

**JUVENILE PREDISPOSITION EVALUATION**  
An Inventory of Scientific Findings

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## Table of Contents

Preface

Introduction

Scales

Truthfulness

Violence

Alcohol

Drug

Resistance

Suicide

Distress

Self-Esteem

Stress Coping Abilities

Juvenile Predisposition Evaluation Research

## Preface

The Juvenile Pre-disposition Evaluation (JPE) is a juvenile defendant assessment test that accurately measures defendant risk of violence (lethality), resistance attitudes, substance (alcohol and drugs) abuse, emotional and mental health problems. It has been researched on juvenile offenders.

This document is a cumulative research record of the evolution of the Juvenile Pre-disposition Evaluation (JPE) into a first class juvenile offender assessment tool. It should be noted that research studies are presented chronologically, from 2002 to the present, in the same order each of the research analyses was done. **Recent studies are most representative of the JPE.** No attempt has been made to incorporate all JPE research into this document; however, it is representative of the JPE's reliability, validity, and accuracy.

The Juvenile Pre-disposition Evaluation (JPE) is an automated computerized assessment instrument designed specifically for the assessment of juvenile sex offenders. The proprietary JPE database ensures continued research and development. The JPE is a brief, easily administered and automated (computer scored) test. It includes true/false and multiple choice items and can be completed in one hour or less. The JPE contains nine empirically based scales:

- Truthfulness
- Alcohol
- Drug
- Distress
- Suicide
- Self-Esteem
- Violence
- Resistance
- Stress Coping Abilities

JPE tests can be given directly on the computer screen or in paper-pencil test booklet format. All tests are computer scored on-site. Once an assessment is completed, a report is provided for immediate printing and review within 3 minutes. The report explains client's attained scores and makes specific intervention and treatment recommendations. It also presents Truth-Corrected scores, significant items, a concise "structured interview" and much more. The JPE is designed to measure the severity of juvenile problems in judicial, correctional, probation and parole systems. It is a risk and needs assessment instrument. The JPE has demonstrated reliability, validity, and accuracy. It correlates impressively with both experienced staff judgment and other recognized tests.

Diskettes contain all of the software needed to score tests, build a database and print reports. The JPE Windows version also has an optional human voice audio presentation that presents the test on the computer screen with accompanying auditory presentation of the text seen on the computer screen.

JPE users are typically not clinicians or diagnosticians. Their role is usually to identify client risk, substance (alcohol and other drugs) abuse, and client need prior to recommending intervention, supervision levels and/or treatment. The JPE is to be used in conjunction with a review of available records and respondent interview. No decision or diagnosis should be based solely on JPE results. Client assessment is not to be taken lightly as the decisions made can be vitally important as they impact lives. JPE research is ongoing in nature, so that evaluators can be provided with the most accurate information possible.

## **Introduction**

Many troubled youth are in need of services. The criminal justice system is an important contact point for juvenile offenders. The courts can screen juvenile offenders for problems and direct them to appropriate agencies for help, treatment and rehabilitation. The Juvenile Pre-disposition Evaluation (JPE) is a juvenile defendant assessment or screening test. Screening juvenile defendants to identify problems facilitates placement of juveniles into appropriate supervision levels, intervention programs and treatment. Accurate and reliable juvenile defendant risk and needs assessment is essential for placement of troubled youths into programs that address their problems and needs.

The JPE is a multidimensional lens itself to recidivism prediction. It combines criminal history along with other behavioral history which includes substance abuse, violence potential, personal resistance or cooperation and other personality factors. For intervention and treatment programs to be effective, juvenile defendants risk level must match service programs intensity level. That is, high risk juveniles placed in high risk programs and low risk juveniles placed in low risk programs. Research has found that placing low risk defendants in programs designed for high risk defendants can be harmful to them. The JPE was designed specifically for the purpose of aiding decisions regarding juvenile defendant placement and rehabilitation.

Personality, attitude and behavioral factors, often referred to as “dynamic variables,” are capable of change and are amenable to intervention and treatment. Positively changing juvenile defendants’ personality, attitudes and behavior can lead to behavioral change, which in turn can lead to reductions in recidivism. Identification of problem prone defendants is the first step in directing juveniles to appropriate programs aimed at helping them to positively change their behavior.

