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PSYCHIATRIC MORBIDITY AMONG AGGRESSIVE DRIVERS

As we mentioned in chapter 4, we routinely conducted structured psychiatric interviews on the treatment-seeking aggressive driving samples so that we would be able to describe the psychological and psychiatric aspects of these participants from a categorical perspective to complement the dimensional perspective (psychological tests) provided in chapter 6. We used the Structured Clinical Interview for Axis I *DSM–IV* Disorders (SCID; First, Spitzer, Gibbon, & Williams, 1996) to diagnose *Diagnostic and Statistical Manual of Mental Disorders* (4th ed. [*DSM–IV*]; American Psychiatric Association, 1994) Axis I disorders, and the SCID–II (First, Spitzer, Gibbon, Williams, & Benjamin, 1996) to diagnose Axis II personality disorders. In addition, we used a SCID-like interview module, modeled after the work of McElroy, Soutullo, Beckman, Taylor, and Keck (1998), to assess for intermittent explosive disorder (IED) among all participants. We describe this in more detail later in the chapter.

Beginning with the second cohort of court-referred aggressive drivers, and continuing with the student sample of aggressive drivers identified by the Driver's Stress Profile (DSP; Larson, 1996a), we also used structured interviews to assess for attention-deficit/hyperactivity disorder (ADHD), both earlier as a child and currently as an adult, and for possible oppositional defiant disorder, using the structured interview developed by Barkley and

TABLE 5.1
Reliability Coefficients for Current and Lifetime Diagnoses

		Current diagnosis		Lifetime diagnosis	
Diagnosis	*n*	κ	*SE*	κ	*SE*
Attention-deficit/hyperactivity disorder	40	.73	.14	.81	.10
History of conduct disorder	19			.92	.08
Oppositional defiant disorder	40	.82	.10	.86	.08
Intermittent explosive disorder	24	.83	.16	.83	.12
Major depressive disorder	40	.90	.10	.90	.07
Anxiety disorders	94	.91	.04	.90	.04
Alcohol abuse/dependence	33	.81	.13	.92	.08
Substance abuse/dependence	26	1.00	.00	.93	.08
Cluster A personality disorders	27	.86	.12		
Cluster B personality disorders	88	.88	.08		
Cluster C personality disorders	45	.80	.10		

Note. Sample sizes for each diagnostic category differ because (a) diagnoses scored as "absent" because of negative responses to Structured Clinical Interview for *DSM–IV* Axis I Disorders and Structured Clinical Interview for *DSM–IV* Axis II Disorders screen questions were not included in the reliability analyses, and (b) composite categories such as personality disorders/anxiety disorders included multiple diagnoses. For all values displayed here, $p = .001$.

Murphy (1998), known as the Attention Deficit Disorder and Oppositional Defiant Disorder Interview.

INTERRATER RELIABILITY

An important part of categorical assessments is interrater reliability. We tape-recorded the interviews for part of the treatment-seeking sample and for the student aggressive drivers. An advanced doctoral student in clinical psychology, with several years of experience in assessing psychiatric populations with the SCID and SCID–II, rescored these tapes while being kept unaware of the initial interviewee's diagnosis or subgroup membership.[1] Kappa values for interrater agreement for disorders commonly found in these populations are listed in Table 5.1.

As can be seen, the kappas for diagnostic agreement were very good to excellent, with all values but one (current ADHD) at .80 or higher. Thus, we believe that our data on reliability of psychiatric diagnoses are of very high quality.

[1]We thank Brian Freidenberg for his assistance in this part of our research.

DIAGNOSIS OF INTERMITTENT EXPLOSIVE DISORDER

As we noted earlier, IED is an understudied condition, a point that has been made by several authors who have written about the disorder from a clinical perspective (Lion, 1992; McElroy, 1999) or from the perspective of the clinical researcher (Coccaro, Kavoussi, Berman, & Lish, 1998; Felthous, Bryant, Wingerter, & Barratt, 1991; Mattes & Fink, 1987; McElroy et al., 1998). The reasons for the relative inattention to IED could be its relative rarity (Bryant, Felthous, & Barratt, 1993; Felthous et al., 1991; Monopolis & Lion, 1983) or that individuals with this problem are more likely to be found in the criminal justice system than in the mental health system; that is, they are "bad," not "mad" (Felthous, Bryant, Wingerter, & Barratt, 1991; Lion, 1992; McElroy et al., 1998).

