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PSYCHOLOGICAL CHARACTERISTICS OF ANGRY AND AGGRESSIVE DRIVERS

As we described in chapter 2, although there is considerable overlap among the constructs of anger, aggression, and hostility, there are also differences. Also as noted in chapter 2, some literature exists regarding driving anger and driving aggression and perhaps regarding driver hostility. Chapter 3 contains a review of the literature that seeks to place the angry, aggressive, problematic driver within the broader theoretical ideas in these fields. In part, it summarizes what is known about the characteristics of the angry, aggressive driver from a dimensional or psychological test perspective and is not repeated here.

The present chapter has three parts. Part 1 is a summary of some of the psychological or dimensional assessment literature with special attention to the important work of Jerry Deffenbacher and his colleagues. Part 2 is a summary of the psychological test results on our treatment-seeking samples, with special attention to whether the driver met criteria for intermittent explosive disorder (IED). We also present distributions of the psychological test scores from our 49 treatment-seeking aggressive drivers. Part 3 is a presentation of selected psychological test norms from the more than 1,000 undergraduates on whom we gathered data. These last results are usually presented separately for each gender. In this part, the mean scores of the 53 students from that

overall sample who were identified as aggressive drivers, and who received in-depth assessment, are also presented for all of our measures.

The data on the treatment-seeking sample are more limited because of the sample size but are probably of more value to clinicians who are called on to assess or treat an aggressive driver. With these limited distributions, one can have a sense of where one's client falls on several dimensions.

PART 1: RESEARCH ON THE MEASUREMENT OF DRIVING ANGER AND DRIVING AGGRESSION

By far the most systematic program of research on the development and use of measures of *driving anger* has been that of Jerry Deffenbacher and his colleagues at Colorado State University. As we describe below, they have more recently turned their attention to driving aggression and other expressions of driving anger. We have made use of some of their measures and find them to be useful and sensitive to treatment effects.

The Driving Anger Scale

In 1994, Deffenbacher, Oetting, and Lynch published a report on the development of a 33-item scale to measure "frequent and intense anger while operating a motor vehicle" (Deffenbacher et al., 1994, p. 84). A large sample of undergraduates (N = 1,526: 724 men and 802 women, average age = 18 years) rated on a scale from 1 (*not at all*) to 3 (*some*) to 5 (*very much*) how much anger they would experience in 53 potentially provocative driving situations. Six somewhat distinct clusters of items were identified that comprised 33 total items. The subscales and number of items are Hostile Gestures (by other drivers; 3 items), Illegal Driving (by other drivers; 4 items), Police Presence (4 items), Slow Driving (by other drivers; 6 items), Discourtesy (9 items), and Traffic Obstructions (7 items). Internal consistency of the whole scale was .90. Mean scores for men (108.8) and women (109.2) did not differ. Norms were also provided.

A short version of the scale, with 14 items, also was described. It had adequate internal consistency (.80) and correlated .95 with the long version. Norms for it were also supplied.

In an important follow-up study, Deffenbacher, Huff, Lynch, Oetting, and Salvatore (2000) screened 1,080 undergraduates in psychology classes with the 14-item Driving Anger Scale (DAS) short form. Respondents were also asked whether they had a problem with driving anger and whether they would like help for it. Fifty-seven (23 men, 34 women) who scored in the upper quartile on the DAS short form and indicated a problem with driving anger and a desire for counseling provided additional data (this is

the sample who participated in the treatment study described in chap. 8). These treatment-seekers provided data on the long-form DAS and on subscales of Spielberger's (1988) State–Trait Anger Expression Inventory (STAXI). In Table 6.1 we list the mean scores on the long-form (33-item) DAS, as well as the subscales, and on Trait Anger.

An examination of the mean DAS full-scale scores reveals that the first (2000) treatment-seeking sample had a full-scale score of 120, equivalent to the 73rd percentile, or not fully in the upper quartile on the scale. The second (2002) treatment-seeking sample had a full-scale score of 128, which falls at the 86th percentile. Unfortunately, the DAS full-scale value was not available on the high driving anger, non-treatment-seeking group, which was described in the 2003 study.

Deffenbacher's group (Deffenbacher, Lynch, Oetting, & Swaim, 2002) also developed a scale to measure driving aggression. It is called the Driving Anger Expression Inventory and contains 53 items. Analyses revealed a five-factor structure. The most relevant factors in the present context are the following: (a) Verbal Aggressive Expression (12 items, internal consistency α = .88), (b) Personal Physical Aggressive Expression (11 items, internal consistency α = .81), and (c) Use of Vehicle to Express Anger (11 items, internal consistency α = .86). They are combined to form a 34-item scale, Total Aggressive Expression, that has an internal consistency of α = .90.

