Prevention and treatment of the antisocial personality disorder

Gezondheidsraad
Health Council of the Netherlands

To the Minister of Health, Welfare and Sport

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Dear Minister,

I hereby present to you the advisory report on *Prevention and treatment of antisocial personality disorder*, as requested by you in a request for advice dated 30 October 2003. The advisory report was drafted by a Committee of the Health Council of the Netherlands and reviewed by the Standing Committee on Medicine and the Standing Committee on Health Ethics and Health Law. In accordance with the request for advice, I have today also submitted this advisory report to the Minister of Justice.

Psychiatric disorders that can result in disruption and damage have been the focus of attention for some time now. This advisory report describes the scientifically proven options for preventing an antisocial personality disorder and the care that can be provided to people with this disorder. These options are important both for the psychiatric health of the patients and for the safety of our society.

The Committee found few good studies on the treatment of antisocial personality disorder. Nevertheless, there are indications that behavioural symptoms such as impulsiveness and aggression can be decreased. The treatment of an additional addiction disorder can also contribute to this. In practice, these options are not fully explored. The advisory report explains how this situation can be changed. One important aspect is the reinforcement of the cooperation between mental health care, the prison system and TBS clinics (clinics for convicts placed under hospital orders). Developing joint guidelines for diagnosis and treatment can form an initial step in this direction.

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The Committee wishes to emphasize the importance of prevention, particularly in view of the current limitations on treatment options. In particular, the prevention and treatment of behavioural disorders in children and adolescents can be an effective and efficient way of preventing antisocial personality disorder at a later age. However, there is also still much room for improvement concerning prevention in the practical setting. For example, the expertise in the field of recognising risk situations and behavioural disorders can be increased. Scientifically proven treatment methods should be used more often. The development of a guideline is also important for the prevention and treatment of behavioural disorders.

The advisory report also takes a stance for more research to support the efficacy of interventions. The research culture in forensic psychiatry appears to require fortification, both within a legal framework (prison system, TBS sector) and beyond (youth care, mental health care). The Committee recommends that universities be included in the process.

I support the Committee's recommendations.

Yours sincerely,
(signed)
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to:

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No. 2006/07E, The Hague, May 8, 2006

The Health Council of the Netherlands, established in 1902, is an independent scientific advisory body. Its remit is "to advise the government and Parliament on the current level of knowledge with respect to public health issues and health (services) research..." (Section 22, Health Act).

The Health Council receives most requests for advice from the Ministers of Health, Welfare & Sport, Infrastructure & the Environment, Social Affairs & Employment, Economic Affairs, Agriculture & Innovation, and Education, Culture & Science. The Council can publish advisory reports on its own initiative. It usually does this in order to ask attention for developments or trends that are thought to be relevant to government policy.

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Executive summary

Request for advice

Antisocial personality disorder (ASPD) is a psychiatric disorder characterised by a long-standing pattern of egocentricity, impulsivity and aggressiveness. Affected individuals lack a sense of responsibility and guilt. People with an ASPD therefore almost always have social problems, cause much damage and distress, and become a nuisance to society. They are also convicted of offences relatively frequently. Between one and two percent of the general population in Western countries have an ASPD. In prisons and TBS* clinics, this percentage is much higher. It is thought that ASPD may be eight times more common among men than among women.

People with an ASPD are often themselves unaware that they are suffering from a disorder and, consequently, they rarely seek help. And if they receive a prison sentence or are ordered to attend a TBS clinic, they are not usually motivated to cooperate with the treatment. They frequently also have an additional psychiatric disorder, such as a serious alcohol or drug addiction, for which they do sometimes submit to treatment.

People with an antisocial personality disorder pose a problem for society on account of the trouble that they cause and their limited motivation to undergo treatment. Furthermore, there is a lack of knowledge among care providers about

* *Terbeschikkingstelling* (TBS): detention under a compulsory treatment order.

how ASPD can best be prevented and treated. Consequently, the Minister of Health, Welfare and Sport, acting on behalf of the Minister of Justice as well, has requested the Health Council to review the current level of knowledge with regard to prevention and treatment. The Council has also been asked to indicate what practical implications this body of knowledge should have.

The development of ASPD

Antisocial personality disorders have their origins in childhood and adolescence. The disorder arises after a process lasting many years and involving a synergistic interaction between various types of risk factors.

This process always begins with some degree of genetic predisposition. When combined with such environmental factors as a lack of parental supervision, abuse or growing up in a deprived area, this predisposition gives rise to neurobiological and psychological risk factors. Examples of neurobiological factors are reduced excitability of the autonomic nervous system or a limited reaction to punishment. Psychological risk factors include a marked need for excitement and a heightened tendency to regard other people's behaviour as hostile.

The greater the number of such risk factors present in children, the more likely they are to develop a behaviour disorder. Behavioural problems among toddlers are often the first warning signals that a child is at increased risk of developing a behaviour disorder. Conduct disorder, in particular, is an important precursor of antisocial personality disorder. The fact that the antisocial behaviour and the lack of a sense of responsibility and guilt have become long-standing is a hallmark of personality disorder.

Prevention

Since antisocial personality disorder results in a great deal of distress, it is important to prevent it from occurring. This is best achieved by preventing and treating behaviour disorders during childhood and adolescence.

From the standpoint of effectiveness and efficiency, research shows that it is important to intervene at the earliest possible stage in circumstances where there is increased risk. The longer the delay, the greater the likelihood that a behaviour disorder will emerge, or that this condition will become chronic and escalate – in which case interventions will usually need to be more intensive and prolonged in order to have an effect. Furthermore, the chances of preventing an ASPD will then diminish. Nevertheless, even prevention by treating a behaviour disorder

during adolescence probably still offers a better prognosis than treating an ASPD during adulthood.

Scientific evidence from a number of interventions shows that they can help to reduce behaviour disorders. In infants, toddlers and children of primary-school age, this can be achieved by providing parents with educational support, improving conditions for development within the family, stimulating the young child's cognitive development and providing the parents with behaviour training. For adolescents, cognitive behavioural therapy, functional family therapy and multisystemic therapy have proved effective.

The various possibilities for the prevention and treatment of behaviour disorders are not being fully exploited at present. This is partly due to a lack of expertise in the detection, diagnosis and treatment of behaviour disorders within the youth care services. Consequently, children with problems are frequently not identified. Furthermore, the treatments are often not tailored to the particular characteristics of the child and those of its family. Moreover, the effectiveness of many of the treatments has not been scientifically established. In addition, cooperation between different institutions is frequently poor.

Similar problems arise in youth custody centres, where a large proportion of the youngsters have a behaviour disorder. These conditions frequently go undetected and are therefore also not treated.

Treatment

There is still insufficient good research to be able to say with any certainty whether antisocial personality disorder can be effectively treated in adulthood. Nor, however, can it be said as yet that the disorder is *not* treatable. Until more research has been done, one can only draw provisional conclusions about the treatability of ASPD.

The most important of these provisional conclusions is that there is no prospect of a cure for ASPD at this point in time, but it is possible to combat certain symptoms of the disorder. There are indications that cognitive behaviour therapy and pharmacological therapy can be used to reduce a person's impulsivity and aggression. Furthermore, there is some scientific evidence that alcohol or drug addiction can be effectively treated in a person with an ASPD by means of psychotherapy, 'contingency management' (conditioning whereby desired behaviour is rewarded) and pharmacological therapy. This can also help to reduce symptoms of the disorder.

These treatment options provide some pointers for risk management (i.e. the reduction and containment of the risk that someone with an ASPD poses to his

surroundings). It is not possible to reduce this risk permanently by means of temporary imprisonment alone.

For one specific group – people with psychopathy – the prospects for risk containment are less favourable. Psychopathy is a severe form of ASPD which is characterised in part by personality traits as callousness, lack of empathy, pathological lying and manipulation. Psychopaths frequently either try to withdraw from treatment or to disrupt it through aggressive behaviour. Group therapy may even have the opposite effect from that intended in these individuals, since it enables them to learn from each other's experiences and hone their manipulative skills.

In the course of their lives, people with an ASPD often come into contact with the mental health services, the prison system and the TBS sector. In all of these areas, better use can be made than at present of the opportunities for risk management. People with an ASPD may sometimes be treated for an addiction or depression within the current mental health system, but they are hardly ever treated for personality disorder. The prison system does not itself possess sufficient knowledge, experience and resources to treat offenders who have an ASPD. And the treatment given to people with an ASPD who are placed under a TBS (compulsory treatment) order suffers from the isolated position that the TBS clinics occupy in relation to the mental health services. This situation is a contributory factor to the low scientific underpinning of the working practices in the clinics and hinders the desired channelling of people with an ASPD into the mental health system once the threat of reoffending has been reduced to an acceptable level. This isolated position is caused in part by a disinclination on the part of the mental health services to treat patients who are considered to be untreatable and potentially dangerous.

Recommendations

Prevention

Since it is mainly children who have a behaviour disorder (or are at increased risk of developing one) who are likely to develop an antisocial personality disorder, it is desirable that the prevention of ASPD should be embedded within the prevention and treatment of behaviour disorders during childhood and adolescence. This requires timely detection of risk factors and early characterisation of behavioural problems and disorders, expert diagnosis, and the implementation of scientifically proven interventions.

Within the youth care services and the juvenile justice system, in particular, improvements need to be made in these three areas. First of all, expertise in recognising risk factors and making them a subject for discussion, as well as in diagnosing behavioural disorders needs to be improved. Furthermore, greater use should be made of scientifically proven treatment methods. The interventions that are adopted should preferably always be subjected to scientific evaluation so as to avoid the use of ineffective methods wherever possible. Moreover, the effectiveness and efficiency of treatments can be enhanced by developing guidelines for detection, diagnosis and treatment.

Finally, the Committee recommends that more statutory options should be created in order to motivate children with a behaviour disorder who have not been convicted of an offence by applying pressure to undergo treatment.

Treatment

The opportunities for risk management can be made better use of than at present when dealing with people with an antisocial personality disorder. According to the Committee, the mental health services should also accept responsibility for preventing people with a psychiatric disorder from slipping back into criminal behaviour or reoffending after having served a prison sentence or having been placed under a TBS order. With this in mind, it recommends fostering expertise within the mental health services as far as the recognition and treatment of ASPD are concerned.

In the TBS sector, the Committee feels that more attention should be focused on the scientific underpinning and evaluation of treatment options and on quality assurance. Due to the low scientific content of the way of working in the clinics, it is possible that ineffective forms of treatment are currently being retained for too long. At the same time, forms of treatment that are, in fact, effective are not being adequately tailored to individual patient characteristics.

Because the prospects for risk management are less favourable in people with psychopathy, it is important that care providers in the TBS sector recognise psychopathy. Admission to a long-stay unit is an obvious option in cases where people with psychopathy have been issued with a TBS order and treatment has indeed proved ineffective, provided the proportionality between the seriousness of the offence committed and the duration of the TBS order is taken into consideration

If risk management is to be effective, the Committee perceives a need for better cooperation between the mental health services, the prison system and the TBS clinics. This is not only important because risk management frequently

requires continuity of care (possibly in the form of assertive outreach), but also because the institutions in question can learn from one another about how people with an ASPD can be treated. An initial step in establishing this cooperation might be to draw up common guidelines for diagnosis and treatment. The Committee believes that universities should also be involved in this process.

Finally, one should consider whether more statutory options are needed outside of the criminal justice framework in order to motivate people with an ASPD by applying pressure to undergo treatment.

Research

Considerable uncertainty still surrounds the development of antisocial personality disorder and the possibilities for prevention and treatment. Whereas we have a reasonably clear picture of the risk factors at the population level, little is known as yet about factors that may have a protective effect, for example. Consequently, it is not possible to draw any firm conclusions about the likelihood of an individual developing an ASPD, thus making targeted prevention more difficult. Nor is much known as yet about the effectiveness of preventive interventions in the long term, and, owing to a lack of good research, little can be said with much certainty about the treatability of antisocial personality disorder. The effectiveness of many of the treatments that are currently being applied in practice remains unproven.

The Committee therefore recommends that more research should be performed into the development of ASPD and into the long-term effects of prevention. In order to select effective and efficient treatments, more research is needed into interventions that are tailored to the specific characteristics of people with an ASPD.

Chapter 1

Introduction

1.1 Question

Antisocial Personality Disorder (ASPD) is a psychiatric disorder characterised by egocentrism, impulsivity and aggressivity. People with an ASPD frequently transgress social norms and have a limited sense of responsibility and guilt. They almost always have social problems and cause a great deal of damage, suffering and social nuisance. They are also relatively frequently convicted of criminal offences. It is likely that a significant proportion of prison populations and criminals with hospital orders is afflicted with an antisocial personality disorder.

People with ASPD are a problem for treatment professionals. As a rule, they have no care demands and are not motivated to cooperate with treatment. Furthermore, there is a lack of knowledge about how ASPD can be treated effectively. The disorder is often complicated by comorbidity with other psychiatric conditions, such as a severe alcohol or drug addiction. Finally, the preconditions for treatment are often sub-optimal. Prisons, for example, have insufficient means for treating people with personality disorders. Poor cooperation between the penitentiary system and mental health care services (GGZ) also makes resocialisation of former prisoners difficult. This is also true for prisoners under hospital orders who, in the final phase or at the end of their hospitalisation period, must be referred to follow-up care by mental health services.

In order to find a solution for these problems, the Minister of Health, Welfare and Sport (VWS), also on behalf of the Minister of Justice, asked the Health Council to provide an overview of current scientific insights into the diagnosis, prevention and treatment of ASPD. The Council was also asked to indicate the practical implications of its findings. The request for advice may be found in Annex A.

The key questions that will be answered in this advisory report are:

- What forms of prevention have been scientifically proven to contribute to preventing the development of an ASPD in children and adolescents?
- What forms of treatment does scientific research show to be effective in curing or combating symptoms of ASPD?
- How can forms of prevention and treatment with scientifically demonstrated effectiveness best be implemented in daily practice?

1.2 Methods

The advisory report was drafted by a specially appointed committee of the Health Council. The membership of the Committee may be found in Annex B. In order to address the request for advice, the Committee mapped and evaluated the scientific literature. It met seven times. During this process, a draft version of chapter 5 regarding possibilities for effective treatment of the ASPD, was submitted to the National Council of Highest Officials for TBS clinics (clinics for convicts placed under hospital orders) for review. A draft version of chapter 7 was commented upon by Professor J.M.A. Hermanns (Professor of Pedagogy, University of Amsterdam), Professor P.C. Vegter (Professor of Penitentiary Law, Radboud University Nijmegen), Professor P. Vlaardingerbroek (Professor of Family and Youth Law, University of Tilburg) and Dr. J.A. van Vliet (Salvation Army Youth Care and Probation, Utrecht). Within the Health Council, the advisory report was reviewed by the Standing Committee on Medicine and the Standing Committee on Health Ethics and Health Law.

1.3 Structure of the advisory report

Chapter 2 indicates how antisocial personality disorder can be differentiated from other personality disorders, how it can be diagnosed and how often it occurs. Chapter 3 contains an overview of what is known about the development and clinical course of ASPD. This lays the foundations for the subsequent chapters on prevention and treatment. Chapter 4 is dedicated to the possibilities indicated by scientific research for the prevention of ASPD. Chapter 5 contains

an overview of current knowledge about the effectiveness of various forms of treatment. In chapter 6 the scientific developments that may result in effective treatment in the future are outlined. Chapter 7 maps the ways in which all the relevant insights can be implemented in current daily practice. Key conclusions and recommendations are listed in chapter 8.

1.4 Evidence based medicine

In answering the question as to which forms of prevention and treatment are effective, the Committee adheres to the principles of evidence based medicine. The starting point is that effectiveness must be determined using the best available scientific evidence. Therefore, the results are weighted according to study design, weighing in more heavily the higher they can be placed in the following hierarchy of study designs:

1 Experimental research
   a Randomised controlled trials (RCTs)
   b Controlled, non-randomised trials
2 Controlled observational trials
   a Cohort research
   b Case-control studies
3 Observational studies without a control group (patient series).

Within these categories, the level of evidence for studies can be further defined based on the quality of randomisation, the comparability between intervention and control groups, clarity about the treatment for which the effect is being compared and the way in which the control group is dealt with, relevance and specificity of the outcome measures, clarity about characteristics of patients who did not complete the treatment being investigated and the length of the follow-up period.

As more high-quality studies become available returning consistent results, the case for (the lack of) effectiveness of an intervention becomes stronger. This can be determined in a systematic review. Thus, a systematic review of multiple, high-quality RCTs with consistent results is considered the strongest form of evidence (Off00, Kha01).

However, an intervention that has proven effective in a research context is not always effective in clinical practice. Differences between patients, treatment professionals and conditions in research settings and in daily practice limit effectiveness. These differences can, for example, relate to comorbid conditions

patients may have, the level of expertise among treatment professionals and the duration of the treatment in question (Pro98).

Moreover, in forensic psychiatry the possibilities for performing randomised trials are sometimes limited. Firstly, it is up to the judge rather than the researchers to determine the setting in which a patient is admitted. Also, due to the risks posed by the patient for his environment, it is irresponsible to leave him in an untreated control group.

The Committee nonetheless feels that RCTs remain the gold standard for determining effectiveness of interventions in forensic psychiatry.

Chapter 2

Definition of terms, diagnosis and prevalence

This chapter outlines how to adequately define and diagnose antisocial personality disorder, and what is known about the prevalence of ASPD.

2.1 Definition of terms

The value of medical definitions depends on “whether they provide a useful framework for organizing and explaining the complexity of clinical experience in order to derive inferences about outcome and to guide decisions about treatment” (Ken03). Whether this is the case is determined based on the requirement of descriptive validity. This requirement is met if a condition can be differentiated from normal variation as well as from other disorders, in terms of symptomatology and underlying mechanisms.

Some definitions of psychiatric conditions are under debate, as their capacity for differentiation is limited. This also applies to the definition of antisocial personality disorder in the DSM-IV. In addition to ASPD, other terms are used in psychiatry, such as psychopathy and dissocial personality disorder (DoI93, Van97, Mor99, RCP99).

Antisocial Personality Disorder

The term antisocial personality disorder was introduced in 1980 in the DSM-III and defined using diagnostic criteria. These criteria were updated in 1994 in the

DSM-IV (see Annex C). Because the ASPD is often present together with other disorders, there is no consensus on the value of the definition. The high degree of comorbidity suggests ASPD cannot easily be differentiated from the other disorders.

There is also criticism of the diagnostic criteria for ASPD. These criteria make the disorder operational in terms of visible behaviours. According to some critics, this leaves the core of the disorder – namely specific personality traits – unexamined, which would in turn make it difficult to differentiate between criminal behaviour that is and is not based on an underlying psychiatric disorder (Bur00,Won00, Ken03). Eventually, this would lead to the psychologisation of criminality, and in forensic-psychiatric settings it may result in over-diagnosing ASPD (Der93, Par98, Mor99).

Psychopathy

Under the influence of these criticisms, the term psychopathy has once again gained attention. In the past, this term was applied to practically every form of abnormal personality. With the development of the Psychopathy Checklist (later revised to the PCL-R) by Hare, the meaning has become far more specific. Since then it is used primarily in forensic psychiatry to identify severe cases of ASPD (Sch94, Mor99, Sal02, Hil04).

Hare's PCL-R consists of twenty criteria that can be used to determine whether someone suffers from psychopathy (see Annex C). The criteria are categorised into behavioural and emotional/interpersonal dimensions. The latter encompasses typical personality traits of the disorder that Hare feels the DSM does not address sufficiently, such as coldness, lack of empathy, pathological lying and manipulation. The PCL-R was recently studied in-depth by Cooke and Michie. They reduced the number of criteria to thirteen (Har91, Coo01a, Hil04).

