CHAPTER 5

Antisocial Personality Disorder

Katherine A. Fowler • Scott O. Lilienfeld

WHAT IS ANTISOCIAL PERSONALITY DISORDER?

In DSM-IV (American Psychiatric Association, 1994), Antisocial Personality Disorder (APD) is operationalized as a pattern of disregard for, and violation of, the rights of others. Like other personality disorders, it is believed to be a stable and enduring pattern of behavior originating in childhood or adolescence. Indeed, conduct disorder is a prerequisite for the DSM-IV diagnosis of APD.

Individuals with APD fail to conform to societal norms, often resulting in repeated and varied illegal behaviors (e.g., stealing, assault, pursuing illegal occupations). Interpersonally, they disregard the rights and wishes of others, often deceiving and manipulating them for profit or pleasure (i.e., "conning" others). They tend to be impulsive, making many decisions without forethought or attention to consequences for self or others. This tendency is often manifested in such behaviors as sudden changes of jobs, relationships, and residences. Further, APD is often characterized by aggressiveness and irritability, defined as a proclivity toward physical assaults of others, including domestic violence. Individuals with APD are at heightened risk of causing indirect physical harm to others through reckless disregard for their safety and, in the case of childrearing, neglect.

Persons with this disorder tend to be consistently irresponsible (i.e., "reliably unreliable"). For example, they may be unemployed for significant periods of time despite job opportunities, quit jobs without a realistic plan for getting a new one, or be repeatedly absent from work for reasons other than personal or family illness. Furthermore, they typically lack a sense of personal responsibility for the adverse consequences of their actions, frequently blaming their victims and lacking remorse. In general, they fail to make amends for their misdeeds, at times offering superficial justifications such as "Life's unfair" or "I was just looking out for number one."

BASIC FACTS ABOUT ANTISOCIAL PERSONALITY DISORDER

Comorbidity. Individuals with APD complain frequently of dysphoria, depressed mood, boredom, restlessness, and tension. Disorders that commonly co-occur with APD include Anxiety Disorders, Depressive Disorders, Substance Use Disorders, Somatization Disorder, and Pathological Gambling and other impulse control disorders (APA, 2000).

Prevalence. In community samples, APD has been found to occur in 3% of males and 1% of females. Within clinical settings, prevalence estimates have ranged from 3% to 30%, depending on the characteristics of the sample. In substance abuse treatment and forensic settings, estimates have been higher.

Age at onset. As currently defined in the DSM, APD cannot be diagnosed prior to age 18.

Gender. APD is more prevalent in men than in women. It is diagnosed in about 3% of males compared with 1% of females in community samples.

Fowler, K. A., & Lilienfeld, S. O. (2006). Antisocial personality disorder. In Practitioner's J. E. Fisher & W. T. O'Donohue (Eds.), *Practitioner's Guide to evidence-based psychotherapy*. New York: Springer.

Course. APD often displays a chronic course, but may decline in severity or remit as the individual ages, particularly starting in the fourth decade of life. Although this "burn-out" phenomenon is particularly evident with respect to criminal behavior, a decline in behaviors comprising the full antisocial spectrum is often seen. Some authors have noted that the "character structure" underlying APD may not change with age, although the observable behaviors typically improve (Reid & Gacono, 2000). Indeed, longitudinal research on released prisoners confirms the suggestion that although the antisocial behaviors of such individuals tends to decline with age, many of their personality traits (e.g., lack of guilt, callousness) remains relatively constant with age (Hart, Kropp, & Hare, 1988). Individuals with APD are more likely than those in the general population to experience premature death by violent means (APA, 2000).

Impairment and other demographic characteristics. A small group of persistent male offenders (5–6%) has consistently been found to be responsible for a disproportionate amount of crime (approximately 50%) (see Farrington, Ohlin, & Wilson, 1986, for a review). Identification of this group of highest-risk offenders depends largely on two variables: early onset of criminal behavior and the persistence of that behavior (Skilling, Harris, Rice, & Quinsey, 2002). Several research groups have proposed variations on a general taxonomy of adolescence-limited vs. life-course persistent antisocial behavior (e.g., Loeber, 1982; Moffitt, 1993). Furthermore, they have noted the remarkable continuity of serious antisocial behavior across various samples (e.g., Loeber & Farrington, 1998) and even called age of onset of criminal behavior the "single best predictor of adult criminal outcomes" (Skilling et al., 2002, p. 27). Because APD includes criteria for early behavior problems and juvenile delinquency, as well as adult criminal behavior, it is not surprising that individuals with this condition are at heightened risk for criminality and incarceration.

Several authors have reported a small-to-medium association (r = .15-.20) between APD and general criminal recidivism (e.g., Glover, Nicholson, Hemmati, Bernfeld, & Quinsey, 2002; Hart et al., 1988). There is less consistency with relation to violent recidivism. Some authors (e.g., Harris, Rice, & Cornier, 1991) have reported moderate associations between APD and violent recidivism, whereas others (e.g., Glover, et al., 2002) have reported virtually no relation. Implementation of criteria from different DSM editions may contribute to some of this inconsistency, as may differential base rates of violence across studies.

