Antisocial personality disorder (ASPD)

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Yurena Febles Arteaga

UČO 464375

CONTENTS

1 DEFINITION

ASPD (Antisocial Personality Disorder), also known as dissocial personality disorder (DPD) is a DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, fifth edition), diagnosis assigned to individuals who habitually violate the rights of others without remorse. People with Antisocial Personality Disorder may be habitual criminals, engaging in behaviours which could lead them to be arrested and prosecuted. They also may manipulate and hurt others in non-criminal ways but that are regarded in society as irresponsible or in violation of social norms and expectations.

The term **antisocial** may be confusing to the lay public since the most common definition is an individual who is a loner or socially isolated. But, indeed, the literal meaning the term *anti-*social is to be against society, to be against rules and acceptable behavior. Moreover, the terms **psychopathy** and **sociopathy** are used in some contexts synonymously but, in others, they are differentiated in that sociopathy is rooted in environmental causes, while psychopathy is genetically based.

2 CRITERIA

According to the DSM-5 (American Psychiatric Association, 2013), Antisocial Personality Disorder (ASPD) (301.7) falls under the dramatic/erratic cluster of personality disorders, the so-called "Cluster B". There are four diagnostic criterion, of which Criterion A has seven sub-features:

A. A pervasive pattern of disregard for and violation of the rights of others, occurring since age 15 years, as indicated by three (or more) of the following:

1) Failure to conform to social norms with respect to lawful behaviors, as indicated by repeatedly performing acts that are grounds for arrest.

2) Deceitfulness, as indicated by repeated lying, use of aliases, or conning others for personal profit or pleasure.

3) Impulsivity or failure to plan ahead.

4) Irritability and aggressiveness, 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 behavior or honor 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 age 18 years.

C. There is evidence of conduct disorder with onset before age 15 years.

D. The occurrence of antisocial behavior is not exclusively during the course of schizophrenia or bipolar disorder.

On the other hand, the World Health Organization's *International Statistical Classification of Diseases and Related Health Problems*, tenth edition (ICD-10) (World Health Organization, 1992), has a diagnosis called **dissocial personality disorder** (F60.2), which is characterized by at least 3 of the following:

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 having 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 experience, particularly punishment;
6. Marked readiness to blame others or to offer plausible rationalizations for the behavior that has brought the person into conflict with society.

There may also be persistent irritability as an associated feature. The ICD states that this diagnosis includes "amoral, antisocial, asocial, psychopathic, and sociopathic personality". Although the disorder excludes conduct disorders, presence of conduct disorder during childhood or adolescence may further support the diagnosis.

3 CHARACTERISTICS

3.1 DIAGNOSTIC FEATURES

According to the DSM-5 (American Psychiatric Association, 2013), the essential feature of antisocial personality disorder is a pervasive pattern of disregard for, and violation of, the rights of others that begins in childhood or early adolescence and continues into adulthood. This people usually have behavioural problems during childhood such as agressions, intimidations, run away (e.g. from home or school), animal harming and so on. The prognosis is worse when the disorder begins in childhood. Since deceit and manipulation are central features of ASPD, it's good to integrate information collected from systematic clinical assessment with information from collateral sources.

Individuals with ASPD fail to conform to social norms with respect to lawful behavior **(Criterion Al)**. Their repeatedly criminal acts (such as destroying property, harassing others, stealing, or pursuing illegal occupations) and their contempt towards law enforcement officers are normally grounds for arrest (whether they are arrested or not).

Persons with this disorder disregard the wishes, rights, or feelings of others. They are frequently deceitful and manipulative in order to gain personal profit or pleasure (e.g., to obtain money, sex, or power) **(Criterion A2)**. They may repeatedly lie, use an alias, con others or malinger. Those with good verbal skills can often deceit their victims, including untrained and unwary therapist. They tend to be charismatic, attractive, and very good at obtaining sympathy from others, by describing themselves as the victim of injustice. Some studies suggest that the average intelligence of antisocials is higher than the norm, though this has been disputed.

A pattern of impulsivity may be manifested by a failure to plan ahead **(Criterion A3)**. Decisions are made on the spur of the moment, without forethought and without consideration for the consequences to self or others; this may lead to sudden changes of jobs, residences, or relationships. This incapacity to plan their acts led therapist in the beginning to think that teaching them problem solving strategies would be helpful, but what they obtained was making them even more offenders because they learnt how to plan their crimes.