Psychopathy as defined using the PCL-R has two advantages over the DSM definition of ASPD. Firstly, research has shown that its predictive validity within forensic psychiatric settings is greater. The diagnosis of psychopathy predicts recidivism with violent behaviour far better than the diagnosis ASPD. The predictive validity of the PCL-R has also been determined for the Dutch TBS population (Ste98, Dou99b, Har00, Hil04).

Additionally, the term psychopathy leaves more room for gradual delimitation of the disorder from a normal variant than the DSM definition of ASPD. A score is assigned for each criterion of the PCL-R, with the total score determining the severity of the condition. Based on individual scores for dimensions, the PCL-R also allows subpopulations to be identified more easily.

Thus, the variety found in clinical practice can be more properly addressed (Har96, Mor99, Ver99a, Bur00, Ken03, Hil04).

Dissocial Personality Disorder

In addition to ASPD and psychopathy, the term dissocial personality disorder is used, originating from the World Health Organisation's ICD-10 (WHO93). This term combines an encompassing definition of personality disorders comparable to that in the DSM-IV with diagnostic criteria that also consider personality traits, comparable to the PCL-R (see Annex C). However, little research has been conducted into the validity of the ICD definition (Mor99, RCP99).

Use of terminology in this advisory report

The Committee does not feel the need to choose between the terms ASPD, psychopathy and dissocial personality disorder within the context of this report. Rather, it regards ASPD and psychopathy as complementary terms. The term ASPD will be used primarily, as it is the most encompassing. However, the dimensions of psychopathy as defined in the PCL-R are also deemed relevant. Psychopathy is viewed as a severe subclass of ASPD, characterised primarily by a severely abnormal score on the emotional/interpersonal dimension (coldness, lack of empathy, pathological lying, manipulation). As little research has been conducted on the validity of the term dissocial personality disorder, this term will not be used here.

2.2 Diagnosis

Antisocial Personality Disorder

In daily practice, multiple instruments are used to diagnose ASPD: self-assessment questionnaires, the traditional clinical interview and semi-structured interviews.

Self-assessment questionnaires such as the Personality Diagnostic Questionnaire (PDQ), the Assessment of DSM Personality Disorders (ADP) and the Questionnaire for Personality Traits (VKP) are, in the opinion of the Committee, unsuitable for making a diagnosis. Use of these questionnaires among the general population often leads to over-diagnosing, as many people have limited introspective capacities. Conversely, as patients within forensic-

psychiatric populations often provide socially desirable responses, use there is likely to lead to under-diagnosing the condition (Rui00b, Ver00).

The traditional clinical interview also raises issues of validity, since it is known that many clinicians tend to let go of the DSM diagnostic criteria (Ver00).

The best method for diagnosing personality disorders is a semi-structured interview. This type of interview is conducted based on a question schematic. Because answers to the questions must be interpreted and viewed in relation to one another, the interview must be conducted by an experienced clinician in order for a good diagnosis to be made. There are three interview schematics available for DSM personality disorders in the Dutch language area. These are translations of the Structured Interview for DSM-IV Personality disorders (SIDP-IV), the Structured Clinical Interview for DSM-IV (SCID-II) and the International Personality Disorder Examination (IPDE). Because patients do not always provide reliable information, the interview must always be supplemented with data from the patient dossier and history as well as information from informants (Ver00, Din04, NVP04).

Psychopathy

The diagnosis of psychopathy can be made based on the PCL-R discussed previously. A structured interview scheme is available for this purpose. Based on the interview, together with additional data from the patient dossier and history as well as information from informants, a score is assigned for each of the criteria of the PCL-R; 0 for ‘not applicable’, 1 for ‘partly applicable’ and 2 for ‘clearly applicable’. According to Hare, the diagnosis of psychopathy can be made if the total score is 30 or higher. In Europe, a cut-off value of 26 is usually used (Har91, Hil04).

Age requirement

According to the DSM-IV, ASPD requires an age of at least 18 years. There are, however, growing signs that a subgroup of adolescents with antisocial personality traits may be identified within the population of young people with severe behavioural problems. The Committee therefore feels that the diagnosis of ASPD may, in exceptional cases, be made in individuals younger than 18 years. For this purpose, The Psychopathy Checklist: Youth Version and the Antisocial Process Screening Device can be used. Because character traits in adolescents need not be permanent, this requires the greatest possible care (Woo97, Tij02, Das04).

2.3 Prevalence

According to epidemiological studies using semi-structured interviews, about one to two percent of the general population in western countries has an antisocial personality as defined in the DSM (version III, III-R or IV). This percentage is higher among low-income populations and early school leavers. Depending on the study, prevalence under men appears to be eight times higher than among women. Prevalence drops after the age of forty-five. ASPD is more common in societies with weak social cohesion than in societies with strong social cohesion. For example, prevalence in Japan and Taiwan has been found to be a few tenths of percentage points. There are no data available on the prevalence of ASPD in the general Dutch population (Mor99, RCP99, Ver99a, Tij02, Coi03, Tor05).

In judicial and forensic-psychiatric settings, the prevalence of ASPD is much higher than in the general population. The differences between the reported figures are large, however, depending on the diagnostic methods used. Where behavioural symptoms of ASPD were examined, prevalence figures vary from 30 to 75 percent. When personality traits are examined, prevalence lies between 10 and 30 percent. The differences between these numbers are likely to be not only related to the different diagnostic instruments used, but also to methodological complications of research in these populations. There are also often significant differences between the populations in judicial and forensic-psychiatric settings in various countries. As a result, outcomes of prevalence studies in such settings in various countries cannot easily be compared (Sch97, Bul99, Hil99, Mor99, RCP99, Kog00, Emm03, Far03).

People with an ASPD often also have another psychiatric disorder. This comorbidity usually involves an addiction disorder or other personality disorder. Exact numbers are lacking, however. Overlap with other disorders is among other things due to the fact that the DSM-IV defines personality disorders based on partially overlapping criteria.

In addition to psychiatric and other medical problems, people with an ASPD have a relatively large number of social problems, such as problems in relationships and at work (Dol93, Van97, Mor99, RCP99, Ver99a, Hil04, Sch04).

2.4 Conclusion

Within psychiatry, in addition to the term antisocial personality disorder, the terms psychopathy and dissocial personality disorder are used. This advisory

report uses ASPD as an umbrella term. Psychopathy is seen as a severe form of ASPD.

Both ASPD in general and psychopathy specifically are ideally diagnosed by an experienced clinician using a semi-structured interview, supplemented with data from other sources.

In western countries, one to two percent of the general population has an ASPD. In forensic settings, prevalence of ASPD is likely between 30 and 75 percent, and 10 to 30 percent for psychopathy.

Chapter 3

Development and clinical course

This chapter outlines what is known about the development of antisocial personality disorder during childhood and adolescence and about the clinical course of an ASPD in adults who do not receive effective treatment for it.

3.1 Development

Personality disorders are usually diagnosed in adults. The reason for this is that a personality disorder assumes a persistent pattern of experiences and behaviours. The personality of children and adolescents is often still developing too much in order to determine such a pattern with sufficient certainty.

Nonetheless, the origins of a personality disorder always lie in childhood and adolescence. This is mirrored by the diagnostic criteria for ASPD in the DSM-IV. These criteria mention an age of at least 18 years, but also require “a pervasive pattern of disregard for and violation of the rights of others occurring since the age of 15 years” and “evidence of conduct disorder with onset before age 15 years” (APA94).

The origins of a personality disorder can best be understood from a biopsychosocial developmental perspective. This is also true for ASPD. A variety of factors always underpin the development of an ASPD: genetic, neurobiological, psychological and environmental factors. Furthermore, the

disorder only develops after a process lasting many years, during which interactions between various factors play a key role (Par98, Ver99a, Loe01, Tij02, Far03, Rai02, Sim04).

Risk factors

The factors on a population level that correlate with the development of an ASPD are fairly well understood. However, the causal effect of these factors remains unproven and any statements to that effect are largely hypothetical. Nonetheless, it is clear that an ASPD can never be attributed to a single cause. The disorder only develops under the influence of a combination of genetic, neurobiological, psychological and environmental factors. Because these factors alone do not necessarily lead to an ASPD, they are referred to as risk factors. The more risk factors are present, the more vulnerable an individual is to developing an ASPD.

The influence of genetic factors on the development of an ASPD became plausible thanks to twin and adoption studies into the backgrounds of antisocial behaviour. These studies show that roughly forty to sixty percent of differences in antisocial behaviour between people is related to genetic factors. Multiple genes are involved in this process (Par98, Hes00, Mat00a, Tij02, Rai03, Sch04).

Regarding neurobiological and psychological factors, it has been shown that impulsive aggressivity, the major need for excitement, the limited fright response and the lack of fear that characterise ASPD correlate with a low level of serotonin, high levels of adrenaline and the hormone DHEAS, low resting cortisol levels, low cortisol response to stress and lowered excitability of the autonomic nervous system.

It is also known that aggression correlates with abnormalities in the cognitive processing of social processes and a poor ability to understand one's own and others' actions in terms of feelings, thoughts, intentions and desires (mentalisation). An example of this is the tendency to interpret ambiguous, neutral or even positive behaviour of others as hostile, and subsequently anticipating or responding aggressively. People with psychopathy also spend less time cognitively processing feedback about their behaviour, leading to difficulties maintaining an overview of the consequences. They also respond less strongly to expressions of emotion, such as fear and sadness in others, and remember such events less clearly (Har96, Kog00, Mat00a, Rai00, Rui00a, Kaz01, Sal02, Str02, Tij02, Rai02, Wie02).

There are three kinds of environmental factors that can influence the development of an ASPD. Firstly, perinatal factors such as maternal smoking or drug use during pregnancy and complications at birth, particularly if they entail brain damage, correlate with later antisocial behaviour in the child. Secondly, it has been noted that characteristics of the family a child grows up in can strongly increase the chances of antisocial behaviour. This can include psychiatric conditions in the parents, persistent fighting between parents, lack of attention and emotional involvement, inconsistent and excessively punitive child-raising methods, abuse, and antisocial behaviour by other family members. Finally, the social environment outside the family also plays a role. The odds of antisocial behaviour increase as the connection an individual has with society shrinks. For example, children with behavioural problems tend to come into contact with antisocial peers because they are rejected by peers who do not have such problems. A weak social structure and unfavourable economic conditions have similar effects. People who feel marginalised, for example due to low socio-economic status, are more likely to tend towards antisocial behaviour than others (Dol93, Par98, Pat98, Mor99, RCP99, Hes00, Loe01, Sal02, Tij02, Far03, Ban04, Knu04, Sch04, Tim04).

Interactions

An ASPD does not develop overnight, but over the course of years. The exact mechanism remains unclear. However, there is empirical support for hypotheses about child development that can lead to an ASPD. According to these hypotheses, the odds of an ASPD are particularly high if risk factors initiate a process that generates more and more new, independent risk factors, thus reinforcing itself.

Such a process can begin if a child, due to genetic predisposition and the influence of specific environmental factors during pregnancy and in the early years of life, develops a neurobiological constitution that is associated with an elevated risk. This primarily involves the child's poor capacity for regulating emotions. It is known that stress and intoxication during pregnancy and complications at birth can lead to abnormalities in the nervous system that contribute to a difficult temperament. Limited sensitivity and responsiveness in parents can contribute to the child not learning to regulate emotions and aggressive behaviour. A stress factor such as abuse can also harm the brain in ways that increase the odds of antisocial behaviour, particularly in combination with certain genetic defects (Bel99a, Bel99b, Cas02, Fon03, Kee03, Tre04, Pea05).

Neurobiological abnormalities and a limited capacity for regulating emotions subsequently form new risk factors for the escalation of behavioural problems and the development of a behavioural disorder. For example, they can contribute to poor development of the child's empathic capacity. The odds of a behavioural disorder developing increase further if the child's parents exhibit, for example, a lack of involvement or if they respond to its behavioural problems in an extremely punitive fashion. Antisocial friends can also play a role. Under the influence of such factors, the odds of developing an ASPD later in life increase (Ver99a, Loe01, Tij02, Far03, Rai02, Kee03, Sim04).

Interactions between risk factors are likely to play an important role in this process. Certain combinations of risk factors appear to correlate with significantly higher chances of displaying antisocial behaviour than the sum of the odds they carry do individually. So far, the underlying mechanisms remain unclear (Rai02).

Research has identified various interactions that correlate with the development of antisocial behaviour. For example, criminality was twice as high in a group with both genetic and environmental risk factors, compared to a group with only one or the other type of risk factor (Clo82, Clo87). Adolescents with congenital physical abnormalities, caused by either genetic or perinatal factors, showed three times as much violent behaviour if they also grew up in an unstable family (Med88). Maternal smoking during pregnancy was found to be associated with twice as much violent behaviour as an adult, and violent behaviour was five times as common if there were also complications at birth, twelve times as common if the child was raised by a single parent, and fourteen times as common if the mother was a teenager at the time of birth (Bre99, Ras99). Comparable effects were found for the combination of complications during birth and, respectively, growing up in a dysfunctional family (Wer87), a psychiatric condition in one of the parents (Bre93), rejection by the mother (Rai94) and poor child-rearing (Ars02). The combination of decreased circulation in the right half of the brain and physical abuse in early youth was also found to be associated with an increased risk of violent behaviour, compared with the already elevated risk if one of these factors is present (Rai01). The same applied for the combination of neurocognitive abnormalities and abuse during early youth (Lew89).

The various types of risk factors that can contribute to the development of an ASPD do not always play an equally significant role. Interactions appear to be particularly important for the development of an ASPD if there are no factors present that pose a large risk individually. For example, if someone grows up under extremely unfavourable circumstances, such as a combination of divorced

parents, socio-economic deprivation and severe abuse, biological risk factors appear less important to the development of ASPD (Rai02, Lan04).

Conversely, social circumstances play a less significant role if dominant biological factors are present. This appears to be the case in psychopathy. Research suggests that the coldness and limited empathic capacity that characterise psychopathy have a relatively strong biological background. For example, children who display antisocial behaviour and psychopathic character traits are less likely to grow up under unfavourable social circumstances than antisocial children without such traits. It is suspected that affective and cognitive information processing disorders underlie psychopathic character traits. These may be caused by a poor distribution of tasks between left and right sides of the brain and dysfunction in the prefrontal cortex. The information processing disorders potentially make the child less sensitive to socialisation. This could explain why, in these cases, it matters less if the parents were or were not able to raise the child properly for the development of antisocial behaviour later in life. However, antisocial personality traits can also develop later in life without the presence of dominant social risk factors, for example due to traumatic brain injury or long-term alcohol or amphetamine use (Woo97, Mat00a, Rai02, Tij02, Far03, Hil03a, Vid04).

Potential precursors of ASPD

ASPD is always presaged by behavioural problems during childhood or adolescence. Such behavioural problems can be an indicator of a psychiatric condition at an early age, such as oppositional behavioural disorder, attention deficit hyperactivity disorder (ADHD) or conduct disorder. Behavioural problems that are more frequent or more severe than normal, seeking out new stimuli more than peers, increased impulsivity and a significantly lower fear level are early warning signs of increased risk for one of these disorders in toddlers. Because the behavioural disorders are significant risk factors for the development of an ASPD, they are seen as potential precursors.

The conduct disorder is seen as the strongest predictor of ASPD (see Annex C), although less than half of children with a conduct disorder are likely to later develop an antisocial personality disorder. Those at greatest risk are boys who already display traits of a conduct disorder at age ten, boys who have a severe form of conduct disorder (characterised by violent aggressivity, coldness and a lack of empathy, or a broad variety of antisocial behaviours), or boys in whom conduct disorder remains present during adolescence. It is likely more than half of these youths at risk will develop an ASPD.

An oppositional behavioural disorder does not itself increase the chances of ASPD, but contributes indirectly, by increasing the odds of a conduct disorder.

ADHD alone also is not likely to increase the odds of ASPD. However, ADHD, particularly in combination with an oppositional behavioural disorder, is associated with the relatively early development and onset of relatively severe forms of conduct disorder, thereby indirectly increasing the odds of an ASPD (Loe82, Woo97, Rai98, Mor99, Hof00, Loe00, Hei02, Hil03a, Far03, Sim04, Bon05, Lie05).

Protective factors

Not all children and adolescents exposed to multiple risk factors develop a behavioural disorder, and not all children and adolescents with a behavioural disorder develop ASPD as adults. This suggests the influence of risk factors may be compensated by protective factors. Insight into how protective factors work is limited, however. Many factors are known to potentially have a protective effect, but not in all populations, age groups or under all circumstances. The underlying mechanisms also remain unclear.

Factors that are known to have some protective effects include: well-developed ability to adapt (resilience); above-average intelligence; a strong emotional bond with the mother; consistent, structured and involved supervision within the family and at school; a strong relationship with friends who do not display antisocial behaviour; the presence of clear social role models in the environment; a successful education; a healthy sense of self-worth; a stable relationship, for example a marriage.

It is worth noting that eighty percent of people who had behaviour disorders during childhood but did not develop an ASPD do develop other psychological problems with a significant disease burden as adults (Far03, Lös03, Mof03, Sto04, Her05).

3.2 Clinical course

In the absence of effective interventions, ASPD has a fairly persistent character. However, there are signs that non-violent antisocial behaviour can decrease spontaneously after the age of 30. This has been associated with a growing understanding of the reprehensible nature of one’s own antisocial behaviour (maturing) and the decrease in life energy required to manifest antisocial behaviour (burn out). Such an effect has not been observed for violent antisocial

behaviour or the affective aspects of ASPD (Dol93, Van97, Ver98b, Mor99, Sch04).

The course of the ASPD is generally characterised by major psychological, medical and social problems. ASPD is related to low educational and income levels, problems at work, poor relationships with one's own children, various forms of criminality, alcohol and drug use, suicidality and an increased risk of a violent death. This means people with an ASPD generally have a relatively poor quality of life. Additionally, they often do significant damage to their direct environment and society (Dol93, Van97, Par98, Mor99, Sch04).

3.3 Conclusion

The risk factors on a population level that correlate with the development of an ASPD are fairly well understood. An ASPD develops after a process lasting many years, during which interactions between genetic, psychological and environmental factors play a key role. If such interactions result in new risk factors, the development of the condition reinforces itself. The longer the process lasts, for example due to a lack of protective factors and effective interventions, the greater the risk of an ASPD. This could explain why early interventions are usually more effective than those later in life (Rai02).

Not much is known about potentially protective factors. Research into the way in which both risk factors and protective factors influence the development of an ASPD is still in its infancy. It is possible to identify high-risk families, such as families with single teenage mothers with a low socio-economic status. However, no predictions can be made about the odds of an ASPD developing on an individual level. This requires more long-term research (Sch94, Par98, Rai03, Far03, Sim04).

Chapter 4

Prevention

This chapter describes the current state of scientific knowledge regarding the possibilities for preventing the development of an antisocial personality disorder. In the previous chapter, it was indicated that the origins of a personality disorder lie in childhood and adolescence. Prevention must therefore take place during that period. Interventions that reduce risk factors and strengthen protective factors during childhood and adolescence can contribute to preventing an ASPD. Prevention and treatment of behavioural disorders in particular can be expected to prevent the development of ASPD. This chapter describes the possibilities in this area, first in young children, then in adolescents. An overview of effect studies listed in this chapter may be found in Annex D.

4.1 Babies, toddlers and elementary school children

In a recent review of 28 studies with a follow-up period of at least one year, it was concluded that interventions in young children can have a clear positive impact on the three key risk factors for youth criminality. These are: poor pedagogic skills in parents and behavioural problems and poor cognitive skills in the child. The most important types of interventions studied were early pedagogic support and improvement of developmental conditions in families, stimulating the cognitive development of young children and behavioural training for parents.

These types of interventions were often combined. This makes it difficult to determine which part was responsible for the effect (Tre03).

Early pedagogic support and improvement of developmental conditions in families

A key element in the programmes with proven efficacy in terms of preventing criminal behaviour is education about the health and development of their child during regular house calls to parents of babies and toddlers. In high-risk groups, such as single teenage mothers with a low socio-economic status, it is useful to begin such educational effort before the birth of the child. It has been shown that a structured programme of physical activity and healthy nutrition for children between the ages of three and five can contribute to preventing behavioural disorders at the age of 17 (Lal88, Old98, Rai03, Tre03).