For ease in interpreting defendant risk, the JPE scoring methodology classifies juvenile scale scores into one of four risk ranges: low risk (zero to 39<sup>th</sup> percentile), medium risk (40 to 69<sup>th</sup> percentile), problem risk (70 to 89<sup>th</sup> percentile), and severe problem risk (90 to 100<sup>th</sup> percentile). By definition the expected percentages of juveniles scoring in each risk range (for each scale) is: low risk (39%), medium risk (30%), problem risk (20%), and severe problem risk (11%). Youths who score at or above the 70<sup>th</sup> percentile are identified as having problems. Juveniles’ scale scores at or above the 90<sup>th</sup> percentile identify severe problems. The accuracy of the JPE in terms of risk range percentages was examined in this study.

## **Scales**

The Juvenile Pre-disposition Evaluation (JPE) is a multidimensional test that was developed to meet the needs of juvenile defendant screening and assessment. JPE scales measure violent tendencies, alcohol and drug abuse severity, resistance, suicide, and emotional or mental health problems. In addition, the Truthfulness Scale measures juvenile truthfulness while completing the test. Juveniles who deny or minimize their problems are detected by the Truthfulness Scale. Truthfulness Scale scores are used to truth-correct other scale scores.

**Truthfulness Scale:** Measures how truthful the juvenile was while completing the test. This scale identifies denial, guardedness, problem minimization and attempts to "fake good."

**Suicide Scale:** Identifies suicide prone individuals. Some youths are emotionally overwhelmed, desperate and dangerous to themselves.

**Resistance Scale:** Measures defensiveness, uncooperativeness and resistance. Some youths resist help; whereas, others accept it.

**Self-Esteem Scale:** Reflects a person's explicit valuing and appraisal of self. It incorporates an attitude of acceptance-approval versus rejection - disapproval.

**Violence (Lethality) Scale:** Measures the use of force to injure, damage or destroy. This scale measures the youth's danger to self and others. Adolescent violence concerns contributed to the inclusion of this scale.

**Alcohol Scale:** Measures alcohol (beer, wine and other liquor) use and abuse. This scale measures the severity of alcohol abuse while identifying alcohol-related problems.

**Drugs Scale:** Measures the severity of illicit drug (marijuana, crack, cocaine, amphetamines, barbiturates and heroin) use and abuse while identifying drug-related problems.

**Distress Scale:** Measures experienced pain, worry, sorrow and grief. Distress can involve both mental and physical strain. Distress is a common reason why youths seek counseling.

**Stress Coping Abilities Scale:** Measures how well the youth handles stress, tension and pressure. Stress exacerbates symptoms of emotional and mental health problems.

## Research Studies

### 1. A study with the Juvenile Pre-Disposition Evaluation

There were 1,329 juvenile defendants tested with the JPE. There were 927 males (69.8%) and 402 females (30.2%). The ages of the participants were follows: 12 & under (2.5%); 13 (8.2%); 14 (16.1%); 15 (27.7%); 16 (31.5%); 17 (12.3%) and 18 & over (1.7%). The demographic composition of participants was as follows. Race/Ethnicity: Caucasian (48.9%); Black (40.3%), Hispanic (8.0%) and Other (2.8%). Education: Sixth grade or less (6.8%); 7<sup>th</sup> grade (11.3%); 8<sup>th</sup> grade (28.5%); 9<sup>th</sup> grade (30.9%); 10<sup>th</sup> grade (16.0%); 11<sup>th</sup> grade (5.7%); High school graduate/GED (0.5%) and Some college (0.2%).

Over 58% of the participants were arrested two or more times. Over 13% of the juveniles had six or more arrests. Over 80% of the juveniles had been on probation one or more times. Over 13% of the participants had two or more alcohol arrests and 24.6% had two or more

drug arrests. Over 15% of the juveniles had their first arrest before the age of 13 and over 15% were arrested by the age of 16.

The inter-item reliability coefficient alphas for the nine JPE scales are presented in Table 1. All scales were highly reliable. Reliability coefficient alphas for all JPE scales were at or above 0.85. These results demonstrate that the JPE is a very reliable juvenile defendant assessment test.