Individuals with ASPD tend to be irritable and aggressive, repeatedly getting into physical fights or commiting acts of physical assault (including spouse beating or child beating) **(Criterion**

A4). (Aggressive acts that are required to defend oneself or someone else are not considered to be evidence for this item.)

These individuals also display a reckless disregard for the safety of themselves or others **(Criterion A5)**. This may be evidenced in their driving behavior (i.e., recurrent speeding, driving while intoxicated, multiple accidents, etc.). Besides, they may engage in sexual behavior or substance use that has a high risk for harmful consequences and neglect their children, putting them in danger.

Individuals with ASPD also tend to be consistently and extremely irresponsible **(Criterion A6)**. Irresponsible work behavior may be indicated by significant periods of unemployment despite available job opportunities, or by abandonment of several jobs without a plan for getting another job. There may also be a pattern of repeated absences from work that are not explained by illness either in themselves or in their family. Financial irresponsibility is indicated by acts such as defaulting on debts, failing to provide child support or support to other dependents.

These individuals show little remorse for the consequences of their acts **(Criterion A7)**. They can be indifferent to, or provide a superficial rationalization for, having hurt, mistreated, or stolen from someone (e.g., 'life's unfair," "losers deserve to lose"). These individuals may blame the victims for being foolish, helpless, or deserving their fate (e.g., "he had it coming anyway"); they may minimize the harmful consequences of their actions; or they may simply indicate complete indifference. They generally fail to compensate or make amends for their behavior. They usually believe that everyone is out to "help number one" and that no one should avoid being pushed around by them. It is widely thought that antisocials are without empathy, but this can be disputed since sadistic antisocials use empathy to experience their victim's suffering, obtaining pleasure from it (Turvey, 1995).

The specific behaviors characteristic of conduct disorder fall into one of four categories: aggression to people and animals, destruction of property, deceitfulness or theft, or serious violation of rules.

3.2 DEVELOPMENT AND COURSE

Antisocial personality disorder has a chronic course but may become less evident or remit as the individual grows older, particularly by the fourth decade of life. Although this remission

tends to be particularly evident with respect to engaging in criminal behavior, there is likely to be a decrease in the full spectrum of antisocial behaviors and substance use.

3.3 IMPACT ON FUNCTIONING

Antisocial Personality Disorder has strong impacts on most areas of functioning such as incarceration as a result of their criminal actions, premature death from violence or accidents or loss or seizure of assets from reckless spending. According to the study of Goldstein, Dawson, Smith, & Grant (2012), the rates in ASPD individuals with divorce, separation, unemployment, financial dependency on state relief sources, homelessness, anxiety, depression, and suicide are elevated when compared to the general population. Furthermore, antisocials usually cause great harm to those around them, including family, friends, neighbours, colleagues and complete strangers through financial exploitation, theft, emotional abuse, assault, sexual assault, homicide and so on.

3.4 PREVALENCE

According to the DSM-5 (American Psychiatric Association, 2013), the annual prevalence of Antisocial Personality Disorder is between 0.2% and 3.3% when the criteria from prior DSM editions are applied. The highest prevalence of antisocial personality disorder (greater than 70%) is among most severe samples of males with alcohol use disorder and from substance abuse clinics, prisons, or other forensic settings. Prevalence is higher in samples affected by adverse socioeconomic (i.e., poverty) or sociocultural (i.e., migration) factors. The diagnosis can at times be misapplied to individuals in settings in which apparently antisocial behavior may be part of a protective survival strategy. That is why the clinicians must consider the social and economic context in which the behaviours occur.

Moreover, ASPD is much more common in males than in females. There has been some concern that antisocial personality disorder may be underdiagnosed in females, particularly because of the emphasis on aggressive items in the definition of conduct disorder.

4 DIAGNOSTIC

The DSM-5 notes that Antisocial Personality Disorder cannot be diagnosed before age 18, so while an adolescent may display antisocial features, prior to age 18, if diagnostic criteria are

met, the appropriate diagnosis would be Conduct Disorder (American Psychiatric Association, 2013). Anyway, to be diagnosed with ASPD after age 18, there must be a history of some symptoms of conduct disorder before age 15.

4.1 COMORBIDITY

According to the DSM-5 (American Psychiatric Asociation, 2013), Antisocial Personality Disorder may coexist with other disorders such as substance use disorder, schizophrenia and bipolar disorders and to a lesser extent other disorders such as narcissistic personality disorder and histrionic personality disorder. In the case that antisocial behavior occurs exclusively during the course of schizophrenia or a bipolar disorder, it shouldn't be diagnosed as ASPD. Clinicians must be very careful and distinguish among disorders looking at the differences in their distinctive features, especially in the cases of narcissistic and histrionic personality disorder.

