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Treating Substance Abuse Offenders in the Southwestern United States: A Report Evaluating the Long-Term Effectiveness of the Yuma County Adult Drug Court

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ABSTRACT This report summarizes data gathered from the 64 graduates of the Yuma County Drug Court from 1998 to 2001. Those who agreed to participate were interviewed at 3, 6, 12 and/or 18 months after graduation. Instruments used included the Addiction Severity Index, the CSAT GPRA Client Outcomes Measure for Discretionary Programs and a questionnaire developed to assess how well relapse prevention plans were followed. Rather than increased ELAPSED time from treatment, the variables that appeared to predict relapse were family problems, lack of social support and employment difficulty. ASI severity scales did not differ significantly over time for those studied, but the instrument did appear to be a useful tool in predicting relapse. The majority of graduates studied were able to successfully carry out their relapse prevention plans and graduation plans. Criminal involvement after graduation appeared to be significantly less than that of offenders who have not been treated in a drug court model and, for those who did recidivate, time to first arrest appeared to be longer for graduates than for non-graduates.

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According to a recent edition of the American Psychological Association Monitor (DeAngelis, 2001), psychologists have vastly underestimated the impact we can have in the area of substance abuse treatment. As rehabilitative measures such as drug courts are implemented by court systems internationally, this statement appears well founded. There is a need for trained substance abuse counselors who can work within the court system. This is an important area for forensic psychologists to familiarize themselves with, especially in rural areas. Drug courts are becoming increasingly common venues for dealing with those arrested for offenses related to substance abuse in the United States as they prove to be efficient, effective and less costly than incarceration. More than a decade has passed since the first drug court model in the U.S. was established. Dade County, Florida, implemented the model as a diversionary program for offenders facing charges of simple drug possession or use in 1989.

A drug court is a special court given the responsibility to handle cases involving drug-addicted offenders through an extensive supervision and treatment program. Drug court utilizes a case management team approach. The team is typically comprised of the presiding judge, the prosecutor, the defense counsel, a psychologist and/or substance abuse treatment specialist, a vocational counselor, a probation officer, education specialists and community leaders (Belenko, 1996). Drug courts are designed to motivate offenders to overcome their substance abuse problems and reconnect to the community as productive citizens, and to support them as they do so. In addition, these courts are intended to ensure consistency in judicial decision-making, enhance the coordination of community agencies and resources and increase the cost-effectiveness of sentencing and maintenance for those convicted of minor drug-related crimes.

Since the implementation of the first U.S. drug court, over 150,000 offenders have participated in or are currently involved with similar models. The current number of active drug courts in the U.S. exceeds 400, with over 220 more in various stages of implementation and development. More than 100,000 participants have graduated from drug court programs (Hora, Schma & Rosenthal, 1999; Robinson, 2001). Research on these programs suggests that 73% of the participants have retained and/or obtained suitable employment after completion of the program. Over 71% of participants complete programs, and this results in positive benefits to society that would not occur if offenders were incarcerated (Cooper, 1997). Over 750 drug-free babies have been born to drug court participants in the last decade. Over 3,500 participants have regained custody of their children and over 4,500 are again able to make child support payments (Belenko, 1998; Lewis, 1998; Peters, 1996, 1999). Recidivism appears to be lower for drug court participants than for those who receive other types of sentencing (Deschenes, Turner & Greenwood, 1995). The model
appears to have many advantages from a social perspective, as well as from a cost-benefit perspective. It also appears to provide a useful arena for partnerships between psychologists and the courts (Foxhall, 2001).

**A PSYCHOLOGICAL PERSPECTIVE ON DRUG COURT TREATMENT**

Although many psychologists have often seen forced, or coerced, treatment as less than optimal, research suggests that, in the case of substance abuse offenders, there may be benefits. For example, beyond a 90-day threshold, treatment outcomes appear to improve in direct relationship to the time spent in treatment, with one year generally found to be the minimum effective duration for treatment (Simpson & Sells, 1983). Over 60% of those who enter treatment through drug court models are still in treatment after one year (Belenko, 1998) compared to only 10% of voluntary participants (Langenbacher, McCrady, Brick & Esterly, 1993). Clients who remain in treatment for extended periods of time apparently overcome much of the initial resistance coercion creates, as research on the outcomes of many U.S. drug courts shows successful outcomes despite initial perceptions of coercion on the part of participants, especially when continued individual and group counseling is mandated in the treatment program (Satel, 2001). Thus, from a psychological perspective, drug court models which keep clients in treatment with qualified clinicians for a duration of over one year, whether the initial entry is viewed as coerced or not, are likely to show success. Cognitive-behavioral therapy appears to be an especially useful approach with recovering addicts (Tiffany, 1990).