**Table 1. Reliability of the Juvenile Predisposition Evaluation (N=1,329)**

JPE SCALES	Coefficient Alphas	Significance Level
Truthfulness Scale	.87	p<.001
Suicide Scale	.87	p<.001
Resistance Scale	.85	p<.001
Self-esteem Scale	.90	p<.001
Violence (Lethality) Scale	.91	p<.001
Alcohol Scale	.92	p<.001
Drugs Scale	.91	p<.001
Distress Scale	.91	p<.001
Stress Coping Abilities	.92	p<.001

Discriminant validity results are presented in Table 2. In these analyses the answer sheet item “Total number of times arrested” was used to define first offenders (one or no arrest) and multiple offenders (2 or more arrests). T-test comparisons were used to study the statistical significance between the offender groups. There were 556 first offenders and 773 multiple offenders. The Alcohol and Drugs Scales were again analyzed using alcohol and drug arrests. “Number of alcohol arrests” was used for the Alcohol Scale, which had 1,282 first offenders and 47 multiple offenders (2 or more arrests). “Number of drug arrests” was used for the Drug Scale, which had 1,234 first offenders and 95 multiple offenders (2 or more arrests).

**Table 2. Comparisons between first offenders and multiple offenders (N=1,329).**

JPE Scale	First Offenders Mean	Multiple Offenders Mean	T-value	Level of significance
Truthfulness Scale	9.14	9.80	t = 2.00	p<.05
Suicide Scale	21.40	24.99	t = 1.63	n.s.
Resistance Scale	14.23	19.44	t = 11.38	p<.001
Self-Esteem Scale	19.19	19.33	t = 0.13	n.s.
Violence Scale	12.27	21.38	t = 17.01	p<.001
Alcohol Scale*	4.13	16.62	t = 11.97	p<.001
Drugs Scale*	9.02	22.96	t = 13.41	p<.001
Distress Scale	16.78	24.48	t = 10.86	p<.001
Stress Coping Abilities	94.97	84.21	t = 4.91	p<.001

\*Note: Offender status defined by alcohol and drug arrests. The Self-Esteem and Stress Coping Abilities Scales is reversed in that higher scores are associated with higher self-esteem and better stress coping skills.

Table 2 shows that mean (average) scale scores of first offenders were significantly lower than scores for multiple offenders on all JPE scales with the exception of the Truthfulness, Suicide and Self-Esteem Scales. As expected, multiple offenders scored significantly higher than did first offenders. Truthfulness Scale results indicate that first offenders tried to minimize their problems or fake good when tested more than did multiple offenders. First offenders may have tried to lessen their situation by faking good. Suicide and Self-Esteem Scales indicated that there was no significance difference between first and multiple offenders. JPE severity measurement scales differentiated between first offenders and multiple offenders. These results support the validity of the JPE.

Multiple offenders scored significantly higher on the Stress Coping Abilities Scale than did first offenders. Juveniles who have multiple arrests demonstrate emotional problems beyond the expected problem-prone behaviors. Juvenile defendants' emotional and personality problems must be addressed if these defendants are to be helped. Changing juvenile problem-prone behavior entails resolving emotional and personality problems.

Predictive validity results for the correct identification of problem behavior (violence tendencies, drinking and drug abuse problems) are shown in Table 3. For the Alcohol and Drugs Scales criteria, problem behavior meant the youth had alcohol or drug treatment. For the Violence Scale criterion the juvenile admitted being a violent person.

**Table 3. Correct Prediction of Problem Behavior**

JPE Scale	Correct Identification of Problem Behavior
Alcohol	100%
Drugs	96.8%
Violence	99.5%

Analysis of the accuracy of JPE risk range percentile scores involved comparing the juvenile's obtained risk range percentile scores to predicted risk range percentages as defined above. The percentages of juveniles expected to fall into each risk range are: Low Risk (**39%**), Medium Risk (**30%**), Problem Risk (**20%**) and Severe Problem or Maximum Risk (**11%**). These percentages are shown in parentheses in the top row of Table 4. The actual percentage of youths 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 obtained are shown in parentheses.

**Table 4. Accuracy of JPE Risk Range Percentile Scores**

<b>Scale</b>	<b>Low Risk (39% Predicted)</b>	<b>Medium Risk (30% Predicted)</b>	<b>Problem Risk (20% Predicted)</b>	<b>Severe Problem (11% Predicted)</b>
Truthfulness	39.5 (0.5)	31.3 (1.3)	19.6 (0.4)	9.6 (1.4)
Suicide	39.8 (0.8)	29.7 (0.3)	20.0 (0.0)	10.5 (0.5)
Resistance	38.5 (0.5)	30.4 (0.4)	20.2 (0.2)	10.9 (0.1)
Self-Esteem	40.0 (1.0)	29.2 (0.8)	20.3 (0.3)	10.5 (0.5)
Violence	38.1 (0.9)	30.8 (0.8)	20.4 (0.4)	10.7 (0.3)
Alcohol	39.6 (0.6)	29.5 (0.5)	20.1 (0.1)	10.8 (0.2)
Drugs	38.5 (0.5)	29.8 (0.2)	20.9 (0.9)	10.8 (0.2)
Distress	37.9 (1.1)	30.8 (0.8)	20.9 (0.9)	10.4 (0.6)
Stress Coping	38.9 (0.1)	30.1 (0.1)	20.0 (0.0)	11.0 (0.0)