Programmes designed to increase the sensitivity of parents to their babies and toddlers have also been developed. Increasing the mother's awareness of the emotional needs of her child in particular can improve bonding. This is likely to have a preventive effect on the development of behavioural disorders, since children who are not safely bonded are at higher risk of developing a behavioural disorder. In a meta-analysis of 12 effect studies, it was shown that short-lasting programmes can effectively increase parental sensitivity (Gre93, IJz95, Str02).

Stimulating the cognitive development of young children

A lack of cognitive skills in young children is a risk factor for criminal behaviour later in life. This insight justifies the assumption that stimulating the cognitive development of young children can have protective effects. Various programmes have been developed to address this, and various studies with several years of follow-up show that these programmes are effective. Moreover, a smaller number of studies show that programmes in which cognitive stimulation plays a part can be effective in preventing criminality later in life (Tre03).

Parent management training

Behavioural training for parents (parent management training) is one of the most common interventions in families with children who display antisocial behaviour or who are at risk of doing so. The idea underlying this intervention is that antisocial behaviour in a child not only has a biological background, but is also learned and maintained through operant conditioning, mostly by the parents, for

example due to inconsistent and punitive child-raising methods. Since it is known that these parental practices pose a risk factor for developing behavioural problems in their children, the behavioural therapy is aimed at making parents aware of their own style of child-raising and teaching them alternative methods. Consistent reactions to behavioural problems and strengthening socially desirable behaviour are key aspects.

The effectiveness of behavioural training has primarily been studied among parents of children aged four to twelve. In a meta analysis of 26 controlled studies, it was concluded that behavioural training of parents is effective, as compared to non-intervention. However, most of these studies did not examine whether the effect remained after termination of treatment. In the studies that did, follow-up was limited to one or two years. Therefore, little can be said about the permanence of the effects (Ser96).

According to a later review of psychosocial interventions for children with behavioural problems, two forms of behavioural training for parents were the only interventions that could be called convincingly efficacious. Ten other forms of behavioural training were deemed probably efficacious. This review also noted limited follow-up periods (Bre98).

A more recent review of controlled studies into the effect of treatment of behavioural disorders in children confirmed the effectiveness of behavioural training for parents (Far02). In recent RCTs, the effects of behavioural training for divorced mothers after a follow-up of three years (Deg05) and the effects of multimodal therapy which included behavioural training for parents were found to persist after 42 months (Edd03).

Behavioural training can also be given to foster parents who take on a child that displays antisocial behaviour. An RCT showed a clear reduction in violent and other criminal behaviour after a follow-up period of two years (Edd04).

Pharmacotherapy

As indicated in chapter 3, ADHD can contribute to the early development of an antisocial personality disorder, and to the development of relatively severe forms of ASPD. Effective pharmacotherapy with methylphenidate and atomoxetine is available for ADHD. This form of treatment suppresses the key symptoms of ADHD: hyperactivity and impulsivity. Whether this improves the long-term prognosis of ADHD is not clear. However, by suppressing symptoms, it is likely ADHD can be prevented from contributing to an antisocial personality disorder (GR00, Far02).

4.2 Adolescents

Older children spend less time under parental supervision and are influenced more strongly by their peers. The effectiveness of interventions targeting the child's parents therefore decrease the older the child gets. For antisocial adolescents, more can be expected from interventions targeting individual children, family therapy and multimodal therapy. The key interventions for preventing and treating antisocial behaviour and behavioural disorders that may also contribute to preventing an ASPD are: cognitive behavioural therapy for the child, functional family therapy, interventions targeting the child's social environment outside the family and multisystemic therapy.

Cognitive behavioural therapy

Research has shown that antisocial behaviour, particularly aggression, correlates with abnormal information processing. An example of this is the tendency to interpret ambiguous, neutral or even positive behaviour of others as hostile, and subsequently anticipating or responding aggressively. Such a trait directly influences the social skills a child develops. For example, ascribing more or less hostile intentions to people in the direct environment can contribute to an inability to draw out positive responses from others and increase the likelihood of giving in to negative peer pressure. Subsequently, this can easily lead to real hostility from others, confirming the imagined hostility. Such a self-reinforcing process may explain why children with behavioural problems develop a fairly limited arsenal of solution-oriented skills. Children with behavioural problems, more so than other children, also believe aggression is worth the trouble (Kaz01, Str02, Wie02).

Cognitive behavioural therapy aims to teach a child to adequately interpret the behaviour of others and respond to it with socially desirable behaviour. In a meta analysis of 30 effect studies, cognitive behavioural therapy was found to be moderately effective for children with behavioural problems. Once again, it was noted that the follow-up periods of the studies were generally limited, meaning little is known about the permanence of the effects. Although the therapy is also applied in children under the age of ten, it appears to be most effective for adolescents (Ben00).

Cognitive behavioural therapy is potentially an effective intervention in children at high risk for developing aggressive behaviour. If a child already frequently displays aggressive behaviour, or if this behaviour takes on severe

forms, cognitive behavioural therapy alone is usually insufficiently effective. Combining cognitive behavioural therapy for the child with a parent management training can sometimes be helpful (Str02, Wie02).

Functional family therapy

The assumption underlying functional family therapy is that behavioural problems in a child fulfil a function in disturbed relationships within the family. Therefore, a potential remedy to the behavioural problems may be found in improving relationships within the family. Research has shown families with delinquents often display a high degree of defensive behaviour and negative attribution. Functional family therapy aims to improve communication between family members, promote mutual support and increase problem-solving capacity for the family as a whole.

In effect studies, functional family therapy has been found to be effective for, among others, recidivist delinquent adolescents up to at least two and a half years after treatment (Ale00, Kaz01, Ale02, Bre05).

Interventions targeting the social environment outside the family

Children are not only influenced by their parents and other family members but, particularly as they grow up, are also strongly influenced by the social environment outside the family. This understanding has led to the development of interventions targeting their peer groups, schools and neighbourhood. Peer groups that display many behavioural problems and criminality are a significant risk factor for developing antisocial behaviour. The same applies to a rejecting environment and a surrounding community with weak social cohesion. However, the indications for the effectiveness of interventions that only tackle one of these risk factors are limited. Nonetheless, programmes for schools have been found effective in reducing behavioural problems. This applies in particular if they successfully reduce bullying (Loe00, Far03, Lie04).

Multisystemic therapy

Multisystemic therapy is a form of multimodal therapy. It can be summarised as a pragmatic combination of various types of interventions tailored to an individual situation. Multisystemic therapy is based on the insight that antisocial behaviour is founded in causes that involve the family, family members, school, peer groups and the surrounding community that can also reinforce each other. In

order to reduce antisocial behaviour, it can be necessary to intervene in all of these domains. The emphasis in multisystemic therapy usually lies on the consequences of disturbed relationships within the family for the functioning of the child in other domains. Special attention is given to the supervision and structure the parents give the child, as well as to education and interactions with peers with behavioural problems. The stimulation of socially desirable behaviour is also addressed (Hen98, Kaz01, Str02).

Multisystemic therapy was initially developed for adolescents displaying violent and other serious criminal behaviour or for adolescents who ran a high risk of doing so. In recent years, this form of therapy has also been applied in adolescents who use drugs or have a psychiatric disorder.

According to a recent meta analysis of eight effect studies, multisystemic therapy is an effective approach for violent and chronically delinquent youths when compared to other forms of treatment. Youths treated with multisystemic therapy scored better on a number of social metrics, demonstrated less aggression and significantly less recidivism than youths in a control group. These effects persisted during the follow-up periods, which varied from twelve weeks to four years (Cur04).

Effective multisystemic therapy demands a great deal from therapists. The multisystemic therapy used in the studies from the meta analysis above did not last a particularly long time (15 to 24 weeks), but was relatively intensive (on average 40 hours per week). Furthermore, quality assurance appears to be very important for effectiveness. The efficacy of multisystemic therapy given by graduate student therapists was significantly higher than for therapy given by community-based therapists (Cur04).

In Norway, multisystemic therapy is part of an intervention programme introduced nationally in 1999. The first study into its effectiveness -– also the first effect study outside the United States - shows, compared to studies conducted in the USA, limited positive results. The authors suspect this is due to the relatively intensive therapy given to the control group (Ogd04).

4.3 Cost-effectiveness

The costs of criminality and other antisocial behaviour for victims, the direct environment and society are high. They include costs of the judicial system (police, courts of law, penitentiaries), loss of goods through theft or vandalism, medical care for victims, and immaterial costs (urban neglect, psychological suffering of victims and next of kin). There are clear signs that programmes targeting children and adolescents aimed at preventing antisocial behaviour can

reduce these costs in a cost-effective manner. Two recent cost-effectiveness analyses from the United States showed that early education, functional family therapy and multisystemic therapy save fourteen dollars for every invested dollar (Wel03, Aos04).

4.4 Conclusion

The origins of antisocial personality disorder lie in childhood and adolescence. Preventing and treating behavioural disorders in this period can probably contribute to preventing a possible ASPD.

In young children (babies, toddlers, elementary school children), multiple types of interventions have been found effective in preventing or reducing behavioural disorders. This includes early pedagogic support and improvement of developmental conditions in families, stimulating the cognitive development of young children, behavioural training for parents and, for the treatment of ADHD, pharmacotherapy.

Adolescents with a behavioural disorder run the highest risk of developing an ASPD as adults. In less severe cases, the behavioural disorder can be treated with cognitive behavioural therapy. In children who already frequently display aggressive behaviour, a combination of different therapies is usually needed. The child's social environment must also be involved. Functional family therapy and multisystemic therapy have been shown to reduce criminality and other severe behavioural problems in adolescents and improve social functioning of the child and the family in which it is growing up.

Cost-effectiveness analyses show that many of these interventions can effectively reduce the high costs of criminality and other antisocial behaviour that otherwise ensue.

A number of comments can be made on the current state of knowledge. Most studies address the prevention of antisocial behaviour and not of ASPD. The evidence for the potential for preventing ASPD is generally indirect at best. Furthermore, the number of studies on which the conclusions are based is fairly small. Follow-up periods in a number of studies are also limited, so the permanence of the effects found is not always clear. It is also usually unclear whether the populations and circumstances in a study are representative for clinical practice (Wie02, Far03, Cha04).

Nonetheless, there is reason for optimism. We must now address the need for more specific knowledge about how (cost)effectiveness of interventions can be optimised. This knowledge can only be obtained through more specific research (Kaz01, NIH05).

Chapter 5

Treatment

This chapter provides an overview of the possibilities for treating people with an antisocial personality disorder in a scientific evidence-based manner. It is limited to interventions for adults (18 years and older).

5.1 Treatment goals

Discussing effectiveness of treatments implies clarity about treatment goals. This advisory report considers both improving the mental health of the patient and protecting society as treatment goals. These goals can be obtained through cure and symptom relief.

Cure encompasses removal of the personality disorder. This is an ambitious goal, as it implies changing a person's personality structure.

Symptom relief primarily entails reduction of the symptoms the patient suffers from. People with an ASPD generally do not feel they have a disorder and suffer from it. Therefore, the emphasis lies on reduction of symptoms that affect their environment and society. Prevention of criminal recidivism and reduction of the severity and frequency of other antisocial behaviour are important parts of this. Such behavioural modification fits into both therapeutic and judicial contexts.

5.2 Data collection

In order to determine whether the ASPD can be cured, or whether symptoms of the disorder can be reduced, the Committee examined three categories of research: research into interventions specifically targeting cure or combating symptoms of the ASPD, interventions aimed at combating comparable symptoms of other psychiatric disorders (such as impulsivity and manipulation in borderline and theatrical personality disorders, and lack of empathy and exploitative behaviour in narcissistic personality disorder), and interventions targeting comorbidity in ASPD. The latter category can be divided into research into the influence of treatment of a comorbid disorder on effectively treating the ASPD and research into the influence of the ASPD on the effectiveness of treating a comorbid disorder. While the latter does not involve treatment of the ASPD itself, the Committee feels the background of the request for advice justifies paying it attention. The outcomes of such research may after all be important for the perspectives of people with ASPD.

The research the Committee is basing its findings on was selected from seven systematic reviews that entirely or partially relate to one of the three listed categories (Dol93, San98, Lee99, Per99, RCP99, Sal02, Lei03, War03). Two alternative selection criteria were used in the selection process: a diagnosis of ASPD within the research population (with an indication of which diagnostic instrument was used) or an outcome measure that can be viewed as (an aspect of) an ASPD dimension.

5.3 Effectiveness of therapeutic interventions

5.3.1 Lack of solid research

Empirical research is primarily interesting if the outcomes can be tied to general conclusions. This is possible if a great deal of research has been done, a large proportion of which meets stringent methodological requirements and the results of individual studies are consistent. This indicates three important problems for making general, evidence-based statements about the possibilities for the effective treatment of antisocial personality disorder.

The first problem is that little research has been conducted into the effectiveness of interventions targeting ASPD (Dol93, San98, Per99, RCP99, Won00, Lei03, War03). This is particularly true for interventions aiming for cure. The Committee is not aware of any research of this kind. To a lesser degree, the

same applies to interventions targeting symptoms of ASPD. Very little research has been done in this field either.

The second problem when attempting to draw general conclusions is that most research is lacking in quality (Dol93, Rot96, Alp97, War03). For example, many publications are unclear about what diagnostic instruments were used to map the study population and what outcome measures were examined. The Committee did not use publications that raised such questions. Other shortcomings include the lack of an adequate control group, poor information about background characteristics of the study population and any control groups, poor descriptions of the intervention and short follow-up periods.

Finally, the heterogeneity of the study is also a barrier to making general statements about the treatment of ASPD (Dol93, Rot96, Alp97, War03). Because the studied populations and treatments often differ significantly from each other, research outcomes usually cannot be compared properly. This alone means consistency between results is impossible.

The limited amount of research, poor quality and heterogeneity of a large amount of the research explains why hardly any meta analyses of the effectiveness of interventions for ASPD have been performed. Only research into the effects of cognitive behavioural therapy on impulsivity and aggression have been subjected to meta analysis.

The Committee considers these quantitative and qualitative limitations to the current state of knowledge as its most important finding with regard to the possibilities for treating ASPD. Every other conclusion must be viewed in the light of these limitations. Until more high-quality research becomes available, clear statements about the possibility or impossibility of effective treatment of ASPD cannot be justified (RCP99, Won00, War03, Hil04).

An overview of the research referred to by the Committee in this paragraph is available in Annex E.

5.3.2 *Curing ASPD*

As mentioned, the Committee did not find any research into interventions aiming to cure ASPD. There is no scientific evidence for this possibility.

5.3.3 *Combating symptoms of ASPD*

The possibilities for combating ASPD symptoms can be differentiated using two dimensions of ASPD drawn from the concept of psychopathy elaborated by Hare in the PCL-R (Har91) and recently updated by Cooke and Michie (Coo01a,

Hil04). As indicated in chapter 2, the Committee feels this concept is also important to ASPD. The concept differentiates between the emotional and interpersonal dimension on the one hand and a behavioural dimension on the other. The first dimension manifests in, among other things, coldness, lack of empathy, pathological lying and manipulation. The behavioural dimension is characterised among other things by impulsivity and irresponsible behaviour.

Emotional and interpersonal dimension of ASPD

The Committee found no scientific evidence for the possibility to positively influence the emotional and interpersonal dimension of ASPD. Among other reasons, this finding is important because psychopathy, a severe form of ASPD characterised by an extremely abnormal PCL-R score for this dimension, appears to be a barrier to influencing the behavioural dimension. Multiple studies in closed settings have shown that patients with strong psychopathic traits are often poorly motivated to take part in treatment. More than other patients, they try to withdraw from the treatment and disrupt it through aggressive behaviour. They are also more likely not to complete the treatment. It is therefore not surprising that positive treatment effects in people with psychopathy are generally not seen (Ogl90, Ric92, Hug97, Hob00, Hil04).

Behavioural dimension of ASPD

In contrast with the emotional and interpersonal dimension, the behavioural dimension of ASPD may well be influenceable. Indications for this may be found in research examining the reduction of impulsivity and aggression. There is relatively strong evidence that cognitive behavioural or pharmacological therapy can reduce impulsivity and aggression.

Three meta analyses have been performed on the effect of cognitive behavioural therapy on impulsivity and aggression. Beck and Fernandez have performed a meta-analysis of 50 studies, 40 with a control group, of cognitive behavioural interventions for rage control (Bec98b). They found that patients who completed a cognitive behavioural treatment programme improved significantly compared to untreated patients. The meta analysis by DiGiuseppe and Trafate of 50 controlled studies confirms these findings (Dig03). They found that cognitive behavioural therapy led to a clear reduction in aggression. In the meta analysis of 23 RCTs by Del Vecchio and O'Leary, a clear effect was found for cognitive therapy, behavioural therapy or a combination of both in outpatients (DelO4). Treatments proved particularly effective in suppressing rage.

An important caveat to these positive findings is that the study populations in the underlying research were extremely heterogenic, and that it is unclear what proportion consisted of people with an ASPD. An RCT among men convicted of domestic abuse found the effect of cognitive behavioural group therapy on the odds of recidivism to be relatively large in men with many antisocial traits (Sau96). But the effectiveness of such therapies can differ per patient type. It is known that group therapy can actually have negative effects for patients with psychopathy, as it enables them to learn from each other's experiences and further hone their manipulation skills. This creates a contraindication for some of the treatments these three meta analyses are based on (Set99, Hor04a, Hor04b, Rui05).

Impulsivity and aggression can't be reduced by just using cognitive (behavioural) therapy; pharmacological therapy is also required. RCTs found a significant reduction of involvement in incidents of serious violence for lithium (She76), of irritation for chlordiazepoxide and oxazepam (Lio79), of rage and hostility for phenelazine and of impulsivity, verbal aggression and aggression against objects for fluoxetine (Coc97). In uncontrolled research, a significant effect was found for fluoxetine on the frequency of rage attacks (Fav93), and for sertraline (Kav94), sodium valproate (Kav98) and olanzapine (Sch99) on impulsive aggression.

It is also unclear whether this research is applicable to all people with an ASPD. The research was conducted largely among patients with a not otherwise specified personality disorder or a history of aggressive behaviour. Furthermore, outcome measures were almost invariably taken immediately following treatment. It is therefore unclear whether the effects are permanent.

Suicidality and other forms of self-harm (parasuicidality) make up a special category of aggression. This form of aggression also appears to be reducible using psychoanalytically based psychotherapy (mentalisation based treatment) (Bat99a, Eva99, Bat01), dialectic behavioural therapy (Lin91, Lin93, Bos05) and pharmacological therapy (Mar95, Ben98, Ver98c, Bat99b). Here too, the available research was generally not conducted among people with an ASPD, or in populations in which the prevalence of ASPD is unclear. Furthermore, the effects of psychotherapy, behavioural therapy and pharmacotherapy were determined only immediately following treatment, or after follow-up of at most six months.

5.3.4 Comorbid disorders

People with an ASPD often also have another psychiatric disorder. Usually this is an addiction disorder or a borderline, theatrical or narcissistic personality disorder (Hil04). Treatment of such comorbid conditions can positively influence the effectiveness of ASPD treatment (RCP99). This may particularly be the case if the comorbid condition contributed to the antisocial behaviour. This appears to be the case for severe addiction in particular, as that generally leads to antisocial behaviour. Daily practice has shown that behaviour often disappears if the addiction is terminated.

The relationship between treating a comorbid disorder and the effectiveness of ASPD treatment has yet to be examined in any depth. Two non-controlled studies have been published that examine the influence of treating depression (Fav94, Pes94). Both showed effective pharmacological treatment of a depressive disorder can affect a personality disorder. However, the changes to the diagnoses of cluster B personality disorders, including ASPD, did not correlate significantly with reductions in depression.