APD tends to aggregate within families. It is more commonly found in first-degree biological relatives of those with APD than in the general population, and twin and adoption studies indicate that both genetic and environmental factors contribute to the risk of developing this disorder. Research indicates that biological relatives of females with the disorder are at greater risk than biological relatives of males with the disorder. This finding is consistent with a multifactorial threshold model of APD (see Cloninger, Christiansen, Reich, & Gottesman, 1978), whereby females both inherit and transmit a greater liability to APD than do males. Furthermore, when a family member has APD, female relatives are more likely to exhibit Somatization Disorder, whereas male relatives are more likely to develop APD and Substance Abuse disorders (see Lilienfeld, 1992). Individuals with an adoptive parent with APD also appear to be at increased risk for developing APD relative to the general population, although adopted-away children seem to resemble their biological parents more than their adoptive parents in terms of antisocial behavior (APA, 2000).

APD is associated with low socioeconomic status and is more prevalent in urban than rural settings. These findings have raised concerns that APD may be misapplied to some individuals in these settings, as antisocial behavior may occasionally serve as a protective strategy under such conditions. The DSM-IV accompanying text on APD urges the clinician to consider these factors when diagnosing the disorder. Alternatively, it is possible that (a) poverty may contribute to APD, (b) APD, which is often associated with occupational instability and failure, may lead to an increased risk for poverty, and/or (c) some of the same causal influences that give rise to poverty also give rise to APD.

ASSESSMENT

What should be ruled out?

When assessing APD, several important considerations must be borne in mind. First, if adult antisocial behaviors accompany a substance use disorder, a diagnosis of APD should be made only if features of APD were also present in childhood, and have continued into the adult years. Chronic antisocial behavior occurring only in the context of schizophrenia or during a manic episode should not be diagnosed as APD.

It is important to distinguish APD from other personality disorders with which it shares certain features. Like APD individuals, those with Narcissistic Personality Disorder (NPD) often present as glib, unempathic, and exploitative. However, individuals with NPD are not usually characterized by impulsivity and aggression. Individuals with Histrionic Personality Disorder may be reckless, seductive, and manipulative, as are those with APD. Nevertheless, individuals with Histrionic Personality Disorder do not necessarily engage in antisocial behaviors. Individuals with Borderline Personality Disorder are also often manipulative, but this manipulativeness usually appears to be motivated by attention- and nurturance-seeking rather by power or material gain, as it typically is in individuals with APD (APA, 2000).

The DSM-IV Text Revision (DSM-IV-TR; APA, 2000) asserts that APD is essentially synonymous with psychopathy, or psychopathic personality. The disorder known as APD, first seen in DSM-III, was intended to capture the same condition that had been known as psychopathy in former classification schemes and in the clinical literature (Cleckley, 1941). Psychopathy is characterized by a constellation of such personality traits as lack of guilt, callousness, dishonesty, manipulativeness, grandiosity, superficial charm, and poor impulse control. In an effort to circumvent the apparent subjectivity of these personality traits, the DSM-III diagnosis of APD focused largely or entirely on behavioral criteria, rather than personality features The resulting criteria have been highly controversial, as some authors argue that the criteria are overinclusive (e.g., Cunningham & Reidy, 1998; Hart & Hare, 1997; Lilienfeld, 1994), as there are most likely a wide array of etiological factors behind criminal behavior, only one of which is psychopathy (Lykken, 1995; Rogers & Dion, 1991). Still others have criticized APD criteria for being underinclusive (Millon, 1981; Widom, 1977), as these criteria may not adequately identify individuals who possess the core personality features of psychopathy, but do not manifest these traits in criminal behavior ("subclinical" or "successful" psychopaths). Moreover, there is compelling evidence that, contrary to DSM-IV-TR, APD and psychopathy are not synonymous, as only about 25-30% of individuals with APD in prison settings meet research criteria for psychopathy (Hare, 2003). As a consequence, contra DSM-IV-TR, there is good evidence that psychopathy and APD are separable conditions. In this chapter, we will report findings that pertain only to APD as defined by DSM criteria.

What is Involved in Effective Assessment?

Researchers and clinicians have typically attempted to assess APD using either selfreport or interview-based measures. Although some instruments for assessing personality disorders have demonstrated acceptable reliability, low levels of agreement among instruments have been observed across studies, with some diagnoses exhibiting no higher than chance agreement levels across instruments (see Perry, 1992, for a review). For example, for APD, Perry (1992) reported Kappa coefficients ranging from .06 (SIDP vs. MCMI) to .59 (SCID vs. PDE) across different measures of APD. Although most of these findings were generated from research that employed DSM-III and DSM-III-R based instruments, this issue may well pertain to DSM-IV-based measures as well. In general, self-report measures of APD yield higher prevalence levels of the diagnosis than do structured interviews, perhaps because the former measures do not permit probing of responses. As a consequence, clinicians should bear in mind that diagnoses of APD derived from selfreport measures may be overly liberal. For some of these measures, there are data on the reliability of APD per se, whereas for other measures there are only data on the reliability of DSM personality disorders in general. In cases in which there are reliability data specifically for APD, we report these data in the following sections.

