

These longitudinal studies show that human infants spontaneously use physical aggression and that humans learn *not* to physically aggress rather than learn to aggress (30, 34, 35). It seems clear that all 18-month-olds, who have developed normally, use physical aggression out of fear, anger, disgust, curiosity and greed. However, not all do so at the

same frequency and with the same vigour. Among a subset of children, levels of aggression remain high, and it is this group that is most likely to demonstrate additional serious behaviour problems such as physically violent and delinquent acts (30, 34, 35). These findings suggest that we might need to revisit the traditional beliefs of the general public and the prevention researchers. The public's focus on violence during adolescence and its prevention during school years is easy to understand; physical aggression during adolescence is more likely to lead to worse consequences for the victims than physical aggression before adolescence, since physical growth during adolescence increases both muscle and brain power. However, these studies underscore the importance of prenatal and early postnatal development for learning to regulate aggressive behaviour (15, 30, 34, 35).

The environment will play an important role in the developmental trajectories of these newly acquired skills. Children learn to control these 'natural' behaviours with age, experience and brain maturation (15, 30, 34, 35). Although brain maturation continues into early adulthood, neural adaptations are more frequent and occur more readily in childhood (15, 19, 31). This trend of decreasing brain plasticity across development stresses the need to initiate prevention and early intervention programmes as soon as possible for those children at highest risk (15, 19, 31, 34, 35).

OVERT VERSUS COVERT DISRUPTIVE BEHAVIOUR

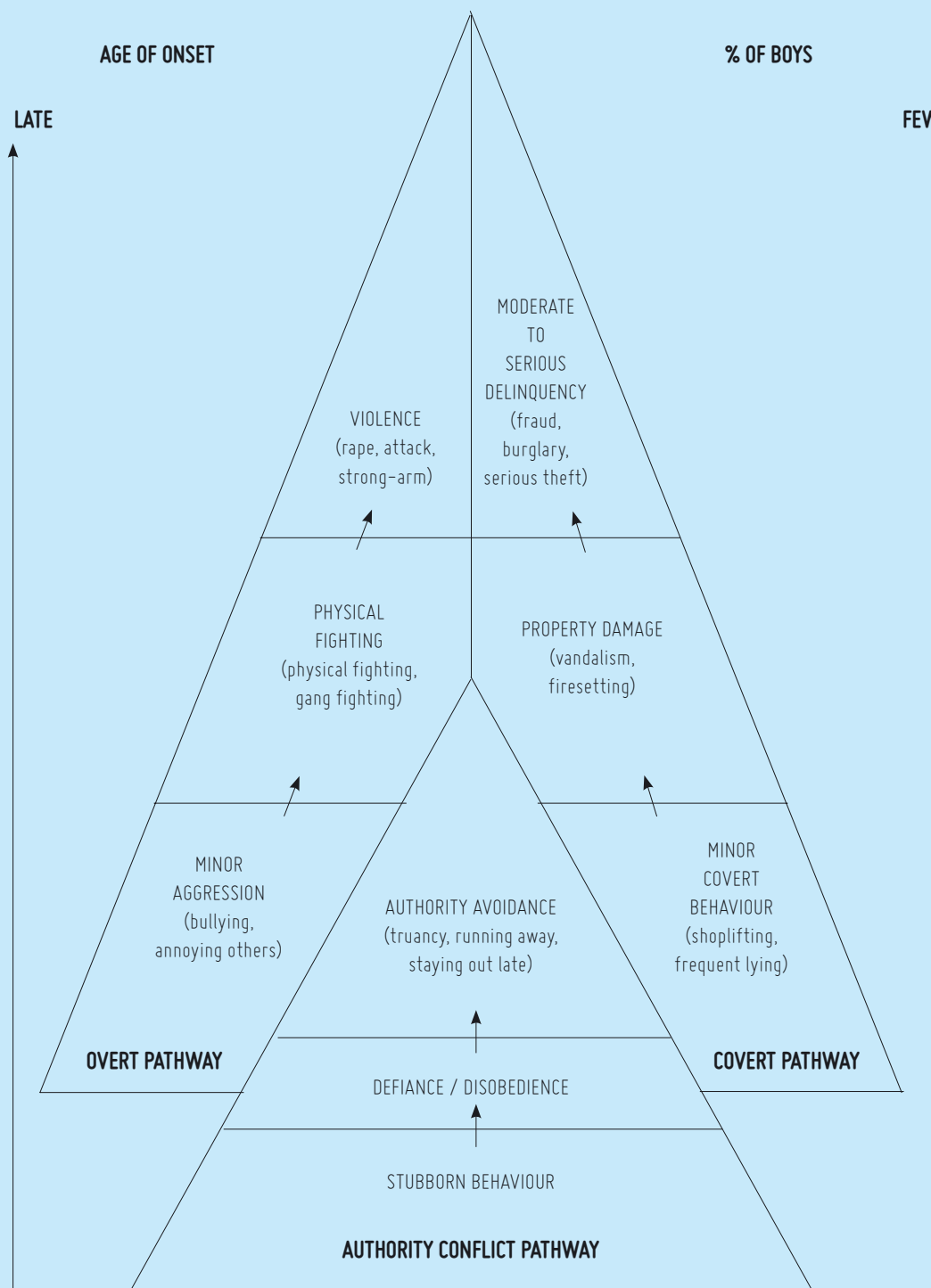
Based on longitudinal data sets, it is clear that violent behaviour rarely appears spontaneously. The development of violence occurs in an orderly rather than a random way. Loeber and colleagues proposed a 'three pathways' model for serious delinquent behaviour (see Fig. 2) (16, 25, 27, 32).

This model describes three distinct pathways:

- **Overt pathway**, starting with minor aggression, followed by physical fighting and violence
- **Covert pathway**, beginning with minor covert behaviours, followed by property damage and moderate-to-serious delinquency
- **Authority conflict pathway**, before age 12

Knowledge of these developmental pathways can support prevention and intervention efforts: a youngster's position on a pathway not only specifies actual problems, but also antisocial behaviours that may occur in the future.