More research has been conducted examining the influence of an ASPD on the effectiveness of treating a comorbid disorder. Although this research does not involve treatment of the ASPD itself, and strictly speaking falls outside the purview of this advisory report, the outcomes may affect the prospects of people with an ASPD. Given the background of the request for advice, the Committee feels it is worth examining.

The majority of this research is of relatively high quality and examines the effectiveness of treatments for addiction. Based on the findings, it can probably be concluded that ASPD patients with a comorbid addiction disorder can be treated effectively. However, due to differences in study populations, diagnostic methods and therapy, the outcomes of the studies are difficult to compare.

In an RCT among addicts with both an ASPD and a depressive disorder, psychotherapy was found to reduce drug use and improve psychosocial functioning. In non-depressed addicts with an ASPD, only drug use was reduced significantly (Woo85). Two more recent parallel RCTs did not find a relationship between antisocial personality traits and effectiveness of psychotherapy for alcohol addiction (Pro97). A non-controlled trial found that alcohol addicts with an ASPD had more psychosocial problems at the beginning of psychotherapy and during follow-up than addicts without an ASPD, but that treatment can nevertheless lead to a significant reduction of these problems (Ver99b). Other

studies show that patients with a personality disorder run a greater risk of relapse. This is particularly true for patients with limited motivation for treatment, or patients who are unable to build a constructive treatment relationship with therapists (Ver98a, Ver04).

In an RCT examining the effect of cognitive behavioural therapy on alcohol addiction, it was found to be more effective in addicts with an ASPD than in those without (Lon94). However, this finding was not confirmed in a subsequent RCT (Kal00).

According to another RCT, the therapeutic community approach can reduce drug use among patients with and without ASPD (Mes99, Mes02).

Contingency management, conditioning through rewarding desirable behaviour, for example in the form of money or privileges, appears to be effective in reducing drug use and psychosocial problems in drug addicts with an ASPD, but not significantly more so than a regular methadone programme (Bro98). According to another RCT, contingency management in addicts with an ASPD can be more effective than in addicts without an ASPD (Mes03).

Treatment of alcohol addicts with an ASPD with Nortriptyline led to a significant reduction of alcohol use (Pow95). In a follow-up study to this RCT, this effect was found to be almost entirely related to the presence of a mood and/or anxiety disorder (Pen96).

In addition to this addiction research, non-controlled research is available looking into the influence of antisocial traits on the effect of psychodynamic psychotherapy for borderline personality disorder. A negative correlation was found between antisocial traits and a reduction in borderline symptoms (Cla94).

Finally, another uncontrolled study looked at the effect of, respectively, cognitive behavioural therapy with and without assertivity training on depression in patients without a personality disorder, patients with a cluster B and patients with a cluster C personality disorder. Both treatments were found to result in significant improvements in all subpopulations after a 3-year follow-up period. The greatest improvement was found in patients without personality disorders. The results for the two other groups were not divided into subgroups by personality disorder, meaning the effects in ASPD are unknown (Bal00).

5.3.5 *Risk management*

In the opinion of the Committee, the possibilities for treatment of impulsivity and aggression and any addiction open up avenues for risk management. Risk management is not focused on curing the personality disorder, but on reducing and making manageable the risks that are posed by patients to their environment

(harm reduction). This must be distinguished from keeping society safe through incarceration, which is also sometimes referred to as risk management.

Risk management can make use of insights from the 'What works' approach to criminal behaviour, largely developed in Canada. According to this approach, based on empirical evidence, effective influencing of criminal behaviour must satisfy four principles. The first is the risk principle. This means that the intensity of treatment must be tailored to match the degree of risk the patient poses to his environment.

The second is the need principle. According to this principle, evidence-based interventions must target influenceable ('dynamic') risk factors specific to the patient and his environment. This can include antisocial cognitions, addiction or an antisocial network. Both the extent of the risk and the specific risk factors can be mapped using structured risk assessment instruments such as the HCR-20, used to asses the risk of violent behaviour, and the SVR-20, used to asses the risk of sexually violent behaviour. Use of such instruments delivers more reliable and precise assessments than an unstructured clinical estimation (Phi00, Hil01, Hil03b, Hil05, Phi05, Vog05).

The third principle in the ‘What works’ approach is the responsiveness principle. This states that the structure of a treatment must also suit individual patient characteristics, such as his style of learning. Finally, the principle of treatment integrity is important. Interventions that meet the first three principles will only be effective if implemented as they were designed. This places demands on, among other things, the expertise of treatment professionals (And96, Gen96, Bon98, Coo01b, Hil04, Rui05).

An example of a treatment that can be implemented within the context of risk management is aggression replacement training (ART). ART is based on the idea that aggressive behaviour is learned through observation, imitation, experience and repetition, and can be unlearned. Personalised skills training is provided with this goal in mind. As there is empirical evidence that aggression correlates with limitations in the areas of social functioning, anger management and moral reasoning, training focusses on these areas. In the Netherlands, Hornsveld developed a variant of ART, which is implemented in TBS clinic De Kijvelanden. Preliminary results of research into its effectiveness are moderately positive. The Committee feels it is important for more such forms of risk management to be developed and assessed scientifically (Gol04, Hor05a, Hor05b).

Because group therapy can also have unintended effects for people with psychopathy, perspectives for risk management in this group are unfavourable (Hil04, Rui05).

5.4 Effectiveness of a prison sentence

There are no signs that purely judicial, repressive interventions in people with an antisocial personality disorder lead to lasting behavioural changes. Incarceration in prison, for example, does not lead to a change in risk factors such as antisocial cognitions, an antisocial network or an antisocial personality complex. The same is true for freedom limiting measures such as placement in an institution for recidivist offenders (ISD, article 38m of the Criminal Code of the Netherlands), if this is not paired with treatment.

Nonetheless, a prison sentence can perform non-therapeutic functions, such as retribution and protection of society for the duration of the incarceration. Treatment given during incarceration may have a lasting positive influence on behaviour. Whether this is also true for people with an ASPD has not been determined (And90, Dol93, And96, Gen96, Bon98, Coo01b).

5.5 Conclusion

The Committee has determined that little good quality research has been conducted into the effectiveness of treatments for people with an antisocial personality disorder. Dutch research is also extremely limited in scope. Until more high-quality research becomes available, clear statements about the possibility or impossibility of effective treatment of ASPD cannot be justified.

The research performed to date does not reveal any possibilities for curing people with an ASPD. In terms of symptom relief, there are also no signs that the emotional and interpersonal dimensions of the ASPD can be influenced. However, the behavioural dimension of the ASPD is likely to be more responsive. Research has shown that cognitive behavioural and pharmacological therapy can reduce impulsivity and aggression. These findings also appear important for people with an ASPD. There is also some scientific evidence that alcohol or drug addiction in people with an ASPD can be treated effectively with psychotherapy, contingency management and pharmacological therapy. This too can contribute to reducing symptoms of the disorder.

In the opinion of the Committee, the possibilities for treatment of impulsivity and aggression and any addiction open avenues for risk management. In that case, the goal is not influencing the personality disorder itself, but reducing and making manageable the risks that patients pose to their environment. To this end, evidence-based interventions must target influenceable risk factors specific to the patient and his environment. Interventions should also be tailored to suit patient

characteristics. There are no signs that purely judicial, repressive interventions in people with an antisocial personality disorder lead to lasting behavioural changes.

In patients with psychopathy, prospects for risk management are poor. In these patients, group therapy can actually have negative effects, as it enables them to learn from each other's experiences and further hone their manipulation skills.

Chapter 6

Treatment prospects

In the previous chapter, it was indicated that according to current scientific insights, proven methods for treating antisocial personality disorder effectively are limited. This chapter outlines developments that may deliver future prospects for evidence-based treatment. Of course, only further research will demonstrate whether these promises can be realised. The scientific developments that may provide new options can be divided into two categories: epidemiological and theoretical.

6.1 Epidemiological clues

The first category consists of research into treatments that may be assumed to be potentially effective in people with an ASPD on epidemiological grounds. These are dialectic behavioural therapy and psychoanalytically oriented psychotherapy as well as treatments given within TBS clinics.

Dialectic behavioural therapy and mentalisation based treatment

Various studies have shown that long-term dialectic behavioural therapy and mentalisation based treatment can improve interpersonal functioning in people with a borderline personality disorder. The Committee deems these findings also relevant for the treatment of people with an ASPD, since, according to personal messages from authors, the study populations for a number of studies included a

significant proportion of people with an ASPD (Lin93, Bat99a, Bat01). Additionally, epidemiological research has shown that comorbidity of antisocial and borderline personality disorders is high (Ver99a). Furthermore, it is likely that the same causes partly underlie both personality disorders (Par97). In sum, this suggests that long-term dialectic behavioural therapy and mentalisation based treatment, potentially in modified form, could be effective in improving interpersonal function of people with an ASPD, or at least in those without strong psychopathic traits.

Treatment in TBS clinics

For a very long time, the effectiveness of treatments implemented within TBS clinics went largely unexamined. However, this now appears to be changing. Forensic psychiatry is increasingly acknowledging the importance of effectiveness studies. In recent years, the first studies of treatment effects have been initiated. Because the scope of the research is limited and results are still pending, treatments within TBS clinics are hardly ever based on scientifically proven effectiveness. This may contribute to the continuance of non-effective treatment modalities and to forms of treatment that may well be effective but that are insufficiently tailored to individual patient characteristics (Rui00a, CBT01, IGZ03).

That there is no evidence for the effectiveness of treatments does however not rule out that they work. At first glance, recidivism figures would indicate that the sector as a whole is effective. The degree of recidivism among people treated for an ASPD in a TBS clinic is unknown, but we do know that recidivism for the overall population of patients formerly under hospital orders is relatively limited. While severe recidivism - defined as conviction for a crime with a potential sentence of four years or more - is 57% among ex-convicts after six years, this figure is 28% among former convicts placed under hospital orders.

Relatively low recidivism does not, however, constitute hard evidence for the effectiveness of treatment given to convicts placed under hospital orders. For example, it is unclear whether there is a correlation between treatments and recidivism figures. Additionally, it is unknown how often the individuals in question would recidivate had they not been treated in a TBS clinic. As a population, they may well be poorly comparable to people who only served a prison sentence. Finally, convicts placed under hospital orders admitted to a long-stay ward are not capable of recidivating. Their treatment may not have led to a reduction in the risk they pose, but because they do not return into society,

they still contribute positively rather than negatively to the recidivism percentage (Gre04, Hil04, Mar04b, War05a).

More research is needed in order to get answers about the effectiveness of treatments given in TBS clinics. In order to gain insight into the effectiveness of people with an ASPD, such research must take into account the heterogeneity of the patient population in TBS clinics (Hil04, Mar04b).

One of the treatment forms used in Dutch TBS clinics that research may show to be effective is the therapeutic community approach (sociotherapy). A relatively large amount of research into the effectiveness of this approach has been conducted outside of the Netherlands. In a meta analysis of 29 effect studies among perpetrators with a psychiatric condition, it was concluded a number of years ago that there is strong evidence for the effectiveness of this approach. A recent systematic review of treatments for delinquents with a severe personality disorder found the therapeutic community approach to be the most promising form of treatment for that group (Lee99, War03).

The Committee feels that the effect studies performed abroad are an indication for the efficacy of the therapeutic community approach as implemented within Dutch TBS clinics. Because patient populations in the communities studied are likely also to include people with an ASPD, this may also apply to treatment of people with this disorder.

The outcomes of the studies in question cannot, however, be transferred thoughtlessly to the therapeutic community approach used in Dutch TBS clinics. Various (combinations of) treatments are often used in the therapeutic community approach. There are likely to be significant differences between treatments in the therapeutic communities studied and those in Dutch TBS clinics.

The Committee once again expresses its reservations for ASPD patients with psychopathy. It believes it is likely that the relatively free atmosphere within a therapeutic community allows them to hone their antisocial skills rather than temper them. It is therefore of particular importance to develop new, specific forms of treatment for this group (Hob00, Hil04).

6.2 Theoretical perspectives

Handholds for treating people with an ASPD may also be drawn from theoretical considerations and research in other populations. Risk management, contingency management, pharmacotherapy and pharmacogenetics, and transcranial magnetic stimulation are worth mentioning.

Risk management

In the previous chapter, it was indicated that the possibilities for treating impulsivity and aggression and any addiction present create possibilities for risk management. The goal is not influencing the antisocial personality disorder itself, but reducing and making manageable risks posed by patients to their environment. To this end, evidence-based interventions must target influenceable risk factors specific to the patient and his environment. Furthermore, the interventions need to be tailored to suit individual patient characteristics.

According to the Committee, there is still significant progress to be made in the field of development and implementation of instruments for risk management. Not only should empirically validated, structured instruments for risk assessment be used – more so than is currently the case –, but also interventions targeting risk reduction tailored to specific traits of people with ASPD need to be developed and implemented. In doing so, it is important to take into account the heterogeneity within ASPD populations.

The Committee believes it is likely that many of the treatments that proved ineffective among people with an ASPD insufficiently took characteristic traits of the disorder into account, such as limited treatment motivation and inability to enter a therapeutic relationship. This could explain, among other things, the correlation between psychopathic traits and disrupting behaviour and dropout during treatment. The Committee believes it is plausible that treatments with a clearer structure and improved supervision could lead to better results in people with an ASPD. Well-trained treatment professionals that have plenty of experience with this target group and adequate supervision and intervision are also important preconditions (Lös98, Dou99a, Set99, Ogl90, Won00, Hil04, Hor04a, Hor04b, Rui05, Bar05).

Contingency management

Effective treatment of people with an ASPD is often complicated by limited treatment motivation. This is particularly true for people with psychopathy. This impediment can potentially be tackled by first making treatment motivation itself a treatment goal. The Committee feels contingency management, conditioning through rewarding desirable behaviour, for example in the form of money or privileges, could potentially play a constructive role. This appears to be most effective if it addresses the sense of status people with ASPD have and makes use of their egocentrism and calculating outlook, for example, by teaching them that they also harm themselves through a lifestyle that leads to judicial

intervention. After all, such interventions cost them status and limit the control they have over their own lives (Hem02, Dav04).

Pharmacotherapy and pharmacogenetics

The behaviour of people with a personality disorder can be influenced using various medicines, including atypical antipsychotics, anti-epileptics, SSRIs, omega fatty acids and opiate antagonists. The effects of these substances are non-specific, however. According to the Committee, it is therefore useful to study the influence of pharmacological substances on the symptoms of a personality disorder, such as impulsive aggression in ASPD. If such symptoms can be translated to a specific type of behaviour in animal testing, a relationship may be sought with certain neurotransmitter systems. In combination with indications that genetic variations in specific receptor subsystems play a role, this can generate hypotheses for the efficacy of pharmacological interventions. These can subsequently be tested in humans.

An example of such an approach involves the 5HT1B serotonin receptor. Activation in test animals leads to a decrease in impulsive aggression. It is worth researching the effects of activation in humans as well. The substances used, so-called triptanes, are already used in humans for the treatment of migraine. It appears logical to examine the effects of triptanes on impulsive aggression in people with an antisocial personality disorder (Fav97, Mar04a, Mic02, Mic04).

Transcranial magnetic stimulation

Neurobiological research has shown that ASPD can be associated with decreased function in the prefrontal cortex. This decreased functioning appears to play a role in affective information processing disorders found in people with psychopathy. Because of these disorders, they respond less strongly to signals with emotional meaning, such as facial expressions of fear or sadness in others. This also leads to a lowered fear response, causing them to take greater risks and be less sensitive to punishment (Dam94, Bec98a, Bla00a, Rai00, Hon01).

Empirical research among healthy test subjects indicates that transcranial magnetic stimulation can influence impulse conductions within the brain. In transcranial magnetic stimulation, an electrical capacitor placed on the head creates a magnetic field. This allows a specific part of the brain to be stimulated. Strengthening impulse conduction in the brain potentially allows the way the brain processes signals with emotional meaning to be influenced (Sie00, Hon01).

Neurobiological research into ASPD and research into the effect of transcranial magnetic stimulation in healthy test subjects suggest this form of treatment for people with ASPD may be able to compensate for the consequences of decreased prefrontal cortex function. This does not mean the ASPD could be cured. However, people with ASPD could be made more susceptible and sensitive to psychotherapy (EFP03).

6.3 Conclusion

Based on epidemiological or theoretical considerations, it would be useful to conduct research into dialectic behavioural therapy, mentalism based therapy, treatments given within TBS clinics, risk management, contingency management, pharmacotherapy and pharmacogenetics, and transcranial magnetic stimulation. Such research may demonstrate the effectiveness of existing treatments or provide new handholds for the development of new, effective treatment modalities.

Chapter 7

Prevention and treatment in practice

This chapter outlines how the interventions for prevention and treatment of antisocial personality disorder described in the previous chapter can best be implemented in daily practice.

7.1 Prevention

7.1.1 Principles

ASPD is a serious disorder associated with major psychological, medical and social problems and leading to significant social disruption and damage. It is therefore important to prevent an ASPD from developing. This is all the more important since the possibilities for effectively treating an ASPD later in life are limited.

The development of an ASPD always begins, based on weaker or stronger genetic predisposition, in childhood and adolescence. Therefore, interventions that reduce risk factors and strengthen protective factors during this period can potentially contribute to preventing an ASPD. In general, when working on the prevention of disorders, either a broad or a selective approach can be chosen.

Broad prevention, targeting all children, is preferable for disorders that occur frequently or in the case of disorders that are extremely rare, but for which identifying high-risk groups or individuals is not easily possible. Neither is true for ASPD. After all, even without prevention, most children do not develop

ASPD. Furthermore, the risk factors and potential precursors of the disorder are fairly well understood.

This makes selective prevention preferable. An advantage of selective prevention over broad prevention is greater cost-effectiveness, as interventions can be implemented in a targeted manner. Additionally, they can be tailored to address specific individuals and situations. This influences effectiveness positively.

The degree of selectivity that can be achieved is limited, however, as risk factors for ASPD are not specific for the disorder. Children with (or with an elevated risk of) a behavioural disorder have an increased risk of developing an ASPD. Of all people who have had behavioural disorders as youths, only a small percentage ultimately develops an ASPD, although eighty percent do have other severe psychological problems as adults (Mof03, Her05). Therefore, it seems natural to embed prevention of ASPD in the prevention and treatment of behavioural disorders in children and adolescents, in order to prevent the development of both ASPD and other disorders.

From an efficiency and cost-effectiveness standpoint, it is important to intervene as early as possible in the event of (increased risk of) behavioural disorders. The longer the wait, the greater the odds that a chronic behavioural disorder develops and potentially escalates. Once this happens, interventions will need to be more intensive and long-lasting to achieve any effect, while the odds of preventing an ASPD decrease. Despite this, prevention of ASPD in the form of treating a behavioural disorder in adolescence probably still provides better perspectives than treatment of adults (Hof00, Loe01, Hei02, Far03, Bon05, Her05).

7.1.2 Interventions for risk factors and behavioural disorders

Selective prevention of ASPD can take on three forms (GR00, Boo04, Her05):

- preventive intervention in children in high-risk groups,
- preventive intervention in children with early behavioural signs indicative of potential behavioural disorders, and
- (early) therapeutic intervention in children and adolescents with a behavioural disorder.

In order to intervene effectively, it is necessary for care providers to become aware of children with problems, by signalling risk factors, early signs of behavioural problems or disorders. Subsequently, a proper diagnosis must be

made. Finally, based on said diagnosis, interventions must be deployed for which, where possible, scientific evidence for effectiveness exists (Her05).

Signalling

Care providers can only intervene once they know which children run an increased risk, already show early signs of behavioural problems or suffer from a behavioural disorder.

Geographic and demographic criteria can be used to determine which children fall into a high-risk group. Examples include: living in a low-income area, parents with low socio-economic status and growing up with a single teenage mother, addicted or criminal parents, or parents with a severe psychiatric disorder. Additionally, the number of contacts a family has with care providers, police and the law - an indicator for the severity of the psychosocial problems the family suffers from - can be used as a criterion.

