

Treatment Intervention Inventory – Juvenile: Juvenile Intake Assessment

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Abstract

The validity of the Treatment Intervention Inventory – Juvenile (TII-Juvenile) was investigated in a sample of 760 juvenile counseling clients. The TII-Juvenile has nine scales for measuring juvenile risk of substance (alcohol and drugs) abuse, anxiety, depression, self-esteem, distress, stress coping problems and family issues. Reliability analyses showed that all TII-Juvenile scales had reliability coefficient alphas of between .85 and .92. The Alcohol and Drugs scales identified all juveniles who had rated their alcohol and drug use as serious problems. Clients who rated their emotional problems as severe were identified: Anxiety Scale (100%), Depression Scale (100%) and Distress Scale (96.7%). TII-Juvenile classification of juvenile risk was shown to be within 2% of predicted risk range percentile scores for all TII-Juvenile scales. This study demonstrated that the TII-Juvenile is a reliable, valid and accurate juvenile assessment test.

Treatment Intervention Inventory – Juvenile: Juvenile Intake Assessment

The Treatment Intervention Inventory - Juvenile (TII-Juvenile) is a test for juvenile counseling clients. It is a juvenile version of the Treatment Intervention Inventory. It was designed for juveniles, yet retain very high statistical reliability, validity and accuracy. The Treatment Intervention Inventory (TII) is an adult risk and needs test for counseling clients that has been shown to be reliable, valid and accurate. The TII-Juvenile is comprised of revised or replaced test items that are appropriate for juvenile clients. The TII and TII-Juvenile help evaluate troubled clients, substance (alcohol and other drugs) abusers and the emotionally disturbed. They can be used to measure the severity of counseling clients' problems in judicial, community service provider and private practitioner programs.

The present study validates the Treatment Intervention Inventory - Juvenile (TII-Juvenile). The TII-Juvenile consists of nine scales that measure juvenile alcohol and drug abuse severity, anxiety, depression, self-esteem, distress, stress coping abilities and family problems. In addition, the Truthfulness Scale measures juvenile truthfulness, denial and minimization while completing the test. Truthfulness Scale scores are used for truth-correcting other scale scores.

The participants were juvenile counseling clients who were assessed by community service programs. The data for this study was obtained from the agencies that use the TII-Juvenile. The validation method used in this study (predictive validity) examined the accuracy at which the TII-Juvenile identified problem drinkers and problem drug abusers and youths who rated their anxiety, depression and distress problems as serious. In the TII-Juvenile, problem information is obtained from the juveniles' responses to test items. Juveniles who rated their problems as serious would be expected to score in the corresponding scale's problem range. For problem information the following test items were used, "I rate my drinking as a serious problem." "I rate my drug use as a serious problem." "I rate my level of distress, anxiety or depression as a severe problem."

For the predictive validity analyses, juveniles were separated into two groups, those who admitted problems and those who did not admit to problems. Then, juvenile scores on the relevant TII-Juvenile scales were compared. It was predicted that juveniles who had alcohol and/or drug problems would score in the problem risk range (70th percentile and above) on the Alcohol and/or Drugs Scales. Similarly, juveniles who admitted anxiety, depression and distress problems would score in the problem risk range on the Anxiety, Depression and Distress Scales, respectively. Non-problem was defined in terms of low risk scores (39th percentile and below). The percentage of juveniles who admitted problems and also scored in the 70th percentile range and above was considered a correct identification of problems. High percentages of juveniles who admitted problems and had elevated problem risk scores would indicate the scales were valid.

Method

Subjects

There were 760 juveniles tested with the TII-Juvenile. Data for this study was provided by the community service agencies that used the TII-Juvenile. Test data were collected during the year 2002. There were 523 males (69.3%) and 232 females (30.7%). The ages of the participants ranged from 14 through 17 as follows: 12 & Under (6.2%); 13 (7.2%); 14 (13.6%); 15 (20.1%); 16 (25.6%); 17 (22.3%); 18 & Over (5.0%). The demographic composition of the participants was as follows. Race/Ethnicity: Caucasian (74.4%); Black (2.8%), Hispanic (16.6%) and Other (6.1%). Education: Sixth grade or less (7.8%); 7th grade (11.1%); 8th grade (18.2%); 9th grade (20.6%); 10th grade (21.8%);

11th grade (15.7%) and High School graduate (4.7%).

