### Stress Coping Abilities and Motivation for Treatment Among DUI Recidivists

by Lisa Degiorgio and Herman Lindeman\*

#### **Trends in Drunk Driving**

In recent years, there has been a dramatic decrease in the numbers of drinking drivers with blood alcohol content at or above 0.08 grams per deciliter (g/dl; National Highway Transportation Safety Administration [NHTSA], 2009). This trend seems to have been facilitated by several strategies that include sobriety checkpoints, reduced permissible blood alcohol concentration (BAC) to 0.08 g/dl, minimum legal drinking age laws, zero tolerance laws for underage drivers, and sentencing guidelines. Despite this promising trend, motor vehicle crashes caused by alcohol impairment still cost an estimated \$37 billion annually, and in 2010, more than 10,000 people died in alcohol-related driving crashes, a rate that equates to one death every 51 minutes (NHTSA, 2005).

DeMichele and Lowe (2011), summarizing a decade of drunk driving research, report that the majority of all impaired driving episodes were committed by a small group of reoffenders. Estimates suggest that 3% to 5% of drivers account for approximately 80% of the total drunk driving episodes. Historically, little progress has been made to prevent impaired driving by driving-under-the influence (DUI) recidivists. In studies designed to evaluate treatment outcomes for recidivists, rates of reoffending range from 7% (Beck et al., 1999) to 15% (LaBrie et al., 2007; Rojek et al., 2003). Simpson and colleagues (1996) report that 30% of DUI offenders reoffend within 10 years. Kunitz and colleagues (2002) report that 40% of offenders who receive no treatment for alcohol abuse reoffend within five years. Research and resources have been committed to identifying appropriate screening tools and recidivist characteristics. Continued research would enhance risk identification and facilitate matching appropriate levels of care to treatment needs (Andrews & Bonta, 2010).

### Variables Associated With DUI Recidivists

Variables strongly associated with DUI recidivists fall into four broad categories:

- 1. Demographic characteristics;
- 2. Criminogenic factors;
- 3. Alcohol- and drug-related factors; and
- 4. Completion of court requirements.

#### **Demographic Characteristics.**

Results from a meta-analysis by Gendreau and colleagues (1996) found specific demographic characteristics associated with reoffending. These characteristics included gender, marital status, race/ethnicity, and educational attainment. Subsequent research into DUI recidivists confirmed that white males over age 35 with a high school education or less are associated with higher rates of reoffending than the general population (Beck et al., 1999; Kunitz et al., 2002; LaBrie et al., 2007). Native Americans are more likely to reoffend than whites and non-whites. Whites are more likely to reoffend than African Americans, Hispanics, and Asians. Asians have the lowest rates of arrest for DUI and reoffending (NHTSA, 2010).

Although providing a useful description of a repeat impaired driver, these characteristics do not differ significantly from the characteristics of first-time offenders (Lacey et al., 1999). Moreover, Rauch and colleagues (2010), in a review of Maryland driving records, found that women were as likely as men to reoffend once they had a received a violation. Despite the similarities across groups, demographic characteristics may offer some predictive power when combined with other factors.

Criminogenic Factors. Research has identified several criminal history factors that are associated with DUI reoffending. Meta-analyses results have identified prior criminal history and antisocial behaviors as the strongest predictors for reoffending (Gendreau et al., 1996; Nochajski & Stasiewicz, 2006). As reported by Nochajski and Stasiewicz (2006), repeat DUI offenders are more likely to have been involved in additional motor vehicle crashes and to have received more traffic violations than first-time DUI offenders. It has been suggested that repeat DUI offenders are poorer drivers than first-time DUI offenders.

Alcohol- and Drug-Related Factors. Rauch and colleagues (2010) examined 100 million Maryland driving records to determine the impact of an initial alcohol-related violation on recidivism.

As one might expect, prior alcohol-related violations are associated with additional acts of reoffending. Moreover, any alcohol-related violation, regardless of conviction, was found to be associated with DUI recidivism (Rauch et al., 2010).