We have not used this scale in our work, preferring Larson's (1996a) Driver's Stress Profile (DSP), which is described below. However, the Total Aggressive Expression scale certainly provides an alternative measure of aggressive driving that may have more sound psychometric properties. The three subscales intercorrelate from .39 to .48. Mean scores on the Total Aggressive Expression scale for high driving anger participants who had sought treatment were 77.1 (*SD* = 17.6) for men and 70.7 (*SD* = 13.7) for women (Deffenbacher, Lynch, Filetti, Dahlen, & Oetting, 2003).

Driver's Stress Profile

The DSP (Larson, 1996a; Blanchard, Barton, & Malta, 2000) is a 40-item scale created by Larson (1996b) to measure changes in reports of aggressive driving in individuals undergoing treatment. It has four 10-item subscales: Anger, Impatience, Competing, and Punishing. Each item is scored on a 4-point frequency scale (0 = *never*, 1 = *sometimes*, 2 = *often*, and 3 = *always*). Blanchard et al. (2000) published some psychometric data on this scale, and we summarize the data here because the scale has not been widely used despite our enthusiasm for it.

One-week test–retest reliability on a sample of 33 individuals (15 male and 18 female; age range: 18–60 years) was .93 for the full scale and ranged

TABLE 6.1
Driving Anger Scale Scores and State–Trait Anger Expression Inventory (STAXI) Scores on Various Samples of College Students With High Driving Anger

	Sample		
Scale or subscale	Treatment-seeking (Deffenbacher et al., 2000)[a]	Treatment-seeking (Deffenbacher, Filetti, et al., 2002)[b]	Non-treatment-seeking (Deffenbacher, Filetti, et al., 2003)[c]
Driving Anger Scale			
Full scale	120.4	128.5	
Hostile Gestures	12.5		
Illegal Driving	11.5		
Police Presence	13.3		
Slow Driving	18.8		
Discourtesy	38.5		
Traffic Obstructions	25.8		
STAXI			
Trait Anger	24.7	24.8	23.2
Anger-In	17.3	17.7	17.9
Anger-Out	17.8	18.7	17.4
Anger Control	20.3	20.7	22.3

[a]Men, $n = 23$; women, $n = 34$. [b]Men, $n = 238$; women, $n = 27$. [c]Men, $n = 21$; women, $n = 17$.

TABLE 6.2
Correlations of Driver's Stress Profile (DSP) Full-Scale Scores With Other Relevant Measures

Measure	Correlation with DSP full-scale score	
Driving Anger Scale	.57	$p < .001$
STAXI		
State Anger	.17	$p <. 05$
Trait Anger	.59	$p < .001$
Anger Expression	–.36	$p < .01$
Anger-In	.16	$p < .05$
Anger-Out	.43	$p < .01$
No. MVAs	.20	$p = .009$
No. MVAs (age) corrected	.28	$p < .001$

Note. MVA = motor vehicle accident.

from .84 (Impatience) to .85 (Anger), to .91 (Punishing) to .96 (Competing). Internal consistency of the full scale on a separate sample of 176 individuals (77 male and 99 female; age range: 17–75 years) was .93.

Separate gender norms on the total score were presented, with 20% of men scoring 25 or lower (compared with 38% of women) and 20% of men scoring 51 or higher (compared with 2% of women). Mean scores for the two genders were significantly different (men: $M = 38.8$, $SD = 16.8$; women: $M = 30.8$, $SD = 30.8$, $p < .001$).

An exploratory factor analysis revealed three factors involving 28 of the items and accounting for 43.4% of the total variance. Factor 1 (29%) was primarily a competition factor, Factor 2 (7.9%) was a mixture of 5 anger and 5 punishment items and thus is characterized by anger and hostility, and Factor 3 (6.3%) was primarily an impatience (7 items) factor with 4 anger items (for a total of 11 items). It reflected impatience and anger at roadway inconvenience.

It is interesting that the total score on the DSP was significantly correlated with self-report of number of motor vehicle accidents ($r = .20$, $p = .009$). When age was covaried, the relation was stronger ($r = .28$, $p < .001$).

Table 6.2 lists the correlations of the full-scale score on the DSP with Deffenbacher et al.'s (2000) full-scale score on the DAS and subscales of Spielberger's (1988) STAXI.

As is obvious, the DSP has considerable overlap with the full-scale DAS (32% shared variance), indicating not only commonality of the measures of driving anger and driving aggression but also that they are measuring somewhat different constructs (see chap. 2 for a review). Likewise, there is considerable overlap (35% shared variance) between the DSP and trait anger as measured by the STAXI.

PART 2: PSYCHOLOGICAL CHARACTERISTICS OF TREATMENT-SEEKING AGGRESSIVE DRIVERS

As we noted in chapter 4, we have assessed 49 treatment-seeking aggressive drivers (37 court referred and 12 self-referred). Several psychological test measures were consistent across the entire 49 and are the primary focus of this portion of this chapter. We present distributional norms of these measures so that readers can compare an aggressive driver for whom he or she is providing assessment or treatment services with a carefully characterized sample.