Procedure

Juveniles completed the TII-Juvenile as part of their intake evaluation in community service programs. The TII-Juvenile contains nine measures or scales. These scales are briefly described as follows. The Truthfulness Scale measures respondent's truthfulness, denial and problem minimization while taking the TII-Juvenile. The Alcohol Scale measures severity of alcohol use or abuse. The Drugs Scale measures severity of drug use or abuse. The Anxiety Scale measures the client's unpleasant emotional experiences that are characterized by non-directed fear. General symptoms such as nervousness, apprehension and tenseness are included in this definition, as are panic, terror, and somatic correlates of anxiety. The Depression Scale measures the client's dejected or self-depreciating emotional state that varies from normal to pathological proportions. General symptoms such as melancholy and dysphoric mood are included in this definition, as are impaired social-vocational functioning and loss of interest in usual activities. In addition, thoughts of suicide and other cognitive as well as somatic correlates of depression are included. The Distress Scale measures sorrow, misery, pain and suffering. Distress incorporates pain (physical and mental), physical and mental abuse, agony and anguish. The Family Issues Scale measures family problems, concerns and stability. The Self-Esteem Scale measures a client's explicit valuing and appraisal of self. The Stress Coping Abilities Scale establishes how well the client copes with stress.

Results and Discussion

The inter-item reliability (alpha) coefficients for the TII-Juvenile scales are presented in Table 1. The Family Issues Scale only contains a few items and is not a measurement scale, consequently, it is not included in the table. All scales were highly reliable. All of the alpha reliability coefficients for all TII-Juvenile scales were at or above 0.85. These results demonstrate that the TII-Juvenile is a reliable test for juvenile assessment.

Table 1. Reliability of the TII-Juvenile

TII-Juvenile Scales	Coefficient Alpha	Significance Level
Truthfulness Scale	.85	p<.001
Anxiety Scale	.85	p<.001
Depression Scale	.87	p<.001
Alcohol Scale	.86	p<.001
Drugs Scale	.87	p<.001
Distress Scale	.85	p<.001
Self-Esteem Scale	.90	p<.001
Stress Coping Abilities	.92	p<.001

Note: The Family Issues Scale is not a measurement scale and not included in this analysis.

Predictive validity results for the correct identification of problems (drinking, drug abuse and emotional problems) are presented in Table 2. Table 2 shows the percentage of juveniles that rated their problems as serious and who scored in the problem risk range on the selected TII-Juvenile scales in comparison to youths who scored in the low risk range. For the Alcohol and Drugs Scales problem behavior means the juvenile rated their alcohol or drug use as a serious

problem. For the Anxiety, Depression and Distress Scales the youth rated their problems as severe. The other TII-Juvenile scales are not included because of a lack of an appropriate criterion.

For the Alcohol Scale comparisons between problem risk and low risk juveniles, there were 15 youths who rated their drinking as a serious problem. These youths were considered problem drinkers. All 15 of these juveniles, or 100 percent, had Alcohol Scale scores at or above the 70th percentile. The Alcohol Scale correctly identified all of the juveniles classified as problem drinkers. These results validate the TII-Juvenile Alcohol Scale.

The Drugs Scale accurately identified juvenile offenders who have drug problems. There were 26 offenders who rated their drug use a serious problem. All 26 of these youths, or 100 percent, had Drugs Scale scores at or above the 70th percentile. These results support the validity of the TII-Juvenile Drugs Scale.

For Distress Scale comparisons there were 30 juveniles who rated their level of distress a severe problem. Of these 30 youths, 29 individuals or 96.7 percent had Distress Scale scores in the problem range (70th percentile and above). This result validates the Distress Scale. Anxiety Scale comparisons found that for the 42 juveniles who rated their level of anxiety as a severe problem, all 42 or 100 percent had Anxiety Scale scores in the problem range. This result supports the validity of the Anxiety Scale. The Depression Scale identified all of the 38 youths who rated their level of depression as a severe problem. This result validates the Depression Scale.