BAC results as a predictor of DUI recidivism have been mixed, with some studies finding a positive relationship and others finding no relationship between the two factors. Refusal to complete a breath test, however, has been associated with DUI recidivism (Nochajski & Stasiewicz, 2006). Heavy-drinking patterns have been associated with DUI recidivism as has a positive family history for alcohol or drug problems. Moreover, prior treatment for alcohol or other drug problems is also related to repeat DUI offenses.

Completion of Court Requirements. The NHTSA (2005) commissioned a report on effective DUI sentencing guidelines. These guidelines generally fall into two categories: sanctions and treatment (NHTSA, 2005; Nochajski & Staseiwicz, 2006). Sanctions include:

- · Fines:
- Driver's license suspension or revocation;
- Probation;
- · Jail sentences; and
- · Ignition interlock systems.

Treatment requirements typically involve participation in education and alcohol treatment programs. Offender sentences may include a combination of sanctions and treatment requirements.

Studies examining the effectiveness of sanctions and treatment on recidivism vary widely. It is estimated that participation in treatment reduces recidivism by 7% to 9% and that the use of the ignition interlock system reduces recidivism by 60% to 90% (NHTSA, 2005). Regardless of the requirements, studies have confirmed that recidivism is reduced when an offender complies with and completes his or her sentencing requirement (Beck et al., 1999; Nochajski & Stasiewicz, 2006).

#### **The Current Study**

Despite the depth and breadth of information available on recidivist characteristics

See STRESS COPING, next page

<sup>\*</sup>Lisa Degiorgio, Ph.D., is an assistant professor in the Division of Counseling and Psychology at Thomas University, in Thomasville, GA. Herman Lindeman, Ph.D., is president and founder of Behavior Data Systems. Professor Degiorgio can be reached by email at Idegiorgio@thomasu.edu.

and the identification of some prediction variables, very few studies have examined offender attitudes about drinking, coping strategies, motivation to change drinking patterns, or treatment engagement (Nochajski & Stasiewicz, 2006). These factors may refine prediction of DUI recidivism, as well as identify protective or mediating factors for reoffenders. The current study used the Florida Driver Risk Inventory (DRI; Behavior

possible recidivists. Recidivists were identified when two DRI cases contained the same code but with different DUI dates and unique percentile scores. This process resulted in the identification of 4,295 DUI recidivists, representing approximately 4% of the total Florida DUI offenders. This percentage, which is lower than other recidivist findings (Beck et al., 1999; LaBrie et al., 2007; Rojek et al., 2003), may be due to the identification process used in this study. Data, including the unique identifier, were entered by the offenders online.

# study. Data, including the unique identifier, were entered by the offenders online. A unique code, along with static demographic

variables (date of birth, gender, race/ethnicity), was

used to identify possible recidivists.

Data Systems, 2012), a DUI screening instrument, to examine stress management and treatment motivation for 4,295 DUI recidivists. The guiding hypothesis states that recidivists will have mean scale scores that indicate more severe problems with stress and coping. In addition, recidivists will report higher levels of motivation for engaging in treatment.

#### **Study Methods**

**Participants.** The study used data from 236,713 Florida offenders who completed the DRI between 2005 and 2012. The State of Florida mandates that all offenders complete the DRI regardless of being convicted or receiving reduced charges for a DUI. A unique code, along with static demographic variables (date of birth, gender, race/ethnicity), was used to identify

Consequently, some identifiers were missing or incomplete, which limited the ability of researchers to link related offender cases.

Seventy-five percent of Florida DUI recidivists were male, 25% were female. Seventy-one percent of the reoffenders were Caucasian, 10% were African American, 16% were Hispanic, 1% were Asian, less than 1% were Native American, and 2% who selected "other" provided no additional information about themselves. The majority of recidivists, 83%, were single (including divorced, separated, and widowed) and 17% were married. Fourteen percent of recidivists had less than a high school education, 43% had completed a GED or received their high school diploma, 26% had completed some college, 14% had completed a bachelor's degree, and 3% had completed a graduate or professional degree. The demographic

findings were consistent with those of the larger Florida DRI population and other recidivist findings.