However, the presence of a single risk factor, such as parents with a low socio-economic status, is not enough to classify a child as high-risk, since individual risk factors have limited predictive value. Only an accumulation of risk factors leads to a significantly higher risk of a disorder (Gar96, Dek99, App05). In the potential presence of a single, severe risk factor, such as physical or sexual abuse, direct action must of course be taken.

In young children, in addition to risk factors, frequent, varied and severe behavioural problems should be noted. These are early warning signs of the potential development of a behavioural disorder. The most important signals are aggression, seeking out stimuli more than peers, a high degree of impulsivity and a low fear level. The predictive value of individual behavioural problems in the long term is limited, however. Nowhere near every child with one or more of these problems develops a behavioural disorder (Hei02, Hil03a, Far03, Sim04, Bon05, Lie05).

In older children and adolescents, criminal behaviour is a clue that a behavioural disorder may be present.

Two methods can be used to identify children with an elevated risk, early signs of behavioural problems or a behavioural disorder: ad hoc signalling and systematic screening. The parents of the (future) child are the primary actors for ad hoc signalling. If they realize their pedagogic abilities are insufficient, or something is wrong with their child's development, it is important for them to seek help.

However, due to ignorance, inability or unwillingness, parents do not always take action. Therefore, professionals and care providers also have a signalling

role. In order to fulfil it properly, it is important that they are sufficiently sensitive and knowledgeable in order to recognise signals. They also need to have the right skills to discuss them with parents, and know which other professionals they should refer children to if necessary. Suitable moments for signalling may occur at infant centres, during visits from midwives, general practitioners or community nurses, at day care centres and play groups, at school, and at the police and youth crime centres (HALT offices). Care providers in secondary care also have a signalling role to play (Her05).

Another possibility is systematic screening. This tool has the potential to reveal active risk factors, early signs of behavioural problems and disorders. Systematic screening is performed either by case finding or through population screening. In case finding, screening can be offered once the child or family has, for whatever reason, come into contact with a professional or care provider. In population screening, parents and children are invited specifically to participate.

Screening uses one or more standardised instruments. In other countries, instruments have been developed to screen for the presence of risk factors and early signs of behavioural problems and disorders. The Dunedin Family Services Indicator (FSI (Mui89) and the Family Stress Checklist (FSC) (Mur85) are used during pregnancy to gauge the odds of future abuse or neglect. Signalling of abuse, neglect and sexual abuse during childhood and youth is done using the Parent-Child Conflict Tactics Scale (CTSPC) (Str98). Behavioural problems in children between the ages of one and three years are screened using the Infant-Toddler Social & Emotional Assessment Revised (ITSEA) (Car03), and in children from the age of three years using the Strengths and Difficulties Questionnaire (SDQ) (Wid03). The Child Behavior Checklist (CBCL) was developed to screen for behavioural disorders (Ach91).

For all of these instruments, research is required in order to determine the predictive value for Dutch populations (Mat00b, Her05). Such research has only been conducted for a version of the CBLC that must be completed by the youth, the Youth Self-Report (YSR). However, in a population of detained adolescents, this proved insufficiently sensitive (Vre06). Research into the validity of the SDQ is currently underway at various locations in the Netherlands (Her05). The Committee feels it is important that research also be conducted into the usefulness of the other instruments.

Useful implementation of screening instruments requires clinical expertise. If this is lacking, screening can easily lead to ‘false positives’: children whose behaviour or development is incorrectly labelled as problematic, whereas the prevalence of severe behavioural problems and disorders is limited to six percent among boys and three percent among girls (Ber04). As the required expertise is

scarce in daily practice, it is recommended that (validated) screening instruments will be implemented selectively, for instance when worrying signals are picked up at infant centres and in general practice. This does however require that more attention is given to the promotion of expertise. In order to determine to what degree this form of signalling is effective and efficacious, research is also required.

Diagnosis

Signals that may indicate the presence of risk factors or early signs of behavioural problems or disorders are rarely clear-cut. In order to determine an indication for intervention tailored to the child's characteristics and the situation it finds itself in, a careful diagnosis is required. As mentioned previously, this also applies when using standardised screening instruments (Her05).

Adequate diagnosing is particularly important if signalling reveals risk factors or early signs of behavioural problems. After all, the presence of these factors and characteristics still leaves a significant degree of uncertainty regarding the odds of a behavioural disorder. This uncertainty is particularly large at the moment in time when intervention can be most effective and efficacious: when the child is young. Therefore, a good diagnosis will often require following the child's development for a number of years. This way, it may become clear whether the signalled risk factors initiate a process that can escalate and develop into a disorder. In such cases, relatively early intervention is still possible. Infant centres and school doctors can be involved in the longer term monitoring of children, among other ways via the periodic health exam (PGO) (Her05, Bai06).

In order to obtain a good understanding of a child, as many sources of information as possible should be consulted. In addition to parents, this includes professionals and other care providers involved in caring for the child. In addition to expertise, adequate diagnosing requires information exchange and cooperation between professionals and care providers, particularly if a child's development is to be monitored over a longer period. The electronic child dossier that will be introduced shortly can be a useful tool. However, existing privacy rules must be taken into account (Dor04).

Good examples of cooperation in the area of diagnosis are the Parent and Child Centres in Amsterdam. These are low-threshold centres organised at a neighbourhood level where parents, professionals and care providers can discuss worrying signals and where care providers from various disciplines can meet to make diagnoses and select interventions. Another example is the network study

performed within the context of the Amsterdam 'Vangnet Jeugd' (Youth Safety Net) project among nuisance families who come into contact with the police after a report of nuisance (Boo04).

Intervention

The intervention that is selected based on the preceding diagnosis should be one with scientifically demonstrated effectiveness. Chapter 4 outlines various interventions available for preventing and treating behavioural disorders, along with levels of evidence. As effectiveness is in part related to consistent implementation, continuous supervision and scientific assessment is desirable.

An example of an approach that meets these criteria may be found in Norway. In 1999, treatment of behavioural problems in young children was implemented nationally through behavioural training for the parents. Behavioural problems in adolescents are tackled through multisystemic therapy. American research has demonstrated the effectiveness of both treatment modalities. As it is known that effectiveness decreases if treatment professionals lack sufficient expertise, a great deal of attention is given to training, intervision and supervision in Norway. Additionally, scientific effect studies are carried out regularly, in order to determine, among other things, whether the treatments are implemented adequately. An independent centre at the University of Oslo coordinates the scientific supervision and assessment for the project, which is financed by the Ministry of Child and Family Affairs (Cur04, Ogd04).

Similar projects are being implemented in The Netherlands, albeit on a far smaller scale. For example, functional family therapy was introduced by the academic centre for child and youth psychiatry De Bascule in Amsterdam in 2003. In 2004, research began into the effectiveness of this approach (Bre05). Following a proposal from the NIZW, multisystemic therapy has been offered by the centre for outpatient forensic psychiatry De Waag in Utrecht and Amsterdam as well as by psychotherapeutic centre De Viersprong in Halsteren since 2004 (Ber03, Bre05). From 2006 onwards, institutions including De Bascule and Youth Services Drenthe will be offering behavioural training to parents of children with behavioural problems. Scientific supervision and evaluation will be provided by Maastricht University, TNO and PI Research (Öry05). In 2006, the Salvation Army Youth Care and Probation and Youth Care Gelderland will start providing behavioural training for foster parents who take on delinquent youths. In the Committee's opinion, these projects deserve to be expanded and extended.

7.1.3 *Role of youth care*

Youth care (youth aid, youth mental health care and judicial youth care) plays a key role in preventing antisocial personality disorder. After all, prevention and treatment of behavioural disorders in children and adolescents are entrusted to youth care and youth health care. Youth aid and judicial youth care currently fail to properly fulfil this role (Alg02, IGZ05, Ope04, Her05, Bra06).

Youth aid

Although improving youth aid is on the agenda (TK06c, Wit06), the Committee underwrites the conclusions of past reports that the quality of signalling, diagnosis and intervention is currently still lacking (Alg02, Ope04, Her05, Bra06).

Youth aid does not adequately signal which children run an increased risk of a behavioural disorder. This is primarily due to a lack of screening instruments and expertise in the field of risk factor recognition. Additionally, care providers often do not know how to discuss worrying pedagogic situations with parents and how to maintain contact with parents who mistrust and avoid them. Additionally, the fracturing of youth aid leads to limited information exchange regarding children. This makes long-term monitoring of children with an elevated risk particularly difficult.

The diagnosis and treatment of behavioural disorders is also sub-par, particularly due to a lack of expertise. This leads to treatments often not being tailored to suit characteristics of the child and the family it is a part of. Many treatments without scientifically proven efficacy are also applied. Finally, an additional problem is that coordination between care providers is often insufficient.

The Committee feels improving the quality of care requires investment in the development of screening instruments. However, this alone is not enough. At least equally important is the need for care providers in youth aid to receive better training in recognising and discussing risk factors and in adequately signalling and diagnosing psychiatric disorders. Furthermore, interventions with scientifically proven effectiveness should be chosen wherever possible. These should also be implemented consistently and assessed scientifically for effectiveness. Development of guidelines for signalling, diagnosis and treatment could make a significant contribution to increasing the quality of care.

An important group with an elevated risk of an ASPD consists of criminal adolescents in judicial juvenile facilities. A majority of them, an estimated 70 percent, has a psychiatric disorder. This is often a behavioural disorder (Lod03, Vre03).

Adequate treatment of psychiatric disorders is often not provided in judicial juvenile facilities. The youth judicial system, due to a lack of expertise, often fails to recognise the psychiatric backgrounds of criminal youths. Insofar as it is recognised, incorrect diagnoses are still far too common. Because of this, as is the case in youth aid, treatment insufficiently tailored to individual traits is provided. Additionally, most treatments implemented have not been proven effective through scientific research (Dor95, Alg02, Dui03, Lod03, Vre03, Dor04, IGZ05, Dui05).

The lacking treatment of psychiatric disorders is likely to contribute to the high degree of recidivism among youths admitted to judicial juvenile facilities. Following release, over 60 percent of youths commit another serious violent crime within four years (War05b, Gee05). Extremely structured alternatives to judicial juvenile facilities, such as the Glen Mills schools, cannot solve the problem. Glen Mills schools are expressly not designed for youths with a psychiatric condition. Furthermore, a positive effect of Glen Mills schools on recidivism has never been demonstrated scientifically (Nat04, Baa05).

According to the Committee, a response to youth criminality caused by or associated with a psychiatric condition should primarily be focussed on reducing future risks and less on the (severity of) the crime committed, as is currently the case. However, proportionality between the severity of the crime and the duration of the sanctions must be kept in mind. This means the sanction may not last any longer than justified by the crime.

Risks can be reduced through improved signalling of disorders, for example during the screening performed by Child Protection Services (Raad voor de Kinderbescherming) and during the Pro Justitia report (Bai06, Dui06). Treatments with proven effectiveness should subsequently be selected during a stay in a judicial juvenile facility. It is important that these treatments be implemented consistently and assessed scientifically for effectiveness wherever possible. Finally, guidelines for signalling, diagnosis and treatment can improve the quality of care in this area as well.

Following discharge from a judicial juvenile facility, youths who require it should be able to receive follow-up treatment within youth mental health care (GGZ). Due to resistance within youth GGZ against youths with a criminal

record, this is often lacking. This increases the odds of relapse and recidivism. In order to change this situation, it is important to improve cooperation between judicial health care and youth GGZ. In some regions in The Netherlands, cooperative projects have already been initiated between both sectors, but they remain few and far between (Dui03, Dui04, Dor04, IGZ05, Ope04).

A proportion of youths in judicial juvenile facilities have a disorder but represent limited danger. According to the Committee, it would be better to treat them in an ambulatory setting, for exampling a youth forensic psychiatric outpatient or day clinic. This is because chances are large that intensive contacts with antisocial peers in a judicial juvenile facility will make them more rather than less antisocial (Dis96, Dis99, Pou01). In order to realise this, more treatment facilities are required within youth care and youth mental health care (Dor04, Dor05).

7.1.4 Normative aspects

When dealing with the prevention of antisocial personality disorder, two normative questions arise. The first one concerns the acceptability of screening for (risk factors for) a personality disorder, the second one concerns the possibilities for exerting pressure if parents or child are not open to help.

Acceptability of screening

Screening is testing for the presence of risk factors for a specific disease or condition or for the disease or condition itself prior to its manifestation. The goal is to implement preventive intervention or early therapy. This is particularly important for severe conditions that can be treated more effectively at an earlier stage. Early intervention can contribute to significant health gains.

However, screening also has potential disadvantages. For example, when mild abnormalities are revealed, this can cause a disproportionate amount of worry. If people then seek treatment due to fear, this may entail unnecessary medical risks. Therefore, care is required, particularly due to the fact that screening tests are offered without demand. It does not take place because a person with complaints visits a doctor; a doctor offers the test because he feels there is a good chance that a particular disorder exists. Naturally, consent is required for testing.

In order to ensure careful decision-making, the Population Screening Act (WBO) requires permission from the Minister of Health (article 2, WBO). This applies to screening for severe diseases and conditions for which no prevention

or treatment is possible, for example, since the knowledge that someone has an increased risk of such a disease or condition, or that it is already present in a latent form, is generally a burden. Screening for (risk factors for) a behavioural disorder is likely not to require permission, as prevention or treatment is available. However, the disadvantages of screening can outweigh potential advantages. In such cases, screening may be permissable but not acceptable.

In order to determine whether screening for (risk factors for) a behavioural disorder is acceptable, the criteria drafted by Wilson and Jungner in 1968 for the WHO can be used, along with the variants that have been developed later (Wil68, GR94, Hal95, GR01, Lee02, Far03, GR04).

According to these criteria, the instruments used must have a high degree of specificity and sensitivity. In this case, it is unknown whether these aspects are safeguarded in Dutch translations of instruments developed aboard. As mentioned previously, there is currently insufficient research on this subject. It is not unlikely that the combination of low sensitivity and specificity of screening instruments and the relatively low prevalence of severe behavioural disorders will lead to a poor predictive value. This in turn could lead to the behaviour of many children incorrectly being labelled problematic (false positives) while other children may incorrectly be considered not problematic (false negatives).

Screening using unsuitable instruments can generate a great deal of worry among the population being screened and lead to stigmatisation. The message that a child is at risk of developing a behavioural disorder, and therefore among other things a personality disorder, can be particularly burdensome, both for the child and its direct environment. This is especially unfortunate if the message is incorrect (as is the case with false positive). However, shortcomings in the predictive value of screening instruments become less significant as the positive effects of preventive intervention or early therapy for children who are on the road to developing a disorder grow.

In order to determine how much children can benefit, insight into the development and clinical course of behavioural disorders is required. In chapter 3, it was indicated that nowhere near every child with a behavioural problem also develops a behavioural disorder. This is in part due to the influence of protective factors. However, little is currently known about these factors. As a consequence, it is often difficult to predict whether a child will develop a behavioural disorder if there is no intervention. This in turn complicates the estimation of the importance of preventive intervention or early therapy for children. After all, it is unclear which children with an increased risk actually benefit from an intervention aimed at preventing a behavioural disorder from developing.

In addition to a sufficiently valid screening instrument, acceptable screening requires there to be sufficient capacity for effective treatment of any behavioural problems and disorders that are revealed. This is currently not the case. The poor quality of youth care has already been outlined. A population screening programme of significant scope can only be justified if quality is increased significantly. After all, obtaining information about the presence of (risk factors for) a behavioural disorder early on in a child's life is only an advantage if effective intervention is a possibility.

These considerations clearly show that identifying and weighing the advantages and disadvantages of screening for (risk factors for) behavioural disorders is complex and fraught with uncertainties. These uncertainties can only be removed by research into the effectiveness and cost-effectiveness of signalling methods. The Committee recommends such research. Only then will it be possible to make a well considered decision regarding the acceptability of screening.

Pressure

A second normative issue in the prevention of ASPD is the use of pressure. Parents of children with (increased risk of) a behavioural disorder are not always motivated to take part in treatment; the same is true for the children themselves. This raises the question of what possibilities exist for exerting pressure in order to provide treatment.

Pressure is used to try and motivate someone to undergo treatment by imposing sanctions in the event of refusal. Such treatment pressure must be distinguished from forced treatment, in which a person is not given a choice and treated against his will (GR02). For some psychiatric conditions, such as psychosis, forced administration of medication may be indicated. However, forced treatment is not useful for behavioural and personality disorders, as the required psychotherapy requires a constructive therapeutic relationship between treatment professional and patient and, as is the case for long-term pharmacotherapy, has no perspectives without motivation (Kal97).

Before the decision can be made to exert pressure, the necessity must be indisputable. Parents with poor pedagogic skills or a child with behavioural problems often do not ask care providers for help with their problems. They are often insufficiently aware of the problems, sometimes feel ashamed or do not know where to go for help. Nonetheless, reservations among parents can often be defeated via 'proactive care'. This means parents are actively approached and explicitly informed about the possibilities for care. Good coordination with other

care providers already involved with a family can contribute to the acceptance of additional care. The majority of parents ultimately accept help they originally did not request (Boo04, Her05).

However, a minority of parents continue to reject help, even if the offer is made in a textbook manner. In such cases, the Civil Code (BW) provides possibilities for applying pressure. The main handhold for this is parental legal obligation to provide care and education (article 1:247 BW). If they fail to meet this requirement, and the child grows up in such a way that his physical or mental health is seriously harmed, and other measures have failed or can be expected to fail, a judge can appoint Youth Services as legal guardian of the child (article 1:254 BW). The Council for Child Protection and the attorney general's office can ask the judge to apply this sanction.

If a child is placed under supervision, parental authority is limited, and Youth Services is given the task of providing the necessary care. This task is performed by family guardians, authorised to give parents pedagogic instructions in writing (articles 1:2457 and 258 BW). Such instructions may be completing a child-raising course, allowing specialised home care or placing the child in a day treatment facility. If parents ignore these instructions, the judge can suspend their authority over the child (article 1:268 BW). In cases of severe neglect of child raising or care of the child, parental rights can even be suspended entirely (article 1:269 BW). If help given within the context of supervision does not yield sufficient improvement, Youth Services, the Council for Child Protection and the attorney general can ask for the child to be placed into care. The child will then be transferred to a foster family or an institution (article 1:261 BW).

In practice, supervision frequently proves insufficiently effective in improving a child's pedagogic situation. This can largely be explained by the lack of concrete goals, poor coordination between family guardians and other care providers, and the heavy workload of family guardians (Slo02, Dui03, Slo04). Additionally, the possibility for giving parents written instructions is rarely exercised. In about 45 percent of cases, it becomes necessary to place the child in care despite the developmental help provided (Sav00). Unfortunately, due to a lack of capacity this measure can often not be carried out when it is needed.

Particularly if the cause of the behavioural problems or disorder lies in child characteristics rather than poor pedagogic skills in parents, it is important that the child also accepts the help. However, this is not always the case. Slightly older children in particular can take an oppositional stance to care providers.

If a child with severe behavioural problems does not want to take part in treatment, it can be transferred to a closed care facility, if this is mandated by the treatment. This can only be done if the child has already been placed under

supervision – something for which the parents can put in a request. However, closed care facilities also lack capacity. Because of this, many children placed in a closed care facility due to severe behavioural problems end up in a judicial juvenile facility. These facilities do not have sufficiently suitable treatment available. Furthermore, it is highly likely that staying at an institution together with convicted children can harm their development (Dis96, Dis99, Sav00, Pou01, Bre04).

Under the age of twelve, a child with a psychiatric disorder can be admitted to a psychiatric hospital against his will as long as his parents agree, since this decision falls whithin parental authority (article 1:245 BW). Based on the Special Admissions to Psychiatric Hospitals Act (BOPZ) admittance is also possible for children aged twelve and older, in which case parental is not required. However, this course of action must then be taken specifically to ward off danger for the child itself, for others or for general safety (article 2 BOPZ). Furthermore, the severity of the danger must be in balance with the severity of the restriction of freedoms (Dij06).