Assisting recovered addicts in dealing with cues to prevent relapse is also critical from a psychological perspective (Foxhall, 2001; Marlatt, 1985). Therefore, a drug court model that includes extensive focus on a relapse prevention plan is likely to assist in client success. Because “triggers,” or people, places, things and events that have become associated with drug use through classical conditioning (Spurgeon, McCarthy & Waters, 1999), can also trigger relapse, long-term programs that establish new habits, social networks and living arrangements are likely to demonstrate more success. Goal-setting, and the increased self-efficacy and sense of personal control that arises from meeting goals are also likely to be important to treatment success. Certainly there is evidence that a variety of variables, including: (a) drug history, (b) history of physical or social abuse, (c) family of origin alcohol or substance abuse, (d) length of abstinence, (e) employment status, (f) social support system/access to services, (g) religious affiliation, and (h) cultural cohort variables related to age and ethnicity impact success rates. Type of treatment (group or individual; cognitive-behavioral or psychodynamic) and length of treatment are also related to success rates. Long-term individual therapy utilizing a cognitive-behavioral approach seems to show evidence of being the most efficient treatment strategy.
overall, especially when combined with goal-setting and social support which leads to improved self-efficacy. Education, job satisfaction, economic improvement, stable family relationships and friendships are also correlated with success. An effective drug court model should combine all of these forms of support for optimum success. Psychologists should have an important role in designing and delivering services for criminal justice agencies and courts that develop drug courts.

YUMA COUNTY DRUG COURT MODEL

*County demographics.* Yuma County, a rural area covering approximately 5,600 square miles in southwestern Arizona with a population of approximately 200,000 is located on the borders of Mexico and California. This area is considered the “drug corridor” by many U.S. justice agencies and use of heroin, methamphetamine and marijuana are reported to be especially high, proportionally, by those working in local criminal justice agencies. Yuma is a city of approximately 80,000. Several smaller communities, including Wellton, Mohave, Somerton, San Luis, Hyder and Rolle and two major military installations, the Marine Corps Air Station and the U.S. Army Proving Grounds, also are included in Yuma County. The economy is based primarily on agriculture, the military and tourism. Over 50% of the population are Latino or Hispanic. Other ethnic groups represented 2% Black or African American, 1% Asian, 1% Native American, and 44% White or Anglo.

*Drug court history and mission.* Yuma County’s Office of Adult Probation and the Yuma County Superior Court began a drug court on March 26, 1998. Since that time, over 60 individuals have graduated from the program and approximately 60 more are currently involved. The mission of the Yuma County Drug Court is to counter the devastating effects of substance abuse on the community by providing selected nonviolent offenders with an opportunity to achieve a more positive (and legal) lifestyle. The program is voluntary. It includes regular court appearances before a designated judge, mandatory and regular drug testing, individual and group counseling, vocational and educational assessment, referrals for vocational training, education or job placement and group support. There are two tracks within the model. Defendants eligible for Track I are offered a choice between drug court participation and prosecution on pending charges. In Track II, previously convicted offenders on probation are referred to the court as a result of petitions to modify or revoke probation. Participants who successfully complete all requirements of the drug court are honored at a special graduation ceremony and have the charges against them dismissed (Track I) or probation terminated early (Track II).

*Eligibility.* In order to be eligible for the program, offenders must volunteer and must be legal U.S. residents, not currently on methadone treatment and with no current dual diagnoses. They cannot have any felony convictions for
violent crimes or any pending or prior convictions for sex offenses, and they may not have any history of drug importation. Track I participants may have been arrested for possession of drugs or drug paraphernalia, use of drugs or low levels of possession for sale. Track II participants may have been convicted for possession of drugs or paraphernalia or other felonies in which it is determined that the original offense was related to a substance abuse problem. The offenses must be probation-eligible offenses, and the sentencing judge is given the responsibility of determining eligibility. Final determination of eligibility and acceptance is at the discretion of the Adult Drug Court team.