Offenders were asked a series of questions about their criminal history. Table 1 summarizes the findings. Eighty-six percent of respondents reported one or more DUI arrests, 13% had one or more alcohol-related arrests (not DUI/DWI), 11% had one or more drug-related arrests (not DUI/DWI), 99% had been arrested at least once (including the current DUI offense), 24% had been involved in one or more at-fault accidents, 52% had one or more traffic violations, 25% had one or more misdemeanors, and 13% had one or more felonies. Recidivists had higher percentage rates for all criminal history items when compared to the larger Florida DRI population.

Eighteen percent of offenders had their current charges reduced, 81% had their license suspended, and 5% had another DUI charge pending at the time of testing. In the larger Florida DRI population, 14% had current charges reduced, 83% had their license suspended, and 4% had another DUI charge pending at the time the DRI was administered.

**Instrument.** The Florida DRI is a self-report measure that uses 140 items to develop five percentile scales, or domains, that address alcohol use, drug use, driver risk, stress management, and truthfulness. In addition, the DRI uses a substance abuse classification that is derived from the *Diagnostic and Statistical Manual of Mental Disorders-IV* (DSM-IV). The DRI has demonstrated concurrent validity (Chang et al., 2002), the ability to distinguish between first-time and multiple offenders (Leshowitz & Meyers, 1996), and the ability to identify problem drinkers (Lacey et al., 1999). DRI

Incidents Reported	0		1		2		3		4 or more	
	N	%	N	%	N	%	N	%	N	%
Total DUI arrests	605	14	2,664	62	818	19	154	4	41	1
Alcohol-related arrests	3,734	87	377	9	104	2	39	1	25	<1
Drug-related arrests	3,839	89	327	8	66	2	24	<1	19	<1
Total lifetime arrests	16	<1	3,995	93	100	2	100	2	84	2
At-fault accidents	3,247	76	782	18	197	5	40	1	10	<1
Traffic violations	2,027	48	814	20	553	13	372	9	410	10
Misdemeanors	3,198	75	682	16	216	5	97	2	59	1
Felonies	3,751	87	364	9	82	2	29	<1	37	-

See STRESS COPING, page 16

#### References

Bloom, B.E., & Covington, S. (2009). Addressing the mental health needs of women offenders. In R.L. Gido & L.P. Dalley (Eds.). *Women's Mental Health Issues Across the Criminal Justice System* (pp. 160–176). Upper Saddle River, NJ: Prentice Hall.

Canadian Mental Health Association (2013). Post-Traumatic Stress Disorder (PTSD). Available at http://www.cmha.ca/mental\_health/post-traumaticstress-disorder/.

Cauffman, E., Feldman, S.S., Waterman J., & Steiner, H. (1998). Posttraumatic stress disorder among female juvenile offenders. *Journal of the American Academy of Child and Adolescent Psychiatry*, 37(11), 1209–1216.

Child Welfare Information Gateway (2008). Long-Term Consequences of Child Abuse and Neglect. Available at https://www.childwelfare.gov/pubs/factsheets/long\_term\_consequences.cfm.

Finkelstein, N., VandeMark, N., Fallot, R., Brown, V., Cadiz, S., & Heckman, J. (2004). Substance Abuse Recovery Through Integrated Trauma Treatment. Sarasota, FL: National Trauma Consortium for the Center for Substance Abuse Treatment.

Leschied A.W (2011). The Treatment of Incarcerated Mentally Disordered Women Offenders: A Synthesis of Current Research. Ottawa, ON: Public Safety Canada.

Matheson, I.F. (2012). Implications of trauma among male and female offenders. *International Journal of Environmental Research and Public Health*, 9(1), 97–99.

Miller, A.N., & Najavits, M.L. (2012). Creating trauma-informed correctional care: A balance of goals and environment. *European Journal of Psychotraumatology*, 3, 1–8.