Table 2. Predictive Validity of the TII-Juvenile

TII-Juvenile Scale	Correct Identification of Problem Behavior
Alcohol Scale	100%
Drugs Scale	100%
Distress Scale	96.7%
Anxiety Scale	100%
Depression Scale	100%

For ease in interpreting juvenile risk, TII-Juvenile scale scores were divided into four risk ranges: 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 youths scoring in each risk range (for each scale) is: low risk (39%), medium risk (30%), problem risk (20%), and severe problem risk (11%). Scores at or above the 70th percentile would identify youths as having problems.

The above predictive validity results lend support for using these particular percentages. The 70th percentile cut off for problem identification correctly classified 96 percent or more of problem youths. The low risk level of 39 percent avoids putting a large percentage of youths into a “moderate” range.

Risk range percentile scores were derived by adding points for test items then converting to percentages. These results are presented in Table 3. Risk range percentile scores represent degree of severity. Analyses of the TII-Juvenile risk range percentile scores involved comparing the youth’s obtained risk range percentile scores to predicted risk range percentages as defined above. These percentages are shown in parentheses in the top row of Table 3. The actual percentage of juveniles 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 3. Accuracy of TII-Juvenile Risk Range Percentile Scores

Scale	Low Risk (39%)		Medium Risk (30%)		Problem Risk (20%)		Severe Problem (11%)	
Truthfulness Scale	39.3	(0.3)	30.3	(0.3)	19.3	(0.7)	11.1	(0.1)
Anxiety Scale	40.7	(1.7)	29.2	(0.2)	18.9	(1.1)	11.2	(0.2)
Depression Scale	37.0	(2.0)	31.7	(1.7)	20.1	(0.1)	11.2	(0.2)
Alcohol Scale	37.3	(1.7)	31.3	(1.3)	20.9	(0.9)	10.5	(0.5)
Drugs Scale	39.3	(0.3)	31.0	(1.0)	18.4	(1.6)	11.3	(0.3)
Distress Scale	39.7	(0.7)	28.6	(1.4)	20.6	(0.6)	11.1	(0.1)
Family Issues Scale	39.7	(0.7)	30.0	(0.0)	19.1	(0.9)	11.2	(0.2)
Self-esteem Scale	40.0	(1.0)	29.2	(0.8)	20.3	(0.3)	10.5	(0.5)
Stress Coping Abilities	38.8	(0.2)	30.1	(0.1)	20.7	(0.7)	10.4	(0.6)

As shown in Table 3, the objectively obtained percentages of participants falling in each risk range were very close to the expected percentages for each risk category. All of the obtained risk range percentages were within 2.0 percentage points of the expected percentages and many (28 of 36 possible) were within one percentage point. Only five obtained percentages were more than 1.5 percent from the expected percentages. These results demonstrate that TII-Juvenile risk range percentile scores are accurate.

Conclusions

This study demonstrated that the TII-Juvenile is a reliable and valid assessment test for juvenile counseling clients. Reliability results showed that all TII-Juvenile measurement scales were highly reliable. Predictive validity analyses demonstrated that the TII-Juvenile identified youths who had distress, anxiety, depression and substance abuse problems. Furthermore, obtained risk range percentages on all TII-Juvenile scales very closely approximated predicted percentages. These results support the reliability, validity and accuracy of the TII-Juvenile.

Decisions regarding intervention programs for juveniles are greatly enhanced by TII-Juvenile test results. The TII-Juvenile can be used to tailor intervention (education, counseling and treatment) to each juvenile based upon their assessment results. Low scale scores are associated with low levels of intervention and treatment, whereas high scale scores relate to more intense intervention/treatment recommendations. Placing troubled youth in appropriate treatment can enhance the likelihood that a juvenile will complete treatment, benefit from program participation and change their behavior.