Treatment. Treatment is delivered in four phases. During the first phase of treatment, the focus is on stabilization, orientation and assessment of needs. This phase lasts approximately 8 weeks. During Phase I, participants are required to participate in group counseling sessions with a substance abuse treatment specialist at least twice weekly. In addition, one individual counseling session per week is provided and three weekly support group meetings (12-step or other approved recovery group) are required. Needs assessment, including psychological, social, economic and vocational summaries, is a focus of these sessions. In addition, a weekly court appearance, which is structured in a support-group format and weekly contact with the supervising case manager is required. Counseling is, thus, intensive and occurs daily. Breathalyzers are given before each group meeting and urinalysis is required, on an unannounced basis, three times per week. In order to remain in the program, no drugs or alcohol are allowed during this time, and assessed fees must also be kept current.

After successful completion, participants continue to Phase II. During this 22-week phase, a focus on intensive treatment and needs assessment continues. Twice weekly group counseling sessions continue. Individual counseling is reduced to once per month and support group meetings are reduced to twice weekly. One fellowship (faith-based) meeting per month is also required. Twice weekly breathalyzer testing continues. Drug testing is also reduced to twice weekly. Contact with the case manager and court appearances occur every two weeks. With the therapist, each participant develops a written draft of a relapse prevention plan during this time. Referrals for vocational/educational counseling to focus on designated areas for life improvement, such as life skills training, structured job search, General Equivalency Degree (GED) training for non-graduates of high school, vocational testing and job or career training are given and arranged. Financial/legal assessment and planning sessions which includes identification of outstanding legal matters such as warrants, tickets, child support and other debts and development of a plan to resolve these issues are also incorporated during this phase. As in the previous phase, in order to remain in the program, no drugs or alcohol are allowed during this time, and assessed fees must be kept current.
Phase three lasts for 10 weeks. During this time, group counseling is required once per week. Group support meetings are required twice per week and a fellowship meeting (faith-based) is required once per week. Individual counseling is discontinued. A mentor or sponsor from the support group or fellowship group is selected, and contact with this person must occur at least once per week. Breathalyzer and drug testing is reduced to once per week, on a random basis. Court appearances and contact with the case manager is required only once per month. During this phase, it is mandatory to have and maintain stable living arrangements, and to finalize and be able to explain the relapse prevention plan developed earlier with the therapist. Also, fees must be current and no evidence of drug or alcohol use may be evidenced.

The final phase lasts until graduation, and requires participation in one group counseling session each week, at least one support group meeting per week, drug testing and breathalyzer once per week, weekly contact with mentor or sponsor, monthly contact with case manager, monthly court appearance, monthly alumni meeting and participation in at least one organized recreational activity per month. In order to graduate, participants must have at least 120 consecutive days clean and sober, be showing consistent progress toward educational and/or vocational goals, be following their recovery/relapse plan successfully and making progress toward resolving any remaining legal problems. They must have successfully completed all four phases, make sure fees are paid in full and complete a graduation questionnaire.

Since 1998, over 250 cases have been referred to drug court. In 20% of the referrals, the client declined the option. Another 25% were declined entry for a variety of reasons. Of those who were accepted, approximately 50% graduated or are currently participating. The remainder were discharged for failure to comply with the requirements. This study examines the long-term success of a sample of graduates who successfully completed the program to assess the sustained effectiveness of this treatment option and recommends strategies for psychologists working to improve similar models.

**METHOD**

**Subjects**

All graduates (N = 64) of the Yuma County Drug Court were invited to participate in the study. Those who agreed (N = 29) were contacted by a trained graduate assistant from a counseling program following their graduation. Participants included 19 males and 10 females. Data was also available from counselors and arrest records on seven additional graduates. The remaining graduates refused to participate in the study (n = 7) or could not be located (n = 21). Thus, data is available on approximately 60% of the graduates.
Instrumentation

Each subject completed the Addiction Severity Index (Fureman, Parikh, Bragg & McClellan, 1996) and the Center for Substance Abuse Treatment Client Outcomes for Discretionary Programs Questionnaire (Substance Abuse & Mental Health Services Administration, 2001). In addition, subjects were questioned to see how successful they had been at following their relapse prevention plans. Additional interview questions determined the following:

1. Has the subject maintained a drug-free lifestyle since graduation?
2. Is the graduate gainfully employed?
3. Has there been future contact with the criminal justice system?
4. What steps have been taken to improve quality of life and how do graduates rate the quality of their life?
5. How do graduates rate the quality of their relationships with significant others?
6. Have relapses occurred? If so, what seemed to trigger these?