Morris, A. (2012). Exploring women's experience in a hostel on release from custody. *Irish Probation Journal*, *9*(1), 162–176.

Sapers, H. (2012). *Annual Report of the Office of the Correctional Investigator 2011–2012*. Ottawa, ON: Correctional Investigator Canada.

Voorhis, P.V., Salisbury, E., Bauman, A., Holsinger, K., & Wright, E. (2008). *Achieving Accurate Pictures of Risk and Identifying Gender-Responsive Needs: Two New Assessments for Women Offenders.* Washington DC: U.S. Department of Justice, National Institute of Corrections.

Wallace, C.B., Conner C.L., & Dass-Brailsford, P. (2011). Integrated trauma treatment in correctional health care and community-based treatment upon re-entry. *Journal of Correctional Health Care*, 17(4), 329–343.

Women Offender Programs and Issues: A Community Strategy for Women Offenders (2012). Ottawa, ON: Correctional Services of Canada.

#### STRESS COPING, from page 6

scales demonstrate satisfactory reliability (p < 0.80; Chang et al., 2002). Bishop (2011) was able to demonstrate some predictive abilities of the DRI in rapid (within one year) DUI recidivist detection. Moreover, the NTHSA stated that the DRI is the only major DUI assessment that addresses driver risk (Popkins et al., 1988).

For each SAI scale, respondents are classified into four risk ranges:

- 1. Low risk (zero to 39th percentile);
- 2. Medium risk (40th to 69th percentile);
- 3. Problem risk (70th to 89th percentile); and
- 4. Severe problem (90th to 100th percentile).

Risk ranges were established by converting raw scores to percentile scores by using cumulative percentage distributions (Behavior Data Systems, 2012). This is similar to the way in which students are assigned grades or scores for grading purposes in school. The 70th percentile is often used for passing grades, and this same percentile initially was used as a working criterion. Similarly, the 90th percentile is a benchmark for identifying severe problems.

In addition to establishing risk thresholds, the risk ranges serve an important role when interpreting Truthfulness Scale scores. The Truthfulness Scale identifies how truthful the respondent is when taking the DRI and can be used to recognize those who attempt to "fake good." A truthfulness concern is identified when a Truthfulness Scale score is at or above the problem risk range (70th

percentile). These respondents are typically cautious, guarded, or may be defensive in their answers. Scores in the problem risk range should be interpreted cautiously. Severe problem scores on the Truthfulness Scale (90th percentile and above) invalidate all scale scores. Responses given by these individuals are likely biased by minimizing problems or not clearly understanding the questions presented in the DRI. Classifying offenders according to predefined risk ranges provides an efficient and reliable solution for determining offender risk, and the impact of truthfulness on test scores is largely contingent on the severity of the client's denial or problem minimization (Behavior Data Systems, 2012).

The Alcohol Risk Scale in the DRI measures the respondent's alcohol use behavior and severity of abuse. The DRI defines alcohol as beer, wine, and other liquors. Questions regarding alcohol use and abuse are incorporated into the Alcohol Risk Scale. The questions differentiate between those with a history of alcohol abuse but who state that they currently abstain from alcohol use, and those who currently abuse alcohol. An elevated alcohol risk percentile score (70th to 80th percentile) indicates an emerging drinking problem whereas scores in the 90th to 99th percentile identify an established and serious drinking problem.

The Driver Risk Scale is designed to identify aggressive, irresponsible, or careless drivers. Respondents with elevated driver risk scores (70th to 89th percentile) are identified as problem-prone drivers who would likely benefit from driving improvement programs, and respondents with the highest percentile scores (90th to 99th) are

dangerous drivers who pose a threat to public safety while driving.

The Drug Risk Scale measures the offender's drug use and severity of drug use and abuse. Drugs are defined in the DRI as marijuana, ice, crack, cocaine, amphetamines, barbiturates, and heroin. Similar to the Alcohol Risk Scale, the DRI Drug Risk Scale takes special precautionary measures to differentiate between current drug users and recovering drug users. An elevated Drug Risk Scale score (70th to 89th percentile) identifies those with emerging drug problems, whereas a severe problem scale score (90th to 99th percentile) identifies repeated drug users and current drug abuse.