It is also important to distinguish ASPD from criminal behavior undertaken for gain because the last one is not accompanied by the characteristic personality features of this disorder. Only when antisocial personality traits are inflexible, maladaptive, persistent and cause significant functional impairment or subjective distress do they constitute ASPD.

The presence of comorbid disorders is an additional factor that can impact the characterization and treatment of antisocial personality and psychopathy (Widiger, 2006). A significant portion of prisoners with psychopathy will meet the criteria for ASPD. However, less than half of the inmates diagnosed with ASPD will meet the criteria for psychopathy (Hare, 2003). Despite a large superposition in behavioural tendencies, psychopathy and ASPD differ in personality pathology, behavior characteristics, etiology and, especially, the affective and interpersonal features.

There are also reports of increased prevalence of anxiety disorders (Goodwin and Hamilton, 2003; Verona et al., 2001) but this does not seem to be the case for psychopathy and it has even been suggested that psychopathy 'protects' against the development of anxiety and mood disorders (Blair, 2012). It seems like interactions between antisocial personality or psychopathy and comorbid disorders may lead to personality types that do not fit in completely in current theories.

5 ETIOLOGY

Various studies state that both genetic and enviromental factors affect in ASPD development. Across several studies, the estimated heritability of antisocial behaviour varies between 40% and 80%, indicating that there is a very strong genetic basis for these behaviours (Glenn and Raine, 2014; Viding and McCrory, 2012). However, a recent meta-analysis showed that there are no clear associations between single genes and antisocial aggressive behaviours across studies (Vassos et al., 2014). Therefore, the solely studying of genetic factors is not enough to explain pathological behaviours.

On the other hand, a rs-fMRI (resting state functional Magnetic Resonance Imaging) study indicated uncoupled connections in areas of the frontal and parietal lobes which are associated with self control and regulation, attention and conflict solving. It was stated that physiological and anatomical deficits observed in the frontal/parietal areas, as well as the cerebellum, can account for the chronic low arousal, high impulsivity, lack of conscience, callousness, and decision-making problems commonly seen in individuals with APD (Tang, Jiang, Liao, Wang, & Luo, 2013).

According to DSM-5 (American Psychiatric Association, 2013), having a first degree biological relative with ASPD is a risk factor. Biological relatives of individuals with this disorder are also at increased risk for somatic symptom disorder and substance use disorders. Adoption studies indicate that both genetic and environmental factors contribute to the risk of developing antisocial personality disorder, somatic symptom disorder and substance abuse disorder. Adopted-away children resemble their biological parents more than their adoptive parents, but the adoptive family environment influences the risk of developing a personality disorder and related psychopathology.

6 HISTORY

Around the 19th century, the high prevalence of antisocial behavior in some psychiatric populations caught the attention of psychiatrists who began to attribute that behavior to deviant mental functioning. For instance, Pinel (1806) described psychiatric patients that didn't show incapacities in rational thinking yet exhibited antisocial behavior.He attributed the antisocial behaviour to uncontrollable impulses and instinctive fury.

A century later, Cleckley (1941) proposed sixteen specific diagnostic criteria for the condition that included disruptive traits (e.g., lack of anxiety, superficial relationships with others and impulsive behavioral deviance) and traits that promoted psychological stability (e.g., social self-assurance and persuasiveness). While Cleckley highlighted both maladaptive and adaptive features of psychopathy, other clinicians placed greater emphasis on callousness and a predatory aggressive style in their operationalization of psychopathy (e.g., McCord and McCord, 1964). The tension between the presence of maladaptive and adaptive traits of psychopathy make evident the complex nature of this disorder and the difficulty to distinguish psychopathy from antisocial personality.

Nonetheless, with the introduction of the Diagnostic Statistical Manual of Mental Disorders (DSM), discussions about the definition of psychopathy and its differentiation from other antisocial disorders got complicated. The first edition of the DSM included the construct Sociopathic Personality Disturbance, in which the individual's social and cultural background played a fundamental role. This classification disappeared in the third edition of the DSM (American Psychiatric Association, 1980), when the current diagnosis of Antisocial Personality Disorder (ASPD) was included. This evolution progressively placed an emphasis on observable behavioral criteria for the diagnosis (Arrigo and Shipley, 2001). As a consequence, the DSM discarded the fact that there were multiple types of antisocial individuals (e.g., psychopathic vs. non-psychopathic) that differed in many ways, and cluster them into a single group based on similarities in behaviour.