Procedure

Interviews were conducted by a trained graduate student from a counseling program at the convenience of the subjects. Subjects were contacted at intervals of 18, 12, 9, 6 and/or 3 months after graduation from drug court. A total of 40 interviews were conducted. Eight of the participants completed interviews at more than one data point. The interviews were administered either at the subject’s home, workplace or another community location convenient to the subject. Each lasted approximately one hour. The research team then reviewed all interview notes and ASI scores and results were compiled.

RESULTS

Of the 19 males and 10 females interviewed, 4 males and 2 females reported that they had relapsed and were again using illegal substances. Although the ASI also screens for alcohol use, use of alcohol was not considered a relapse as it is not an illegal substance. Fourteen of the subjects, or approximately one-half, reported moderate alcohol use. Two of the subjects who self-reported drug relapse also reported alcohol use. Two more of the male subjects were considered to have relapsed based on interviewer observation and other reports. For purposes of this study, the seven subjects who have been re-arrested on drug charges or reported to be using by their counselors will also be considered to have relapsed. Thus, 15 of the 36 subjects on whom data is currently
available have relapsed after graduating from drug court. Relevant information on each of the subjects appears in Table 1.

Details about each subject’s drug history, length of abstinence, religious affiliation, history of emotional or physical abuse, history of family alcoholism, gender, age and ethnicity appear in Table 1. Interview data suggests that the focal questions can be answered, for this group, as follows:

1. Has the subject maintained a drug-free lifestyle since graduation? The majority of graduates have done so, but below the national average reported for similar programs.
2. Is the graduate gainfully employed? Although all but two graduates are currently employed, over half are in unstable, poorly paying and unrewarding jobs.
3. Has there been future contact with the criminal justice system? For five subjects.
4. What steps have been taken to improve quality of life and how do graduates rate the quality of their life? The majority of subjects report satisfaction. Two are continuing their education. Several more are making positive lifestyle changes, planning marriages or seeking career training or advancement. Material goals, such as vehicles or better housing, are cited by many and progress toward these goals is noted.
5. How do graduates rate the quality of their relationships with significant others? Thirteen of the subjects seem to have positive, stable relationships with friends and families. Limited social support seems to be a problem for over one-half of the group, however. This may be related to the unique problems of living in a rural, rather than an urban, area where fewer opportunities exist for establishing new social ties.
6. Have relapses occurred? If so, what seemed to trigger these, and what was the response? Over one-third of the subjects have relapsed since graduation. No clear patterns related to any of the variables examined seemed to characterize these relapses.

ASI Score Changes and Lifestyle Changes Across Time

Ten participants completed interviews at more than one data point. This data is discussed from a longitudinal perspective, below. Other interview results were compared from the perspectives of severity of ASI scores across time.

Summary of Changes Between 3 and 6 Months

Data was available on Subject Z at 3- and 6-month intervals after graduation from drug court. ASI interview ratings were zero on all dimensions at 3
months. At six months, a rating of 3 was assigned to “need for family counseling” and the subject reported difficulty with his girlfriend. He also reported health problems, and was receiving disability and unable to work. According to the data, he had not resumed the use of illegal substances at the conclusion of the study.

**Summary of Changes Between 6 and 9 Months**

Data was available on five subjects at 6- and 9-month data points. Subject N had ASI scores of zero in all areas at both interviews. He reported some health
problems. He had secured steady employment in sales and reported rewarding relationships with his spouse and close friends. Subject P began using marijuana and amphetamines again between the 6- and 9-month interviews. At her first interview, she had been assigned a score of “2” on need for family counseling and a score of 1 on “need for employment counseling.” At the second interview, she was assigned a score of 2 for “need for employment counseling,” a score of 3 for treatment for drug counseling and a 4 for “need for family counseling.” Custody problems, dissatisfaction with employment and unfulfilling relationships seemed to characterize her experiences during this time.

Subject V reported satisfying work and family relationships and planned to continue her education. She received scores of zero in all areas at both interviews and appeared to be functioning very well. Subject Y also received scores of zero in all areas at both interviews. She was not involved in a relationship, and was still living at home with her parents. She did not maintain her employment during the three-month interval, and was looking for work at the time of the second interview. She did report satisfying and supportive friendships. Subject AA was not working at either interview due to illness. He reported good relationships with his mother and children and no problems, other than health-related, were evident. He received scores of zero on all ASI dimensions at each interview.

**Summary of Changes Between 9 and 12 Months**

Longitudinal data was available at both 9- and 12-month data points for six subjects.