In essence, patients (a) who periodically act very aggressively, resulting in serious assaultive acts or property damage; (b) whose degree of aggression is grossly out of proportion to any provocation or precipitating stressor; and (c) whose behavior cannot be better accounted for by other disorders are diagnosed, according to *DSM–IV* (American Psychiatric Association, 1994, p. 612), with IED. In earlier times, such individuals might have been diagnosed with explosive personality disorder in *Diagnostic and Statistical Manual of Mental Disorders* (2nd. ed.; American Psychiatric Association, 1968), or with "episodic dyscontrol syndrome" (Maletzky, 1973).

Reference to the offenses for which our court-referred aggressive drivers were convicted (see upper portion of Table 4.2) gives one a sense of an aggressive driving response out of proportion to whatever provocation may have been experienced on the roadways. The same can be said of the officials described in our introductory newspaper story or the vignettes in chapter 1. These offenses and others like them across U.S. highways gave birth to the term *road rage*. Because some of our participants seemed to react in an aggressive fashion out of proportion to the provocation, we assessed all treatment-seeking aggressive drivers for IED. We also assessed the student sample that was in the highest 16% on the DSP for IED.

It should be noted that a single aggressive driving offense, no matter how severe, would not be enough to warrant a diagnosis of IED. Instead, we were looking for a pattern of several overaggressive assaultive acts or incidents of property damage out of proportion to any provocation to lead us to diagnose IED.

The *DSM–IV* suggests that one take into account possible exclusionary comorbidity such as borderline personality disorder (BPD), antisocial personality disorder (ASPD), mania, and ADHD. Presence of these comorbid conditions are not, however, absolute exclusions. Instead, the recommendation seeks to determine whether one could better account for the repeated aggressive acts out of proportion to provocation by the other disorders.

Various attempts to deal with comorbidity and exclusion in diagnosing IED have been proposed. For example, Coccaro et al. (1998) proposed research criteria for IED that do not exclude the diagnosis of IED on the basis of any Axis II comorbidity. However, they added two diagnostic criteria: (a) The aggressive behavior is generally not premeditated and is not committed to achieve a tangible objective (money, power, etc.) and (b) aggressive outbursts occur twice a week, on average, for at least 1 month.

Mattes and Fink (1987) took a similar approach by waiving all Axis II exclusionary criteria (but retaining exclusions of individuals with psychotic disorders or bipolar disorder). They did not adopt Coccaro et al.'s (1998) frequency criteria.

Felthous et al. (1991) took the opposite tack in their study of 443 self-referred men with a history of violence. Only 79 (17.8%) showed recurrent aggressive episodes without provocation and were free of any other diagnosable psychopathology. Only 15 of the men (3.4%) met all *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed. [*DSM–III*]; American Psychiatric Association, 1980) criteria for IED.

The middle ground was used by McElroy et al. (1998) in a study of 27 individuals with IED, most of whom were convicted felons or referred by other mental health practitioners. McElroy et al. (1998) used *DSM–IV* criteria and developed a structured interview modeled after the SCID. They took the stance of interviewing in detail, when comorbid exclusionary diagnoses were present, to decide whether the aggressive episodes were best explained by the comorbid disorder or by IED. We have followed this path.

Thus, for example, we saw a female patient with BPD who assaulted her ex-boyfriend's automobile, causing hundreds of dollars of damage, after he had broken off the relationship. This overly aggressive episode without adequate provocation was judged to be part of Criterion 1 of BPD: extreme or frantic efforts to avoid real or potential or imagined abandonment. Thus, this episode would not count toward meeting the criteria for IED.

Our structured interview for IED is quite brief, in line with the *DSM–IV* criteria. It was administered in the context of also administering the SCID and SCID–II to make the interviewer aware of possible comorbid conditions that should be investigated so that appropriate follow-up questions could be asked. It is presented in Exhibit 5.1.

DESCRIPTIVE STUDIES OF INTERMITTENT EXPLOSIVE DISORDER

Because our work with treatment-seeking aggressive drivers has led us to IED, we here include some background on IED research. In one of the best studies of IED diagnosed by *DSM–IV* criteria, McElroy et al. (1998)

EXHIBIT 5.1
Intermittent Explosive Disorder Interview

Subject Name: _____

Subject #: _____

Date: _____

Criterion A. *Several discrete episodes of failure to resist aggressive impulses that result in serious assaultive acts or destruction of property.*

Criterion B. *The degree of aggressiveness expressed during the episode is grossly out of proportion to any precipitating psychosocial stressors.*

Criterion C. *The aggressive episodes are not better accounted for by another mental disorder (ASPD, BPD, psychosis, mania, CD, ADHD)*

A1. Do you feel as if you've ever behaved in an impulsive, aggressive manner that resulted in harm to someone or destruction of property?