FIG. 2: Pathway Model for Overt, Covert, and Authority Conflict
(Loeber & Hay, 1997; Loeber et al., 1993)



THREE PATHWAYS TO BOYS' PROBLEM BEHAVIOUR AND DELINQUENCY

"Prevention programmes should be applied as soon as possible and should focus on the acquisition of new skills."

REACTIVE VS PROACTIVE AGGRESSION

Recently, a distinction between reactive and proactive aggression has been proposed to clarify the heterogeneous group of aggressive children. Reactive aggression is defined as an aggressive response to a perceived threat or provocation, whereas proactive aggression is considered as behaviour that anticipates a reward (24, 32). Although many children show both types of aggression, evidence suggests that reactive and proactive aggression are distinct phenomena with different underlying neurobiological and social-information-processing mechanisms (24). This subtyping may have some implications for prevention and intervention approaches to aggression (24, 32): interventions altering reactive aggression should focus on anger management, whereas programmes addressing proactive aggression should promote social problem-solving skills (24).

CALLOUS-UNEMOTIONAL TRAITS

Recent studies have identified characteristics, in a small number of children and adolescents, that are congruent with adult psychopathy (22, 25, 26, 29). The interpersonal features (i.e. manipulation, deceitfulness, superficial charm and grandiosity) and the affective features (i.e. shallow affect, lack of empathy, guilt and remorse, and a failure to accept responsibility for anti-social acts) of psychopathy, labelled as callous-unemotional traits, can be present in early childhood (children as young as three) and adolescence, and continue into adulthood (26, 28, 29). There is a growing consensus that high levels of these features predict persistent and serious forms of anti-social behaviour (26, 29). Traditional prevention and intervention programmes will probably fail with youth who show these characteristics (26, 51).

PREVENTION AND INTERVENTION

The developmental trajectories of juvenile violence suggest that no one approach will hold the 'solution' to the problem of youth violence (50). It is unlikely that there is a universal set of sufficient factors for successful treatment (6). What is necessary will depend on the context in which treatments are administered, the youth targeted, and the goals of the treatment.

In 2004, the US National Institutes of Health (NIH) asked a panel of scientists to report on the state of knowledge of violence prevention and intervention programmes (6). In line with the 'What works' principles from the United Kingdom and European experts in the field (4), the panel concluded that successful programmes tend to share a constellation of characteristics concerning:

- how the programmes should be developed — derived from sound theoretical rationales, addressing strong risk factors, developmentally appropriate
- how they should be delivered — long-term treatments (often lasting a year and sometimes much longer), tailored to the specific needs of the target group (52), following a cognitive/behavioural strategy (61, 66), focusing on improving social competency and other skill-development strategies (65), preferably not delivered in coercive institutional settings, having the capacity for delivery with fidelity
- to whom they should be delivered — working intensively with those targeted for treatment, multicontextual (71), as early as possible

"Based on the evidence to date, parent training should be the first-line approach for young children with disruptive behaviour."

Shifting to programmes that do not work, the NIH concluded that there are many pitfalls in both theory and implementation that can cause an intervention to be unsuccessful. Some are the opposite of factors that lead to success, such as the failure to address strong risk factors, short duration and developmentally inappropriate interventions (6). Others include (6):

- programmes that bring together high-risk youth in ways that facilitate contagion (i.e., most likely to have harmful, iatrogenic effects) (64)
- implementation protocols that are not clearly articulated
- programmes limited to scare tactics
- programmes limited to toughness strategies (e.g. classic boot camps)
- programmes that consist largely of adults lecturing 'at' youth

Other standards have been proposed for youth violence prevention programmes, particularly those intended for implementation on a national level. One of these is cost-effectiveness, a key consideration in programme funding but not a scientific criterion for effectiveness (6, 48).

The list of prevention and intervention approaches that work and do not work is based on high-quality studies. Although these studies have certain limitations (60, 68, 69), the standards for evaluating the effectiveness of prevention and intervention programmes are widely agreed (3, 6, 43, 55, 64):

- rigorous experimental design
- evidence of significant deterrent effects
- replication of those effects at multiple sites or in clinical trials

It should be noted that most of the rigorous evaluations in this field have been carried out in North America. There is little rigorous empirical evidence on the prevention of juvenile crime from European countries (4, 7, 54).

The recommended approaches to violence prevention and intervention range from a focus on individuals, to families, schools and neighbourhoods or communities (1, 3, 5, 7, 8, 40, 43).

PREVENTION

All the programmes and strategies listed in this section are prevention approaches: they aim to prevent the onset of youth violence and associated risk factors. Some target individual risk factors, others focus on environmental risk factors, and a few are designed to change both. They can be implemented on a universal scale (for the entire population) or a selected scale (for children at elevated risk of youth violence). Programmes that target the families of high-risk children are among the most effective in preventing violence. As stated above, these programmes should be applied as soon as possible (14) and should focus on the acquisition of new skills (42, 66).

EFFECTIVE PREVENTION APPROACHES

(2, 3, 4, 5, 7, 8, 43)

INDIVIDUAL APPROACHES

Skill- and competency-building programmes designed to improve a broad range of skills and competencies (e.g., social skills, emotional competence, self-control, moral reasoning, problem-solving, thinking skills and academic or job-related skills) are effective general strategies for reducing youth violence and risk factors for youth violence (3, 51). These programmes are often school-based.

Examples:

Promoting Alternative Thinking Strategies

I Can Problem-Solve

PARENT-FOCUSED APPROACHES

The evidence for programmes that focus on family functioning, particularly on family management and parenting practices, is quite robust and persistent (2, 50, 67).