Subject I, who had an ASI score of zero on all scales except need for psychological treatment (score of 2), was arrested for theft and reported to again be abusing illegal drugs 12 months after graduating from drug court.

Notable changes during this three-month period for Subject J included leaving a girlfriend who was using drugs, becoming increasingly responsible for his children by a previous marriage and maintaining satisfying employment. ASI scores did not differ between the two interviews; all areas were zero at both interviews.

Subject K completed high school and developed stronger relationships with his children and family between 9- and 12-month interviews. His severity index scores were also zero on all dimensions at both interviews. He also maintained employment.

Subject L also received zeros on all ASI items at both interviews. She reported a supportive relationship with her husband, and was staying home to raise her three young children, one of whom is autistic.

Subject N reported health problems, increased responsibility and satisfaction at work and a supportive relationship with his spouse during the three-month interim between 9- and 12-month interviews. He also had scores of zero on all ASI dimensions.
Comparison of Self- and Administrative Report

Self-report data appeared to be reliable in most instances. In only two cases (subjects C and I) did there appear to be a discrepancy between administrative and self-report. This may be because of a self-selection factor, however. Graduates who were willing to participate in the study may have been more confident of their ability to remain drug-free.

Comparison of ASI Scores Across Time

The ASI measures a client’s need for treatment as perceived by the interviewer on a Likert-type scale of 0 (low) to 9 (high) in each of seven areas: medical services, employment counseling, alcohol problems, drug problems, legal services, family and/or social counseling and psychiatric and/or psychological counseling. As depicted in Table 2, most participants received scores of zero in all areas of the ASI. Means for each domain at each time period is presented. Each was assessed for significance at the .01 level via ANOVA. Although no areas were significant (likely due to the small sample size), several patterns were evident. Employment difficulties and problems with family and social support were most common. A qualitative analysis of the data indicated that these problems were generally precursors or co-occurring difficulties for those who did relapse. All of the subjects who relapsed had difficulties noted in one or both of these areas. Only two of the subjects who did not relapse had family or social support difficulties and none had difficulties maintaining employment.

DISCUSSION AND IMPLICATIONS

Life Domains Which Appear to Affect Substance Use Patterns

Longitudinal data suggests that maintaining strong, supportive relationships with family and friends, achieving goals and job satisfaction characterize those who succeed. When any of these factors are absent, subjects appear more likely to again begin abusing illegal substances. Long-term social support may be important for maintaining success. Employment counseling and support finding appropriate jobs also seems to be a necessary component to ensure long-term success.

ASI as a Predictor of Relapse

All subjects who relapsed except one had non-zero scores on the ASI in one or more areas. Family/social support were noted as problematic for nearly 60%
or those who relapsed. Employment was noted as an area of concern for 43% and psychological counseling was rated as a need for 30%. Of those who did not relapse, only 5% were noted as in need of family counseling and only 5% were noted as in need of psychological services. No other domains were rated above zero. Although the sample size is too small to justify quantitative analysis, these trends suggest that the ASI severity rating scale may be a valid predictor of potential for relapse and further study is warranted.

### Fidelity of Relapse Prevention Plans

The participants, overall, appeared to be functioning well and not in need of treatment after their drug court rehabilitation. Their relapse prevention plans appeared to work effectively and they seemed able to maintain the skills they had acquired.

Among those who were not able to do so, social support and lack of rewarding employment seemed to be the most problematic areas. Several regional characteristics may make success particularly challenging. Establishing new networks of social support may be more difficult in rural than in urban settings.

### Table 2: Comparison of Mean ASI Scores of Yuma Drug Court Graduates in Each Domain at 3, 6, 9, 12 and 18 Months After Program Completion

<table>
<thead>
<tr>
<th></th>
<th>3 mos.</th>
<th>6 mos.</th>
<th>9 mos.</th>
<th>12 mos.</th>
<th>18 mos.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N</strong></td>
<td>2</td>
<td>14</td>
<td>9</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td><strong>Medical</strong></td>
<td>0.00</td>
<td>0.21</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Employment</strong></td>
<td>0.00</td>
<td>0.07</td>
<td>0.22</td>
<td>0.50</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Alcohol</strong></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Drugs</strong></td>
<td>0.00</td>
<td>0.00</td>
<td>0.33</td>
<td>0.42</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Legal</strong></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Family/Social</strong></td>
<td>0.00</td>
<td>0.86</td>
<td>0.44</td>
<td>0.25</td>
<td>0.33</td>
</tr>
<tr>
<td><strong>Psychological</strong></td>
<td>0.00</td>
<td>0.21</td>
<td>0.00</td>
<td>0.58</td>
<td>1.33</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td>0.00</td>
<td>1.36</td>
<td>1.00</td>
<td>1.75</td>
<td>1.67</td>
</tr>
</tbody>
</table>