We will also follow the example of chapter 5, in that (a) we compare all treatment-seeking aggressive drivers with nonaggressive driving controls as well as court-referred with self-referred aggressive drivers, and (b) we compare aggressive drivers who met criteria for IED with aggressive drivers who did not meet IED criteria. In this way, we can add to the very limited available dimensional psychological data on this relatively understudied population.

We changed a number of measures between our assessments on our so-called Cohort 1 (20 court-referred drivers and 10 self-referred drivers) and those on Cohort 2 (17 court-referred drivers and 2 self-referred drivers). The measures available on all 49 treatment-seeking aggressive drivers are briefly described below.

Measures

Driver's Stress Profile and the Driving Anger Scale

The DSP, a 40-item scale that measures aspects of driving aggression, was described in detail in Part 1. The DAS, a 33-item scale that measures aspects of driving anger with six subscales, also was described in detail in Part 1.

State–Trait Anger Expression Scale

The STAXI (Spielberger, 1988) is a 44-item instrument on which participants rate their reactions on a 4-point scale (1 = *almost never*, 4 = *almost always*). It yields scores on six subscales. (a) State Anger (10 items) measures how angry the person feels at the current time. (b) Trait Anger (10 items) measures how the respondent usually feels. (c) Angry Temperament (6 items) reflects the respondent's propensity to experience anger in the absence of specific provocation; a part of Trait Anger is reflected in the Angry Temperament scale. The last three subscales measure how the respondent deals with anger: (d) Anger-In (8 items, measures the tendency to suppress anger and harbor grudges), (e) Anger-Out (8 items, measures typical outward expression of angry feelings), and (f) Anger Control (8 items,

measures the degree to which the participant controls outward expression of anger).

Buss–Durkee Hostility Inventory

The Buss–Durkee Hostility Inventory (Buss & Durkee, 1957) is a rationally designed scale of 75 items to measure individual differences in hostility as a personality trait.

Beck Depression Inventory

The Beck Depression Inventory (A. T. Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) is a 21-item measure of depressive symptoms that are answered on a scale that ranges from 0 to 3. It is probably the most widely used measure of depression in the United States, and it has a long history of reliability and validity research (A. T. Beck, Steer, & Garbin, 1988).

State–Trait Anxiety Inventory

The State–Trait Anxiety Inventory (Spielberger, 1983) consists of 20 items, answered on a scale that ranges from 1 to 4, that measure the respondent's current state of anxiety, and 20 other items, also answered on a scale that ranges from 1 to 4, that measure the relatively enduring trait of anxiety. Both scales have good reliabilities and validities.

Comparison of Court-Referred With Self-Referred Aggressive Drivers

Table 6.3 shows the means and standard deviations for the measures of driving aggression (DSP), driving anger (DAS), and general anger (STAXI), for the court-referred and self-referred aggressive drivers. We also tabulated the values for the 28 control participants (see chap. 4) who took part as paid volunteers. Similar tabulations for hostility, depression, and anxiety are also presented in the table.

First, an examination of the comparisons of the two groups of aggressive drivers reveals that the self-referred aggressive drivers scored significantly higher than the court-referred aggressive drivers on the full-scale DSP and its four subscales as well as on the full-scale DAS and each of its six subscales (all $ps < .01$). On the STAXI, the self-referred drivers were higher on the Trait Anger, Anger-Out, and Anger-In subscales (all $ps < .05$). Turning to the measures of psychological distress, there were no significant differences between the two groups of treatment-seeking aggressive drivers; there was, however, a trend ($p = .06$) for the self-referred group to acknowledge more trait anxiety than did the court-referred group.

Turning to the comparisons of all aggressive drivers to the controls, we find a trend for the treatment-seeking aggressive drivers to score higher

TABLE 6.3
Scores for Treatment-Seeking Aggressive Drivers and Control Participants on Measures of Driving Aggression, Driving Anger, General Anger, Hostility, Anxiety, and Depression