Based on this Act, the attorney general can request conditional authorisation for forced admission for children aged 12 and older with a psychiatric condition. The judge can issue this if the disorder leads to danger that can be averted if the child meets the conditions. This usually relates to cooperating with treatment. If the child fails to do so, a forced admission may follow (articles 14a and 14d BOPZ).

For both forced admissions and conditional authorisation, the BOPZ requires a disorder that "leads the involved party to cause danger" (articles 2 paragraph 2 and 14a paragraph 2 BOPZ). According to the law's history, this should be understood to mean that the danger is directly and primarily caused by the disorder, such that the patient is an unwilling tool of his disorder. Whether this is the case cannot be defined per disorder, but must be determined per person and per situation. However, assuming a causal relationship between a disorder and danger for behavioural problems is often seen as problematic, for example because parental pedagogic powerlessness is a dominant cause of the danger (Dij06). Therefore, the BOPZ is not often applied to children with a behavioural disorder (Dui04).

In addition to civil legal measures, the Criminal Code (Sr) allows for punishment and measures to be applied to children between the ages of twelve and eighteen years old who have committed a crime. These also provide room for applying pressure for treatment. Force, however, is not an option. Treatment is voluntary, but the alternatives are made unattractive.

Before criminal prosecution can commence, the attorney general can, as a condition for dismissing the case against a child who has committed a crime, demand participation in a learning activity (for example a HALT project) or care provided by Youth Services (articles 77e-f Sr). If prosecution and conviction follow, the judge can apply a sentence consisting of juvenile detention, a fine or community service. The most important measure that can be applied, potentially combined with punishment, is placement in a judicial juvenile facility (article 77h Sr). However, this is only possible if the child has committed a serious crime, and placement is required in order to safeguard the safety of others and is also in the best interest of the child's optimal development (article 77s Sr).

The punishments and measures listed above can also be given conditionally. Conditions may include that the child will obtain outpatient or inpatient treatment or be supervised by the juvenile probation office. Within this context, the judge can order Youth Services to treat the child (article 77x-z Sr).

While retribution plays an important part in adult criminal law, juvenile criminal law is primarily pedagogic in function. However, it is doubtful whether it can realise this goal and thereby contribute to the prevention and treatment of behavioural disorders. Whilst from a pedagogic viewpoint, a swift and clear response to punishable behaviour is desirable, legal proceedings are often protracted. Additionally, there is often insufficient monitoring of adherence to the conditions set. Furthermore, as indicated above, the quality of care in judicial juvenile institutions is often lacking. Because judicial juvenile facilities on the one hand, and youth care and youth mental health care on the other hand often fail to cooperate properly, conditional sentences and measures often do not connect to mandatory ones.

In order to improve this situation, the cabinet is stimulating cooperation between judicial juvenile facilities and youth mental health care. Additionally, the cabinet is preparing a bill on Influencing Juvenile Behaviour. This bill introduces the possibility to apply intramural or outpatient treatment measures, or a combination of both, in the event of a conviction. This measure is felt to be of particular importance for recidivist children with behavioural problems for whom conditional sanctions are felt to be too mild, and placement in a judicial juvenile facility too severe. Juvenile detention is kept open as an option for children who do not cooperate sufficiently (TK06b).

The lack of civil law options for pressure to treat is a significant problem for youth care (Wer04). Often it is necessary to wait for a child to commit a crime in order to be able to make use of criminal law options. Juvenile criminal law, given

the poor quality of judicial juvenile care, currently does not provide a good framework for treating behavioural disorders.

The Committee is therefore of the opinion that more possibilities must be created for motivating children with a behavioural disorder who have not been prosecuted criminally to accept treatment. Additionally, in daily practice there is a need for possibilities to force participation in care provision for convicted children, once their sentence or measures have ended. Currently, they often do not receive follow-up treatment, due to resistance in youth care against children with a criminal past and due to unwillingness of the children themselves (Dui03, Wer04).

The Committee calls for expanding the possibilities for exerting treatment pressure for children with severe behavioural problems. The government has already announced proposals of this nature. For example, new inpatient care offerings in youth care are being created for children with severe behavioural problems placed under supervision, to ensure they no longer need to rely on judicial juvenile facilities. A bill on Closed Youth Custodial Institutions is also being prepared. This will not only regulate admission and treatment in a closed facility within the context of the Youth Care Act, but also creates the possibility for follow-up treatment by youth care in an open setting, with return to the closed facility should it be necessary. At a later stage, the cabinet wishes to determine whether this new regulation can be combined with the current regulations for children with a psychiatric disorder in the BOPZ (TK05).

The Committee feels it is too early to determine whether the Closed Youth Custodial Institutions bill deserves support, also taking into account the criticism that has been voiced in the legal community (Bru06),

7.2 Treatment

Antisocial personality disorders cannot currently be cured, the Committee concluded in Chapter 5. There are signs that the concomitant behaviour can be influenced, however. Research has shown that cognitive behavioural therapy and pharmacological therapy can reduce an individual's impulsivity and aggression. Additionally, there is some scientific evidence that an alcohol or drug addiction in an individual with an ASPD can be treated effectively with psychotherapy, contingency management and pharmacological therapy. This too can contribute to reduction of symptoms of the disorder. In people with psychopathy, the most severe form of ASPD, treatment perspectives are poorer.

The Committee is of the opinion that the possibilities for treatment of impulsivity and aggression and any addictions present handholds for risk

management, where the goal is to reduce and make manageable the risks a patient forms for his environment. This chapter indicates how existing possibilities can be implemented in current daily practice. Incidentally, providing social security through incarceration is sometimes also referred to as risk management. Here, however, we are only using the term to refer to interventions aimed at influencing behaviour.

7.2.1 Risk management in Mental Health Care, penitentiary institutions and the TBS sector

Treatment of antisocial personality disorder is currently mostly limited to convicts with an ASPD who are placed under hospital orders. But nowhere near all people with an ASPD are given hospital orders. Many have never been convicted of a crime, others are only given a punitive sentence when convicted. This means there are more people with an ASPD outside than in the TBS sector. Therefore, risk management also requires the involvement of mental health care (GGZ) and penitentiary institutions.

Preventive risk management in the GGZ

Ideally, people with an ASPD are treated at an early stage of their disorder, in order to limit the nuisance they cause and the crimes they commit. The GGZ clearly has a role to play in this area. In practice, however, people with an ASPD are often treated for an addiction or depression, but rarely for the personality disorder.

Cultural differences are the first reason for this state of affairs. While the judicial circuit focuses on safeguarding society, a therapeutic perspective is the prevalent idiom in the GGZ. This places patient care first and foremost, with carers making sure their treatment benefits the patient and is in principle only started if he asks for it. Even if pressure is exerted or force is applied, this is done with the best interests of the patients in mind and with the assumption that during the course of treatment he will become aware of the benefits. Such a therapeutic approach is at odds with risk management. After all, risk management is primarily focused on the interests of society, as is security through incarceration, and in patients with ASPD it is certainly not applied on the patient's request. This is because ASPD patients almost never ask for help with the personality disorder, and certainly not motivated by the interests of others.

A second cause of under treatment of ASPD in the GGZ is that the sector lacks specific knowledge and experience in this area. The GGZ institutions

generally lack care programmes for people with a personality disorder. For example, ASPD is often not recognized during the treatment of addiction (Kam05). And even if it is, care providers are often not sure how to deal with the aggressive behaviour and limited treatment motivation in people with an ASPD. The fact that possibilities for treatment pressure in the GGZ are limited also plays a role. Treatment is therefore often considered of limited usefulness. Furthermore, care providers worry that people with an ASPD will cause management problems that disrupt the treatment of other patients (Dan03, IGZ03, Vli06).

As a consequence of this, the contribution the GGZ makes to reducing the risk people with an ASPD pose in their environment is limited. In practice, this means that treatment of their personality disorder only commences once they have been convicted of a crime, although at this point it often becomes apparent they have already had multiple contacts with GGZ institutions that were generally brief and fruitless (Pan03, Vli06).

This situation can only be changed if the GGZ also includes risk management as one of its responsibilities. At the same time, attention must be paid to promoting expertise in the area of recognising and treating the disorder as well as dealing with these patients. The Committee feels more use could be made of existing, evidence-based options for risk assessment and management. Finally, new legal options for exerting treatment pressure for people with an ASPD should be examined. The Committee will examine this in more depth in § 7.2.2.

Risk management during and after a prison sentence

Many people with an ASPD commit one or more criminal acts and are subsequently convicted, sometimes in combination with hospital orders. However, effective risk management also requires treatment, since behaviour based on an underlying psychiatric condition will not change due to a prison sentence alone. In the long term, such measures do not reduce the risks such individuals pose to society.

Treatment given during incarceration may have a lasting positive influence on behaviour. However, the penitentiary system lacks the proper knowledge, experience and means to independently develop and provide treatment for people with a personality disorder. Treatment during a prison sentence will also rarely be enough to ensure effective risk management, because the necessary treatment usually takes longer than the sentence. Nonetheless, a start with the treatment can be made, either in prison, in a TBS clinic (following transfer based on article 13 Sr) or in a psychiatric hospital (on the basis of article 15 of the Penitentiary

Principles Act (PBW)). However, effective risk management requires continuation of treatment after the prison sentence has been served (Veg99).

Given all this, it is desirable for TBS clinics to involve the GGZ in the treatment process during the detention period. TBS clinics have far greater expertise and experience dealing with this group than penitentiary institutions. GGZ involvement is also important insofar as treatment needs to be continued after release. Such cooperation dovetails neatly into the 'Recidivism reduction' programme of the Ministry of Justice and the rehabilitation system, the goal of which is to develop behavioural interventions for prisoners that meet internationally accepted quality criteria (MvJ05).

Treatment in the GGZ can also take place within the context of a Penitentiary Programme (article 4 PBW) or a conditional prison sentence (article 14a Sr) and – following its expected introduction – conditional release. The threat of (resumption of) a prison sentence may be an important stimulus for people with an ASPD to take part in treatment.

For the same reasons that the GGZ hardly treats any people with an ASPD before they commit crimes, they also fail to provide sufficient treatment after they have and have been convicted for them. Treatment in the GGZ during a conditional prison sentence or release, or following completion of a sentence requires the GGZ to shake off its reticence for treating (ex)delinquents (MvJ04, RMO05).

Risk management during and after hospital orders

Risk management through interventions dovetails neatly into the key goal of TBS clinics: contributing to the safety of society. However, there is room for improvement in how this is given form. This is also true for the treatment of people committed to TBS clinics with ASPD.

The limitations to risk management during and after hospital orders can to a large degree be traced back to the isolated position of the TBS sector relative to the GGZ. This has two negative consequences. First, this isolation contributes to the limited scientific basis for the methods used in TBS clinics. For example, treatments are still selected based on experiential knowledge rather than scientifically proven efficacy. Additionally, still too little attention is paid to consistent implementation and scientific evaluation of treatments. As a consequence of this, ineffective forms of treatment may be adhered to for too long, and treatments that may well be effective are insufficiently tailored to individual patient characteristics (Rui00a, CBT01, IGZ03).

A second consequence of the isolated position of TBS clinics is poor transfer of people with an ASPD to the GGZ once their criminal risk has been reduced to a socially acceptable level. In these cases, effective risk management is crucial for a gradual return into society. There are currently far too few possibilities for this. Because convicts placed under hospital orders are seen as untreatable and potentially dangerous within the GGZ, there is little interest in treating them. The same stance is usually maintained once treatment under hospital orders is completed, leading to limited aftercare for former convicts placed under hospital orders. In many cases, such aftercare is required to prevent recidivism (CBT01, Mar03, Vli06).

In order to improve the isolated position of TBS clinics and the consequences this has for the treatment of people with ASPD, better structural cooperation with the GGZ is required. Additionally, the GGZ must be more open to treating (ex) convicts placed under hospital orders.

Existing treatment methods are generally ineffective for people with psychopathy. Insofar as they have been given hospital orders, treatment has proven ineffective, and proportionality between the severity of the crime committed and the duration of the measure remains extant, admission to a long-stay department is the obvious choice.

Need for cooperation

Effective risk management requires cooperation between the GGZ, penitentiary institutions and the TBS sector, on two grounds.

First, over time people with ASPD often come into contact with several of these sectors. The reason for an initial contact with the GGZ can be an addiction disorder. Poor motivation for treatment or aggressive behaviour often leads to such contacts remaining brief and superficial, resulting in ineffective treatment and a barely reduced risk to society. Following a conviction for one or more criminal acts, a prison sentence and/or hospital orders often follows at a later stage. In order to prevent repetition of this cycle, the three sectors should provide a continuum of (proactive) care. This requires a chain approach, in which people with an ASPD can transfer to the most suitable institution. It also requires a sharing of risk management, transfer of knowledge about patients and treatments that form a continuum. Such a chain approach thus requires cooperation. Rehabilitation can also be involved.

A second reason for cooperation is that the GGZ, penitentiary institutions and TBS clinics can often learn from each other in terms of how best to treat people with an ASPD. For example, the GGZ can benefit from the experiences

penitentiary institutions and the TBS sector have with dealing with aggression. In turn, the GGZ has a fairly broad knowledge of evidence-based treatment choices and quality assurance through supervision, intervision and protocol use. Cooperation, which should also involve universities, can allow this knowledge to be shared and developed further.

In practice, however, cooperation between the GGZ on the one hand and penitentiary institutions and TBS clinics on the other is difficult due to differences in culture, treatment traditions, legal regimes, management and financing. This has been pointed out repeatedly over the past decade. The consequences, such as limited treatment offerings in prisons for convicted psychiatric patients and poor transfer of convicts placed under hospital orders to the GGZ, have been highlighted frequently. Policy initiatives have been taken in response, for example in the field of forensic psychiatric network formation, but this has not yet led to sufficient improvements (Tui89, IBO95, IBO98, Bla00b, Oei00, Rui00a, Bra01, CBT01, Gro03, IGZ03, Mar03, IGZ04, EK05, RMO05, Vli06). Recently, an interdepartmental working group (Houtman Committee) proposed transferring funding for psychiatric care in prisons and TBS clinics to the Ministry of Justice, who can then purchase care from the GGZ (Int05). This proposal may contribute to streamlining psychiatric care provided within the context of incarceration or hospital orders, but it does not provide solutions for poor aftercare (RMO05).

The Committee feels that only cooperation between the GGZ, TBS clinics, penitentiary institutions and universities will allow specific expertise about the treatment of people with ASPD to be bundled and developed further. This cooperation can be given form by, for example, creating joint guidelines for diagnosis and treatment. The Committee feels such guidelines are required to increase the efficacy and cost-effectiveness of treatments. The development of guidelines not only provides the possibility for making existing knowledge more explicit and identifying gaps, but also for mapping out any legal, practical and organisational boundaries to concrete implementation. Finally, it was indicated in the previous chapter that there is room for important progress to be made in the field of development and implementation of instruments for risk assessment and management. Cooperation is also desired in this area.

7.2.2 Pressure

As a rule, people with an ASPD have no care demands for their personality disorder and are not motivated to cooperate with treatment. Cooperation must often be forced via sanctions if they refuse.

Exerting pressure can be of particular importance to the success of treatments that specifically target a lack of treatment motivations, such as contingency management, or comorbid disorders that undermine motivations. In people with an ASPD, pressure is often required as a follow-up to treatment in order to prevent disruptive behaviour and dropout. However, the question remains whether there are sufficient legal opportunities for exerting treatment pressure on people with an ASPD. Exerting treatment pressure must be distinguished from forced treatment. As already indicated, forced treatment is not useful for personality disorders, as the required psychotherapy requires a constructive therapeutic relationship between treatment professional and patient and, as is the case for long-term pharmacotherapy, has no perspectives without motivation.

The legal possibilities for treatment pressure are greatest following criminal conviction. First and foremost, pressure can be exerted by passing a conditional prison sentence, if necessary in combination with an unconditional sentence. The implementation of (the conditional portion of) the prison sentence will be waived if the convict meets certain conditions during his probation period, such as participation in outpatient treatment or treatment after admission to a psychiatric institution, or taking medication. As a probationary period may last a maximum of three years, treatment within the context of a conditional sentence can only last up to three years (articles 14a-c Sr). After the expected introduction of the conditional release, treatment can also take place within this framework. In such cases, it is expected that probation and therefore the maximum duration of treatment will equal one-third of the sentence (TK06a).

Secondly, the TBS measure provides for possibilities to exert treatment pressure following a conviction. TBS can, in combination with a prison sentence, be given if the convicted party has committed a crime under the influence of a psychiatric condition and the measure is required to safeguard the safety of others or general safety. The combination of TBS and a prison sentence is becoming increasingly common.

TBS with forced treatment (article 37a Sr) itself already exerts pressure to take part in treatment based on admission to the facility. After all, a TBS clinic has a therapeutic climate from which the convict under hospital orders cannot withdraw and that he, under penalty of sanctions, may not disrupt. Additionally, the convict under hospital orders knows forced treatment will only be lifted once treatment has sufficiently reduced the risk of recidivism. And in the last stage of treatment under hospital orders, pressure for treatment outside the TBS clinic is made possible for a term of up to three years, by making the release conditional on compliance with this treatment (articles 38g and 38j Sr). Pressure can also be exerted to ensure treatment outside of TBS clinics by sentencing people to

conditional hospital orders (article 38 Sr). In contrast to TBS with forced treatment, the duration of these conditional hospital orders is limited to a maximum of four years (article 38d Sr).

Finally, since 2004, the possibility has existed to sentence recidivists – a person with a risk of recidivism who has been convicted of a crime at least three times in the past five years – to admission to an institution for recidivist offenders (ISD). During the execution of this measure, treatment of addiction or 'other problems' is offered (article 38m Sr). The convicted party can refuse this offer, but will then be included in an austere regime where he enjoys fewer privileges and freedoms. The maximum duration of placement in an ISD is two years (article 38n Sr). The measure can also be applied conditionally, with a probation term of at most three years (article 38p Sr).

In the opinion of the Committee, whether these criminal law options for exerting treatment pressure are sufficient to reduce the risk a person with ASPD forms for his environment can only be determined once sufficient effective treatments are available. Current practice lacks such treatments. After all, there is a significant lack of treatment offerings in prisons, TBS clinics and ISDs for people who have been given an unconditional prison sentence or measure, as well as outside this framework, namely for treatment within the context of a conditional sentence or measure or conditional suspension. Additionally, the effectiveness of many of the treatments provided in prisons, TBS clinics and ISDs has not been demonstrated scientifically.

It is unrealistic to expect that symptoms of a personality disorder can be reduced permanently within a few years. In that context, the maximum terms for treatment within the context of a conditional sentence or measure are likely to be too short for most people with an ASPD. This means that once these terms end, other possibilities for exerting pressure must be used or one must have faith in voluntary participation in treatment, if risks to the environment are to be reduced sufficiently.

The possibilities for exerting treatment pressure outside of a criminal law framework are limited, however. As is the case for a child aged 12 or older, an adult with a psychiatric disorder can be admitted against his will based on the Special Admissions to Psychiatric Hospitals Act (BOPZ) if this is necessary in order to avert a concomitant danger to himself, to others or to general safety (article 2 BOPZ). A conditional authorisation for forced admission is also possible in such cases (articles 14a and 14d BOPZ). However, as indicated above, the scope of the BOPZ is limited by the fact that there must be a causal relationship between the psychiatric disorder and the danger to be averted. In people with a personality disorder, such a causal relationship is usually only

assumed in extreme situations, for example if combined with a serious addiction or traumatic experience (Dij06).*

The limited possibilities for exerting treatment pressure if no criminal act has been committed or after a prison sentence or measure has been terminated, definitely are a problem for the GGZ (GR02). Above it was indicated that a lack of possibilities for exerting pressure not only allows people with ASPD to easily withdraw from treatment, but that they can also cause management difficulties that disrupt the treatment of other patients. This is an important explanation for the hesitance in the GGZ regarding the treatment people with an ASPD.