• Training Programmes for Parents:

Programmes that target the families of children at risk are among the most effective in preventing youth violence (25, 50, 51, 67). Research shows that training parents to use specific child-management skills can lead to improvements in children's anti-social behaviour (including aggression) and family management practices (63, 66). Based on the evidence to date, parent training should be the first-line approach for young children with disruptive behaviour (50, 66).

Examples:

Triple P (Positive Parenting Programme)

The Incredible Years

To date, however, there is insufficient evidence to draw any firm conclusions concerning the role that parent-training programmes might play in preventing behavioural problems on a universal scale (38). Studies provide some support for the use of group-based parenting programmes to improve the emotional and behavioural adjustment of children under the

age of three. Yet there is little known about the long-term effectiveness of the programmes, and the results from the few studies for which data are available produce borderline-significant findings (38).

• **Home Visitation:**

A nurse or other professional goes to the child's home and provides training, counselling, support, monitoring, or all of these services, to at-risk mothers (47). Given the evidence that both prenatal and postnatal malnutrition contribute to the development of child behaviour problems (57), adequate nutrition might also be part of this prevention approach.

This strategy is particularly effective when implemented before children develop behaviours that put them at risk of violence (47).

Example:

Nurse-Family Partnership

SCHOOL-BASED PROGRAMMES (3, 39, 45, 46, 59):

There are conflicting findings for most school-based programmes, both for individual change programmes and for those attempting to change the social climate or school organisation (48). As mentioned above, programmes designed to strengthen individual skills have mostly demonstrated positive effects and these are often school-based programmes (3, 39).

• **Behaviour Management Programmes:**

Strategies that take a behavioural approach to youth violence can also have positive, consistent effects on violence, delinquency and related risk factors. The behavioural approaches shown to be effective in preventing youth violence on a universal scale are generally school-based. These are: monitoring behaviour and reinforcing attendance, academic advancement and school behaviour, and behavioural strategies to manage a classroom (39, 49).

Examples:

Seattle Social Development Project
Olweus Bullying Prevention Program
Good Behavior Game

• **Capacity-Building Programme:**

Approaches that focus on building a school's capacity to plan, implement and maintain positive changes can considerably decrease student delinquency.

• **Teaching Strategies:**

Several teaching strategies have proven to be effective in reducing the risk of academic failure, a risk factor for youth violence (3):

- Continuous progress programmes, designed to allow students to proceed through a hierarchy of skills, advancing to the next level as each skill is mastered

- Cooperative learning programmes, bringing students of various skill levels together in small groups, allowing students to help each other learn
- Compensatory education strategies (such as cross-age or adult tutoring) which target students at risk for academic failure, so they can receive extra assistance to improve their academic performance

COMMUNITY-BASED PROGRAMMES:

Few community-based interventions have been evaluated, though some initiatives appear to have some effect (3, 4, 7, 25). These include:

- Programmes to improve community cohesion and empowerment, based on an assessment of risk and protective factors in the lives of young people e.g., the Communities That Care programme
- Mentoring (the creation of relationships between young people who are at risk of offending and pro-social peers or older volunteers) e.g., Big Brothers Big Sisters of America
- Situational crime-prevention methods (based on a theory that crime occurs when motivated offenders coincide with suitable targets in the absence of capable guardians) (4)
- Targeted policing of youths and of areas where they are known to commit crimes (4)

MULTICONTEXTUAL PROGRAMMES:

A small number of promising youth violence prevention programmes address multiple domains that affect a child's risk of future violence: home, school and community. These programmes target at-risk youth.

Examples:

CASASTART
(Striving Together to Achieve Rewarding Tomorrows)
The Incredible Years: Parent, Teacher and Child Training Series
Families and Schools Together (FAST Track) (52)

INEFFECTIVE PREVENTION APPROACHES (3, 4, 64)

- Peer-led programmes, including peer counselling, peer mediation and peer leaders (3, 25, 64)
- Non-promotion to successive grades
- Redirecting youth behaviour and shifting peer-group norms, attempting to turn youth gangs into benign clubs (redirecting high-risk youth towards conventional activities via recreational enrichment and leisure activities)
- Curfews aimed at restricting criminal opportunities by keeping children off the streets at certain times and places

For all preventive efforts there is a balance to be drawn. On the one hand, the interventions have potential benefits, both in reduced crime and other outcomes. On the other, there are the dangers associated with stigmatising groups, individuals and families (with the potential to increase their exclusion and offending) and of impinging on the civil liberties of people who have not committed any crimes (7).

INTERVENTION

All programmes and strategies in this section are implemented on an indicated scale, that is, for young people who have already demonstrated delinquent or seriously violent behaviour.

A problem with intervention is that it is unavoidably focused on those young people who have been caught — and are a small minority of offenders. They may include some of the most prolific offenders in this age group, although there is some suggestion in the literature that the most visible, rather than the most active, offenders end up in the juvenile courts. Generally, the criminal-justice system deals only with a minority of juvenile offenders, and evidence on recidivism in juvenile justice suggests that its ability to prevent future offending is not strong.

In general, a juvenile's involvement with the justice system seems to have a negative impact on his or her psycho-social development, even in systems that aim to help rather than repress (7). Justice-system approaches to preventing youth violence can be effective when they focus on providing help and support rather than establishing greater punishments. One such approach is 'wraparound services', in which comprehensive services are tailored to the individual needs of youths and their families, as opposed to trying to fit youths into predetermined or inflexible programmes. Some interventions may work for one young person but not for another, even when they have committed comparable offences of similar seriousness.

Intervention should also aim to prevent victimisation among those young people who have already been attacked, abused or stolen from. Young people are often the victims of repeated crimes, and those who are victimised repeatedly are more likely to go on to become offenders (7).

EFFECTIVE INTERVENTION APPROACHES

(3, 4, 7, 8, 43)

These programmes include many of those listed above, delivered more intensively and applying more motivational techniques. They also include the following:

INDIVIDUAL APPROACHES

Multimodal, behavioural and skills-oriented interventions are more effective than counselling and other less-structured approaches.