Self-report measures. Although several instruments that assessed DSM-III and DSM-III-R PD criteria for APD exhibited adequate psychometric properties, little research pertaining to updated versions exists. We discuss four such instruments here: the Personality Diagnostic Questionnaire-4+ (PDQ-4+; Hyler, 1994), the Millon Clinial Multiaxial Inventory-III (MCMI; Millon, 1983,1987,1994), the Minnesota Multiphasic Personality Inventory-2 DSM-IV Personality Disorder scales (MMPI-2 DSM-IV PD scales), and the Wisconsin Personality Disorders Inventory (WISPI-IV; Klein & Benjamin, 1996) as well as one new instrument, the Assessment of DSM-IV Personality Disorders Questionnaire (ADP-IV; Schotte & De Doncker, 1996).

The PDQ-4+ is a self-report measure consisting of 99 true-false items that assess DSM-IV criteria for the 10 major personality disorders, and two personality disorders (passive-aggressive and depressive) designated for further study. Only one published study has examined the psychometric properties of the PDQ-4+. Fossati et al. (1998) administered the PDQ-4+ and Structured Clinical Interview for DSM-IV Personality Disorders, Version 2.0 (SCID-II) to a sample of 300 psychiatric inpatients and outpatients. Correlations among all PDQ-4+ and SCID-II scales were low to moderate, but significant (r = .19-.42). Additionally, PDQ-4+ scales exhibited mediocre internal consistencies. Only two scales (antisocial and dependent) showed strong powers of discrimination.

At one time, the MCMI was considered a well-researched instrument for use in personality disorder assessment. However, little research has been published regarding the latest revision of this instrument, the MCMI-III (Millon, 1994). As the MCMI-III has changed or replaced 95 of 175 items from the MCMI-II, it is essentially impossible to comment on the properties of this instrument until updated validation information is available. What is currently known about the MCMI-III will be reported here.

The MCMI-III was designed to assess the principal dimensions of Millon's biosocial theory of personality (see Millon, 2003). Like prior editions, it uses a true/false format. Millon (1994) reports test–retest reliability estimates of the MCMI-III PD scales, over periods from 5 to 14 days, ranging from ranging from .85 (Paranoia) to .93 (Antisocial, Borderline, and Depressive). Craig (1999) reports, however, that reliability estimates from Millon's group tend to be somewhat higher than those reported by other researchers.

Another set of scales once frequently used and researched has received little attention since the advent of DSM-IV. The MMPI DSM-III Personality Disorders (MMPI-PD) scales were developed by first asking psychologists to select MMPI items that appeared to assess each DSM-III personality disorder, and then refining the preliminary scales by eliminating items with low item-total correlations. Unlike the PDQ-4 items, the content of the MMPI items does not correspond directly to that of the DSM criteria for APD. The internal consistency of the MMPI DSM-III APD scale in a psychiatric sample was .78 (Morey, Waugh, & Blashfield, 1985), and its three-month test–retest reliability in a psychiatric sample was .82 (Trull, 1993). A revised set of personality disorder scales, including a scale for APD, has been developed for the MMPI-2 (Somwaru & Ben-Porath, 1995), although research concerning their psychometric properties is preliminary.

The WISPI-IV is the latest version of the Wisconsin Personality Disorders Inventory, a measure designed to assess personality disorders from an interpersonal perspective. It comprises 204 items, for which the individual is asked to rate statements on a 10-point scale from 0 (never or not at all true of you) to 10 (always or extremely true of you), to the degree that they describe one's "usual self" over the past five years. The items map onto 11 PD scales (10 primary DSM-IV personality disorders, and passive aggressive PD), and ten items are derived from the Marlowe-Crowne Scale for social desirability (Greenwald & Satow, 1970). Its scales have demonstrated good internal consistency, ranging from α = .74 to α = .95 in a mixed psychiatric and community sample (Klein & Benjamin, 1996; Smith, Klein, & Benjamin, 2003). Smith et al. (2003) reported a median correlation of .44 (range: .32–.60) between the WISPI-IV and a widely used semistructured interview, the SCID-II (see below), providing preliminary evidence of convergent validity.

The ADP-IV (Schotte & De Doncker, 1996) is a 94-item questionnaire that, like the PDQ-4+, assesses the criteria for the 10 DSM-IV personality disorders, plus those for the two designated for further study. Each item consists of a "trait question," which asks the individual to rate the degree to which he feels that a statement describes him on a 7-point Likert-type scale. If individuals agrees to some degree that the trait applies to them (i.e., rates it as a 5 "rather agree" or higher), then they he completes an additional item, rating the degree to which the trait in question has caused or causes distress in themselves or others on a scale from 1 ("not at all") to 3 ("definitely"). Schotte et al. (2004) reported that on average, 3–4 items on each individual's questionnaire are rated as present but not causing distress. The ADP-IV can be scored dimensionally, using trait scores, and categorically, using scoring algorithms that take into account both trait and distress cut-offs. The original version of the ADP-IV is in Dutch, but English, German, Japanese, and French versions are available.

