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Defendant Questionnaire:
Drug Court / Defendant Assessment

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ABSTRACT

The Defendant Questionnaire (DQ) is an adult drug court defendant assessment test that accurately measures defendant risk of violence (lethality), substance (alcohol and drugs) abuse, antisocial attitudes, emotional and mental health problems. DQ test results for 1,868 adult defendants are presented in this study. Reliability analyses demonstrate that all DQ scales had very high alpha reliability coefficients of between .85 and .94. Significant scale score differences between first and multiple offenders (2 or more arrests) support the discriminant validity of DQ scales. The Violence and Antisocial Scales identified 100% of defendants who admitted being violent and antisocial. The Alcohol and Drug Scales correctly identified 100% of the defendants who had been treated for alcohol and drug problems. Defendant Questionnaire classification of defendant risk was demonstrated to be within 1.6% of predicted risk range percentile scores. The Defendant Questionnaire is a reliable, valid and accurate test for adult drug court defendant assessment.

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Accurate identification of defendant problem severity enables placement of defendants in appropriate levels of supervision, intervention and treatment. The importance of matching defendant risk/needs with levels of supervision and intervention cannot be overemphasized. Research has shown that placing low risk defendants in programs meant for high risk defendants can be detrimental to low risk defendants, often making it more likely that the low risk defendants will re-offend (Andrews, Bonta & Hoge, 1990). The DQ helps in selecting appropriate supervision levels, intervention, counseling and treatment alternatives.

The DQ incorporates defendants criminal history into risk/needs assessment. According to Fulton, Gendreau and Paparozzi (1995) combining criminal history along with other offender behavioral history is essential for accurate risk/needs assessment. These important variables are contained in the DQ. Defendant criminal history combined with DQ criminogenic needs variables accurately identifies defendant risk/needs. In addition, a test that is multidimensional lends itself to recidivism prediction. The present study investigated the reliability, validity and accuracy of the Defendant Questionnaire.

Method

Subjects

There were 1,868 adult drug court defendants tested with the Defendant Questionnaire. There were 1,345 males (72%) and 523 females (28%). The ages of the participants ranged from 18 through 60 as follows: 19 & under (15.9%); 20-29 (36.3%); 30-39 (27.5%); 40-49 (15.2%); 50-59 (4.6%) and 60 & Over (0.8%). The demographic composition of participants was as follows. Race/Ethnicity: Caucasian (67.9%); Black (9.5%), Hispanic (19.5%) and Other (3.2%). Education: Eighth grade or less (7.9%); Some high school (27.0%); High school graduate/GED (48.2%); Some college (11.5%) and College graduate (5.4%). Marital Status: Single (59.9%); Married (25.6%); Divorced (9.1%); Separated (4.2%) and Widowed (1.1%).

Over 69 percent of the participants were arrested two or more times. Twelve percent of all defendants had six or more arrests. Over one-third (37.4%) of the defendants had one or more felony arrests. Over one-fourth (29.6%) of the participants had two or more alcohol arrests and 9.7 percent of the defendants had two or more drug arrests. Over 30 percent of the defendants had their first arrest before the age of 18 and 60.7 percent were arrested by the age of 21.

Procedure

Participants completed the DQ as part of their screening and assessment by court services programs. The DQ contains six measures or scales and the Substance Abuse/Dependency Classification Scale. These scales are briefly described as follows. The Truthfulness Scale measures the truthfulness of the respondent while taking the DQ. The Alcohol Scale measures severity of alcohol use or abuse. The Drugs Scale measures severity of drug use or abuse. The Violence Scale measures offender proneness to commit violence. The Antisocial Scale measures antisocial behavior, e.g. lying, uncaring, irresponsible, unsocial, emotionally blunted, needless conning, etc. The Stress Coping Abilities Scale measures ability to cope with stress. A score at the 90th percentile or higher on this scale identifies established emotional and mental health problems. The Substance Abuse/Dependency Classification Scale contains reformatted DSM-IV criteria for classifying defendants as substance abuser or substance dependent. It is a classification and not a measurement scale, defendants either meet criteria or they do not.

Results and Discussion

DQ screening results are easy to interpret and permit a straightforward system for classifying risk. In the DQ, scale scores are presented as percentiles that range from zero to 100. The DQ has four risk categories: low risk (zero to 39th percentile), medium risk (40 to 69th percentile), problem risk (70 to 89th percentile), and severe problem risk (90 to 100th percentile). By definition the expected percentages of defendants scoring in each risk range (for each scale) is: low risk (39%), medium risk (30%), problem risk (20%), and severe problem risk (11%). Defendants who score at or above the 70th percentile are identified as having problems. Defendants scale scores at or above the 90th percentile identify severe problems.