_____

_____

_____

a. How many times has this occurred? _____ (Code # of episodes with SCID–I under IED)

b. Please describe the worst two:

Incident #1

_____

What provoked this incident?

_____

Do you feel as if the incident warranted such behavior?

_____

On a scale of 0–100, where 0 = *no control* and 100 = *total control*, how much in control of yourself did you feel during this incident? (Code with SCID–I under IED) _____

Incident #2

_____

What provoked this incident?

_____

Do you feel as if the incident warranted such behavior?

_____

On a scale of 0–100, where 0 = *no control* and 100 = *total control*, how much in control of yourself did you feel during this incident? (Code with SCID–I under IED) _____

(continued)

EXHIBIT 5.1
Intermittent Explosive Disorder Interview *(Continued)*

c. Please describe the most recent episode:

_____

_____

What provoked this incident?

_____

Do you feel as if the incident(s) warranted such behavior?

_____

On a scale of 0–100, where 0 = *no control* and 100 = *total control*, how much in control of yourself did you feel during this incident? (Code with SCID–I under IED) _____

Diagnostic Summary (Code With SCID–I)

(0 = absent; 1 = evidence of some problems, but does not meet criteria for subsyndromal; 2 = subsyndromal; 3 = present). *Note:* For subsyndromal diagnosis, person must meet full criteria for either A or B and meet full criteria for C.

Current: _____ **Lifetime:** _____

Note. ASPD = antisocial personality disorder; BPD = borderline personality disorder; CD = conduct disorder; ADHD = attention deficit/hyperactivity disorder; SCID–I = Structured Clinical Interview for *DSM–IV* Axis I Disorders.

studied 27 individuals with IED, most of whom were convicted felons or referred by other mental health practitioners. Data on comorbid Axis I disorders showed a high prevalence of current (89%) and lifetime (93%) mood disorders and a relatively high prevalence of current (37%) and lifetime (48%) anxiety disorders and lifetime substance abuse (48%). Detailed data on the phenomenology of the aggressive episodes also were presented, including 88% acknowledging "tension arising with impulses," 75% acknowledging "relief after the aggressive act," 92% acknowledging irritability or rage accompanying impulses to act, and 79% acknowledging these same affective states during the act. Despite the very informative nature of the study (including retrospective reports of which drug treatments had helped), the study suffered from three deficits: (a) No patient control or normal control participants were assessed; (b) Axis II disorders were assessed clinically, rather than with structured diagnostic instruments; and (c) no dimensional assessments with psychological tests were performed.

Some of these problems were corrected in a study by Coccaro et al. (1998) that included 188 individuals, all of whom had personality disorders that had been carefully diagnosed with the Structured Interview for *DSM–III–R* Personality Disorders (Pfohl & Zimmerman, 1989). In this way they circumvented exclusion based on presence of ASPD or BPD. Coccaro

et al. compared patients who had personality disorders and who met their revised criteria for IED with patients who had personality disorders who did not meet the criteria on presence of other Axis I disorders (as diagnosed by the Schedule for Affective Disorders and Schizophrenia—Lifetime; Spitzer & Endicott, 1977) and on several psychological dimensions such as impulsiveness and state anxiety aggression. This study thus lacked a nonpatient control population (i.e., persons without personality disorders). Patients with IED had higher prevalence of current mood disorders (39.5% vs. 22.3%) and lifetime mood disorder diagnoses (72.4% vs. 44.6%) as well as drug use disorders (36.8% vs. 18.8%). The groups did not differ on current or lifetime anxiety disorders. It is interesting that 33% of the IED sample, versus only 6% of the non-IED group, met criteria for BPD. Thus, the IED sample is very heavily weighted toward BPD and, by definition, all participants had an Axis II disorder.

In a third descriptive study of patients with "temper outbursts," Mattes and Fink (1987) relaxed two of the *DSM–III* criteria for IED: (a) absence of generalized aggressiveness between episodes and (b) presence of exclusionary diagnoses. They excluded patients with a comorbid diagnosis of psychotic disorder or bipolar disorder. For 33 patients with temper outbursts, 22 met their relaxed criteria for IED, 16 had residual attention-deficit disorder, 15 had alcoholism, and 16 had drug abuse (there were multiple diagnoses).

These patients acknowledged 18.6 verbal outbursts per month over the previous 6 months, 5.8 outbursts per month involving destruction of property, and 1.6 assaults per month. Fourteen had spent some time in jail because of assaultive behavior, but most stays were for only 1 to 2 nights. In the family study portion of the report, Mattes and Fink (1987) stated that 6.9% of first-degree relatives of patients with IED met criteria for IED themselves, and 13.8% of relatives had temper problems.