FAMILY-BASED INTERVENTIONS

Family therapy can be quite effective in preventing further violence in already violent young people (70). The most effective family interventions entail programmes with multiple parts that address not only the child at risk but the internal dynamics of the family and the family's engagement in the community, the school and with their children's peers.

A thread they all share is the focus on altering maladaptive or dysfunctional patterns of family interaction and communication, including negative parenting behaviours — all risk factors for youth violence. Family therapies show consistent, positive effects on family functioning, child behaviour, family interactions, and delinquency. Current evidence suggests that family and parenting interventions for juvenile delinquents and their families have beneficial effects in reducing the time spent in institutions (70). These interventions may also reduce the rates of later arrest, but at present these results need to be interpreted with caution, because of diversity in the results of studies (70).

Four model intervention programmes that use the family therapy approach are:

• **Functional Family Therapy (FFT)** (4, 43):

FFT is a family-based intervention programme for youths with behavioural problems and their families. Its effectiveness derives from emphasising those aspects that enhance protective factors and reduce risk. To accomplish these changes in the most effective manner, FFT is a multi-dimensional programme with steps that build upon each other. These phases consist of engagement and motivation, behaviour change and generalisation.

retrieved from

<http://www.colorado.edu/cspv/publications/factsheets/blueprints/FS-BPM03.pdf>

• **Multisystemic Therapy (MST)** (4, 43, 50, 52, 61):

MST is an intensive family- and community-based treatment that addresses the multiple factors known to be related to delinquency. The multisystemic approach views individuals as being nested within a complex network of interconnected systems that encompass individual, family and extrafamilial (peer, school, neighbourhood) factors. Intervention may be necessary in any one or a combination of these systems.

MST addresses the multiple factors known to be related to delinquency across the key settings, or systems, within which youths are embedded. It strives to promote behaviour change in the youth's natural environment, using the strengths of each system (e.g., family, peers, school, neighbourhood, indigenous support network) to facilitate change.

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A recent Cochrane review, however, stated that there is inconclusive evidence of the effectiveness of MST compared with other interventions with young people (56).

"Home-based treatments appear to be more effective than residential treatments."

• **Multidimensional Treatment Foster Care (MTFC)** (4, 43, 50, 58):

This programme is designed for adolescents who have problems with chronic anti-social behaviour, emotional disturbance and delinquency. Community families are recruited, trained and closely supervised to provide MTFC-placed adolescents with treatment and intensive supervision at home, in school and in the community; to establish clear and consistent limits, with follow-through when the limits are breached; to give positive reinforcement for appropriate behaviour; to provide a relationship with a mentoring adult; and to ensure separation from delinquent peers.

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<http://www.colorado.edu/cspv/publications/factsheets/blueprints/FS-BPM08.pdf>

• **Multidimensional Family Therapy (MDFT)**:

MDFT is an outpatient, family-based drug-abuse treatment for teenage substance abusers. It takes into account the interlocking environmental and individual systems in which clinically referred teenagers reside. Objectives for the adolescent include transformation of a drug-using lifestyle into a developmentally normative lifestyle and improved functioning in several developmental domains, including positive peer relations, healthy identity formation, bonding to school and other pro-social institutions, and autonomy within the parent-adolescent relationship.

In the case of the parent(s), intermediate objectives include: increasing parental commitment and preventing parental abdication; improved relationship and communication between parent and adolescent; and increased knowledge about parenting practices (e.g., limit-setting, monitoring, appropriate granting of autonomy).

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<http://www.med.miami.edu/ctrada/x63.xml>

INEFFECTIVE INTERVENTION APPROACHES

(3, 4, 64)

- Boot camps (residential programmes, modelled after military basic training); Produce no significant effect on recidivism, they might even produce harmful effects on youth (3). Boot camps mainly focus on physical discipline, rather than a wide range of skills and competencies.
- Shock programmes such as 'Scared Straight' and other programmes, organising visits to prison by juvenile delinquents or children at risk for criminal behaviour: these programmes are designed to deter participants from future offending by providing first-hand observations of prison life and interactions with adult inmates. These programmes not only fail to deter crime, but actually lead to a rise in offending

behaviour (3, 62).

- Residential programmes: Interventions in psychiatric or correctional institutions appear to have positive effects on youths only as long as they remain in the residential setting (71). Home-based treatments appear to be more effective than residential treatments (41), but sometimes it is necessary to place the youth in a residential setting out of the home. Cognitive-behavioural treatment (CBT) seems to be a little more effective than standard treatment for youths in residential settings (36). The effects appear about one year after release, but there is no evidence of more long-term effects or that CBT is any better than alternative treatments (36).
- Waivers to adult court (placing youths in adult criminal institutions): Is a justice-system approach to deter youth violence. Evaluation has shown that these measures increase recidivism rather than decrease it; moreover, they expose young people to serious harm such as sexual abuse, attack with weapons and suicide (3, 44).
- Individual counselling and social casework (the combination of individual psychotherapy or counselling with close supervision of youths and coordination of social services): Have not demonstrated any positive effect on the recidivism of general delinquency (3). Individual counselling might only be effective for non-institutionalised, seriously delinquent youths (3). The reason for this remain elusive.

PSYCHOPHARMACOLOGICAL INTERVENTION

Medication should be considered for violent aggressive children only in the context of a careful diagnostic assessment that reviews multiple risk factors and generates a complex formulation (1, 2, 37, 53). Managing violent children and adolescents with solely pharmacological methods is not recommended. The critical clinical recommendation is that, if a comorbid condition exists, then treating it with indicated medications might reduce the aggressive behaviour as well (e.g., stimulants for ADHD, antidepressants for mood and anxiety disorders, anticonvulsants for partial complex seizure disorder) (1).

Neuroleptics have been shown to decrease aggressive behaviour, but their side-effects may outweigh their usefulness in treating aggression. They require careful consideration before use (1, 53).