Risk range percentile scores are derived from scoring equations based on defendants' pattern of responding to scale items and criminal history, when applicable. These results are presented in Table 1. Risk range percentile scores represent degree of severity. The higher the percentile score is the higher the severity of the defendant's problems.

Analysis of the accuracy of DQ risk range percentile scores involved comparing the defendant's obtained risk range percentile scores to predicted risk range percentages as defined above. The percentages of defendants expected to fall into each risk range are shown in parentheses in the top row of Table 1. The actual percentage of defendants falling in each of the four risk ranges, based on their risk range percentile scores, was compared to these predicted percentages. The differences between predicted and attained are shown in parentheses.

As shown in Table 1, DQ scale scores were very accurate. The objectively attained percentages of participants falling in each risk range are very close to the expected percentages for each risk category.

All of the attained risk range percentages were within 1.6 percentage points of the expected percentages and most (18 of the 24) were within 1.0 percentage points. Compared to predicted percentages attained risk range percentages were 99% accurate. These results demonstrate that DQ scale scores accurately identified defendant risk.

Table 1. Accuracy of DQ Risk Range Percentile Scores

Scale	Low Risk (39% Predicted)		Medium Risk (30% Predicted)		Problem Risk (20% Predicted)		Severe Problem (11% Predicted)	
Truthfulness	37.6	**(1.4)**	30.9	**(0.9)**	21.6	**(1.6)**	9.9	**(1.1)**
Alcohol	39.8	**(0.8)**	29.4	**(0.6)**	20.3	**(0.3)**	10.5	**(0.5)**
Drugs	40.3	**(1.3)**	29.4	**(0.6)**	19.6	**(0.4)**	10.7	**(0.3)**
Antisocial	40.1	**(1.1)**	30.1	**(0.1)**	19.6	**(0.4)**	10.2	**(0.8)**
Violence	40.1	**(1.1)**	29.2	**(0.8)**	20.2	**(0.2)**	10.5	**(0.5)**
Stress Coping	38.7	**(0.3)**	29.9	**(0.1)**	20.5	**(0.5)**	10.9	**(0.1)**

The inter-item reliability (alpha) coefficients for the DQ scales are presented in Table 2. All scales were highly reliable. Reliability coefficient alphas for all DQ scales were at or above 0.85. These results demonstrate that the DQ is a very reliable adult defendant assessment test.

Table 2. Reliability of the DQ (N=1,868)

DQ SCALES	Coefficient Alphas
Truthfulness Scale	**.90**
Alcohol Scale	**.94**
Drugs Scale	**.93**
Antisocial Scale	**.85**
Violence Scale	**.87**
Stress Coping Abilities	**.93**
Substance Abuse/ Dependency Scale*	**.94**

All coefficient alphas are significant at $p<.001$.

*The Substance Abuse/Dependency Classification Scale is a classification as opposed to a measurement scale derived from DSM-IV criteria. Dependency and abuse items do not measure the extent to which predicted criteria are met. However, the Substance Abuse/Dependency Scale's coefficient alpha is included here because it demonstrates that DSM-IV dependency and abuse items as incorporated in the DQ are also reliable.

Discriminant validity of DQ scales was studied by comparing first and multiple offenders' scale scores. Multiple offenders reported two or more arrests and first offenders had one or no arrest. Multiple offenders would be expected to score higher on DQ scales because having a second and subsequent arrest is indicative of serious problems. It was hypothesized that statistically significant differences between multiple and first offenders would exist and DQ scales would differentiate between first and multiple offenders.

In the following analyses the DQ answer sheet item "Total number of times arrested" was used to define first offenders and multiple offenders (2 or more arrests). T-test comparisons were used to study the statistical significance between first and multiple offenders. There were 634 first offenders and 1,234 multiple offenders. The Alcohol and Drugs Scales were also analyzed using alcohol and drug arrests. "Number of alcohol arrests" was used for the Alcohol Scale, which had 1,332 first offenders and 536 multiple offenders (2 or more arrests). " Number of drug arrests" was used for the Drugs Scale, which had 1,693 first offenders and 175 multiple offenders (2 or more arrests).

Table 3. Comparisons between first offenders and multiple offenders (N=1,868).				
DQ Scale	**First Offenders Mean**	**Multiple Offenders Mean**	**T-value**	**Level of Significance**
Truthfulness Scale	11.99	10.33	t = 5.53	p<.001
Alcohol Scale	6.71	13.58	t = 12.44	p<.001
Drugs Scale	8.10	13.17	t = 8.76	p<.001
Antisocial Scale	11.56	24.23	t = 33.19	p<.001
Violence Scale	8.29	19.57	t = 25.33	p<.001
Stress Coping Abilities	130.16	116.68	t = 5.83	p<.001
*Alcohol Scale	6.93	21.97	t = 22.06	p<.001
*Drugs Scale	9.84	26.99	t = 15.58	p<.001

*Note: Defendant status defined by alcohol and drug arrests. The Stress Coping Abilities Scale is reversed in that higher scores are associated with better stress coping skills.