Measure	Court (n = 37)		Self (n = 12)		All Agg. (n = 39)		Controls (n = 28)		Analyses: Court vs. self		Analyses: Agg. vs. control	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	$t(47)$	p	$t(65)$	p
Driver's Stress Profile												
Total score	24.16	24.56	60.33	22.98	33.02	28.64	23.18	16.11	4.5	.000	1.93	.057
Anger	7.19	4.89	17.92	5.85	9.82	6.89	9.04	3.60	6.3	.000	0.65	.516
Impatience	6.24	7.08	16.92	7.17	8.86	8.42	6.39	5.27	4.53	.000	1.58	.119
Competing	5.38	8.36	12.67	8.23	7.16	8.83	3.11	4.70	2.64	.011	2.63	.010
Punishing	5.35	6.26	12.83	6.29	7.18	7.00	4.57	4.61	3.59	.001	1.98	.053
Driving Anger Scale												
Total score	72.16	28.96	121.00	20.26	84.12	34.25	80.57	22.73	5.41	.000	0.55	.590
Hostile Gestures	5.92	3.40	11.08	3.29	7.18	4.02	7.43	2.69	4.61	.000	0.32	.750
Illegal Driving	6.84	2.66	13.42	4.36	8.45	4.22	10.18	2.83	4.94	.000	1.93	.057
Police Presence	7.05	3.67	11.25	5.01	8.08	4.38	7.29	4.31	3.14	.003	0.77	.443
Slow Driving	12.54	5.03	22.00	5.27	14.86	6.50	12.93	4.81	5.60	.000	1.49	.142
Discourtesy	22.14	8.27	37.92	5.50	26.00	10.26	27.14	6.57	6.16	.000	0.60	.554
Traffic Obstructions	14.20	5.98	23.83	6.70	16.56	7.39	15.61	6.14	4.71	.000	0.58	.566
State–Trait Anger Expression Scale												
State Anger	14.24	6.03	15.50	9.69	14.55	7.01	10.36	0.83	0.54	.595	4.14	.000
Trait Anger	17.30	6.94	23.92	6.91	18.92	7.44	15.61	4.77	2.87	.006	2.38	.020
Angry Temperament	6.68	3.55	8.58	3.75	7.14	3.52	5.5	1.80	1.67	.103	2.71	.008
Anger-Out	15.95	4.78	19.33	4.77	16.78	4.96	14.14	2.74	2.13	.038	3.00	.004
Anger-In	13.92	4.35	17.50	3.97	14.80	4.50	15.36	4.65	2.53	.015	0.52	.604
Buss–Durkee Hostility: Total	25.70	12.70	37.30	17.10	29.60	14.20	21.00	7.70	—	—	2.28	.030
Beck Depression Inventory	6.89	8.19	8.42	6.46	7.27	7.77	3.96	2.99	0.59	.56	2.65	.010
State–Trait Anxiety Inventory												
State Anxiety	45.38	13.39	50.42	21.32	46.61	15.61	27.61	5.96	0.77	.45	7.61	.000
Trait Anxiety	38.05	10.01	44.83	12.45	39.71	39.71	31.39	6.30	1.91	.06	4.23	.000

Note. Court = court referred; Self = self-referred; Agg. = aggressive drivers. Dashes in cells indicate there are no applicable data.

than the control participants on the full-scale DSP. On the Competing subscale, the aggressive drivers were significantly ($p = .05$) higher; they also showed a trend to be higher on the Punishing subscale. On the DAS, the two groups were generally not different with the exception of the Illegal Driving subscale, for which there was a trend for the control participants to score higher than the aggressive drivers.

On the generalized measure of anger (STAXI), the treatment-seeking aggressive drivers were significantly higher than the control participants ($p = .02$ or higher) on State Anger, Trait Anger, Angry Temperament, and Anger-Out. They were also higher than control participants on hostility measured by the Buss–Durkee Hostility Scale. Finally, the aggressive drivers were also significantly ($p < .01$) higher than the control participants on all three measures of psychological distress.

The pattern of the mean scores for the three groups—court-referred, self-referred, and controls—is of interest. For the most part, except for the STAXI subscales and measures of psychological distress, the court-referred aggressive drivers acknowledged the lowest scores, followed by the controls and then by the self-referred group. We suspect that the court-referred participants were deliberately underreporting driving anger and driving aggression and, to a lesser degree, overall anger.

The latter results are somewhat comparable to Galovski and Blanchard's (2002b) earlier report on the first cohort of aggressive drivers, which reported that the treatment-seeking aggressive drivers were significantly ($p < .05$) higher than the controls on the DSP Competing subscale, on DAS Anger (at slow driving and traffic obstructions), on STAXI Trait Anger and Angry Temperament, on the Buss–Durkee Total Hostility scale, and on state anxiety measured on the State–Trait Anxiety Inventory.

Comparison of Aggressive Drivers Who Meet or Do Not Meet Criteria for Intermittent Explosive Disorder

In Table 6.4, the results for the treatment-seeking aggressive drivers are subdivided on the basis of the presence of IED. This presentation is part of our effort, begun in chapter 5, to make available information on IED-positive drivers because of the relative absence of information on individuals with IED.

An examination of Table 6.4 reveals that there are no differences on the driving aggression measure (DSP), only one difference on the driving anger measure (DAS)—namely, greater anger in response to hostile gestures by those with IED—and no differences on the measures of psychological distress. On the measures of generalized anger measured by the STAXI, however, drivers who meet criteria for IED are significantly higher on Trait Anger, Angry Temperament, and Anger-Out. There is also a trend ($p = .09$) for the IED drivers to be higher on hostility. Thus, the major

TABLE 6.4
Scores for Treatment-Seeking Aggressive Drivers on Measures of Driving Aggression, Driving Anger, General Anger, Hostility, Anxiety, and Depression as a Function of Intermittent Explosive Disorder (IED) Status