The Stress Coping Abilities Scale found in the DRI measures the offender's ability to cope effectively with stress, tension, and pressure. Percentile scores in the problem risk range (70th to 89th percentile) for stress coping abilities identify individuals who would benefit from stress management intervention programs, and those with percentile scores in the severe risk range (90th to 99th percentile) will likely require more intensive treatment.

The sixth DRI scale is the Substance Abuse/Dependency Classification Scale based on DSM-IV classification criteria. The substance abuse/dependency classification is a binary measure of whether the respondent does or does not meet the substance abuse/dependency criteria outlined in the DSM-IV.

Reliability coefficients were calculated for the DRI using data from all Florida DUI offenders. The results—truthfulness = 0.89;

See STRESS COPING, next page

alcohol = 0.92; drugs = 0.92; driver risk = 0.87; and stress coping abilities = 0.91—indicate high to moderately high reliability for the DRI.

Analysis. Mean scale scores from all Florida DUI offenders were compared to the sample of recidivists using their initial test administration, and t-tests were conducted to determine whether differences between scores for all offenders and the recidivists were statistically different. Higher mean scale scores for Alcohol, Drug, and Driver Risk Scales generally indicated more severe problems and elevated risk. Scoring for the Stress Coping Abilities Scale was reversed, so that lower mean scores indicated more limited coping or fewer stress management strategies. As noted above, researchers expected higher mean scores for recidivists on Alcohol, Drug, and Driver Risk Scales and a lower mean score on Stress Coping abilities. Effect sizes were also calculated using Cohen's d to evaluate the magnitude of difference between groups. Levene's test for equal variances was also applied.

In addition, a chi-square analysis was conducted to explore the relationship between number of lifetime DUI convictions and offenders' motivation for treatment. Responses from all Florida DUI offenders, rather than just the recidivists, were used in this analysis because some offenders had DUI convictions that had occurred in other states or prior to 2005, when the DRI was implemented in Florida. Charges, arrests, or convictions for DUI that occurred in Florida prior to 2005 or in other states would not have been included in the recidivist sample.

For the chi-square analysis, DUI convictions were grouped in five categories: 0 convictions, 1 conviction, 2 convictions, 3 convictions, and 4 or more convictions. Motivation for treatment was addressed by two test questions:

1. How would you describe your desire to get alcohol treatment or help? and

2. How would you describe your desire to get drug treatment or help?

Response options included: 1 = I want help (highly motivated), 2 = I may need help (moderately motivated), 3 = Maybe, not sure (mildly motivated), 4 = No need (Not motivated).

#### **Study Results**

As predicted, recidivists had a higher mean scale score on the Alcohol, Drugs, and Driver Risk Scales and a lower mean scale score on the Stress Coping Abilities Scale than non-recidivists. The results were statistically significant for all scales (detailed results are displayed in Table 2). There was wide variation in the effect size

been committed to identifying appropriate screening tools and recidivist characteristics to reduce the costs (personal, financial, social) associated with DUI recidivism. The results of this study showed that recidivists demonstrated poorer stress management than non-recidivist offenders in the larger Florida DUI population. Moreover, recidivists exhibited more severe problems associated with alcohol, drugs, and driver safety than non-recidivist offenders in the larger Florida DUI population. Results also indicated that greater numbers of DUI convictions were related to more motivation to participate in treatment. From this, researchers may conclude that recognition of an alcohol problem may come only after multiple arrests for alcohol-related

## Researchers expected higher mean scores for recidivists on Alcohol, Drug, and Driver Risk Scales and a lower mean score on Stress Coping abilities.

(magnitude of difference) of the DRI scales. Using Cohen's descriptions of magnitude, medium effect sizes were achieved for Alcohol and Drug Scales. Driver Risk and Stress Coping Abilities Scales achieved very small effect sizes.