Table 3 shows that mean (average) scale scores of first offenders were significantly lower than scores for multiple offenders on all DQ scales with the exception of the Truthfulness Scale. As expected, multiple offenders scored significantly higher than did first offenders. Truthfulness Scale results suggest that first offenders tried to minimize their problems or fake good when tested more than did multiple offenders. This result indicates that in court settings, first-time offenders minimize their problems, perhaps in an attempt to lessen consequences of their situation. The DQ accurately differentiated between first offenders and multiple offenders. These results demonstrate that DQ scales are valid.

As shown in Table 3, both the Alcohol Scale and Drugs Scale demonstrate even greater differences than total number of arrests in scale scores between first offenders and multiple offenders. Both scales are significant at p<.001. The mean Alcohol Scale score for the multiple offender group was 21.97 while the first offender group mean score was 6.93. The mean Drugs Scale score for the multiple offender group was 26.99 while the first offender group mean score was 9.84. Higher DQ scale scores mean more severity of problem behavior. These results support the hypothesis that multiple offenders, because of their history of arrests, score higher than first-time offenders do. The defendants who were believed to have more severe problems (multiple offenders) scored significantly higher on these scales than first-time offenders.

Multiple offenders scored significantly higher on the Stress Coping Abilities Scales than did first offenders. Defendants who have multiple arrests demonstrate emotional problems and problems handling stress in their lives, beyond just the expected problem-prone behaviors. Defendants exhibit emotional and personality problems and these problems must be addressed if these defendants are to be helped. Changing defendant problem-prone behavior entails resolving emotional and personality problems.

Relationships between defendants' criminal history and their DQ scale scores are presented in Table 4. Statistically significant correlation coefficients between DQ scales and criminal history variables also validates DQ scale scores. DQ scales that measure problem-prone behavior were expected to be correlated with variables that indicate defendant problems, such as the number of times they have been arrested, their age at first arrest and probation records. For example, the DQ Alcohol Scale should be correlated with number of alcohol-related arrests and the Drugs Scale should be correlated with drug-related arrests. Defendant criminal history variables were obtained from DQ answer sheets that were completed by the defendants.

The DQ scales included in this analysis were the Alcohol, Drugs, Antisocial and Violence Scales. These scales measure problem-prone behavior that can result in defendant arrests. The Truthfulness and Stress Coping Abilities Scales are not included because these scales measure emotional and mental health factors.

Table 4. Relationships between Criminal History Variables and DQ Scales				
	Alcohol Scale	**Drugs Scale**	**Anti-social**	**Violence Scale**
Age at first arrest	-.028^	-.157*	-.210*	-.191*
Total number of arrests	.286*	.222*	.592*	.505*
Times on probation	.205*	.077*	.445*	.331*
Alcohol arrests	.380*	.062**	.323*	.204*
Drug arrests	.117*	.485*	.421*	.273*

Significant levels, * p<.001, ** p<.01, ^ n.s. .

Age at first arrest is significantly correlated with the Drugs, Antisocial and Violence Scales. The negative coefficients indicate that the younger a defendant was at their first arrest the higher their scale scores were. Total number of arrests is correlated with all scales. The highest correlation coefficients occur with the Antisocial and Violence Scales. These results indicate that defendants have been arrested for crimes other than alcohol and drug offenses. Similar coefficients were obtained with number of times on probation. The Alcohol Scale is significantly correlated with alcohol-related arrests. The Drugs Scale is significantly correlated with drug-related arrests. These results are in agreement with the discriminant validity results reported above. Significant correlation with alcohol and drug arrests supports the validity of the Alcohol and Drugs Scales, respectively. The magnitude of the correlation coefficients are moderate and suggest that criminal history variables alone do not predict defendant problems. DQ scales, that measure problem-prone behaviors, are needed for accurate prediction of defendant problems.

Predictive validity of DQ scales was examined by determining the accuracy at which the DQ identified violent prone defendants, defendants with antisocial attitudes, problem drinkers and problem drug abusers. Accurate tests differentiate between problem and non-problem defendants. An inaccurate test, for example, may too often call non-problem drinkers problem drinkers or vice versa. Having been in alcohol or drug treatment identifies defendants as having an alcohol or drug problem. Defendants who have been in alcohol or drug treatment would be expected to score in the problem range on the Alcohol or Drugs Scales. It is likely that some defendants have an alcohol or drug problem but have not been in treatment. DQ database information, i.e., responses to test items obtained from the defendants', serve as criterion measures. With regards to violence and antisocial attitude, defendants direct admissions of problems were used as the criteria.