	IED present (n = 16)		IED absent (n = 33)			
Measure	*M*	*SD*	*M*	*SD*	*t*(47)	*p*
Driver's Stress Profile						
Total score	40.44	31.22	29.42	27.07	1.27	.21
Anger	11.06	8.10	9.21	6.27	0.88	.38
Impatience	11.44	9.02	7.61	7.95	1.51	.14
Competing	8.75	9.32	6.39	8.62	0.87	.39
Punishing	9.19	7.03	6.21	6.89	1.41	.17
Driving Anger Scale						
Total score	94.94	36.33	78.88	32.47	1.56	.13
Hostile Gestures	9.06	4.49	6.27	3.49	2.38	.02
Illegal Driving	7.63	4.15	8.85	4.27	0.95	.35
Police Presence	9.81	5.50	7.24	3.51	1.71	.10
Slow Driving	16.00	6.30	14.30	6.61	0.86	.40
Discourtesy	29.94	9.67	24.09	10.13	1.92	.06
Traffic Obstructions	18.84	8.06	15.45	6.90	1.52	.13
State–Trait Anger Expression Inventory						
State Anger	16.31	9.29	13.70	5.56	1.04	.31
Trait Anger	22.69	8.81	17.09	6.01	2.29	.03
Angry Temperament	9.13	4.13	6.18	2.76	2.59	.02
Anger-Out	19.44	4.59	15.48	4.66	2.8	.01
Anger-In	16.25	4.70	14.09	4.29	1.6	.12
Anger Control						
Buss–Durkee Hostility Total	35.80	18.90	25.90	11.60	1.76	.09
Beck Depression Inventory	9.81	9.96	6.03	6.26	1.63	.11
State–Trait Anxiety Inventory						
State Anxiety	49.25	18.95	45.33	13.85	0.82	.42
Trait Anxiety	41.44	11.88	38.88	10.52	0.77	.49

differences are on more core psychological features related to generalized anger and hostility rather than on driving-specific features.

Psychological Test Distributions for Treatment-Seeking Aggressive Drivers

The last information we present on the treatment-seeking aggressive drivers are the distributions of scores from these 49 individuals on the measures described above that were common to the assessment of Cohort 1 and Cohort 2. These data are not norms, because we have mixed the results from the 37 court-referred and 12 self-referred aggressive drivers despite there being mean differences on some measures (see above).

Clinical Hint

This is a limited sample in terms of size; moreover, as we note in chapter 9, many of the court-referred aggressive drivers probably were not completely candid on the measures related to either aggressive driving or driving anger. Nevertheless, this next section does provide the distribution of scores on measures we recommend using for this population if you, as a clinician, are faced with assessing or treating an aggressive driver. After reading the following material, you will know where your driver–client lies relative to a well-characterized sample.

Table 6.5 contains distributions for the DSP full-scale or total score; Table 6.6 contains distributions for each of the subscales. Note that the mean DSP full-scale score for the 49 treatment-seeking aggressive drivers (33) is slightly below the mean (34.3) for the normative adult sample.

TABLE 6.5
Norms for Treatment-Seeking Aggressive Drivers on the Driver's Stress Profile Total Score

Score	Cumulative %
4	8.2
6	10.2
8	14.3
10	26.5
12	34.7
14	36.7
16	40.8
18	44.9
20	51.0
22	53.1
24	55.1
30	57.1
35	63.3
40	67.3
45	71.4
50	75.5
55	77.6
60	81.6
65	85.7
70	89.8
75	89.8
80	91.8
90	93.9
100	95.9
110	100.0
M	33.0
Mdn	19.0

TABLE 6.6
Norms for Treatment-Seeking Aggressive Drivers on Driver's Stress Profile Subscales: Anger, Impatience, Competing, and Punishing

Anger		Impatience		Competing		Punishing	
Score	Cumulative %	Score	Cumulative %	Score	Cumulative %	Score	Cumulative %
1	6.1	1	14.3	1	40.8	1	14.3
3	20.4	2	20.4	2	51.0	2	32.7
5	32.7	3	32.7	3	53.1	3	42.9
7	51.0	4	46.9	4	59.2	4	53.1
9	55.1	6	53.1	5	61.2	5	55.1
11	61.2	7	61.2	6	63.3	6	59.2
13	71.4	9	63.3	9	67.3	8	67.3
15	77.6	10	67.3	11	73.5	10	73.5
17	83.7	11	73.5	13	77.6	12	79.6
19	93.9	13	79.6	15	81.6	14	87.8
21	95.9	16	81.6	18	87.8	16	91.8
24	98.0	19	85.7	21	89.8	20	95.9
30	100.0	22	89.8	24	93.9	25	95.9
		25	93.9	27	95.9	30	100.0
		30	100.0	30	100.0		
M	9.8		8.9		7.2		7.2
Mdn	7.0		6.0		3.0		4.0

TABLE 6.7
Driving Anger Scale Total Score for Treatment-Seeking Aggressive Drivers

Score	Cumulative %
40	6.1
45	14.3
50	14.3
55	26.5
60	32.7
65	40.8
70	44.9
75	49.0
80	55.1
85	57.1
90	59.2
95	65.3
100	65.3
105	71.4
110	71.4
115	75.5
120	75.5
125	87.8
130	91.8
140	93.9
150	98.0
M	82.0
Mdn	84.1

Table 6.7 shows the distributions for the treatment seekers on the full-scale score of the DAS. Tables 6.8 and 6.9 contain distributions for each of the six DAS subscales.