A relationship between the number of lifetime DUI convictions and motivation for alcohol treatment x2 (15, N = 234,580) = 10860, p < 0.001, and motivation for drug treatment x2 (15, N = 234,573) = 2510, p < 0.001 was established. Offenders with more DUI convictions were more likely to report higher motivation for treatment, whereas those with no DUI convictions or one conviction reported very little or no motivation for alcohol or drug treatment.

#### Discussion

This study explored the stress management and treatment motivations for 4,295 Florida DUI recidivists who completed the DRI. As noted, considerable resources have

incidents. Although these results may not be surprising, they offer some practical implications for treatment guidelines.

Using the risk/need principle described by Andrews and Bonta (2010), individuals who demonstrate higher problem severity or indicate a motivation for treatment can be matched to appropriate levels of treatment. Evidence suggests that treatment matched to risk classification and offender needs can result in reduced recidivism, reduced costs, and increased public safety (Andrews & Bonta, 2010; Hanson et al., 2010; PEW Charitable Trusts, 2011).

#### **Study Limitations**

The authors and test designers have limited knowledge, or input into, the ways in which the DRI is administered to offenders by the various agencies that use the test. For example, some agencies may administer the DRI individually and others may administer the DRI in groups. Both methods are acceptable, and procedures for both methods are described in the DRI training manual. However, the process used by the agencies may influence offender responses. Moreover, these inconsistencies in test administration may affect the test results. Additional field research should include a description of administration procedures.

Information regarding treatment recommendations and outcomes was not included in this study. Participation and completion of treatment has been associated with

See STRESS COPING, next page

Table 2: Mean Score Comparisons of All Florida DRI Offender Compared to Recidivists								
	Compared	to necialvists						
Cooloo	AH	Desiglicates	-					

Scales	All	Recidivists	D	р	d	
Alcohol	8.06	11.35	3.29	< 0.001	0.40	
Drugs	3.56	4.40	0.84	< 0.001	0.50	
Driver risk	9.75	13.51	3.76	< 0.001	0.11	
Stress coping abilities	143.96	142.51	-1.45	0.05	0.01	

reduced rates of recidivism (Hanson et al., 2010). Collection of treatment information would allow for more extensive prediction models of risk and recidivism. Additional studies that apply the risk/need principle to treatment should be conducted to evaluate the effectiveness of matching treatment intensity with problem severity for DUI offenders.

Substantial efforts have been made to reduce the overall numbers of individuals who drive while under the influence of alcohol or drugs. The evidence suggests, however, that a small group of recidivists accounts for a large percentage of drunk

to problem risk may lead to further reductions in the recurrence of impaired driving and to overall improvements in public and traffic safety.

#### References

Andrews, D.A., & Bonta, J. (2010). *The Psychology of Criminal Conduct* (5th ed.). New Providence, NJ: Lexis Nexus Group.

Beck, K.H., Rauch, W.J., Baker, E.A., & Williams, A.F. (1999). Effects of ignition interlock license restrictions on drivers with multiple alcohol offenses: A randomized trial in Maryland. *American Journal of Public Health*, 89, 1696–1700.

Behavior Data Systems, Ltd. (2012). Florida Driver Risk Inventory. Available at www.bdsltd.com.

Bishop, N. (2011). Predicting multiple DUI offenders using the Florida DRI, 2007–2008. Substance Use and Misuse, 118, 423–429.

### The study also confirmed that motivation for treatment is associated with multiple arrests for DUI violations.

driving. This study demonstrated higher risk and problem severity for recidivists than for non-recidivists at their initial DRI test, including poorer stress management and coping strategies. The study also confirmed that motivation for treatment is associated with multiple arrests for DUI violations. Indications of motivation and identification of poor stress management early in the screening (or intake) process will allow clinicians to customize treatment needs for offenders who present a higher risk for reoffending. Matching high-recidivism-risk offenders with high-intensity treatment and low-recidivism-risk offenders with lowintensity treatment should reduce recidivism rates among offenders (Andrews & Bonta, 2010). Implementing the risk/need principle with DUI offenders warrants further study. The benefits of matching treatment needs Chang, I., Gregory, C., & Lapham, S.C. (2002). Review of Screening Instruments and Procedures for Evaluating DWI Offenders. Washington DC: AAA Foundation for Traffic Safety.