Preliminary reports indicate promising psychometric properties for the ADP-IV. When scored dimensionally, the trait scales have demonstrated good internal consistency (median Cronbach's alpha: .76; range: .60–.84) (Schotte, De Doncker, Van Kerckhoven, Vertommen, & Cosyns, 1998), and adequate test–retest reliability and stability (median r=.82 over a six-month interval; Schotte et al., 2004). Furthermore, in a Flemish sample of n = 487 psychiatric inpatients, and n = 659 individuals from the general population, the ADP-IV was found to adequately discriminate those with and without a PD diagnosis in the psychiatric sample when scored both categorically and dimensionally. Additionally, at the dimensional level, the convergent correlations between the 12 PD scales and their corresponding scales on a widely used semistructured interview, the SCID-II (see below), ranged from .35 to .67, with a median of .52 (Schotte et al., 2004).

Structured interview measures Several structured and semistructured interview measures for the assessment of DSM-IV personality disorders are available, although as is the case for self-report measures, there is variation in the degree to which they are supported by research. We will discuss three widely used interview measures here: the Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997), the Diagnostic Interview for DSM-IV Personality Disorders (DIPD-IV; Zanarini, 1996), and the Structured Interview for DSM-IV Personality Disorders (SIDP-IV; Pfohl, Blum, & Zimmerman, 1997).

The SCID-II (First et al., 1997) is a semistructured diagnostic interview for assessment of the 10 DSM-IV Axis II personality disorders, as well as Depressive Personality Disorder and Passive-Aggressive Personality Disorders, which are included in Appendix B of DSM-IV as criteria sets for further study. Like the SCID-I, the SCID-II contains one item per criterion for each of the diagnoses, to be rated by the interview on a scale from 1 ("Absent or false") to 3 ("Threshold or true"). Most research on the SCID-II was conducted using its previous version, the DSM-III-R SCID-II (e.g., Renneberg, Chambless, Dowdall, Fauerbach, & Graceley, 1992; First, Spitzer, Gibbon, & Williams, 1995; Dreessen & Arntz, 1998), and indicates acceptable levels of interrater reliability and internal consistency. At least one study reports high levels of internal consistency for the SCID-II, and its inter-rater reliability is generally reported to be fair-to-excellent, with kappas ranging from .43 to .98, and intraclass correlations coefficients (ICCs) ranging from .61 to 1.00 for PD categories (Maffei et al., 1997). Findings from a recent study of the convergence of the WISPI-IV with the SCID-II indicate widely varying levels of internal consistency among the scales of the SCID-II, ranging from $\alpha = .30$ (histrionic) to $\alpha = .77$ (avoidant).

The DIPD is a semistructured diagnostic interview that assesses the presence of the 10 primary DSM-IV personality disorders, as well as the two for further research. It requires that the criteria for each PD must be "present and pervasive" (Grilo et al., 2001) for at least 2 years, and that they be characteristic of the person for most of his or her adult life. Adequate levels of inter-rater reliability (range: .52–1.0; APD = 1.0) and test–retest reliability (1–2 week interval; range .46–.85; APD = .84) have been reported for this measure (Zanarini et al., 2000), and internal consistencies within each of the diagnoses have been found to range from α = .47 (Schizoid PD) to α = .87 (APD) (Grilo et al., 2001).

The Structured Interview for DSM-IV Personality Disorders (SIDP-IV; Pfohl et al., 1997) is a 60- to 90-minute semistructured interview, in which the interview rates the presence or absence of DSM-IV PD criteria on a 4-point scale (0 = "not present," 1 = "subclinical presence," 2 = "present," 3 = "strongly present"). To be considered clinically present, a criterion must be rated 2 or 3. Past versions of the SIDP attained acceptable levels of inter-rater agreement when assessing the disorders categorically (joint interview κ = .71) (Stangl, Pfohl, Zimmerman, Bowers, & Corenthal, 1985), but psychometric properties of the current edition are not known.

What Assessments are Not Helpful?

There is no compelling evidence for the use of projective techniques in the detection of APD, although these instruments are often used to aid in the diagnosis of this condition. Although some authors (e.g., Gacono & Meloy, 1994) have maintained that certain Rorschach indices, such as an abnormally large number of reflection responses or an abnormally small number of texture responses, are

associated with APD (and psychopathy), research has offered little support for these claims (Wood, Lilienfeld, Garb, & Nezworski, 2000). We are unaware of any evidence that the Thematic Apperception Test, human figure drawings, or other projective methods are helpful in the detection of APD. The MMPI-2 Psychopathic deviate (Pd) scale (Scale 4) is positively correlated with APD symptoms (Lilienfeld, 1999) and may be useful in the assessment of certain features of APD. Nevertheless, it should not be used by itself to generate diagnoses of APD because it does not map directly onto DSM-IV APD symptoms. Moreover, although certain Harris-Lingoes subscales of the Pd scale, especially Pd2 (Authority Problems) are moderately to highly associated with APD symptoms, other Pd subscales, particularly Pd3 (Social Imperturbability) and Pd4 (Social Alienation), appear to be negligibly associated with APD symptoms (Lilienfeld, 1999).