Nevertheless, the International Statistical Classification of Diseases and Related Health Problems (ICD) developed by the World Health Organization (1992), introduced a diagnostic category that acknowledges the existence of antisocial personality types (e.g., amoral, psychopathic, antisocial), although this tool has not been popular in research on antisocial behavior. However, in the same way that the DSM, the ICD does not provide enough guidelines for how to differentiate between the clinical subtypes, collapsing them into a single category.

The evolution of the conceptualizations of antisocial personality and psychopathy has guided the development of assessment instruments and treatment. Failing to consider the differences that exist across types of antisocial individuals has a major impact on treatment outcomes, as therapeutic interventions are more likely to succeed if they matchthe patient's needs (Andrews et al., 1990).

7 TREATMENT

Several attempts have been made to treat ASPD using a variety of clinical approaches. Despite that, there are still no really effective treatment programs available for these individuals. Many clinicians and researchers advocate that antisocial individuals, particularly those with high levels of psychopathy, are very difficult to treat as to be next to untreatable (e.g., Harris and Rice, 2006). This issue is increased by the fact that these individuals hardly ever search for help, as usually they do not admit that they have a problem (egosyntonics). If they do search voluntarily for treatment is mostly to alleviate other diseases such as depression or emotional distress. The DSM-5 (American Psychiatric Association, 2013) does not specify treatment options for ASPD either.

So, as we see, the consensus is very little in the way of effective treatment for ASPD. Occasionally, these individuals are more or less kept from committing crime as many of them are contained by the criminal justice system through some combination of incapacitation such as incarceration, or supervision and monitoring such as parole or house arrest. But incarceration may not deter these individuals, as they have difficulties to learn from mistakes, are rigid in decision making, are unresponsive to punishment and make poor decisions (De Brito, Viding, Kumari, Blackwood, and Sheilagh, 2013).

The DSM- 5, as well as other sources, indicate that these individuals normally cease behavioral expression of their antisocial belief system in their 40's (American Psychiatric Association, 2013) although this is inconclusive. Other sources argue that they become no longer physically capable of acting in aggressive way or engaging in criminal activity because they turn too emotional battered by resisting society and accumulate physical injuries from a lifestyle of neglect of medical care, untended injuries, drugs and alcohol abuse.They still have an antisocial belief system in their day to day dealings with others, but may hide their behaviour through practice effects. This would lead them to be more subtle and not draw attention, avoiding the risk of being arrested.

Appart from the above mentioned harm to themselves and others, the behaviors of antisocial individuals lead to severe financial consequences that affect society. For instance, in the USA alone the financial damage resulting from this behavior is estimated at $400 billion (Kiehl and Buckholtz, 2010). In summary, the emotional and financial costs oft this disorder create a real need for identifying and developing treatment programs that will target these disorders.

7.1 MEDICATION

Pharmachological treatment has been used to treat, especially, the aggressive behaviours of antisocial individuals.There is still no direct evidence that pharmacotherapy is a viable approach for treating these individuals and, given the complex nature of antisocial personality and psychopathy, at the moment pharmacotherapy does not seem to be a strong treatment approach for these populations. Some of the casereports using pharmacotherapy are detailed next.

Hirose (2001) described the case of a patient diagnosed with ASPD, who had a long history of aggressive and disruptive behavior. Risperidone (an antipsychotic), was administered at different time points and he observed a reduction in aggressive behavior in the periods that followed. Walker et al. (2003) described the cases of 4 highly aggressive, impulsive and irritable individuals with psychopathy and a diagnosis of ASPD who were admitted to a maximum-security forensic psychiatric institute. They were treated with quetiapine (another antipsychotic). All of the patients showed a reduction in aggression, impulsivity, and irritability, which led to the conclusion that quetiapine seems effective in treating severe antisocial behavior.

There are also studies in offender samples such as the one of Sheard et al. (1976), which assessed the effect of lithium on impulsive aggression in incarcerated offenders using a double-blind, placebo-controlled study design. It was reported that lithium seems to have a positive impact on the reduction of violent behavior during detention. In another study from Barratt et al. (1997), incarcerated offenders participated in a study in which 30 inmates were treated with phenytoin (an antiepileptic drug) while another 30 inmates from the control group were administered a placebo. The results suggest that this anticonvulsant offers an effective way for treating aggressive behaviour in incarcerated populations. Mattes (2012) has recently reviewed previous pharmacological trials in both incarcerated and non-incarcerated populations and has argued that oxcarbazepine, a modern antiepileptic, should be suitable for treating aggression in offender populations.