TABLE 2:

This table lists programmes for youth violence prevention and intervention. They have been selected from the 'Blueprints for Violence Prevention', a project of the Center for the Study and Prevention of Violence at the University of Colorado and from the expertise of researchers across Europe. Many of these programmes have not yet been evaluated in Europe, so they should be considered 'promising' rather than 'effective'. Other efficacious treatments may be omitted.

	PROGRAMME TARGETS	AGE	INDIVIDUAL	PARENTS	PARENT-CHILD INTERACTION	SCHOOL	PEERS	COMMUNITY
PREVENTION	PROGRAMME TITLE							
	OLWEUS BULLYING PREVENTION PROGRAM	ELEMENTARY, MIDDLE AND JUNIOR HIGH SCHOOL	X			X		
	PROMOTING ALTERNATIVE THINKING STRATEGIES (PATHS)	ELEMENTARY SCHOOL				X		
	GOOD BEHAVIOR GAME	EARLY ELEMENTARY SCHOOL				X		
	TRIPLE P: COMMUNITY-WIDE	0-12 YEARS		X				
	LINKING THE INTERESTS OF FAMILIES AND TEACHERS (LIFT)	FIRST AND FIFTH GRADE			X			
	I CAN PROBLEM-SOLVE	NURSERY SCHOOL, KINDERGARTEN AND ELEMENTARY SCHOOL						
	STRENGTHENING FAMILIES PROGRAM FOR PARENTS AND YOUTH 10-14	SIXTH-GRADE STUDENTS	X		X			
	SEATTLE SOCIAL DEVELOPMENT PROJECT	ELEMENTARY, MIDDLE AND JUNIOR HIGH SCHOOL			X			
	COMMUNITIES THAT CARE							
	RAISING HEALTHY CHILDREN PROGRAM	ELEMENTARY SCHOOL AND JUNIOR HIGH SCHOOL	X		X		X	

PROGRAMME TARGETS		AGE	INDIVIDUAL	PARENTS	PARENT-CHILD INTERACTION	SCHOOL	PEERS	COMMUNITY
	PROGRAMME TITLE							
PREVENTION	NURSE-FAMILY PARTNERSHIP (NFP)	PRENATAL – 2 YEARS		X				
	BEHAVIORAL MONITORING AND REINFORCEMENT PROGRAM	JUNIOR HIGH SCHOOL				X		
	CASASTART	11-13 YEARS	X	X		X	X	X
	FAST TRACK	ELEMENTARY SCHOOL	X	X				
	PERRY PRESCHOOL PROJECT	3-4 YEARS	X	X				
	PREVENTIVE TREATMENT PROGRAM	7-9 YEARS	X	X				
	THE COPING POWER PROGRAMME	LATE ELEMENTARY AND EARLY MIDDLE SCHOOL	X	X				
	THE INCREDIBLE YEARS: PARENT, TEACHER AND CHILD TRAINING SERIES	2-10 YEARS	X	X		X		
	BRIEF STRATEGIC FAMILY THERAPY (BSFT)	8-17 YEARS				X		
	FUNCTIONAL FAMILY THERAPY (FFT)	11-18 YEARS	X	X		X		
INTERVENTION	MULTISYSTEMIC THERAPY (MST)	12-17 YEARS	X	X	X	X	X	X
	MULTIDIMENSIONAL TREATMENT FOSTER CARE (MTFC)	TEENAGERS	X	X	X			

"Every child presenting with significant conduct problems merits a careful diagnostic assessment."

CONCLUSIONS

Today, researchers know much more about how to prevent youth violence than they did two decades ago when some stated that 'nothing works' in tackling youth violence. This is clearly no longer the case. A core set of model programmes that meet very high scientific standards for being effective prevention or intervention programmes has been identified (see Table 2).

Conduct disorder is a complex disorder, requiring the availability of an array of services, tailored to the needs of the child and his or her context. This approach, however, is complicated by the fact that multiple services (juvenile justice, mental health, child welfare and educational services) are involved, each with different concerns and different views on how to tackle the problem of youth violence. In spite of the development of effective prevention and intervention programmes, recently there has been a rise in punitive approaches by policymakers in many European countries, supported by the widespread public perception that juvenile delinquency is on the rise and becoming more serious. Moreover, children with conduct problems are often handled by the juvenile justice and school systems, bringing them to the attention of child psychiatrists at a later stage, which complicates treatment as the problem becomes a chronic disorder.

Close cooperation between mental-health and juvenile-justice care is warranted in order to establish a common action plan and to promote the well-being of young people.

Above all, effective prevention is essential. To be successful, prevention programmes should start early in the life of children at risk, and they should focus on the acquisition of new skills.

Interventions for seriously violent youth can also be beneficial, but only if they are coordinated, aimed at multiple domains of dysfunction, delivered during extended periods of time, and tailored to the individual's needs. Financial and personnel resources are needed to support this.

The number of model prevention and intervention programmes identified to date is small and comes mainly from the USA. Europe must give a high priority to developing and evaluating programmes and policies so as to increase their number.

Finally, two items warrant special attention in the research on youth violence. First, the role of culture and ethnicity in youth violence should be further investigated. Secondly, most of the research in this field is based on male samples, leaving policymakers without evidence on which to base approaches to tackle gender-specific youth violence.