Like the DSP, the mean full-scale DAS score of 84 is noticeably lower than the mean for Deffenbacher et al.'s (1994) normative sample of college students (109) and well below the means of their treatment-seeking college student samples presented in Table 6.1. This is further evidence of our court-referred treatment-seekers' tendency to minimize, or possibly to "fake good." The self-referred drivers' mean score is comparable to Deffenbacher, Filetti, Richards, Lynch, and Oetting's (2003) treatment samples.

Table 6.10 contains distributions for trait anger as measured by the STAXI (Spielberger, 1988), and Table 6.11 contains distributions for the constructs of Anger-In and Anger-Out. The manuals for the STAXI contain much more comprehensive norms.

Finally, Tables 6.12 and 6.13 contain distributions for our measures of general psychological distress. Table 6.12 has distributions for state and trait anxiety, as measured by the State–Trait Anxiety Inventory (Spielberger, 1983); Table 6.13 has distributions for depressive symptoms as measured by the Beck Depression Inventory (A. T. Beck et al., 1961). It seems clear

TABLE 6.8
Norms for Treatment-Seeking Aggressive Drivers on the Driving Anger Scale Subscales of Slow Driving, Discourtesy, and Traffic Obstructions

Slow Driving		Discourtesy		Traffic Obstruction	
Score	Cumulative %	Score	Cumulative %	Score	Cumulative %
6	6.1	9	4.1	7	10.2
8	16.3	12	8.2	8	14.3
10	26.5	15	18.4	9	22.4
11	36.7	18	28.6	10	26.5
12	46.9	20	34.7	11	28.6
14	61.2	24	51.0	12	32.7
16	63.3	28	53.1	14	44.9
18	75.5	30	67.3	16	55.1
20	79.6	32	69.4	18	59.2
22	83.7	34	75.5	20	72.5
24	87.8	37	83.7	22	81.6
26	91.8	40	87.8	26	87.8
28	95.9	43	95.9	30	93.9
30	100.0	45	100.0	34	98.0
				35	100.0
M	14.9		26.0		16.6
Mdn	13.0		16.0		15.0

TABLE 6.9
Norms for Treatment-Seeking Aggressive Drivers on the Driving Anger Scale Subscales of Hostile Gestures, Illegal Driving, and Police Presence

Hostile Gestures		Illegal Driving		Police Presence	
Score	Cumulative %	Score	Cumulative %	Score	Cumulative %
3	24.5	4	20.4	4	20.4
4	32.7	5	34.7	5	40.8
5	42.9	6	38.8	6	53.1
6	53.1	7	46.9	7	57.1
7	63.3	8	57.1	8	65.3
8	71.4	9	69.4	9	69.4
9	73.5	10	73.5	10	73.5
10	77.6	11	79.6	11	81.6
11	81.6	12	83.7	13	85.7
12	85.7	13	85.7	14	89.8
14	89.8	14	91.8	15	91.8
15	100.0	17	93.9	17	95.9
		18	98.0	19	98.0
		29	100.0	20	100.0
M	7.2		8.5		8.1
Mdn	6.0		7.0		5.0

TABLE 6.10
Norms for Treatment-Seeking Aggressive Drivers on the State–Trait Anger Expression Inventory: Trait Anger

Score	Cumulative %
10	8.2
11	14.3
12	18.4
13	30.6
14	36.7
15	42.9
16	49.0
17	55.1
18	57.1
19	63.3
20	67.3
25	77.6
30	89.8
35	98.0
40	100.0
M	18.9
Mdn	17.0

TABLE 6.11
Norms for Treatment-Seeking Aggressive Drivers on the State–Trait Anger Expression Inventory: Anger-In and Anger-Out

Anger-In		Anger-Out	
Score	Cumulative %	Score	Cumulative %
9	10.2	10	8.2
10	20.4	11	18.4
11	32.7	12	22.4
12	36.7	13	32.7
13	42.9	14	40.8
14	53.1	15	44.9
15	59.2	16	55.1
16	63.3	17	59.2
17	71.4	18	63.3
18	83.7	19	67.3
19	87.8	20	75.5
20	87.8	22	83.7
23	95.9	24	85.7
26	100.0	26	95.9
		28	100.0
M	14.8		16.8
Mdn	14.0		16.0

TABLE 6.12
State and Trait Anxiety (State–Trait Anxiety Inventory) Norms for Treatment-Seeking Aggressive Drivers