Finally, treatment with selective serotonin reuptake inhibitors has been found to increase glucose metabolism in the orbitofrontal cortex, suggesting a potential method for improving functioning in regions that have been identified as deficient in criminal populations (Glenn and Raine, 2014). However, no studies with antisocial or psychopatic individuals have been made related to this (Olivier and van Oorschot, 2005).

What is more, although there are effective pharmacological treatment for some of the symptoms, drug abuse or non-compliance with treatment guidelines make impossible the widespread use of these medicaments.

7.2 COGNITIVE BEHAVIORAL THERAPHY (CBT)

Many treatment studies in antisocial offender populations have employed Cognitive Behavioral Therapy (CBT). In CBT, maladaptive tendencies are tackled through treatment of unwanted behaviors and/or disturbed thought processes. This approach comes from a unitary perspective in which emotions, cognitions and behaviors are interconnected. Thereby, CBT is able to target multiple components of an experience and act accordingly.

The pattern of findings in studies using CBT in offender populations suggests no or very limited treatment efficacy, especially in individuals with high levels of psychopathy. For instance, Hitchcock (1995) compared the effects of cognitive therapy in 20 psychopathic offenders and 20 non-psychopathic inmates and found that this form of treatment had little effect in either sample. Other studies using some form of group or individual CBT have reported that psychopathy correlated negatively with clinical improvements in forensic patients (Hughes et al., 1997), offenders with elevated levels of psychopathy compared to low levels of psychopathy were more likely to reoffend despite showing improvements due to treatment (Olver et al., 2013; Seto and Barbaree, 1999), sexual offenders with high levels of psychopathy compared to low levels of psychopathy were more likely to quit the program and to recidivate (Olver and Wong, 2009) and so on.

7.2.1 Cognitive Self Change (CSC)

A specific form of CBT (Cognitive Behavioral Therapy) called CSC (Cognitive Self Change) seems to be one method which has success at modifying the behaviour of violent offenders, both antisocial and otherwise (Barbour, 2013). CSC is designed to bring thinking habits and patterns under the offender's conscious and deliberate control. Participants learn to objectively observe and report their thinking without justification. Then, they are aimed to identify the linkages between their specific thinking patterns and their antisocial conduct. They finally rehearse and practice alternative thinking patterns, using actual events in their lives. Techniques such as journaling and role plays are very used. For this therapy, groups

usually meet twice a week for 3 hours during the period that they are imprisoned. With this therapy, recividism rate diminishes.

7.2.2 Moral reconation therapy (MRT)

Moral reconation therapy slightly decreases the risk of further offending (Ferguson and Wormith, 2013). It is generally implemented in a group format because there is a risk that one-on-one therapy reinforces narcissistic behavioural characteristic. Groups usually meet weekly for two to six months and it can be used in correctional or outpatient settings.

MRT is grounded in the framework of cognitive behaviorism, and draws inspiration from Kohlberg's (1976) theory of moral development, which assumes that moral development progresses through three main stages: the preconventional level (common to children, persons judge the morality of an action by its direct consequences and have an egocentric point of view), the conventional level (typical of adolescents and adults, who judge the morality of actions compared with society's views and expectations) and the postconventional level (there is a growing realization that one's own perspective may, on occasion, take precedence over society's views). Therefore, an individual in the last level may disobey rules inconsistent with his or her own principles. Theorists suggest that many people never reach this level of abstract moral reasoning (Cherry, 2011).

According to this theory, breaking the law would seem more acceptable to those at the earlier, more selfcentered, stages of development. Little and Robinson (1988) affirm that offenders "enter treatment with low levels of moral development, strong narcissism, low ego/identity strength, poor self-concept, low self-esteem, inability to delay gratification, relatively strong defense mechanisms, and relatively strong resistance to change and treatment". Consequently, MRT seeks to move offenders from a lower, hedonistic level of moral reasoning (pleasure vs. pain) to a higher level where social rules and others become important.