TREATMENT

What Treatments are Effective?

Considering the enormous toll that APD takes on the affected individual, the individual's family and friends, and society at large, it is unfortunate that there is little evidence of effective treatments for APD. Indeed, as Turkat (1990) observed, the treatment of APD is an "unpopular topic in psychiatry" (p. 60), probably because there is precious little evidence for efficacious treatments and because individuals with APD tend to be notoriously unpleasant to treat. Aside from a scattering of poorly controlled case studies, there is little treatment literature bearing on APD, and that which does exist discusses the benefits of treating such associated behaviors as substance abuse or violence, but says little about altering its underlying personality features.

Several studies have reporting encouraging findings regarding substance abuse treatment in individuals with APD. In a sample of patients with heroin addiction (N=183), Darke, Finlay-Jones, Kaye, & Blatt (1996) found that APD patients were not significantly more likely to relapse, or to drop out or be removed from the treatment program, when compared to non-APD patients (d = -.17). In a sample of patients in treatment for alcohol addiction (N=309), Verheul, van den Brink, Koeter, & Hartgers (1999) found no difference in post-treatment alcohol and social problems when comparing patients who met DSM-III-R criteria for APD and those who did not . The authors concluded that antisocial patients had benefited just as much as their nonantisocial counterparts from this program, which included detoxification, daycare and residential treatment, individual and group counseling, and relapse prevention. Goldstein et al. (2001) compared residential addiction treatment clients meeting DSM-III-R APD criteria with those displaying only adult antisocial behavior on several outcome variables. Although those meeting full criteria for APD were at slightly increased risk for first episode of relapse, the two groups did not differ in severity of relapse episode. Taken together, these findings provide preliminary indications that patients with co-occurring APD and substance abuse problems may sometimes fare as well in substance abuse treatment as patients without APD.

Nevertheless, other studies of substance abuse treatment report findings suggesting less improvement in individuals with APD than other individuals. For example, in a sample of inpatient alcoholics with co-occurring DSM-III personality disorders (N = 102), Poldrugo and Forti (1988) found significantly reduced compliance with group treatment and abstinence from alcohol in patients with APD (n = 24). Nevertheless, the comparison groups were quite small in this study, and

that it was unclear (a) what criteria were used to determine treatment compliance and (b) whether the raters of this variable were blind to the patients' diagnoses. In a sample of low-SES methadone opiate dependent men enrolled in a methadone maintenance program at a VA hospital (N= 193), Alterman, Rutherford, Cacciola, McKay, and Boardman (1998) found that number of APD symptoms correlated negatively and moderately with treatment completion. Nevertheless, number of APD symptoms did not correlate significantly with other variables (e.g., presence of narcotic traces in urine; social, legal, or psychiatric problems), and was not a specific indicator, because conduct disorder scales, psychopathy scales, and an index of socialization predicted treatment completion equally well. The findings regarding the relation of APD to substance abuse treatment outcome are therefore inconsistent.

Additionally, there are preliminary indications that concurrent psychopathology can moderate treatment outcome in antisocial patients under some conditions. In a sample of opiate addicts (N=63), receiving drug counseling plus professional psychotherapy (supportive or cognitive behavioral), Woody, McLellan, Luborsky, and O'Brien (1985) found that patients with opiate addiction plus APD (OP+APD) showed little improvement with treatment, whereas those with opiate addiction and APD plus depression (OP+APD+DEP) improved to a degree comparable to non-APD patients. Specifically, while OP+APD patients showed significant improvement on only 3 of 22 possible variables, confined to areas of drug use and legal status, OP+APD+DEP significantly improved on 11 variables, including days working, days using opiates, days using stimulants, illegal income, and symptom counts on the SCL-90, SADS anxiety and SADS depression. In terms of effect sizes representing overall improvement, OP+DEP+APD patients showed moderate improvement (d=.50), whereas OP+APD patients showed a small negative effect size (d=-.23), reflecting deterioration.

No group therapies, self-help treatments, or individual therapies (e.g., psychoanalysis, person-centered therapy) are known to be effective in treating APD. Although Turkat (1990) recommended that anger management and impulse control training strategies be used to minimize the problematic behaviors of individuals with APD, there is no controlled evidence for their efficacy. Other authors, such as Beck and Freeman (1990), have suggested a cognitive-behavioral approach to APD that addresses six self-serving beliefs and cognitive styles central to this condition: (1) Justification, (2) Thinking is believing, (3) Personal infallibility, (4) Feelings make facts, (5) The impotence of others, and (6) Low-impact consequences. In addition to addressing these dysfunctional beliefs, Beck and Freeman propose that therapists guide APD patients toward more abstract thinking and toward recognizing the effects of their behavior on others. Nevertheless, there are no known controlled studies of this treatment.

What is Effective Medical Treatment?