The Committee calls for further research into the degree to which expanding the non-criminal law possibilities is desirable for exerting treatment pressure for people with an ASPD, for the purposes of effective risk management. Such possibilities may be important for convicts placed under hospital orders who qualify for admission to a long-stay department and who represent a limited recidivism risk outside the TBS clinic as long as long-term structure and care can be imposed upon them.

7.3 Conclusion

Prevention of antisocial personality disorder by intervening in the event of (an increased risk of) behavioural disorders in childhood and youth is likely to be more effective and efficacious than treatment of adults. This requires timely signalling of risk factors, early signs, behavioural problems and disorders, as well as expert diagnosis and the implementation of evidence-based, effective interventions. Improvements are required in these three areas in youth care and judicial youth care in particular. Furthermore, there is a need for greater legal possibilities to apply pressure to motivate children with severe behavioural disorders to take part in treatment.

The Committee feels the possibilities for treatment of impulsivity and aggression and any addictions present handholds for risk management, thus aiming for a reduction in the risks a person with ASPD poses to his environment, and an increased manageability of these risks. However, available possibilities

* See also the letter dated 16 February 2001 from the Netherlands Psychiatric Society (NVvP) addressed to the Minister of Health, Welfare and Sports. On 15 March 2000, the latter had submitted a written response (reference GVM/GGZ/2053661) to the NVvP requesting a response to the suggestion to, via conditional authorisation for forced admission, force ambulant treatment upon people with an antisocial or other psychiatric condition who, after the end of a prison sentence for a serious crime, pose a renewed risk to society. According to the NVvP, the threat posed by people with a personality disorder is often not primarily caused by the disorder.

are currently underutilised. In order to change that, it is necessary to improve cooperation between the GGZ, TBS clinics and penitentiary institutions. This can be achieved through, among other things, bundling specific knowledge about treatment in guidelines, with the help of universities. Finally, new legal options for exerting treatment pressure for people with an ASPD should be examined.

Chapter 8

Conclusions and recommendations

This chapter draws conclusions and makes recommendations on prevention and treatment based on the previous chapters.

8.1 Conclusions

8.1.1 Prevention

Prevention is effective and cost-effective

As antisocial personality disorder is a severe disorder that leads to a great deal of harm, suffering and social nuisance, and because possibilities for effective treatment are currently limited, it is important to prevent the disorder wherever possible.

Children with (or with an elevated risk of) a behavioural disorder have an increased risk developing an ASPD. From an efficacy and cost-effectiveness standpoint, it is important to intervene as early as possible in the event of increased risk. The longer the wait, the greater the odds a chronic behavioural disorder will develop and potentially escalate. Once this happens, interventions will need to be more intensive and long-lasting to achieve any effect, whilst the odds of preventing an ASPD decrease. Despite this, prevention in the form of treating a behavioural disorder in adolescence probably still provides better prospects than treatment of adults.

In scientific research, multiple types of interventions have been found effective in contributing to prevention and treatment of behavioural disorders. In babies, toddlers and elementary school children, this can be achieved by providing parents with early pedagogic support, improving developmental conditions within the family, stimulating the cognitive development of the young child and providing behavioural training to parents. Interventions that have proved effective in adolescents are cognitive behavioural therapy, functional family therapy and multisystemic therapy.

Possibilities for prevention are currently not being utilised optimally

The possibilities for prevention and treatment of behavioural disorders are currently not being utilised optimally. This is in part because the expertise required for signalling, diagnosis and treatment of behavioural disorders is lacking in youth care. This leads to children with problems often not being identified. Treatments are also often not tailored to suit characteristics of the child and the family it is a part of. Many treatments without scientifically proven efficacy are also applied. Additionally, cooperation between institutions is often lacking.

Comparable problems exist in judicial juvenile facilities, where a significant proportion of youths suffer from a behavioural disorder. This is often not recognised and therefore left untreated.

8.1.2 Treatment

No conclusions can currently be drawn about a potential cure.

There is currently too little good-quality research available to draw a clear conclusion about the possibilities or impossibilities of effectively treating people with an antisocial personality disorder. This is because little research has been conducted into the effectiveness of interventions specifically targeting ASPD. Furthermore, the quality of most research is questionable. Finally, the heterogeneity of the populations and treatments studied is often a barrier to comparing research outcomes.

Due to these quantitative and qualitative limitations to the current state of knowledge, no statements can be made regarding the possibilities or impossibilities of cure. However, the limited amount of research that does meet sufficiently high quality standards does so far not show any possibilities. In terms of symptom relief, there are also no signs that the emotional and interpersonal

dimensions of the ASPD (coldness, lack of empathy, pathological lying, manipulation) can be influenced.

Influencing behaviour does appear possible

These limitations are likely not to apply to the behavioural dimension of the ASPD. Research has shown that cognitive behavioural therapy and pharmacological therapy can reduce an individual's impulsivity and aggression. These findings also appear important for people with an ASPD. There is also some scientific evidence that alcohol or drug addiction in people with an ASPD can be treated effectively with psychotherapy, contingency management and pharmacological therapy. This too can contribute to reduction of symptoms of the disorder.

Combating symptoms creates possibilities for reducing danger

The possibilities for treatment of impulsivity and aggression and alcohol or drug addiction present handholds for risk management: reducing and making manageable the risks a patient poses for his environment. To this end, evidence-based interventions must target influenceable risk factors specific to the patient and his environment. A (temporary) prison sentence alone cannot permanently reduce the risk.

For people with psychopathy, a severe subclass of ASPD characterised among other things by personality traits like coldness, a lack of empathy, pathological lying and manipulation, prospects for risk management are poorer. Not only do they relatively frequently attempt to withdraw from treatment or disrupt it through aggression, but group therapy can actually have negative effects, as it enables them to learn from each other's experiences and further hone their manipulation skills.

There is room for improvement in the current risk management practice

Over the course of their lives, people with ASPD often come into contact with the GGZ, as well as with penitentiary institutions and the TBS sector. The possibilities for risk management in all of these sectors can be utilized better than is currently the case. People with ASPD are sometimes treated for addiction or depression in the GGZ, but hardly ever for the personality disorder. The penitentiary system lacks the proper knowledge, experience and means to independently treat convicts with ASPD. And the treatment of convicts with an

ASPD placed under hospital orders suffers from the isolated position TBS clinics have relative to the GGZ. This contributes to the poor scientific underpinning of methods used in these clinics, and impedes the desired transfer of people with an ASPD to the GGZ once their recidivism risk has been reduced to an acceptable level. This isolated position is caused, among other things, by a lack of interest in the GGZ to treat patients if they are seen as untreatable and potentially dangerous.

8.2 Recommendations

8.2.1 Prevention

Embed prevention

Because children with an (elevated risk of a) behavioural disorder in particular are at risk of developing an ASPD, the Committee recommends embedding the prevention of ASPD in the prevention and treatment of behavioural disorders during childhood and adolescence.

Improve diagnostics and signalling

From an efficacy and cost-effectiveness standpoint, it is important to intervene as early as possible if there is an increased risk of ASPD. This requires timely signalling of risk factors, early signs, behavioural problems and disorders, as well as an expert diagnosis. Expertise in youth care and judicial youth care needs to be increased. Risk factors need to be recognized more promptly and become more discussible. Diagnosing of behavioural disorders also needs to be improved.

A good diagnosis will often require following the child's development for a number of years. Infant centres and school doctors can be involved in this, through the periodic health check, as well as in other ways.

Use evidence-based interventions

Effective and efficacious prevention should make use of interventions for which scientific evidence of effectiveness exists. This is currently insufficiently the case in youth care and judicial youth care. Additionally, it is desirable for implemented interventions to be scientifically assessed continuously, in order to

avoid the use of ineffective methods wherever possible. This is also lacking in daily practice.

In August 2005, the Minister of Justice appointed the Approval Committee for Judicial Behavioural Interventions. It is tasked with assessing the quality of interventions offered as a condition or part of a criminal sanction or measure upon the request of institutions. This includes interventions for both minors and adults. One of the assessment criteria is the presence of scientific evidence for effectiveness. The Ministry of Health, Welfare and Sports is striving to appoint a similar committee for non-judicial youth interventions in 2007.

The Committee feels such assessments are a step in the right direction. However, it does have a preference for repeated visitation over one-time approval, in order to take new scientific insights into account.

Develop guidelines

The efficacy and cost-effectiveness of interventions can be increased by developing guidelines for signalling, diagnosis and treatment. This provides the opportunity for making existing knowledge more explicit and mapping out any legal, practical and organisational boundaries to concrete implementation.

Increase possibilities for pressure

The lack of civil law options for pressure to treat is a significant problem for youth care. Often it is necessary to wait for a child to commit a crime in order to be able to make use of criminal law options. Juvenile criminal law, given the lacking quality of judicial juvenile care, currently does not provide a good framework for treating behavioural disorders. The Committee therefore recommends creating more legal possibilities for motivating children with a behavioural disorder who have not been prosecuted criminally to accept treatment by means of treatment pressure.

8.2.2 Treatment

Increase GGZ involvement in risk management

The possibilities for risk management can be utilized better than is currently the case. According to the Committee, the GGZ should include preventing people with psychiatric disorders from lapsing into criminal behaviour as part of its responsibilities. Within this framework, the Committee recommends the GGZ

increase its expertise in the area of recognising and treating ASPD as well as dealing with these patients. For example, more use can be made of evidence-based options for risk assessment and management.

The GGZ must also become more involved in the treatment of people with an ASPD who have been sentenced to a (conditional) prison sentence or who are given a conditional release. The same applies to the treatment of people with an ASPD who should transfer from a TBS clinic to the GGZ, and for aftercare for former convicts placed under hospital orders. There are currently far too few possibilities for this. Effective risk management will often require continuation of treatment after the end of the prison sentence or treatment under hospital orders.

Improve attention for evidence-based treatment in the TBS sector

The Committee recommends paying more attention to scientific evidence for and assessment of treatment choices as well as quality assurance. This is also true for the treatment of people with ASPD. Due to the poor evidence base for the methods used in the clinics, ineffective forms of treatment may be adhered to for too long, and treatments that may well be effective are insufficiently tailored to individual patient characteristics.

As the prospects for risk management are poor for people with psychopathy, it is important for care providers in the TBS sector to recognize this condition. Insofar as people with psychopathy have been given hospital orders, treatment has actually proven ineffective, and proportionality between the severity of the crime committed and the duration of the measure remains extant, admission to a long-stay department is the obvious choice.

Improve cooperation between GGZ, penitentiary institutions and TBS clinics

The Committee feels effective risk management requires the GGZ, TBS clinics and penitentiary institutions to cooperate more closely. This is not only necessary because risk management often requires continuity of (proactive) care, but also because the institutions can learn from each other when it comes to treating people with an ASPD.

Develop guidelines

This cooperation can be given form by, for example, creating joint guidelines for diagnosis and treatment. The Committee also feels universities should be involved in the process. Here too, the development of guidelines provides the opportunity for making existing knowledge more explicit and mapping out any legal, practical and organisational boundaries to concrete implementation.

Examine possibilities for pressure

Finally, the Committee recommends examining whether more legal options need to be created for exerting pressure to motivate people with an ASPD to accept treatment outside of the criminal law framework. There appears to be a need for this in the GGZ.

8.2.3 Research

The development and possibilities for prevention and treatment of antisocial personality disorder are surrounded by significant uncertainty. Research is needed to change this.

Research risk factors and protective factors

The risk factors on a population level that correlate with the development of an ASPD are fairly well understood. However, not much is known about factors that may have a protective effect. Additionally, research into the interactions between risk factors and protective factors is still in its infancy. Therefore, no predictions can be made about the odds of developing an ASPD on an individual level. In turn, this makes the desired selective prevention more difficult. The Committee therefore recommends more long-term research into risk factors and protective factors for ASPD be conducted among children and adolescents.

Combine interventions with long-term effect studies

Multiple types of interventions have been found effective in scientific research in contributing to prevention and treatment of behavioural disorders. It is likely these interventions can also have a preventive effect for ASPD. However, there is insufficient certainty about whether such an effect will actually occur in the long term. The Committee therefore recommends performing long-term research into

the efficacy and cost-effectiveness of these interventions in youths. Important subsidising bodies in the Netherlands, such as ZonMw (the Netherlands organisation for health research and development), often set three years as a maximum term for research projects. This term is insufficient for conducting useful research into the prevention of ASPD.

Research promising treatment methods in greater detail

The scientific evidence for treatment options for people with an ASPD is currently limited to indications that a person's impulsivity and aggression can be reduced and any addiction present can be treated. The Committee recommends more research be conducted into interventions tailored to specific characteristics of people with an ASPD, such as a limited treatment motivation and inability to enter into a therapeutic relationship. In doing so, it is important to take the heterogeneity within ASPD populations into account.

Based on epidemiological or theoretical considerations, the Committee feels it would be useful to conduct research into the effectiveness of dialectic behavioural therapy, mentalism based therapy, treatments given within TBS clinics, risk management interventions, contingency management, pharmacotherapy and pharmacogenetics, and transcranial magnetic stimulation. Such research may demonstrate the effectiveness of existing treatments or provide new handholds for the development of new, effective treatment modalities.

The Committee feels independently performed RCTs that include cost-effectiveness studies are important, as these are lacking in this field. Other controlled studies can also contribute to gaining insight into the efficacy of interventions.

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Annexes

Annex **A**

The request for advice

On 30 October 2003, the Minister of Health, Welfare and Sport (VWS), also on behalf of the Minister of Justice, filed the following request for advice with the chairman of the Health Council (letter reference GVM/2408440):

Antisocial personality disorder is a psychiatric condition that frequently leads to criminal behaviour or other forms of social nuisance. This disorder is also a problem for mental health care (GGZ) and forensic psychiatry, as clear treatment perspectives are generally lacking. The reason for this is that people with an antisocial personality disorder generally do not have any care demands, that there is a lack of knowledge about effective treatment methods and because the condition is often complicated by comorbid psychiatric conditions, such as (serious) addiction.

Insofar as treatment perspectives exist, treatment conditions are often sub-optimal. A substantial proportion of people with an antisocial personality disorder are located in TBS clinics and prisons. The lack of favourable conditions for treating this group is in part due to the relationship between forensic psychiatry and the general GGZ. In part due to differences between treatment visions, cooperation between the two sectors remains limited. Two interdepartmental policy studies (1995, 1998) and the TBS Policy Vision Committee report (2001) noted that convicts placed under hospital orders do not transfer easily to general GGZ facilities. This also, possibly particularly so, applies to convicts placed under hospital orders with an antisocial personality disorder. The general GGZ has relatively limited experience with this group of patients, and there is a belief that they can cause significant management problems. This situation complicates the gradual resocialisation of convicts with an antisocial personality disorder who are placed under hospital orders.

The treatment of delinquents with an antisocial personality disorder who are not sentenced to TBS faces similar problems. The size of this group is estimated to encompass a few dozen percent of the detained population. At this moment, there are hardly any possibilities for treating personality disorders during detention. Such treatment will also rarely be sufficient, as the necessary duration of treatment for antisocial personality disorder will generally exceed the duration of detention. Therefore, also from the perspective of preventing recidivism, there is a need for suitable care for people with an antisocial personality disorder who have completed their prison sentence. This led my predecessor to ask the Netherlands Psychiatric Society (NVvP) in 2000 for its vision on the desirability and implementability of ambulant forced treatment for this group within the context of the BOPZ Act. According to the NVvP this is complicated by significant psychiatric, medical-ethical and legal objections. They indicated a preference for using existing facilities to more effectively implement GGZ care within a criminal legal framework, and to create special intramural facilities for former detainees who do not meet conditions or recidivate.

Given the problems the treatment of delinquents with an antisocial personality disorder encounters, it is important to not only improve cooperation between forensic psychiatry and general GGZ, but also primary prevention of delinquency. Wherever possible, the first goal should be to try to prevent people with an antisocial personality disorder from progressing to committing crimes. This too is a role the GGZ should take on.

Forensic psychiatry is a policy area under the joint purview of the departments of Justice and of Health, Welfare and Sport. Over the past years, both departments have taken a number of policy initiatives aimed at promoting the quality and cost-effectiveness of forensic care and improving cooperation between judicial and GGZ institutions. There is currently a need to obtain a clearer picture of the possibilities for evidence-based treatment of people with an antisocial personality disorder and of the influence treatment setting has on its effectiveness. Such insights will contribute to diverse but connected goals, including improving the mental health of the individuals in question, prevention of delinquency, reduction of recidivism, transfer from TBS clinics and a cost-effective use of available means.

Also on behalf of my colleague from Justice, I request that you provide an overview of the current state of science with regard to the treatment of people with an antisocial personality disorder, taking into account the experiential knowledge available within TBS clinics. I ask that you pay particular attention to the possibilities for

- adequately diagnosing antisocial personality disorder;
- preventing the development of an antisocial personality disorder;
- effectively treating people with an antisocial personality disorder; and
- preventing recidivism in other (for example, purely judicial) ways.

Furthermore, I request that you comment, if possible, on the organisational and judicial circumstances that may influence the effectiveness of the courses of treatment/action available, taking relevant ethical aspects into account.

Sincerely,
The Minister of Health, Welfare and Sport,
H Hoogervorst

Annex **B**

The Committee

- Prof. W.A. van Gool, *chairperson*
  Professor of Neurology, Academic Medical Centre, Amsterdam
- Dr R. Berghmans
  University lecturer, Institute for Health Ethics, Maastricht University
- G.H.A. van Brussel,
  Social medicine doctor, Head of Cluster for Social Mental Health Care, GGD Amsterdam
- F.H. Clabbers, *advisor*
  Ministry of Health, Welfare and Sport, The Hague
- Prof. Th.A.H. Doreleijers
  Professor of Child and Youth Psychiatry, VU University Medical Center/de Bascule, Amsterdam
- Prof. G.F. Koerselman
  Professor of Psychiatry, University Medical Center, Utrecht
- Dr J. Meyer
  Director of the Expertise Center for Forensic Psychiatry, Utrecht
- Prof. L.M. Moerings
  Professor of Penology, Leiden University
- D.W. Oppedijk
  Medical director, Forensic Psychiatric Centre Veldzicht; Balkburg (until 1-10-2005)

- Dr P. Osinga, *advisor*
  Ministry of Justice, The Hague
- Prof. C. de Ruiter
  Professor of Forensic Psychology, Maastricht University
- Prof. J.A. Swinkels
  Professor of Guideline Development in Mental Health Care, University of Amsterdam
- Prof. R.W. Trijsburg
  Professor of Psychotherapy, Erasmus University, Rotterdam
- Prof. R. Verheul
  Professor of Personality Disorders, University of Amsterdam
- A. Bood, *secretary*
  Health Council of The Netherlands, The Hague

The Health Council and interests

Members of Health Council Committees are appointed in a personal capacity because of their special expertise in the matters to be addressed. Nonetheless, it is precisely because of this expertise that they may also have interests. This in itself does not necessarily present an obstacle for membership of a Health Council Committee. Transparency regarding possible conflicts of interest is nonetheless important, both for the President and members of a Committee and for the President of the Health Council. On being invited to join a Committee, members are asked to submit a form detailing the functions they hold and any other material and immaterial interests which could be relevant for the Committee's work. It is the responsibility of the President of the Health Council to assess whether the interests indicated constitute grounds for non-appointment. An advisorship will then sometimes make it possible to exploit the expertise of the specialist involved. During the inaugural meeting the declarations issued are discussed, so that all members of the Committee are aware of each other's possible interests.

Annex **C**

Definition of terms

Antisocial personality disorder (DSM-IV)

The Diagnostic and Statistical Manual of Mental Disorders (DSM) is a classification system for psychiatric disorders, drafted by the American Psychiatric Association. The most recent version is the DSM-IV, published in 1994. The DSM is frequently used worldwide for clinical diagnoses and research. The DSM-IV classifies psychiatric conditions using sets of criteria in specific categories.