PSYCHIATRIC MORBIDITY AMONG TREATMENT-SEEKING AGGRESSIVE DRIVERS

To make the data on psychiatric morbidity more understandable and to reduce the number of comparisons, in Table 5.2 we have tabulated the frequencies and percentages of the court-referred and self-referred samples who met criteria for various Axis I disorders; similar data on Axis II disorders are tabulated in Table 5.3.

We have adopted two conventions in assessing Axis II disorders: First, we administered the SCID–II screening questionnaire before the interview. If a participant was positive on the screening questionnaire for the number of symptoms needed to meet criteria for the disorder, or one symptom fewer than the number needed to meet the criteria, then all of the items for

TABLE 5.2
Summary of Psychiatric Morbidity for Treatment-Seeking Aggressive Drivers and Community Control Participants: Axis I Disorders

	Groups								Analyses (*p*)	
	Court referred (*n* = 37)		Self-referred (*n* = 12)		All tx-seeking (*n* = 39)		Community controls (*n* = 30)			
Disorder	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Court versus self	Agg. drivers versus controls
Anxiety disorders—current										
Specific phobia	3	8.1	1	8.3	4	8.2			*ns*	
Social phobia	1	2.7	1	8.3	2	4.1			*ns*	
Panic disorder	0	0	2	16.6	2	4.1			.01	
OCD	0	0	4	33.3	4	8.2			< .001	
PTSD	0	0	0	0	0	0				
GAD	2	5.4	3	25.0	5	10.2			.05	
Any current anxiety disorders	5	13.5	5	41.7	10	20.4	2	6.7	.04	.099
Anxiety disorders—past										
Social phobia	0	0	1	8.3	1	2.0			.08	
PTSD	1	2.7	4	32.3	5	10.2			.002	
Panic disorder	0	0	1	8.3	1	2.0			.08	
Any past anxiety disorder	3	8.1	5	4.7	8	16.3	3	10.0	.006	*ns*
Mood disorders—current										
Major depressive disorder	1	2.7	0	0	1	2.0			.57	
Dysthymia	1	2.7	0	0	1	2.0			.57	
Bipolar II	0	0	1	8.3	1	2.0			.08	
Mood disorder NOS	2	5.4	0	0	2	4.1			*ns*	
Any current mood disorder	4	10.8	1	8.3	5	10.2	0	0	*ns*	.071
Mood disorders—past										
Major depressive disorder	5	13.5	4	33.3	9	18.4			.12	
Mood disorder NOS	1	2.7	0		1	2.0			*ns*	
Any past mood disorder	5	13.5	5	41.7	10	20.4	6	20	.04	*ns*

Somatoform disorders										
Somatization disorder	0	0	1	8.3	1	2.0			.08	
Body dysmorphic disorder	1	2.7	0	0	0	2.0			*ns*	
Eating disorders										
Binge eating disorder	0	0	1	8.3	1	2.0			.08	
Intermittent explosive disorder	12	32.4	4	33.3	16	32.7	0	0	*ns*	< .001
Alcohol and drug disorders—current										
Alcohol abuse	5	13.5	3	25.0	8				.19	
Alcohol dependence	2	5.4	0	0	2				*ns*	
Substance abuse	3	8.1	0	0	3				*ns*	
Substance dependence	2	5.4	0	0	2				*ns*	
Any current alcohol or drug disorder	10	27.0	3	25.0	13	26.5	0	0	*ns*	.002
Alcohol and drug disorders—past										
Alcohol abuse	8	21.6	4	33.3					*ns*	
Alcohol dependence	4	10.8	2	16.6					*ns*	
Substance abuse	4	10.8	2	16.6					*ns*	
Substance dependence	1	2.7	1	8.3					*ns*	
Any past alcohol or drug disorder	16	48.2	4	33.3	19	38.8	2	6.7	*ns*	.002
Any Axis I disorder current	20	54.1	8	66.7	28	57.7	2	6.7	.44	< .001
Any Axis I disorder past/current	29	78.4	9	75.0	38	77.6	11	36.7	*ns*	< .001

Note. tx = treatment; Agg. = aggressive; Freq. = frequency; OCD = obsessive–compulsive disorder; PTSD = posttraumatic stress disorder; GAD = generalized anxiety disorder; NOS = not otherwise specified.