Although there is no controlled evidence that psychopharmacological treatment ameliorates APD features, a few studies suggest that drug treatment may minimize some of the destructive behaviors associated with APD. For example, some researchers have found an association between treatment with lithium carbonate (lithium) and carbamazepine (Tegretol) and decreased general violence, aggression, and impulsiveness (Tyrer, 1988). However, few controlled studies have demonstrated these effects. To our knowledge, no controlled studies have examined the effects of Tegretol on violent or antisocial behavior, and we located only one controlled clinical trial of this nature for lithium. Sheard, Marini, Bridges, and

Wagner (1976) treated 66 patients exhibiting serious assaultive and antisocial behavior, with Lithium or placebo for up to 3 months. They found a significant reduction in aggressive behavior in the Lithium group relative to placebo. Others have found that antisocial symptoms secondary to certain Axis I conditions (e.g., depression, paraphilias) may be effectively treated by means of pharmaceutical treatments traditionally prescribed for the treatment of those conditions (e.g., mood stabilizers, antiandrogens). In a double-blind, placebo-controlled trial of the selective serotonin-reuptake inhibitor fluoxetine hydrochloride (Prozac) conducted with 40 DSM-III-R personality-disordered individuals with histories of impulsive aggressive behavior and irritability, and no current major depression, bipolar disorder or schizophrenia, Coccaro and Kavoussi (1997) found that fluoxetine, but not placebo, resulted in a sustained reduction in self-reported irritability and aggression. Nevertheless, the relevance of these findings to the treatment of APD per se is unclear.

CONCLUDING REMARKS

In contrast to psychopathy, for which there are decades of clinical lore and research findings that contribute to a "therapeutic nihilism" (Reid & Gacono, 2000; but see Salekin, 2002), there is scant controlled intervention research on APD. As a consequence, it is difficult to offer definitive recommendations for the treatment of this condition. Although there are some indications that drug-addicted individuals with both APD and depression may be more likely to benefit from treatment than drug-addicted individuals with APD alone, these findings are preliminary and of unknown generalizability to individuals outside of substance abuse settings. Nevertheless, given evidence that APD (a) may in some cases be a negative treatment indicator and (b) is associated with increased risk for physical aggression, we advice clinicians who work in forensic settings, substance abuse settings, or both to incorporate well validated measures of APD into their assessment batteries. Because selfreport measures of APD do not permit probing of responses and therefore may yield overly liberal diagnoses of this condition, we further recommend that these measures be supplemented with structured interviews. Hopefully, further controlled research on treatment outcome among APD patients will permit stronger conclusions to be drawn regarding the treatment implications of this diagnosis across various settings.

REFERENCES

Alterman, A. I., Rutherford, M. J., Cacciola, J. S., McKay, J. R., & Boardman, C. R. (1998). Prediction of 7 months methadone maintenance treatment response by four measures of antisociality. *Drug & Alcohol Dependence*, 49, 217–223.

American Psychiatric Association (1994). Diagnostic and statistical manual of mental disorders (4th ed.). Washington, DC: Author.

American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text revision). Washington, DC: Author.

Beck, A. T., & Freeman, A. (1990). Cognitive therapy of personality disorders. London: The Guilford Press.

Cleckley, H. (1941). The mask of sanity: an attempt to reinterpret the so-called psychopathic personality. St. Louis: Mosby.

Cloninger, C. R., Christiansen, K. O., Reich, T., & Gottesman, I. I. (1978). Implications of sex differences in the prevalences of antisocial personality, alcoholism, and criminality for familial transmission. *Archives of General Psychiatry*, *35*, 941–951.

Coccaro, E. F., & Kavoussi, R. J. (1997). Fluoxetine and impulsive aggressive behavior in personality-disordered subjects. *Archives of General Psychiatry*, *54*, 1081–1088.

Craig, R. J. (1999). Testimony based on the Millon Clinical Multiaxial Inventory: Review, commentary, and guidelines. *Journal of Personality Assessment*, 73, 290–305.

Cunningham, M. D., & Reidy, T. J. (1999). Don't confuse me with the facts: Common errors in violence risk assessment at capital sentencing. *Criminal Justice & Behavior, 26, 20–43.*

Darke, S., Finlay-Jones, R., Kaye, S., & Blatt, T. (1996). Anti-social personality disorder and response to methadone maintenance treatment. *Drug and Alcohol Review*, 15, 271–276.

Dreessen, L., & Arntz, A. (1998). Short-interval test-retest interrater reliability of the Structured Clinical Interview for DSM-III-R Personality Disorders (SCID-II) in outpatients. *Journal of Personality Disorders*, 12, 138–148.

Farrington, D. P., Ohlin, L., & Wilson, J. Q. (1986). *Understanding and controlling crime*. New York: Springer Verlag.

First, M. B., Spitzer, R. L., Gibbon, M., & Williams, J. B. W. (1995). The Structured Clinical Interview for DSM-III-R Personality Disorders (SCID-II): I. Description. *Journal of Personality Disorders*, *9*, 83–91.