DeMichele, M., & Lowe, N.C. (2011). DWI recidivism: Risk implications for community supervision. *Federal Probation*, *75*, 19–24.

Gendreau, P., Little, T., & Goggin, C. (1996). A metaanalysis of the predictors of adult offender recidivism: What works. *Criminology*, 34, 575–607.

Hanson, R.K., Bourgon, G., Helmus, L., & Hodgson, S. (2010). A Meta-Analysis of the Effectiveness of Treatment for Sexual Offenders: Risk, Need, and Responsivity. Ottawa, ON: Public Safety Canada.

Kunitz, S.J., Woodall, W.G., Zhao, H., Wheeler, D.R., Lillis, R., & Rogers, E. (2002). Rearrest rates after incarceration for DWI: A comparative study in a southwestern US county. *American Journal of Public Health*, *92*, 1826–1831.

LaBrie, R.A., Kidman, R.C., Albanese, M., Pellar, A.J., & Shaffer, H.J. (2007). Criminality and continued DUI offense: Criminal typologies and recidivism

among repeat offenders. Behavioral Sciences and the Law, 25, 603–614.

Lacey, J.H., Jones, R.K., & Wiliszowski, C.H. (1999). *Validation of Problem Drinking Screening Instruments for DWI Offenders* (DOT HS 808 881). Washington DC: National Highway Traffic Safety Administration.

Leshowitz, B., & Meyers, J.M. (1996). Application of decision theory to DUI assessment. *Alcoholism: Clinical and Experimental Research*, 20(7), 1148-1152

National Highway Traffic Safety Administration (NHTSA, 2005). *A Guide to Sentencing DWI Offenders* (DOT HS 810 555). Washington DC: Author. Available at www.nhtsa.gov.pdf.

National Highway Traffic Safety Administration, National Center for Statistics and Analysis (NHTSA, 2009). Results of the 2007 national roadside survey of alcohol and drug use by drivers. *Traffic Safety Facts: Research Note* (DOT HS 811 175). Washington DC: Author. Available at www.nhtsa.gov.pdf.

National Highway Traffic Safety Administration (NHTSA, 2010). Alcohol and Highway Safety: Special Report on Race/Ethnicity and Impaired Driving (DOT HS 811 336). Washington DC: Author. Available at www.nhtsa.gov.pdf.

Nochajski, T.H., & Stasiewicz, P.R. (2006). Relapse to driving under the influence (DUI): A review. *Clinical Psychology Review*, 26, 179–195.

The PEW Charitable Trusts (2011). Risk/needs assessment 101: Science reveals new tools to manage offenders. *Issue Brief*, September 20, 2011. Available at <a href="http://www.pewcenteronthestates.org/publicsafety">http://www.pewcenteronthestates.org/publicsafety</a>.

Popkins, C.L., Kannenberg, C.H., Lacey, J.H., & Waller, F.F. (1988). Assessment and Classification Instruments Designed to Detect Alcohol Abuse (DOT HS 807 475). Washington DC: National Highway Traffic Safety Administration.

Rauch, W.J., Zadon, P.L., Ahlin, E.M., Howard, J.M., Frissell, K.C., & Duncan, D. (2010). Risk of alcoholimpaired driving recidivism among first offenders and multiple offenders. *American Journal of Public Health*, 100, 919–924.

Rojek, D.G., Coverdill, J.E., & Fors, S.W. (2003). The effect of victim impact panels on DUI rearrest rates: A five-year follow-up. *Criminology*, 41, 1219–1339.

Simpson, H.M., Mayhew, D.R., & Beirness, D.J. (1996). *Dealing with Hard Core Drinking Drivers*. Ottawa, ON: Traffic Injury Research Foundation.

**8** JOURNAL OF COMMUNITY CORRECTIONS