State Anxiety		Trait Anxiety	
Score	Cumulative %	Score	Cumulative %
21	4.1	22	4.1
25	8.2	24	12.2
29	12.2	26	18.4
33	20.4	30	26.5
37	28.6	34	32.7
41	34.7	38	42.9
45	46.9	40	49.0
47	51.0	44	57.1
49	67.3	46	73.5
51	73.5	48	81.6
53	79.6	50	87.8
60	89.8	60	95.9
65	89.8	70	100.0
70	91.8		
75	93.9		
80	100.0		
M	46.6		39.7
Mdn	47.0		41.0

TABLE 6.13
Beck Depression Inventory Norms for Treatment-Seeking Aggressive Drivers

Score	Cumulative %
0	12.2
1	22.4
2	32.7
3	40.8
4	55.1
5	59.2
7	61.2
9	69.4
11	75.5
13	79.6
15	85.7
17	91.8
19	95.9
21+	100.0
M	7.3
Mdn	4.0

that this sample of treatment-seeking aggressive drivers acknowledges very little depression but some moderate levels of anxiety, especially current state anxiety.

PART 3: PSYCHOLOGICAL CHARACTERISTICS OF COLLEGE STUDENTS WHO ACKNOWLEDGE BEING AGGRESSIVE DRIVERS

As we noted in chapter 4, Malta (2004) obtained psychological measures on a large sample of college undergraduates and then interviewed 53 of those who scored 1 standard deviation or higher above the mean of the DSP (Larson, 1996a; Blanchard et al., 2000), our primary measure of aggressive driving. There was some overlap with the measures described in Part 2 of this chapter that were obtained with the treatment-seeking aggressive drivers. However, in some instances newer versions of some measures were used. We now describe the two measures that we used with the college-age sample, for which male and female norms are provided.

Measures

Driver's Stress Profile

The DSP (Larson, 1996a) is a 40-item rationally designed scale that measures the respondent's tendency to drive aggressively. Each item is scored on a scale that ranges from 0 to 3, for a maximum possible score of 120. There are four subscales of 10 items each (see earlier description in Part 1).

Driving Anger Scale

The DAS (Deffenbacher et al., 1994) is a 33-item scale on which items are scored on a scale that ranges from 1 to 5, yielding a maximum total scale score of 165. It measures the degree to which the respondent experiences anger in driving situations. It has six subscales, identified by factor analyses, that range from 3 to 9 items (again see earlier description in Part 1).

The mean and standard deviation scores of the 53 college students who acknowledged being aggressive drivers are listed in Table 6.14. Because there is no comparison group, one has to examine these scores in comparison to either earlier values presented in this chapter or to published norms.

Starting with the driving aggression and driving anger measures, one can see that the mean score on the DSP was in the 90th percentile or higher according to Blanchard et al's. (2000) published norms for the general population. Thus, compared with the general population, this group endorsed very high levels of driving aggression.

TABLE 6.14
Means and Standard Deviations on Measures of Driving Anger, Driving Aggression, and Generalized Anger Among College Students High in Driving Aggression

Measure or subscale	*M*	*SD*	Range
Driver's Stress Profile			
Total score	64.7	12.0	53–107
Anger	20.0	3.7	13–30
Impatience	17.1	5.4	0–27
Competing	13.6	6.9	0–30
Punishing	14.0	5.3	4–30
Driving Anger Scale			
Total scale	122.8	18.9	60–161
Hostile Gestures	11.8	3.0	5–15
Illegal Driving	11.5	3.8	5–20
Slow Driving	22.3	4.1	12–30
Discourtesy	37.9	5.7	12–45
Police Presence	14.0	4.2	4–20
Traffic Obstructions	25.3	5.6	14–35
State–Trait Anger Expression Inventory			
Trait Anger	24.0	5.7	14–40
Anger-In	19.0	4.2	11–31
Anger-Out	19.6	4.0	11–30
Anger Control	39.7	8.0	23–63

Looking at the mean score of 123 on the DAS, we find this sample of college students at the 78th percentile according to Deffenbacher et al's. (1994) norms and between the two treatment samples described in Table 6.1. The Trait Anger scores are also very comparable to Deffenbacher, Filetti, Lynch, Dahlen, and Oetting's (2002) samples in Table 6.1. This leads us to conclude that the means and ranges in Table 6.15 are representative of what one should expect from a sample of aggressive-driving college students.

College Student Norms for Selected Measures

To make our material as useful as possible to clinicians faced with young adult aggressive drivers sent for assessment or treatment, we provide norms on the measures of driving anger and driving aggression based on our sample of more than 1,000 college students. Separate tables for men and women are provided because women typically score lower than men on measures of anger and aggression. We also hope this information may be of value to anyone undertaking research with these populations. (Norms are available, of course, on all, or almost all, of these measures, either in the manuals that accompany the tests or in the articles that describe the instrument.)