First, M. B., Gibbon, M., Spitzer, R. L., Williams, J. B., & Benjamin, L. S. (1997). *User's guide for the Structured Clinical Interview for the DSM-IV Personality Disorders*. Washington, DC: American Psychiatric Press.

Fossati, A., Maffei, C., Bagnato, M., Donati, D., Donini, M., Fiorilli, M., Novella, L., & Ansoldi, M. (1998). Criterion validity of the Personality Diagnostic Questionnaire -4+ (PDQ-4+) in a mixed psychiatric sample. *Journal of Personality Disorders*, 12, 172–178.

Gacono, C. B., & Meloy, J. R. (1994). The Rorschach assessment of aggressive and psychopathic personalities. Hillsdale, NJ: Erlbaum.

Glover, A. J. J., Nicholson, D. E., Hemmati, T., Bernfeld, G. A., & Quinsey, V. L. (2002). A comparison of predictors of general and violent recidivism among high-risk federal offenders. *Criminal Justice and Behavior*, 29, 235–249.

Goldstein, R. B., Bigelow, C., McCusker, J., Lewis, B. F., Mundt, K. A., & Powers, S. I. (2001). Antisocial behavioral syndromes and return to drug use following residential relapse prevention/health education treatment. *American Journal of Drug and Alcohol Abuse*, 27, 453–482.

Greenwald, H. J. & Satow, Y. (1970). A short social desirability scale. *Psychological Reports*, 27, 131–135.

Grilo, C. M., McGlashan, T. H., Morey, L. C., Gunderson, J. G., Skodol, A. E., Tracie, S. M. et al. (2001). Internal consistency, intercriterion overlap and diagnostic efficiency of criteria sets for DSM-IV schizotypal, borderline, avoidant, and obsessive-compulsive personality disorders.

Hare, R. D. (2003). Manual for the revised psychopathy checklist (2nd ed.). Toronto, ON, Canada: Multi-Health Systems.

Harris, G. T., Rice, M. C., & Cornier, C. A. (1991). Psychopathy and violent recidivism. Law and Human Behavior, 15, 625–637.

Hart, S. D., & Hare, R. D. (1997). Psychopathy: assessment and association with criminal conduct. In D. M. Stoff, J. Breiling, & J. D. Maser (Eds.), *Handbook of antisocial behavior*, (pp. 22–35). New York, NY: Wiley.

Hart, S. D., Kropp, P. R., & Hare, R. D. (1988). Performance of psychopaths following conditional release from prison. *Journal of Consulting and Clinical Psychology*, *56*, 227–232.

Hyler, S. E. (1994). The Personality Diagnostic Questionnaire 4+. New York: New York State Psychiatric Institute.

Klein, M. H., & Benjamin, L. S. (1996). *The Wisconsin Personality Disorders Inventory-IV*, Madison, WI: University of Wisconsin, unpublished test.

Lilienfeld, S. O. (1992). The association between antisocial personality and somatization disorders: A review and integration of theoretical models. *Clinical Psychology Review*, 12, 641–662.

Lilienfeld, S. O. (1994). Conceptual problems in the assessment of psychopathy. *Clinical Psychology Review*, 14, 17–38.

Lilienfeld, S. O. (1999). The relation of the MMPI-2 Pd Harris–Lingoes subscales to psychopathy, psychopathy facets, and antisocial behavior: Implications for clinical practice. *Journal of Clinical Psychology*, 55, 241–255.

Loeber, R. (1982). The stability of antisocial and delinquent child behavior: A review. *Child Development*, 53, 1431–1466.

Loeber, R., & Farrington, D. O. (1998). Serious and violent juvenile offenders: Risk factors and successful interventions. Thousand Oaks, CA: Sage.

Lykken, D. T. (1995). The antisocial personalities. Hillsdale, NJ: Erlbaum.

Maffei, C., Fossati, A., Agostoni, I., Barraco, A., Bagnato, M., Donati, D., Namia, C., Novella, L., & Petrachi, M. (1997). Interrater reliability and internal consistency of the structured clinical interview for DSM-IV Axis II personality disorders (SCID-II), version 2.0. *Journal of Personality Disorders*, 11, 279–284.

Millon, T. (1981). Disorders of personality DSM III Axis II. New York: Wiley.

Millon, T. (1983). Millon Clinical Multiaxial Inventory manual. New York: Holt, Reinhart, & Winston.

Millon, T. (1987). Millon Clinical Multiaxial Inventory-II: Manual for the MCMI-II. Minneapolis, MN: National Computer Systems.

Millon, T. (1994). Millon Clinical Multiaxial Inventory-III: Manual. Minneapolis, MN: National Computer Systems.

Millon, T. (2003). Evolution: A generative source for conceptualizing the attributes of personality. In T. Millon & M. Lerner (Eds.), *Handbook of psychology: Personality and social psychology* (Vol. 5, pp. 3–30). New York: Wiley & Sons.

Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review*, 100, 674–701.

Morey, L. C., Waugh, M., & Blashfield, R. (1985). MMPI scales for the *DSM-III* personality disorders: Their derivation and correlates. *Journal of Personality Assessment*, 49, 245–251.