TABLE 5.3
Summary of Psychiatric Morbidity for Treatment-Seeking Aggressive Drivers and Community Controls: Axis II Personality Disorders

	Group								Analyses (p)	
	Court-referred (n = 37)		Self-referred (n = 12)		All tx-seeking (n = 49)		Community controls (n = 30)			
Disorder	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Court versus self	Agg. versus controls
Antisocial PD	8	20.5	1	8.3	9	18.4	0	0	*ns*	.013
Antisocial PD[a]	12	32.4	3	25.0	15	28.6	0	0	*ns*	.001
Borderline PD	2	5.4	3	25.0	5	10.2	0	0	.05	.071
Narcissistic PD	5	13.5	0	0	5	10.2	0	0	.18	.071
Histrionic PD	2	5.4	1	8.3	3	6.1	0	0	*ns*	*ns*
OCPD	1	2.7	3	25.0	4	8.2	2	6.7	.01	*ns*
Avoidant PD	1	2.7	1	8.3	1	2.0	0	0	*ns*	*ns*
Paranoid PD	4	10.8	2	16.6	6	8.2	0	0	*ns*	.046
Any Axis II PD	15	40.5	6	50.0	21	42.9	2	6.7	*ns*	.001

Note. tx = treatment; Agg. = aggressive; Freq. = frequency; PD = personality disorder; OCPD = obsessive–compulsive personality disorder.
[a]This row includes participants who met criteria for adult antisocial PD criteria but did not meet criteria for conduct disorder.

that personality disorder were asked. If a participant acknowledged fewer symptoms on the screening questionnaire, then that particular personality disorder was omitted from the interview to save time.

Second, in the interest of presenting as much data as possible on the Axis II disorders, we have described a participant as having a subthreshold personality disorder if he or she fully met one fewer than the required minimum number of symptoms (e.g., he or she was positive for four of nine symptoms of BPD instead of the minimum of five). Also, if the participant met the adult symptom criteria for ASPD but did not meet criteria for conduct disorder, we labeled him or her as subthreshold. Following the analytic scheme that Galovski, Blanchard, and Veazey (2002) described in an earlier report on psychiatric disorders found in part of this sample, we compared court-referred and self-referred aggressive drivers on each of the categories and on the summary categories.

We were also able to recruit a group of community volunteers who denied any difficulties with aggressive driving. They were paid to undergo the diagnostic interviews. Their results for the summary diagnostic categories are presented in Tables 5.2 and 5.3. This sample was recruited as part of the Galovski et al. (2002) study and were matched to the Cohort 1 court-referred and self-referred aggressive drivers on age and gender. The comparison sample was 33% female and had an average age of 34.5 years (SD = 12.4). As a second step in the analyses, we compared all treatment-seeking aggressive drivers combined with the community volunteers on summary categories.

Court-Referred Versus Self-Referred Aggressive Drivers

An examination of Table 5.2 reveals that for anxiety disorders, significantly higher percentages of the self-referred aggressive driver group met criteria for current panic disorder, obsessive–compulsive disorder, and generalized anxiety disorder than the court-referred group. The self-referred group (41.7%) also had a significantly (p = .04) higher percentage of any current anxiety disorder than the court-referred group (13.5%). The self-referred group also had a significantly higher percentage of past posttraumatic stress disorder than the court-referred group, as well as a higher percentage (41.7%) of any past anxiety disorder than the court-referred group (8.1%).

In regard to mood disorders, there were no significant differences on any individual current mood disorder or the summary value. In regard to past mood disorders, the self-referred group (33.3%) did acknowledge more past major depression than the court-referred group (13.5%). The summary value for any past mood disorder was significant.

For alcohol and other substance-related problems (abuse or dependence), there were no significant differences between the two treatment-

seeking groups on current or past diagnoses or on the summary statistical comparisons. In fact, the samples are quite similar, with 27% of court-referred participants and 25% of self-referred participants having a current diagnosable substance-related condition. It is very important to note that there were no differences between the two groups of treatment-seeking aggressive drivers on IED (32.4% of court-referred drivers vs. 33.3% of self-referred drivers).

Turning now to the data on Axis II personality disorders in Table 5.3, one sees that the self-referred group had significantly greater percentages of participants who met criteria for BPD and obsessive–compulsive personality disorder (OCPD) than the court-referred group. However, the court-referred group had a significantly greater percentage of members who met criteria for narcissistic personality disorder (NPD). Again, the two groups of aggressive drivers were similar in whether they met criteria for any Axis II disorder, with self-referred (50%) drivers slightly more likely to do so than court-referred (40.5%) aggressive drivers.