TABLE 6.15
Male and Female Norms for Full-Scale Driver's Stress Profile Scores Among College Students

Score range	Cumulative %	
	Men (n = 533)	Women (n = 463)
0–5	1.5	0
6–10	2.4	3.2
11–15	4.3	8.0
16–20	9.6	18.8
21–25	19.1	30.7
26–30	28.1	44.7
31–35	37.9	54.4
36–40	47.3	65.0
41–45	57.0	72.8
46–50	64.5	81.0
51–55	71.9	86.0
56–60	78.2	90.9
61–65	85.0	94.2
66–70	89.9	95.5
71–75	91.7	96.5
76–80	94.9	98.3
81–85	95.9	98.5
86–90	97.6	99.1
91–95	97.9	99.4
96–100	98.3	99.6
101–105	98.5	99.6
106+	100.0	100.0
M	44.5	36.2
Mdn	42.0	33.0

We present normative data on the following measures from the large college student sample: the DSP and its subscales (Blanchard et al., 2000; Larson, 1996a; see Tables 6.15–6.19) and the DAS and its subscales (Deffenbacher et al., 1994; see Table 6.20).

We realize that we have given the reader a great deal of tabular material. We hope it will be useful to clinicians in terms of characterizing an individual client whom one needs to assess before beginning treatment. We have found such clinical norms helpful.

TABLE 6.16
Male and Female Norms for the Driver's Stress Profile Anger Subscale Among College Students

Score range	Cumulative %	
	Men (n = 533)	Women (n = 463)
0	0.8	0
1–2	1.3	0
3–4	2.4	1.5
5–6	4.7	5.4
7–8	11.4	13.2
9–10	20.3	28.1
11–12	34.7	43.0
13–14	49.0	57.2
15–16	63.4	70.2
17–18	75.2	82.3
19–20	85.7	89.8
21–22	93.1	95.2
23–24	96.1	96.1
25–26	98.5	99.6
27–28	99.4	100.0
29–30	100.0	100.0
M	14.8	13.8
Mdn	15.0	13.0

TABLE 6.17
Male and Female Norms for the Driver's Stress Profile Impatience Subscale Among College Students

Score range	Cumulative %	
	Men (n = 533)	Women (n = 463)
0	1.9	0.6
1–2	5.4	5.2
3–4	12.9	12.1
5–6	23.6	24.4
7–8	35.3	37.4
9–10	49.7	54.4
11–12	60.8	66.5
13–14	71.5	75.8
15–16	78.2	84.2
17–18	86.3	88.8
19–20	90.2	92.2
21–22	94.2	95.2
23–24	95.7	97.4
25–26	97.2	98.5
27–28	97.9	99.8
29–30	100.0	100.0
M	11.5	10.8
Mdn	11.0	10.0

TABLE 6.18
Male and Female Norms for the Driver's Stress Profile Competing Subscale Among College Students

Score range	Cumulative %	
	Men (n = 533)	Women (n = 463)
0	10.3	31.7
1–2	20.6	50.3
3–4	29.3	65.2
5–6	41.8	74.7
7–8	52.3	79.9
9–10	62.1	86.0
11–12	70.4	90.5
13–14	77.3	93.7
15–16	84.8	95.7
17–18	88.4	97.0
19–20	93.1	97.8
21–22	95.1	98.9
23–24	96.6	98.9
25–26	97.6	99.6
27–28	98.5	99.6
29–30	100.0	100.0
M	9.2	4.5
Mdn	8.0	2.0

TABLE 6.19
Male and Female Norms for the Driver's Stress Profile Punishing Subscale Among College Students

Score range	Cumulative %	
	Men (n = 533)	Women (n = 463)
0	1.3	1.9
1–2	11.6	17.5
3–4	28.7	37.8
5–6	43.3	52.7
7–8	54.6	68.9
9–10	66.2	78.2
11–12	73.9	86.4
13–14	80.5	90.7
15–16	87.2	95.2
17–18	91.2	97.2
19–20	94.6	97.6
21–22	96.1	98.5
23–24	97.9	99.1
25–26	98.7	99.4
27–28	99.1	99.4
29–30	100.0	100.0
M	9.0	7.1
Mdn	8.0	6.0

TABLE 6.20
Male and Female Norms for Driving Anger Scale Full-Scale Scores Among College Students

Score range	Cumulative %	
	Men (n = 533)	Women (n = 463)
33–55	3.0	2.0
56–65	6.2	6.7
66–75	9.4	12.6
76–80	14.3	19.1
81–85	20.6	24.7
86–90	27.8	30.8
91–95	35.1	36.9
96–100	42.8	44.0
101–103	47.1	48.8
104–106	52.5	54.2
107–109	56.8	57.9
110–112	62.5	64.2
113–115	67.0	69.2
116–118	70.9	73.8
119–121	77.1	77.9
122–124	81.4	81.8
125–127	85.4	85.5
128–130	87.8	88.9
131–133	89.5	91.1
134–136	91.9	93.1
137–140	95.3	95.0
141–145	97.4	97.0
146–150	98.5	98.0
151–155	99.1	99.3
156–165	100.0	100.0
M	104.0	102.9
Mdn	105.0	104.0