According to the DSM-IV, a personality disorder as a persistent pattern of clearly abnormal internal experiences and behaviours that is rigid, manifesting itself in a broad range of personal and social situations. It causes significant suffering or functional limitations, is stable and lasting, with beginnings in adolescence or early adulthood, cannot be ascribed to another psychiatric disorder, and is not caused by substances or a somatic condition.

The DSM-IV identifies three clusters of personality disorders. Cluster A is formed by the paranoid, schizoid and schizotypical personality disorders. Cluster B encompasses theatrical, narcissistic, antisocial and borderline personality disorders. Cluster C includes avoidant, dependent and obsessive-compulsive personality disorders.

The DSM-IV classifies antisocial personality disorder based on four visible characteristics (APA94, NVP01):

A A pervasive pattern of disregard for and violation of the rights of others occurring since the age of 15 years, as indicated by three (or more) of the following:
   1 failure to conform to social norms with respect to lawful behaviour as indicated by repeatedly performing acts that are grounds for arrest
   2 deceitfulness, as indicated by repeatedly lying, use of aliases, or conning others for personal profit or pleasure
   3 impulsivity or failure to plan ahead
   4 irritability and aggressivity, as indicated by repeated physical fights or assaults
   5 reckless disregard for safety of self or others
   6 consistent irresponsibility, as indicated by repeated failure to sustain consistent work behaviour or honour financial obligations
   7 lack of remorse, as indicated by being indifferent to or rationalizing having hurt, mistreated, or stolen from another.

B The individual is at least 18 years of age

C There is evidence of Conduct Disorder with onset before age 15 years

D The occurrence of antisocial behaviour is not exclusively during the course of schizophrenia or a manic episode

Psychopathy (PCL-R)

The PCL-R by Hare measures psychopathy using twenty criteria. With the exception of three, these are categorised in two dimensions. The emotional and interpersonal dimension of the disorder encompasses coldness, a lack of empathy, pathological lying and manipulation (I). The behavioural dimension encompasses impulsiveness and irresponsible behaviour (II). The criteria within this second dimension show similarities with the diagnostic criteria of the DSM-IV for the ASPD (Har91, Hil99, Hil04).

Criteria (dimension):

4 Smooth talker/superficial charm (I)
5 Strongly inflated sense of self-worth (I)
6 Need for stimuli/tendency towards boredom (II)
7 Pathological lying (I)
8 Trickery and deception/manipulative behaviour (I)
9 Lack of remorse or guilt (I)

10 Lack of emotional depth (I)
11 Cold/lack of empathy (I)
12 Parasitic lifestyle (II)
13 Lack of control over behaviour (II)
14 Promiscuous sexual behaviour (-)
15 Behavioural problems at a young age (II)
16 Lack of realistic long-term goals (II)
17 Impulsivity (II)
18 Irresponsible behaviour (II)
19 Not taking responsibility for own behaviour (II)
20 Many short-term partners (-)
21 Youth delinquency (II)
22 Violating terms and conditions of conditional sentences and/or failing to obtain early or conditional release (-)
23 Varied criminality (II).

Dissocial personality disorder (ICD-10)

According to the WHO disease classification, the ICD-10, a dissocial personality disorder is a disorder that meets the general definition of a personality disorder (comparable to that of the DSM-IV) and which has at least three of the following characteristics (WHO93):

1 Callous unconcern for the feelings of others
2 Gross and persistent attitude of irresponsibility and disregard for social norms, rules and obligations
3 Incapacity to maintain enduring relationships, though with no difficulty in establishing them
4 Very low tolerance to frustration and a low threshold for discharge of aggression, including violence
5 Incapacity to experience guilt, or to profit from adverse experience, particularly punishment
6 Marked proneness to blame others, or to offer plausible rationalizations for the behaviour that has brought the individual into conflict with society.

Antisocial personality disorder (DSM-IV)

ASPD is always presaged by behavioural problems during childhood or adolescence. Such behavioural problems at a young age can already be an expression of a psychiatric behavioural disorder. Behavioural disorders are

significant risk factors for the development of an antisocial personality disorder. Therefore, they are seen as potential precursors of an ASPD.

The most important behavioural disorders defined in the DSM-IV are oppositional conduct disorder, attention deficit hyperactivity disorder (ADHD) and conduct disorder.

The conduct disorder is seen as the strongest predictor of ASPD. The antisocial conduct disorder is classified using three characteristics in the DSM-IV (APA94, NVP01):

A A repetitive and persistent pattern of behaviour in which the basic rights of others or major age-appropriate societal norms or rules are violated, as manifested by the presence of three (or more) of the following criteria in the past 12 months, with at least one criterion present in the past six months:

Aggression to people and/or animals

1 Often bullies, threatens or intimidates others
2 Often initiates physical fights
3 Has used a weapon that can cause serious physical harm to others (e.g. a bat, brick, broken bottle, knife, gun)
4 Has been physically cruel to people
5 Has been physically cruel to animals
6 Has stolen while confronting a victim (e.g., mugging, purse snatching, extortion, armed robbery)
7 Has forced someone into sexual activity.

Destroying another’s personal possessions.

8 Has deliberately engaged in fire setting with the intention of causing serious damage
9 Has deliberately destroyed others' property (other than by fire setting)

Deceitfulness or theft

10 Has broken into someone else's house, building or car
11 Often lies to obtain goods or favours or to avoid obligations (i.e., “cons” others)
12 Has stolen items of nontrivial value without confronting the victim (e.g. shoplifting, but without breaking and entering; forgery)

Serious violations of rules

13 Often stays out at night despite parental prohibitions, beginning before age 13 years

14 Has run away from home overnight at least twice while living in a parental or parental surrogate home (or once without returning for a lengthy period)

15 Is often truant from school, beginning before age 13 years.

B The disturbance in behaviour causes clinically significant impairment in social, academic or occupational functioning.

C If the individual is aged 18 years or older, criteria are not met for antisocial personality disorder.

Annex **D**

Prevention effect studies

Table 1 Research (primary studies and meta analyses) into the effectiveness of prevention and treatment of behavioural problems and disorders.

Author	Method	Population	Intervention	Follow up	Dropout	Outcome
Babies, toddlers and elementary school children						
Lal88	RCT	216 women with low socio-economic status, 85% single, and their children	Early pedagogic support of and behavioural training for parent(s) and daily care at a day-care centre for the child, for the first 5 years of the child's life	10 years	24%	6% of children in the intervention group and 22% of children in the control group had received at least one conditional conviction by the end of follow-up
Old98	RCT	400 pregnant women, 85% of young age, single and/or of low socio-economic status	Early pedagogic support of and behavioural training for parent(s) during house calls, from 2 months before up to a maximum of 22 months after the birth of the child	15 years	Not known	Significant positive effect on maternal pedagogic skills, family circumstances and child's social functioning
Rai03	RCT	438 children from the age of 3 years	A structured programme of nutrition, education and physical activity vs usual community conditions, for 2 years	18 years	Not known	Fewer cases of antisocial personality disorder at the age of 17 and fewer convictions in the intervention group

IJz95	Meta analysis of 12 studies	Not known	Short-term programmes aimed at improving parental sensitivity to their child's needs	Not known	Not known	Average effect size 0.50
Ser96	Meta analysis of 26 studies	Parents of children with a history of antisocial behaviour and aged between 4 and 12 years	Behavioural training for parents	At most 1 year	Not known	Average effect size 0.86
Deg05	RCT	238 divorced mothers with a son between the ages of 6 and 10 years	Behavioural training for the mother for 6 months	3 years	Not known	Significant reduction in delinquency and deviant peer affiliation
Edd03	RCT	361 children (avg. age 11 years) and their parents	Short-term multimodal intervention, including behavioural training for parents	42 months	Not known	Significantly fewer arrests and less alcohol use
Edd04	RCT	Foster parents of 79 boys (avg. age 15 years) with a history of antisocial behaviour	Behavioural training	2 years	Not known	Significant reduction in violent and other criminal behaviour of the foster child
Adolescents						
Ben00	Meta analysis of 30 studies	Children with a history of antisocial behaviour	Cognitive behavioural therapy	Not known	Not known	Average effect size 0.66
Lie04	RCT	744 children in school, avg. age 7 years	Classroom based, behaviour management program, focused on promoting prosocial behaviour, for 2 years	-	Not known	Significant reduction of behavioural problems
Cur04	Meta analysis of 8 studies	Antisocial youths, avg. age 15 years	Multisystemic therapy for 15-24 weeks	12 weeks to 4 years	Not known	Average effect size 0.55
Ogd04	RCT	100 Antisocial youths, avg. age 15 years	Multisystemic therapy for 6 months	-	4/100	Significantly greater reduction of internalised behaviour; significant increase in social skills and family cohesion; marginally significantly larger reduction of externalised behaviour

Annex **E**

Treatment effect studies

Table 2 Research (primary studies and meta analyses) into the effectiveness of treatment of ASPD symptoms.

Author	Method	Population	Intervention	Follow up	Dropout	Outcome
Influencing the emotional and interpersonal dimension						
Ogl90	Un-controlled observa-tional	80 male delinquents, 21 with a PCL >26, 47 with a PCL = 17-26 and 12 with a PCL < 17, avg. age 27 years	Therapeutic community	-	Not known	Significant negative correlation between PCL score on the one hand, and number of days in treatment, treatment motivation and treatment effect on the other
Ric92	Cohort	322 male delinquents; 46 from the treatment group with a PCL score >24; avg. age at offence 23 years	(Non-representative) therapeutic community vs. regular prison for at least 2 years	10 years	Not known	Relatively high violent recidivism for treated psychopaths, relatively low for treated non-psychopaths
Hug97	Un-controlled observa-tional	9 delinquents; PCL-R score = 11-27, avg. age 41 years	Group therapy, supplemented with various individual therapies for 18 months	-	Not known	Significant negative correlation between changes and score for emotional and interpersonal PCL-R dimension
Hil04	Un-controlled observa-tional	87 forensic psychiatric patients, 41 with an ASPD and 27 with a PCL-R score >25, avg age 30 years	Therapeutic community	Not known	Not known	Negative correlation between high PCL-R score and participation in work and social activities

Influencing the behavioural dimension

Bec98b	Meta analysis of 50 studies		Cognitive behavioural therapy	Not known	Not known	Average effect size for rage control 0.70
Dig03	Meta analysis of 57 studies		Cognitive behavioural therapy	Not known	Not known	Average effect size for aggression reduction 1.16
Del04	Meta analysis of 23 studies		Cognitive behavioural therapy	Not known	Not known	Average effect size for rage reduction 1.07
Sau96	RCT	218 men convicted for domestic violence, including 49 with an antisocial personality (MCMI); avg. age 32 years	Structured feminist-cognitive behavioural therapy vs. less structured process-oriented psychodynamic therapy, for 20 weeks	Average 26 months	72/218	Men with many antisocial traits showed lower rates of recidivism after cognitive behavioural therapy
She76	RCT	66 delinquents with a history of chronic impulsive aggressive behaviour, ages 16-24 years	Lithium vs placebo, for at most 3 months	1 month	Not known	Significant correlation between treatment and involvement in serious violent incidents
Lio79	RCT	65 patients with a history of impulsivity and aggressivity; avg. age 28 years	Chlordiazepoxide vs oxazepam vs placebo, for 4 weeks	-	20/65	Significant reduction in irritability for oxazepam group
Sol93	RCT	108 borderline patients, avg. age 27 years	Phenelzine vs haroperidol vs placebo, for 5 weeks	-	32/108	No significant effect on impulsive behaviour; phenelzine did have effect on anger and hostility
Coc97	RCT	40 patients with a personality disorder (DSM-III-R) and a high OAS-M score; avg. age 38 years	Fluoxetine vs placebo, for 12 weeks	-	Not known	Significant reduction of impulsive verbal aggression and impulse aggression against objects
Fav93	Un-controlled observa-tional	127 depressive patients, 18 with a comorbid ASPD, avg age 28 years	Fluoxetine, for 8 weeks	-	42/127	Significant reduction in the number of rage attacks
Kav94	Un-controlled observa-tional	11 patients with a personality disorder (DSM-III-R) age 20-53 years	Sertraline, for 8 weeks	-	4/11	Significant reduction of impulsive aggression (OAS-M)
Kav98	Un-controlled observa-tional	10 patients with a personality disorder (DSM-IV), in whom fluoxetine had no effect on im-pulsive aggressivity, age 25-54 years	Sodium valproate, for 8 weeks	-	2/10	Significant reduction of impulsive aggressivity (BIS and BDHI)
Sch99	Un-controlled observa-tional	11 borderline patients	Olanzapine, for 8 weeks	-	2/11	Significant reduction of impulsivity and aggressivity

Bat99a	RCT	44 patients with a borderline personality disorder and a history of (para)suicidality, avg. age in treatment group 30 years, control group 33 years	Day clinic, psychoanalytically oriented psychotherapy vs. standard psychiatric treatment for 18 months	-	6/44	Significant improvements from 6 months in areas of (para)suicidality, depression and interpersonal functioning
Eva99	RCT	34 patients with a recent history of self harm and cluster B personality problems (ICD-10)	Manual assisted cognitive behavioural therapy vs treatment as usual, 2-6 sessions	6 months	2/34	Non-significant reduction of self-harm; significant reduction of depression
Bat01 (follow-up study to Bat99a)				18 months	Not known	Increase in differences between treatment and control groups
Lin91	RCT	44 women with a borderline personality disorder	Dialectic behavioural therapy vs treatment as usual, for 12 months	-	Not known	Significantly less parasuicidal behaviour than in the control group
Lin93 (follow-up study to Lin91)				12 months	Not known	At 6 months less, but after 12 months no difference in parasuicidal behaviour compared to the control
Bos05	RCT	58 women with a borderline personality disorder	Dialectic behavioural therapy vs treatment as usual, for 1 year	6 months	Resp. 23% and 63%	Significantly larger decrease in parasuicidal behaviour and alcohol dependence
Mar95	Un-controlled observa-tional	45 people with a borderline personality disorder, including 40 with a comorbid depressive disorder	Venlafaxine, for 12 weeks	-	Not known	Significant reduction of self-harm
Ben98	Un-controlled observa-tional	12 borderline patients with psychotic behaviour, avg. age 30 years	Clozapine, for 16 weeks	-	0/12	Significant reduction in the number of suicide attempts
Ver98c	RCT	91 patients with at least 2 suicide attempts, including 74 with a cluster B personality disorder (PDQ-R); avg. age treatment group 34 years, control group 37 years	Paroxetine vs placebo, for 1 year	-	72/91	Significant reduction in the number of suicides
Bat99b	RCT	58 people with multiple suicide attempts, including 85% with a borderline personality disorder, avg. age 30 years	Fluphenazine, low dose vs ultra low dose, for 6 months	-	60%	Significant reduction of self-harm behaviour in both groups; differences between groups non-significant

Table 3 Research (primary studies and meta analyses) into the effectiveness of treatment of comorbidity.

Author	Method	Population	Intervention	Follow up	Dropout	Outcome
Influence of treating comorbidity on treatment of the ASPD						
Fav94	Un-controlled observa-tional	83 patients, including 63 women, with a depressive disorder and a comorbid personality disorder (56 cluster B, including 9 ASPD); avg age 39 years	Fluoxetine, for 8 weeks	-	Not known	Patients with cluster B personality disorders in particular showed significant reduction in depression; 7 out of 9 ASPD patients no longer met diagnostic criteria (PDQ-R)
Pes94	Un-controlled observa-tional	68 patients with a depressive disorder (HRSD), including 40 women, 43 with a comorbid personality disorder (including 11 cluster B) (SIDP); avg age 40 years	Desipramine, for 26-36 days	-	Not known	39 patients no longer had a depressive disorder; significant reduction for number of cluster A and cluster C, but not for cluster B personality disorders
Influence of the presence of ASPD on the treatment of comorbidity						
Woo85	RCT	101 addicts, 17 with both a comorbid ASPD (SADS-L and SADS-C) and comorbid depressive disorder, and 13 with only a comorbid ASPD	Psychotherapy, for 24 weeks	4 weeks	Not known	Improvements in depressive addicts with an ASPD almost as significant as for addicts without an ASPD; non-depressive addicts with an ASPD only showed significant reduction in drug use
Pro97	2 RCTs	RCT 1: 952 alcohol addicts, avg. age 39 years; RCT 2: 774 alcohol addicts, avg. age 42 years	Cognitive behavioural coping skills therapy vs motivation enhancement therapy vs twelve-step facilitation therapy – in an outpatient setting (rct 1) are as inpatient treatment with aftercare (rct 2) – for 12 weeks	1 year	Not known	All treatments resulted in significant decreases in alcohol use; correlation with degree of sociopathy directly after treatment, but not later on
Ver99b	Un-controlled observa-tional	309 alcohol addicts, including 95 with an ASPD	Inpatient and/or outpatient psychotherapy, for respectively 3 and 5 months	14 months	Not known	Equally large improvements for addicts with and without an ASPD
Ver98a	Un-controlled observa-tional	187 alcohol addicts, including 72 with a cluster B personality disorder; avg. age 41 years	Inpatient treatment or outpatient counselling/ psychoeducation	1 to 2 years	Not known	Patients with poor treatment motivation and/or therapeutic relationships showed relatively high relapse during follow-up

Lon94	RCT	149 addicts, including 31 with an ASPD (DIS)	Individually targeted cognitive behavioural therapy vs relationship enhancement treatment (RET), for 5 months, followed by 2 booster sessions	6 months	Not known	Addicts with an ASPD used significantly less alcohol after cognitive behavioural therapy compared to the RET and to addicts without an ASPD
Kal00	RCT	149 addicts, including 42 with a high degree of sociopathy (SSCPI); avg. age of sociopaths 42 years, others 34 years	Individually targeted vs relationship targeted behavioural therapy		Not known	No significant differences related to the therapy or the diagnosis
Mes99	RCT	338 addicts, including 49% with an ASPD (MCMI-II)	Therapeutic community followed by outpatient care, 10 resp. 2 months vs 6 resp. 6 months	19 months	58%	Significant reduction of drug use in both groups; no significant influence of an ASPD
Mes02 confirmation of Mes99 after replacing MCM-II by SCID-II						
Bro98	RCT	40 addicts, avg. age 38 years	Structured contingency management intervention and methadone vs methadone alone, for 13 weeks	-	13/40	Significant but comparable reductions in drug use and psychosocial problems (ASI) in both groups
Mes03	RCT	120 addicts, including 44% with an ASPD; avg. age 43 years	Cognitive behavioural therapy vs contingency management vs standard methadone programme, for 16 weeks	1 year	17%	Addicts with an ASPD in both treatment groups used significantly less cocaine; significantly less cocaine use in the cm group compared with addicts without an ASPD
Pow95	RCT	65 alcohol addicts with an ASPD	Nortriptyline vs bromocriptine, for 6 months	-	36/65	Significant reduction in impulsive alcohol use after Nortriptyline; non-significant decrease in anxiety and depression (BAI and SCL-90)
Pen96 (follow-up analysis of Pow95)						Positive effect of Nortriptyline limited to addicts who in addition to a comorbid ASPD also had a comorbid mood and/or anxiety disorder
Cla94	Un-controlled observa-tional	35 women with a borderline personality disorder; avg. age 27 years	Psychodynamic psychotherapy, group therapy and structured therapeutic activities, for at least 25 weeks	-	Not known	Significant negative correlation between antisocial traits and a reduction of borderline symptoms (PAI and SCL-90-R).
Bal00	Cohort	61 patients with depressive complaints, including 7 without, 14 with a cluster B and 40 with a cluster C personality disorder	Cognitive behavioural therapy with vs without assertivity training, for 5 weeks	1 to 3 years	Not known	Significant reduction in depressiveness in all subgroups (BDI, ATQ, HS); greatest improvement in patients without a personality disorder