Note: Range for each item is 0–9.
Maintaining stable and rewarding employment in an economically disadvantaged region is more difficult. A long-term treatment model which focuses on enhancing social support structures with peers who do not evidence a history of substance abuse may be useful. The Yuma Drug Court has responded to this need by initiating an “Alumni Group” that organizes social, recreational activities for graduates. This may help future graduates develop stronger positive social ties which are maintained after graduation. Training in areas such as goal-setting, time-management and career enhancement, as well as support for improved education, also seems warranted. Attaining goals is one of the most commonly cited reasons for life satisfaction by subjects interviewed. Long-term career counseling and job placement services also seem to be needed to enhance success of future graduates.

**Criminal Involvement Between Graduates and Non-Graduates of Drug Court Compared**

The success rate of Yuma County’s Drug Court has been comparable to nationally reported drug court success rates which tend to be around 75%, and is above the greater than 50% recidivism rates generally reported for substance-abuse offenders who are not treated in a drug court model. Although local data on recidivism rates is not available in Yuma County due to a lack of funding (Valenzuela, 2001; White, 2001), observations seem to indicate a similar pattern (White, 2001). Despite the many regional characteristics which may make success particularly challenging, Yuma County Drug Court graduates appear to fare at least as well, and perhaps slightly better, than graduates of drug courts in other areas (Valenzuela, 2001).

**CONCLUSIONS**

This study provided important information about the precursors for success or failure of drug court graduates in Yuma County which may, perhaps, be generalized to others in similar rural areas. First, time did not appear to be a significant predictor of success or failure among the group studied. Relapse was as likely to occur at 3, 6, 9, 12 or 18 months after graduation. Rather than increased time from treatment, the variables that appeared to be important in predicting relapse were family problems, lack of social support and employment difficulty. ASI severity scales did not appear to differ significantly over time for those studied, but the instrument did appear to be a useful tool in predicting relapse.

This study supports the overall utility of incorporating a drug court model into rural criminal justice agencies to treat those convicted on drug-related charges. Not only is the model more cost-effective than incarceration, it is also better at preventing recidivism. The majority of graduates are able to success-
fully carry out their relapse prevention plans and graduation plans. Their criminal involvement after graduation appears to be significantly less than that of offenders who have not been treated in a drug court model and, for those who do recidivate, time to first arrest appears to be longer among drug court graduates than for non-graduates.

It is also worth noting that, for the group studied, self-report measures appeared to be reasonably valid. This finding needs to be interpreted cautiously due to the small sample size and the nature of the study. Use of volunteers, although required from an ethical human subjects standpoint, does likely introduce a self-selection bias among subjects.

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**AUTHORS’ NOTES**

Sherri McCarthy, PhD, is an associate professor of Educational Psychology at Northern Arizona University-Yuma. She holds a doctorate in educational psychology with an emphasis in human development and cognition. She teaches courses in adolescent psychology, developing critical thinking skills, behavior management and personality adjustment. Her research focuses on teaching critical thinking and coping skills and on applications of psychology to education and criminal justice. She has written books on bereavement counseling and special education issues and recently had a chapter published on educational strategies to reduce the likelihood that adolescents will commit acts of terrorism in *The Psychology of Terrorism, Vol. 3* (Greenwood Press, 2002), edited by Chris Stout. Dr. McCarthy is active in APA’s International Psychology Project through Division 2 and served on the organizing committee for the first international conference on the teaching of psychology for applied settings in St. Petersburg, Russia.

Thomas Franklin Waters, PhD, is an associate professor of Criminal Justice at Northern Arizona University-Yuma. He earned his doctorate in criminal justice from the University of Arizona with additional training from the University of Denver and the National Institute of Corrections. He has worked in rehabilitation programs in several prisons throughout the U.S. He recently completed a sabbatical project comparing opportunities for careers in criminal justice agencies for women in U.S. and Mexican agencies. Dr. Waters teaches courses in a variety of areas, including drug issues and the law, research methods in criminal justice and other current topics. He is active in the criminal justice community, cooperating with juvenile and adult probation agencies and police agencies throughout Arizona in a variety of projects and program evaluations.

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