All Treatment-Seeking Aggressive Drivers Versus the Community Sample

Returning again to Table 5.2, one sees, in regard to Axis I disorders, a trend for aggressive drivers to be more likely to meet criteria for a current anxiety disorder and current mood disorders than the community control participants. There were no differences in past anxiety or mood disorders. The aggressive drivers (26.5%) were significantly more likely to meet criteria for current alcohol or substance disorders than the control participants (0%) but showed only a trend to be more likely to meet criteria for past alcohol or substance disorders. It is not surprising that the aggressive drivers were significantly ($p < .001$) more likely to meet criteria for IED than the community control participants.

An examination of the Axis II data in Table 5.4 reveals that the aggressive drivers, as a group, were significantly more likely than the control participants to meet criteria for ASPD and paranoid personality disorder, with trends for more NPD and paranoid personality disorder. Moreover, the aggressive drivers (42.9%) were also significantly more likely than the controls (6.7%) to meet criteria for any Axis II disorder.

The results described above extend those previously reported by Galovski et al. (2002) in that they include the data from our second cohort of treatment-seeking aggressive drivers (see Table 4.1). In all instances, the differences that Galovski et al. (2002) reported as significant remain significant; in some instances—for example, BPD, OCPD, and NPD—directional differences became significant with the expanded sample.

TABLE 5.4
Axis I Psychiatric Disorders Among College Students Who Reported High Levels of Aggressive Driving

Diagnosis	Subsyndromal		Full	
	Freq.	%	Freq.	%
Current intermittent explosive disorder	2	3.8	2	3.8
Lifetime intermittent explosive disorder	2	3.8	7	13.2
Current oppositional defiant disorder	8	15.1	6	11.3
Lifetime oppositional defiant disorder	11	20.8	4	22.6
Current attention-deficit/hyperactivity disorder	2	3.8	4	7.5
Childhood attention-deficit/hyperactivity disorder	6	11.3	6	11.3
Mood disorders				
Current major depressive disorder	0		4	7.5
Current dysthymia	0		0	
Current bipolar I and II	0		0	
Current mood disorder NOS	0		0	
Any current mood disorder	0		4	7.5
Lifetime major depressive disorder	3	5.7	13	24.5
Lifetime bipolar	0		0	
Lifetime mood disorder NOS	0		2	3.8
Any lifetime mood disorder	3	5.7	15	28.3
Anxiety disorders				
Current panic disorder	1	1.9	2	3.8
Current social phobia	1	1.9	8	15.1
Current specific phobia	3	5.7	10	18.9
Current obsessive–compulsive disorder	1	1.9	2	3.8
Current generalized anxiety disorder	2	3.8	1	1.9
Current posttraumatic stress disorder	1	1.9	0	
Current anxiety disorder NOS	1	1.9	1	1.9
Any current anxiety disorder	5	9.4	16	30.2
Lifetime panic disorder	2	3.8	3	5.7
Lifetime social phobia	1	1.9	8	15.1
Lifetime specific phobia	3	5.7	13	24.5
Lifetime obsessive–compulsive disorder	1	1.9	5	9.4
Lifetime posttraumatic stress disorder	3	5.7	1	1.9
Lifetime anxiety disorder NOS	0		2	3.8
Any lifetime anxiety disorder	5	9.4	24	45.3
Somatoform disorders	0		2	3.8
Eating disorders	0		2	3.8
Alcohol and substance abuse/dependence				
Current alcohol abuse	0		4	7.5
Current alcohol dependence	0		7	13.2
Current drug abuse	0		2	3.8
Current drug dependence	0		6	11.3
Any current substance disorder	0		16	30.2
Lifetime alcohol abuse	0		4	7.5
Lifetime alcohol dependence	0		11	20.8
Lifetime drug abuse	0		3	5.7
Lifetime drug dependence	0		15	28.3
Any lifetime substance disorder				
Psychotic symptoms	0		0	

Note. $N = 53$. Freq. = frequency; NOS = not otherwise specified.

Treatment-Seeking Aggressive Drivers With Intermittent Explosive Disorder Versus Treatment-Seeking Aggressive Drivers Without Intermittent Explosive Disorder

As we noted earlier in this chapter, there is a relative scarcity of data, especially data on psychiatric comorbidity, on individuals who meet criteria for IED. We are in the fortunate position of having a set of treatment-seeking aggressive drivers who met criteria for IED (N = 16) and what could be considered an excellent comparison group: treatment-seeking aggressive drivers who do not meet criteria for IED (N = 33). The two groups are thus equated on critical variables: They are seeking treatment for the same anger–aggression problem, aggressive driving. Also of interest is that our three subsamples contain roughly equivalent percentages of aggressive drivers who meet criteria for IED: court-referred Sample 1 (7/20 = 35%), the self-referred sample (3/10 = 30%), and court-referred Sample 2 (6/19 = 31.6%). Thus, there is not a referral source bias.