RECOMMENDATIONS

- Europe should promote and support the use of rigorously evaluated evidence-based prevention and intervention programmes in the approach to youth violence.
- Europe should invest funds for research and establish a research agenda; the priorities for future research are:
 - development, implementation and evaluation of programmes and interventions to build the evidence base of good practice
 - better understanding of the mechanisms that underlie effective and ineffective interventions
 - fundamental research on genetics, brain development and neurobiology, and the complex interplay between these domains
 - more investigation and understanding of the development of anti-social behaviour in females
- Attention to cultural diversity (ethnicity, immigrant status, religion) among violent offenders is important. Rigorous evaluation of the influence of culture on violent behaviour is still rare but necessary. Traditional prevention and intervention approaches most likely will not be successful for young people of minority groups.
- Policies focusing on youth violence should target reducing substance abuse, since the majority of violent adolescent offenders use alcohol and illicit drugs.
- Cooperation on both a European and national level should be encouraged in:
 - sharing and disseminating all relevant scientific and empirical knowledge
 - developing, transferring/adapting and disseminating promising and effective programmes
- Cooperation and coordination should be encouraged between professionals to enable an individualised approach to the child/adolescent and his/her family.
- Every intervention should be carried out with respect for children's rights (e.g., United Nations Convention on the Rights of the Child).
- Europe should rethink juvenile justice and develop a justice system with an emphasis on prevention and intervention, in balance with appropriate sanctions.
- Training, recruitment and supervision should be provided so as to increase the number of professionals with the knowledge, skills and cultural competency to deal with violent young people.
- Sustained debate with the media and involved professionals on the coverage of juvenile crime should be organised, to help create an objective and realistic perception of this issue.

REFERENCES

References are organised by domain.
Key contributions to this report are marked with an asterisk (*).

Comprehensive reports and documents on various aspects of youth violence and conduct disorder

1. American Academy of Child and Adolescent Psychiatry. (1997). Practice parameters for the assessment and treatment of children and adolescents with conduct disorder. *J Am Acad Child Adolesc Psychiatry*, 36(10 Suppl), 122S-39S.
2. American Academy of Child and Adolescent Psychiatry. (2007). Practice parameters for the assessment and treatment of children and adolescents with oppositional defiant disorder. *J Am Acad Child Adolesc Psychiatry*, 46(1), 126-41.
3. *Satcher, D. (2001). Youth violence: A report of the Surgeon General. Washington DC: United States Department of Health and Human Services. Retrieved from <http://www.surgeongeneral.gov/library/youthviolence/>
4. *Fitzgerald, M., Stevens, A., & Hale, C. (2004). A review of the knowledge on juvenile violence: Trends, policies and responses in the EU member states. Brussels: European Commission.
5. *Institut National de la Santé de la Recherche Medicale. (2005). Trouble des conduites chez l'enfant et l'adolescent. Retrieved from <http://lesrapports.ladocumentationfrancaise.fr/BRP/064000267/0000.pdf>
6. *National Institutes of Health. (2004). Preventing violence and related health-risking social behaviors in adolescents: An NIH State-of-the-Science conference. Retrieved from <http://consensus.nih.gov/2004/2004YouthViolence-PreventionSOS023html.htm>
7. *Stevens, A., Kessler, I., & Gladstone, B. (2006). Review of effective practice in preventing juvenile crime in the European Union. Brussels: European Commission.
8. Waddell, C., Lipman, E., & Offord, D. (1999). Conduct disorder: Practice parameters for assessment, treatment, and prevention. *Can J Psychiatry*, 44(Suppl 2), 35S-40S.

Prevalence of youth violence

9. Aebi, M.F., Aromaa, K., Aubusson de Cavarlay, B., Barclay, G., Gruszczynska, B., von Hofer, H., ... Tavares, C. (2006). European Sourcebook of Crime and Criminal Justice Statistics (3rd ed.). Den Haag: Boom Juridische Uitgevers.
10. Angelili, R. (2007). Towards an EU strategy on the rights of the child (2007/2093(INI)). Retrieved from the European Parliament website: <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+REPORT+A6-2007-0520+0+DOC+PDF+V0//EN>
11. Hawkins, D.F., Laub, J.H., Lauritsen J.L., & Cothorn L. (2000) Race, ethnicity and serious and violent juvenile offending. Washington DC: US Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.
12. Junger-Tas, J., Marshall, I.H., & Ribeaud, D. (2003). Delinquency in an international perspective: the international self-reported delinquency study (ISRd). Den Haag: Kugler Publications.
13. Lodewyckx, I., Janssens, A., Ysabee, P., & Timmerman, C. (2005). Allochtone en autochtone jongeren met psychische problemen en gedragsproblemen: verschillende trajecten naar de hulpverlening? Universiteit Hasselt /Universiteit Antwerpen, Steunpunt Gelijkekansenbeleid/OASES.