For the predictive validity analyses defendants were separated into two groups, those who had treatment or admitted problems and those who have not had treatment or did not admit to problems. Then, defendant scores on the relevant DQ scales were compared. It was predicted that defendants with an alcohol treatment history would score in the problem risk range (70^{th} percentile and above) on the Alcohol Scale. Similarly, offenders who had drug treatment, violence and antisocial problems were predicted to score higher than offenders not admitting to these problems. Non-problem is defined in terms of low risk scores (39^{th} percentile and below). The percentage of defendants that have been in treatment or admit problems and also score in the 70^{th} percentile range and above is a measure of how accurate DQ scales are. High percentages of defendants with treatment and problem histories and elevated problem risk scores would indicate the scales are accurate. Because criterion measures were gotten from the DQ database a lack of suitable criterion measures prevented carrying out predictive validity analyses on the other two DQ scales. The test items used in these analyses were, "I have been enrolled in one or more treatment programs for alcohol problems," "I have been enrolled in one or more treatment programs for drug problems," "I have been arrested for assault or a violent crime," "Two or more of the following are true: Cold or indifferent, lying or manipulative, lack of remorse or regret, harassing or threatening, unsympathetic or uncaring."

Predictive validity results for the correct identification of problem behavior (violence tendencies, antisocial attitudes, drinking and drug abuse problems) are analyzed in terms of the percentages of defendants that had treatment or admitted to having problems and who scored in the problem risk range. For the Alcohol and Drugs Scales criteria, problem behavior means the defendant had alcohol treatment or drug treatment. For the Violence Scale criterion the defendant admitted having been arrested for a violent crime. For the Antisocial Scale, defendants admitted being antisocial. In these analyses scale scores in the Low risk range (zero to 39th percentile) represent "no problem," whereas, scores in the Problem and Severe Problem risk ranges (70th percentile and higher) represent alcohol, drugs, violence or antisocial problems.

The DQ Alcohol Scale was very accurate in identifying defendants who have alcohol problems. There were 410 defendants who had been in alcohol treatment and these defendants were classified as problem drinkers. All 410 defendants, or 100 percent, had Alcohol Scale scores at or above the 70th percentile. The Alcohol Scale correctly identified all of the defendants categorized as problem drinkers. It is likely that some defendants have alcohol problems but have not been in treatment. For these individuals scoring at or above the 70th percentile on the Alcohol Scale alcohol treatment is recommended. These results demonstrate that the Alcohol Scale is valid.

The DQ Drugs Scale was also very accurate in identifying defendants who have drug problems. There were 323 defendants who had been in drug treatment, 316 defendants, or 97.8 percent, had Drugs Scale scores at or above the 70th percentile. These results strongly substantiate the accuracy of the DQ Drugs Scale.

The Violence Scale accurately identified (**100%**) defendants who admitted violence problems. Defendants who had been arrested for a violent crime scored in the problem range. The direct admission of a violence problem validates the Violence Scale. The Antisocial Scale accurately identified (**99%**) offenders who admitted to being antisocial. Direct admission of antisocial attitudes validates the Antisocial Scale. These results demonstrate that the DQ Violence, Antisocial, Alcohol and Drugs Scales are valid. The other two DQ scales were not included in these analyses because of a lack of direct admission or other criterion measures within the DQ database.

Conclusion

This study demonstrates that accurate defendant assessment is achieved with the Defendant Questionnaire (DQ). The DQ accurately measures defendant risk of violence (lethality), substance (alcohol and drugs) abuse, antisocial behaviors, emotional and mental health problems. In short, the DQ provides a wealth of information concerning defendants' adjustment and problems that contribute to understanding the defendants. Accurate assessment is essential for placing defendants in appropriate supervision and treatment programs. The four DQ risk range categories are suggestive of the appropriate type and level of supervision, intervention, counseling and treatment programs.

Relationships between offenders' criminal history variables and DQ scale scores demonstrate that the DQ measures relevant behaviors. Identification of these problems and prompt intervention can reduce an offender's risk of future arrests or recidivism. DQ results provide an empirical basis for recommending appropriate supervision level, intervention and treatment programs. Andrews, Bonta and Hoge (1990) demonstrated that problem severity must match the level of treatment intensity for maximum outcome effectiveness.

Andrews et al. (1990) reported literature that showed defendants with identified problems benefited from having been placed in high level intervention programs while lower risk cases did as well or better with minimal as opposed to more intensive service. This "matching" of level of intervention and level of risk can only happen with accurate test data. The Defendant Questionnaire is an accurate substance abuse defendant assessment test.

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