Table 5.5 subdivides the treatment-seeking aggressive driver sample into IED positive versus IED negative, and it presents a summary of Axis I groupings as well as Axis II data. Comparisons of the diagnostic results in Table 5.5 reveal a significantly higher likelihood of a current mood disorder among aggressive drivers with IED (23.5%) than among comparable drivers without IED (3.1%). There were no differences in current or past anxiety disorders or current or past alcohol or substance disorders.

Although participants with IED are more likely to meet criteria for several individual personality disorders, only in the category that includes presence of any Axis II disorder do those with IED (64.7%) show a significantly higher likelihood than those without IED (31.3%). There is also a difference on ASPD when the subthreshold cases are included (IED, 52.9% vs. no IED, 18.8%).

Non-Treatment-Seeking College Student Sample With High Aggressive Driving

As described in chapter 4, we identified those college students from Malta's (2004) large survey who scored 1 standard deviation or higher on the DSP (Larson, 1996a), a self-report measure of aggressive driving. Fifty-three of these individuals answered a number of additional questionnaires and took part in the previously described series of structured psychiatric diagnostic interviews. The results from those interviews are summarized in Tables 5.4 and 5.6.

Among these relatively high-functioning young adults, we find very little current mood disorder (7.5%) but a higher level of current anxiety disorders (30.2%). Much of the latter is due to social phobia or specific

TABLE 5.5
Summary of Psychiatric Morbidity (Axis I and Axis II) for Treatment-Seeking Aggressive Drivers as a Function of Presence of Intermittent Explosive Disorder (IED)

	IED present (n = 17)		IED absent (n = 32)		Analysis	
Disorder	Freq.	%	Freq.	%	$\chi^2(1, N = 49)$	p
Any current anxiety disorder	5	29.4	5	15.6	1.30	*ns*
Any past anxiety disorder	3	17.6	5	15.6	0.03	*ns*
Any current mood disorder	4	23.5	1	3.1	5.05	.025
Any past mood disorder	3	17.6	7	21.9		
Current alcohol abuse/dependence	2	11.8	8	25.0	1.20	*ns*
Current substance abuse/dependence	3	17.6	3	9.4	0.71	*ns*
Any current alcohol or drug abuse	4	23.5	9	28.1	0.12	*ns*
Past alcohol abuse/dependence	8	47.1	11	34.4	0.75	*ns*
Past substance abuse/dependence	4	23.5	3	9.4	1.82	*ns*
Any past alcohol or drug dependence	9	52.9	12	37.5	1.08	*ns*
Any current Axis I disorder[a]	7	41.2	13	40.6	0.01	*ns*
Any current/past Axis I	13	76.5	24	66.7	0.01	*ns*
Antisocial disorder	5	29.4	4	12.5	2.12	.15
Antisocial disorder + sub-antisocial disorder	9	52.9	6	18.8	6.11	.013
Borderline disorder	3	17.6	2	6.3	1.57	*ns*
Narcissistic disorder	3	17.6	2	6.3	1.57	*ns*
Histrionic disorder	2	11.8	1	3.1	1.44	*ns*
Obsessive–compulsive disorder	1	5.9	3	9.4	0.18	*ns*
Paranoid disorder	3	17.6	3	9.4	0.71	*ns*
Any Axis II disorder	11	64.7	10	31.3	5.07	.024

Note. Freq. = frequency; PD = personality disorder; sub- = subsyndromal.
[a]Excludes IED.

phobia. Not unexpectedly, there are reasonably high levels of current alcohol and drug problems (30.2%) and noticeable histories of alcohol and substance problems.

When the data from Table 5.4 are compared with the data on treatment-seeking aggressive drivers summarized in Table 5.2, the results are similar for current anxiety disorders (30.2% for students vs. 20.4% for treatment seekers), current mood disorders (7.5% for students vs. 10.2% for treatment seekers), and current alcohol and substance problems (30.2% for students vs. 26.5% for treatment seekers).