Developmental trajectories and risk factors for youth violence

14. Barker, E.D., & Maughan, B. (2009). Differentiating early-onset persistent versus childhood-limited conduct problem youth. *Am J Psychiatry*, 166(8), 900-908.
15. Beauchaine, T.P., Neuhaus, E., Brenner, S.L., & Gatzke-Kopp, L. (2008). Ten good reasons to consider biological processes in prevention and intervention research. *Dev Psychopathol*, 20(3), 745-74.
16. Burke, J.D., Loeber, R., & Birmaher, B. (2002). Oppositional defiant and conduct disorder: A review of the past 10 Years, Part II. *J Am Acad Child Adolesc Psychiatry*, 41(11), 1275-93.
17. Caspi, A., McClay, J., Moffitt, T., Mill, J., Martin, J., Craig, I.W., ... Poulton, R. (2002). Role of genotype in the cycle of violence in maltreated children. *Science*, 297(5582), 851-854.
18. Dandreaux, D.M., & Frick, P.J. (2009). Developmental pathways to conduct problems: A further test of the childhood and adolescent-onset distinction. *J Abnorm Child Psychol*, 37(3), 375-85.
19. Dodge, K.A. (2009). Mechanisms of gene-environment interaction effects in the development of conduct disorder. *Perspect Psychol Sci*, 4(4), 408-414.
20. Fonagy, P. (2004). Early-life trauma and the psychogenesis and prevention of violence. *Ann NY Acad Sci*, 1036, 181-200.
21. Fontaine, N., Carboneau, R., Vitaro, F., Barker, E.D., & Tremblay, R.E. (2009). Research review: A critical review of studies on the developmental trajectories of antisocial behavior in females. *J Child Psychol Psychiatry*, 50(4), 363-85.
22. Frick, P.J. (2004). Developmental pathways to conduct disorder: Implications for serving youth who show severe aggressive and antisocial behaviour. *Psychol Sch*, 41(8), 823-833.
23. Herrenkohl, T.I., Maguin, E., Hill, K.G., Hawkins, J.D., Abbott, R.D., & Catalano, R.F. (2000). Developmental risk factors for youth violence. *J Adolesc Health*, 26(3), 176-86.
24. Kempes, M., Matthys, W., de Vries, H., & van Engeland, H. (2005). Reactive and proactive aggression in children — A review of theory, findings and the relevance for child and adolescent psychiatry. *Eur Child Adolesc Psychiatry*, 14(1), 11-19.
25. Loeber, R., Burke, J.D., Lahey, B.B., Winters, A., & Zera, M. (2000). Oppositional defiant and conduct disorder: A review of the past 10 years, Part I. *J Am Acad Child Adolesc Psychiatry*, 39(12), 1468-84.
26. Loeber, R., Burke, J.D., & Pardini, D.A. (2009). Perspectives on oppositional defiant disorder, conduct disorder, and psychopathic features. *J Child Psychol Psychiatry*, 50(1-2), 133-42.
27. Loeber, R., & Stouthammer-Loeber, M. (1998). Development of juvenile aggression and violence: Some common misconceptions and controversies. *Am Psychol*, 53, 242-259.
28. Moffitt, T.E., Arseneault, L., Jaffee, S.R., Kim-Cohen, J., Koenen, K.C., Odgers C.L., ... Viding, E. (2008). Research Review: DSM-V conduct disorder: Research needs for an evidence base. *J Child Psychol Psychiatry*, 49 (1), 3-33.
29. Moffitt, T.E., Caspi, A., Harrington, H., & Milne, B.J. (2002). Males on the life-course-persistent and adolescence-limited antisocial pathways: Follow-up at age 26 years. *Dev Psychopathol*, 14(1), 179-207.
30. Petitclerc, A., & Tremblay, R.E. (2009). Childhood disruptive behaviour disorders: Review of their origin, development, and prevention. *Can J Psychiatry*, 54(4), 222-31.
31. Raine, A. (2002). Biosocial studies of antisocial and violent behavior in children and adults: A review. *J Abnormal Child Psychol*, 30(4), 311-326.
32. Rappaport, N., & Thomas, C. (2004). Recent research findings on aggressive and violent behavior in youth: Implications for clinical assessment and intervention. *J Adolesc Health*, 35(4), 260-77.
33. Rutter, M. (2005). The promotion of resilience in the face of adversity.

In A. Clarke-Stewart & J. Dunn (Eds.) *Families count: effects on child and adolescent development* (pp. 26–50). New York, NY: Cambridge University Press

34. Tremblay, R.E. (2006). Prevention of youth violence: Why not start at the beginning? *J Abnorm Child Psychol*, 34(4), 481–487.

35. Tremblay, R.E. (2008). Understanding development and prevention of chronic physical aggression: Towards experimental epigenetic studies. *Phil Trans R Soc B*, 363(1503), 2613–22.

Prevention and intervention programmes

36. Armelius, B.Å., & Andersen, T.H. (2007). Cognitive-behavioral treatment for antisocial behaviour in youth in residential treatment. *Cochrane Database of Systematic Reviews* 2007, Issue 4. Art. No.: CD005650. doi: 10.1002/14651858.CD005650.pub2

37. American Academy of Child and Adolescent Psychiatry. (2005). Practice parameter for the assessment and treatment of youth in juvenile detention and correctional facilities. *J Am Acad Child Adolesc Psychiatry*, 44(10), 1085–98.

38. Barlow, J., & Parsons, J. (2003). Group-based parent-training programmes for improving emotional and behavioural adjustment in 0–3-year-old children. *Cochrane Database of Systematic Reviews* 2003, Issue 2. Art. No.: CD003680. doi: 10.1002/14651858.CD003680

39. Bennett, K.J., & Offord, D.R. (2001). Conduct disorder: Can it be prevented? *Curr Opin Psychiatry*, 14(4), 333–337.

40. Brestan, E.V., & Eyberg, S.M. (1998). Effective psychosocial treatments of conduct-disordered children and adolescents: 29 years, 82 studies, and 5,272 kids. *J Clin Child Psychol*, 27(2), 180–9.

41. Breuk, R. (2008). Breaking the cycle: Day treatment for juvenile delinquents. Wageningen: Ponsen & Looyen.

42. Catalano, R.F., Hawkins, D.J., Berglund, M.L., Pollard, J.A., & Arthur, M.W. (2002). Prevention science and positive youth development: Competitive or cooperative frameworks? *J Adolesc Health*, 31(6 Suppl), 230–239.

43. *Center for the study and prevention of violence. (2010). Blueprints for Violence Prevention. Retrieved December 1, 2009, from <http://www.colorado.edu/cspv/blueprints/>

44. Centers for Disease Control and Prevention. (2007). Effects on violence of laws and policies facilitating the transfer of youth from the juvenile to the adult system. *MMWR*, 56 (No. RR-9), 1–11.

45. Centers for Disease Control and Prevention. (2007). The effectiveness of universal school-based programs for the prevention of violent and aggressive behavior. *MMWR*, 56 (No. RR-7), 1–11.

46. Cooper, W.O., Lutenbacher, M., & Faccia, K. (2000). Components of effective youth violence prevention programs for 7- to 14-year-olds. *Arch Pediatr Adolesc Med*, 154 (11), 1134–39.

47. Doggett, C., Burrett, S.L., & Osborn, D.A. (2005). Home visits during pregnancy and after birth for women with an alcohol or drug problem. *Cochrane Database of Systematic Reviews* 2005, Issue 4. Art. No.: CD004456. doi: 10.1002/14651858.CD004456.pub2

48. Elliot, D.S. (1998). Prevention programs that work for youth: Violence prevention. University of Colorado: Center for the study and prevention of violence.