The program is designed to influence how offenders think about moral issues and make moral judgments. It is a structured program that uses a manual describing exercises and lessons directed at groups of 10 to 15 offenders. The therapy involves 12 to 16 sessions. Each session lasts 1 to 2 hours, and there are usually two sessions per week. Each participant is given a workbook that contains the mentioned exercises and lessons. It

focuses on several areas, including confrontation of beliefs, attitudes and behaviors, assessment of current relationships, reinforcement of positive behavior and habits, positive identity formation, development of frustration tolerance, and development of higher stages of moral reasoning.

Despite criticism, the advocates of MRT believe that they have developed an approach that is superior to other cognitive-behavioral approaches.

7.2.3 Milieu therapy

Milieu therapy uses therapeutic communities to effect behavior change. It clusters integrative forms of the CBT approach. Though there are some differences, this approach generally implements techniques that support self-examination, the development of accountability, and the enhancement of interpersonal engagement through CBT strategies. Messina et al. (1999) used this approach in individuals with substance abuse with and without ASPD to examine the likelihood of treatment completion, drug use, and recidivism. The results were similar for patients with and without ASPD; both had lower rates of recidivism, used less drugs, and were equally likely to complete the program.

In contrast, though, it has not been effective in psychopathy. Rice et al. (1992) evaluated the efficacy of a therapeutic community program and, after an evaluation conducted approximately 10.5 years after treatment they found that participants with psychopathy had a higher rate of violent recividism. In contrast, offenders without psychopathy had a lower rate of reoffense. These results suggest that the therapeutic community program promoted the further development of the disruptive interpersonal-affective features typically seen in offenders with psychopathy, while those without psychopathy were able to use the acquired skills to develop prosocial behaviours.

Thus, research indicates that therapeutic communities are useful for treating antisocial personality in general, but not psychopathy. This has contributed to the pessimism regarding treatment of psychopathy that is still dominant in some settings.

7.3 CONTINGENCY MANAGEMENT (CM)

Contingency Management (CM) is one treatment method that seems to have positive effects in antisocial populations with comorbid substance use disorders. It is based on the principles of

instrumental learning and involves the use of negative and positive reinforcers to modify behavior. For instance, Silverman et al. (1998) used it to reinforce cocaine abstinence in methadone abusers with and without adiagnosis of ASPD. Patients received vouchers that they could exchange for services or goods after handing in drug-free urine samples. The use of vouchers as positive reinforcement increased the likelihood of abstinence in the treatment conditions.

7.4 COMPARISON AND COMBINATION OF CBT AND CM AND CONCLUSSION

Messina et al. (2003) made a study in substance abusers with and without ASPD, in which they systematically compared the effects of CM, CBT and the combination of CM and CBT. One intriguing result was that participants with ASPD were more likely to show a reduction in the use of cocaine (they had more treatment responsivity). Besides, treatment responsivity in the ASPD group was higher in the CM condition relative to the CBT and combined CM and CBT conditions. The group without ASPD did not show reduced use of cocaine in this period.

In general, there is evidence that psychological and behavioural interventions are effective for antisocial individuals. Individuals with ASPD seem resistant to some forms of CBT, but are more responsive to behavioural interventions that focus on reward and contingency learning. On the contrary, psychopathic individuals seem to be unresponsive to individual, group, and community CBT. It is important to note that most of the studies that included a psychopathic sample had some issues like flawed designs, relatively small sample sizes, an inappropriate characterization of the target populations, etc. (D'silva et al., 2004; Harris and Rice, 2006). That is the reason why some have argued that it is too early to conclude that treatment does not work in populations with elevated levels of psychopathy (D'silva et al., 2004; Salekin et al., 2010). Nonetheless, it is clear that different types of antisocial individuals can differ considerably in the response to treatments.

7.5 OTHER APPROACHES

Current treatment approaches do not match the needs of the patient, since there is a lack of insight into the different biological and cognitive factors that can cause antisocial behavior which has lead to cluster all antisocial individuals into the same group. Thus, those treatment approaches have not been fully successful.

Novel approaches which try to redefine psychopathology using multimodal latent variables have been developed in response to these failures. They include the search for multimodal neuroimaging, cognitive endophenotypes and computional psychiatry. The goal is to re-characterize antisocial personality and psychopathy using statistical regularities in biology and cognition as natural delineators rather than man-made psychological constructs, which are less precise. This would be possible using large databases which include many types of biological and cognitive measures obtained in these populations (one example is ENIGMA consortium, an international collaboration between more than 500 scientists who have combined their genetic, imaging and clinical data to study brain disorders). Thereby, once the individual has been classified, the dimensions in the classification will provide a specific body of candidate target areas for treatment (Brazil et al., 2016).

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