The major Axis I difference between the treatment-seeking aggressive drivers and college students who scored high on aggressive driving is the prevalence of IED. For the treatment seekers, 32.7% meet full criteria for IED; in comparison, among the college students only 3.8% meet full criteria for IED, with a total of 13.2% meeting the criteria over their lifetimes. A comparison of these two rates reveals that it is highly significant ($p < .001$)

TABLE 5.6
Axis II Personality Disorders Among College Students Who Reported High Levels of Aggressive Driving

Diagnosis	Subsyndromal		Full	
	Freq.	%	Freq.	%
Avoidant PD				
Dependent PD			1	1.9
OCPD	5	9.4	4	7.5
Paranoid PD	2	3.8	5	9.4
Schizotypal PD	1	1.9	1	1.9
Schizoid PD				
Histrionic PD				
Narcissistic PD	1	1.9	2	3.8
Borderline PD	3	5.7	4	7.5
Antisocial PD	4	7.5	3	5.7
History of conduct disorder	6	11.3	7	13.2
Any Axis II disorder			14	26.4

Note. Freq. = frequency; PD = personality disorder; OCPD = obsessive–compulsive personality disorder.

in regard to currently meeting IED and continues to be significant ($p = .02$) when the subthreshold IED cases among the student sample are included.

An implication of this finding is that treatment studies that recruit from a college population whose members have scored high on driving anger or aggressive driving (e.g., Deffenbacher, Huff, Lynch, Oetting, & Salvatore, 2000) may not contain many of those drivers who are most likely to commit the noticeably violent, assaultive act, such as those described in Table 4.2. Thus, even highly screened college samples probably have few cases of road rage as it is popularly described.

This is not to say that treatment research on college students who are high in driving anger has no value. Younger drivers, especially young males, have higher rates of motor vehicle accidents and, as Deffenbacher et al. (2000) have shown, college-age drivers who are high in driving anger have higher rates of motor vehicle accidents. Thus, any research that can point the way to helping the angry, aggressive driver operate his or her vehicle in a less angry and aggressive manner is valuable.

Turning to the data in Table 5.6, one can see a relatively low level of personality disorders in this college-age population: Only 26.4% meet criteria for any Axis II disorder, with the most common ones being paranoid personality disorder (9.4%), OCPD (7.5%), and BPD (7.5%). Antisocial personality disorder was diagnosed in only 5.7%, or 13.2% when one includes those who were subthreshold. The comparable data from the treatment-seeking aggressive drivers in Table 5.4 show comparable levels of BPD (10.2%), OCPD (8.2%), and paranoid personality disorder (8.2%). The

noticeable differences are in the rate of full ASPD (18.4%) and ASPD including the subsyndromal cases (28.6%). Statistical comparisons of the two groups reveal significantly higher rates of full ASPD among the treatment-seeking population than for the college population of aggressive drivers. Comparisons including subthreshold ASPD cases were also significantly (p = .03) different.

CONCLUSIONS

Our earlier comment about differences between our court- and self-referred aggressive drivers and samples recruited from a college population with high scores on aggressive driving or driving anger questionnaires is relevant here when one notices the differences in the prevalence of ASPD between the two groups. Our clinical experience is that drivers with ASPD constitute a particular treatment challenge. This challenge can be answered in part by studying groups who are heterogeneous with regard to age and perhaps referral source.

The last points on which we comment are the noticeable levels of current (11.3%) and lifetime (22.6%) oppositional defiant disorder found among the college student aggressive drivers. Adding the subsyndromal cases brings the lifetime rate to 43.4%. We do not have comparable data on the treatment-seeking aggressive drivers. These values should be contrasted with the *DSM–IV* (American Psychiatric Association, 1994) estimate of 2% to 16%.

There were also 6 cases of adult ADHD and 12 cases (22.6%) of childhood ADHD in the college student sample. The *DSM–IV* (1994) gives a prevalence value of 3% to 5% in school-age children. Again, we do not have comparable data on the treatment-seeking sample. It thus seems clear that this high-functioning sample is coping with a noticeable residue of childhood externalizing and excessive activity problems.

In future treatment research, one might want to take the possible presence of those disorders into account. More important, one should also begin to investigate what role the presence of disorders such as IED, ASPD, ADHD, and oppositional defiant disorder play in treatment outcome when using a standard treatment. We have very preliminary data indicating that aggressive drivers with IED respond less readily to the standard brief four-session group cognitive–behavior therapy treatment we describe in chapter 10 (Galovski & Blanchard, 2002a). As noted earlier, our clinical impression is that the presence of ASPD in group members can make treatment more difficult.

Clinical Hint

We recognize that the detailed level of assessment of Axis I and Axis II disorders is very time consuming and that practicing clinicians might want to omit that portion of the assessment. We believe clinicians need, at a minimum, to assess individuals for IED and ASPD. We believe treatment may need to be altered (primarily lengthened) for individuals who meet the criteria for either of these disorders.