49. Embry, D.D. (2002). The Good Behavior Game: A best practice candidate as a universal behavioral vaccine. *Clin Child Fam Psychol Rev*, 5(4), 273–97.

50. Eyberg, S.M., Nelson, M.M., & Boggs, S.R. (2008). Evidence-based psychosocial treatments for children and adolescents with disruptive behaviour. *J Clin Child Adolesc Psychol*, 37(1), 215–37.

51. Frick, P.J. (2000). A comprehensive and individualized treatment approach for children and adolescents with conduct disorders. *Cogn Behav Pract*, 7(1), 30–37.

52. Frick, P.J. (2001). Effective interventions for children and adolescents

with conduct disorder. *Can J Psychiatry*, 46(7), 597–608.

53. Gilligan, J., & Lee, B. (2004). The psychopharmacologic treatment of violent youth. *Ann NY Acad Sci*, 1036, 356–381.

54. Jeamment, P. (2005). Actualité du trouble des conduites chez l'enfant et l'adolescent. *Neuropsychiatr Enfance Adolesc*, 55, 469–472.

55. Limbos, M.A., Chan, L.S., Warf, C., Schneir, A., Iverson E., Shekelle, P., & Kipke, M.D. (2007). Effectiveness of interventions to prevent youth violence. *Am J Prev Med*, 33(1), 65–74.

56. Littell, J.H., Popa, M., & Forsythe, B. (2005). Multisystemic Therapy for social, emotional, and behavioural problems in youth aged 10–17. *Cochrane Database of Systematic Reviews* 2005, Issue 4. Art. No.: CD004797. doi: 10.1002/14651858.CD004797.pub4

57. Liu, J., & Raine, A. (2006). The effect of childhood malnutrition on externalizing behavior. *Curr Opin Pediatr*, 18(5), 565–70.

58. Macdonald, G., & Turner, W. (2008). Treatment Foster Care for improving outcomes in children and young people. *Cochrane Database of Systematic Reviews* 2008, Issue 1. Art. No.: CD005649. doi: 10.1002/14651858.CD005649.pub2

59. Mytton, J.A., DiGiuseppi, C., Gough, D., Taylor, R.S., & Logan, S. (2006). School-based secondary prevention programmes for preventing violence. *Cochrane Database of Systematic Reviews* 2006, Issue 3. Art. No.: CD004606. doi: 10.1002/14651858.CD004606.pub2

60. Nock, M.K. (2003). Progress review of the psychosocial treatment of child conduct problems. *Clin Psychol Sci Prac*, 10, 1–28.

61. Perisse, D., Gerardin, P., Cohen, D., Flament, M., & Mazet, P. (2006). Le trouble des conduites chez l'enfant et l'adolescent: une revue des abordos thérapeutiques. *Neuropsychiatr Enfance Adolesc*, 54, 401–410.

62. Petrosino, A., Turpin-Petrosino, C., & Buehler, J. (2002). 'Scared straight' and other juvenile awareness programs for preventing juvenile delinquency. *Cochrane Database of Systematic Reviews* 2002, Issue 2. Art. No.: CD002796. doi: 10.1002/14651858.CD002796

63. Powell, N.R., Lochman, J.E., & Boxmeyer, C.L. (2007). The prevention of conduct problems. *Int Rev Psychiatry*, 19(6), 597–605.

64. Rhule, D.M. (2005). Take care to do no harm: Harmful interventions for youth problem behavior. *Prof Psychol Res Practice*, 36(6), 618–25.

65. Sullivan, T.N., Farrell, A.D., Bettencourt, A.F., & Helms, S.W. (2008). Core competencies and the prevention of youth violence. In N.G. Guerra & C.P. Bradshaw (Eds.), *Core competencies to prevent problem behaviors and promote positive youth development*. *New Directions for Child and Adolescent Development*, 122 (pp. 33–46).

66. Van de Wiel, N., Matthys, W., Cohen-Kettenis, P.C., & van Engeland, H. (2002). Effective treatments of school-aged conduct-disordered children: Recommendations for changing clinical and research practices. *Eur Child Adolesc Psy*, 11, 79–84.

67. Webster-Stratton, C., Reid, M., & Hammond, M. (2004). Treating children with early-onset conduct problems: Intervention outcomes for parent, child and teacher training. *J Clin Child Adolesc Psychol*, 33(1), 105–24.

68. Weisz, J.R., Weersing, V.R., & Henggeler, S.W. (2005). Jousting with straw men: comment on Westen, Novotny, and Thompson-Brenner (2004). *Psychol Bull*, 131 (3), 418–426.

69. Westen, D., Novotny, C.M., & Thompson-Brenner, H. (2004). The empirical status of empirically supported psychotherapies: assumptions, findings, and reporting in controlled clinical trials. *Psychol Bull*, 130 (4), 631–63.

70. Woolfenden, S., Williams, K.J., & Peat, J. (2001). Family and parenting interventions in children and adolescents with conduct disorder and delinquency aged 10–17. *Cochrane Database of Systematic Reviews* 2001, Issue 2. Art. No.: CD003015. doi: 10.1002/14651858.CD003015

71. Woolgar, M., & Scott, S. (2005). Evidence-based management of conduct disorder. *Curr Opin Psychiatry*, 18(4), 392–96.

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WE WOULD LIKE TO ACKNOWLEDGE THE CONTRIBUTIONS TO THIS REVIEW OF THE FOLLOWING EUROPEAN EXPERTS:

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PUBLISHED BY:

Evens Foundation
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We thank the following persons for their continued commitment:
Dr Yolande Avontroodt (Board Member Evens Foundation),
Prof. Dirk Deboutte (Head of Collaborative Antwerp Psychiatric Research Institute – Youth, University of Antwerp),
Prof. Theo Doreleijers (President EFCAP-EU)
and any others whom we may not have mentioned individually.

CONCEPT & PRODUCTION

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