As shown in Table 4, JPE scale scores are very accurate. The objectively obtained percentages of participants falling in each risk range are very close to the expected percentages for each risk category. All of the obtained risk range percentages were within 1.4 percentage points of the expected percentages and most (33 of the 36) were within 1.0 percentage points. These results demonstrate that the JPE scale scores accurately classify juvenile defendant risk.

### **Conclusion**

This study demonstrates that accurate juvenile defendant assessment is achieved with the Juvenile Predisposition Evaluation (JPE). Results corroborate and support the JPE as an accurate assessment or screening test for juvenile defendants. The JPE accurately measures juvenile risk of violence (lethality), substance (alcohol and drugs) abuse, resistance behavior, emotional and mental health problems. In short, the JPE provides a wealth of information concerning juveniles' adjustment and problems that contributes to understanding the juvenile.

Reliability results demonstrated that all nine JPE scales are highly reliable. Reliability is necessary in juvenile defendant assessment or screening tests for accurate measurement of juvenile risk. Tests cannot be valid or accurate without being reliable. Validity analyses confirm that the JPE measures what it purports to measure, that is, juvenile defendant risk. Results demonstrate that repeat offenders exhibit more problem-prone behavior than first offenders. Multiple offenders (having 2 or more arrests) scored significantly higher than first offenders (discriminant validity). The JPE accurately identified juveniles who have problems. Obtained risk range percentages on all JPE scales very closely approximated predicted percentages. These results strongly support the validity of the JPE.

JPE results provide important risk/needs assessment for courts to make informed decisions regarding juvenile defendant sentencing options. Problem-prone individuals exhibit many characteristics that are identified with the JPE. Relationships between juveniles' criminal history variables and JPE scale scores demonstrate that the JPE measures relevant behaviors that identify juveniles as problem-prone. Identification of

these problems and prompt intervention can reduce a juvenile defendant's risk of future arrests or recidivism. The JPE facilitates understanding of juvenile defendant violence tendencies, substance abuse, resistant behavior, and emotional and mental health problems. JPE results also provide an empirical basis for recommending appropriate supervision level, intervention and treatment programs.

### **References**

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### **Summary**

Results corroborate and support the Juvenile Pre-disposition Evaluation (JPE) as an accurate assessment or screening test for juvenile defendants. The JPE accurately measures juvenile risk of violence (lethality), substance (alcohol and drugs) abuse, resistance behavior, emotional and mental health problems. In short, the JPE provides a wealth of information concerning juveniles' adjustment and problems that contributes to understanding the juvenile defendants.

Reliability results demonstrated that all nine JPE scales are highly reliable. Validity analyses confirm that the JPE measures what it purports to measure, that is, juvenile defendant risk. Results demonstrate that repeat offenders exhibit more problem-prone behavior than first offenders. Multiple offenders (having 2 or more arrests) scored significantly higher than first offenders (discriminant validity). The JPE accurately identified juveniles who have problems. And, obtained risk range percentages on all JPE scales very closely approximated predicted percentages. These results strongly support the accuracy of the JPE.

JPE results provide important risk/needs assessment for courts to make informed decisions regarding juvenile defendant sentencing options. Problem-prone individuals exhibit many characteristics that are identified with the JPE. Relationships between juveniles' criminal history variables and JPE scale scores demonstrate that the JPE measures relevant behaviors that identify juveniles as problem-prone. Identification of these problems and prompt intervention can reduce a juvenile defendant's risk of future arrests or recidivism. The JPE facilitates understanding of juvenile defendant violence tendencies, substance abuse, resistant behavior, and emotional and mental health problems. JPE results also provide an empirical basis for recommending appropriate supervision level, intervention and treatment programs. Courts can direct juvenile defendants with more severe problems to appropriate programs to affect behavioral change. Positively changing juvenile defendant behavior can lead to reductions in recidivism and crime.

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