Perry, J. C. (1992). Problems and considerations in the valid assessment of personality disorders. *American Journal of Psychiatry*, 149, 1645–1653.

Pfohl, B., Blum, N., & Zimmerman, M. (1997). Structured Interview for DSM-IV Personality. Washington, DC: American Psychiatric Press.

Poldrugo, F., & Forti, B. (1988). Personality disorders and alcoholism treatment outcome. *Drug and Alcohol Dependence*, 21, 171–176.

Reid, W. H., & Gacono, C. (2000). Treatment of antisocial personality, psychopathy, and other characterologic antisocial syndromes. *Behavioral Sciences and the Law, 18*, 647–662.

Renneberg, B., Chambless, D. L., Dowdall, D. J., Fauerbach, J. A., & Graceley, E. J. (1992). The Structured Clinical Interview for DSM-III–R, Axis II and the Millon Clinical Multiaxial Inventory: A concurrent validity study of personality disorders among anxious outpatients. *Journal of Personality Disorders*, 6, 117–124.

Rogers, R., & Dion, K. (1991). Rethinking the DSM-III-R diagnosis of antisocial personality disorder. *Bulletin of the American Academy of Psychiatry and Law*, 19, 21–31.

Salekin, R. T. (2002). Psychopathy and therapeutic pessimism: Clinical lore or clinical reality? *Clinical Psychology Review, 22,* 79–112.

Schotte, C. K. W., & De Doncker, D. A. M. (1996). *ADP-IV Questionnaire: Manual and norms*. Antwerp, Belgium: University Hospital Antwerp.

Schotte, C. K. W., De Doncker, D., Vankerckhoven, C., Vertommen, H., & Cosyns, P. (1998). Self-report assessment of the DSM-IV personality disorders: Measurement of trait and distress characteristics: The ADP-IV. Psychological medicine, 28, 1179–1188.

Schotte, C. K. W., De Doncker, D. A. M., DMitruk, D., Van Mulders, I., D'Haenan, H., & Cosyns, P. (2004). The ADP-IV questionnaire: Differential validity and concordance with the semistructured interview. *Journal of Personality Disorders*, 18, 405–419.

Sheard, M. H., Marini, J. L., Bridges, C. I., & Wagner, E. (1976). The effect of lithium on impulsive on impulsive aggressive behavior in man. *American Journal of Psychiatry*, 133, 1409–1413.

Skilling, T. A., Harris, G. T., Rice, M. E., & Quinsey, V. L. (2002). Identifying persistently antisocial offenders using the Hare Psychopathy Checklist and DSM Antisocial Personality Disorder Criteria. *Psychological Assessment*, 14, 27–38.

Smith, T. L., Klein, M. H., & Benjamin, L. S. (2003). Validation of the Wisconsin Personality Disorders Inventory-IV with the SCID-II. *Journal of Personality Disorders*, 17, 173–187.

Somwaru, D. P. & Ben-Porath, Y. S. (1995). Development and reliability of MMPI-2 based personality disorders. Presented at Annual Symposium on. Recent Developments in MMPI-2, MMPI-A, 30th, St. Petersburg Beach, FL.

Stangl, D., Pfohl, B., Zimmerman, M., Bowers, W., & Corenthal, C. (1985). A structured interview for the DSM-III personality disorders. *Archives of General Psychiatry*, 42, 591–596.

Trull, T. J. (1993). Temporal stability and validity of two personality disorder inventories. *Psychological Assessment: A Journal of Consulting and Clinical Psychology*, 5, 11–18.

Turkat, I. D. (1990). The personality disorders: A psychological approach to clinical management. Elmsford, New York: Pergamon Press.

Tyrer, P. (1988). Personality disorders: Diagnosis, management, and course. London: Wright.

Verheul, R., van den Brink, W., Koeter, M. W. J., & Hartgers, C. (1999). Antisocial alcoholic patients show as much improvement at 14-month follow-up as non-antisocial alcoholic patients. *American Journal on Addictions*, 8, 24–33.

Widom, C. S. (1977). A methodology for studying noninstitutionalized psychopaths. *Journal of Consulting and Clinical Psychology*, 45, 674–683.

Wood, J. M., Lilienfeld, S. O., Garb, H. N., & Nezworski, M. T. (2000). The Rorschach Test in clinical diagnosis: A critical review, with a backward look at Garfield (1947). *Journal of Clinical Psychology*, 56, 441–448.

Woody, G. E., McLellan, A. T., Luborsky, L., & O'Brien, C. P. (1985). Sociopathy and psychotherapy outcome. *Archives of General Psychiatry*, 42, 1081–1086.

Zanarini, M. C., Skodol, A. E., Bender, D., Dolan, R., Sanislow, C., Schaefer, E., Morey, L. C., Grilo, C. M., Shea, M. T., McGlashan, T. H., Gunderson, J. G. (2000). The collaborative longitudinal personality disorders study: reliability of Axis I and II diagnoses. *Journal of Personality Disorders*, 14, 291–299.