

RESULTS OF  
INTERCHANGE  
GRADUATE'S TEST  
ASSESSMENTS

MAY 2002

A TECHNICAL REPORT FOR THE ALCOHOL & DRUG CRIMINAL  
JUSTICE WORKING GROUP AND THE INTERCHANGE PROGRAM

REPORT PREPARED BY:  
MATT NICE  
SENIOR RESEARCH AND EVALUATION ANALYST  
MULTNOMAH COUNTY  
PERFORMANCE MANAGEMENT GROUP  
503-988-3364

<http://www.co.multnomah.or.us/budget/eru/>

## **Executive Summary**

The InterChange program has two goals: reducing criminal behavior and reducing substance abuse. The following report describes InterChange initial program “outcomes”—changes in offender thinking among program graduates—intended to lead to outcomes of reduced criminal behaviors and substance abuse. Test results indicate that InterChange graduates experience significant reductions in criminal thinking and attitudes after treatment, as measured by the Pride in Delinquency (PID) and the multi-dimensional Criminal Sentiment Scale- Modified (CSSM) instruments. These findings are consistent with previously published reports of preliminary data. Future analyses should determine if these instruments are useful in predicting graduates' likelihood for future recidivism and substance abuse.

### **Specifically:**

- An average pre-post test decrease of 42% in graduates' pro-criminal attitudes was found, as measured by the PID scale
- Overall, a 41% decrease in unfavorable attitudes towards laws, police officers, and the judges/courts was observed (as measured by the CSSM-LCP)
- Graduates showed a 47% average decrease in attitudes toward violating the law, (as measured by the CSSM-TLV)
- There was a 38% average decrease of identification with criminal for graduates (as measured by the CSSM-ICO)

### **Additional analyses found:**

- Graduates' length of stay has steadily been declining—now 22.2 less days than earlier graduates
- Client motivation for IC appears to have waned
- Preliminary results indicate IC graduates have somewhat better problem-solving appraisal upon completion, as measured by the PSI

### **Serious limitations to the study were also identified:**

- Less than 60% of graduates completed pre-post tests
- In nearly all cases, the service provider failed to provide crucial follow-up assessment data

## **Introduction**

The InterChange program has two goals: reducing criminal behavior and reducing substance abuse. The program's target population is adult males under Department Community Justice supervision who have demonstrated a need for residential substance abuse treatment but who can also be safely housed in a minimum security facility outside of jail. The following report focuses on changes in criminal thinking among program graduates. These changes are intended to lead to the intermediate and long-term outcomes of reduced criminal behavior and substance abuse.

## **Criminal Thinking Patterns, Recidivism, and Substance Abuse**

Reducing criminal thinking among this population is essential to realize decreases in recidivism and chronic substance abuse.<sup>1</sup> As such, reducing criminal thinking is key piece of the curriculum at InterChange.

Program staff assessed thinking by administering three pencil-and-paper surveys to InterChange residents: 1) the Pride in Delinquency scale, 2) the Criminal Sentiments Scale-Modified, and 3) the Problem Solving Inventory-Modified (a new measure discussed later). For the first two surveys, higher scores reflect the presence of greater criminal attitudes. Graduates' changes in criminal thinking are measured by comparing their scores on these surveys early in the program (pre-test) to their scores at the end of the program (post-test). Unfortunately, less than 60% of graduates completed both tests, so results are limited to those who completed both sets of tests.<sup>2</sup> Additional post-tests were designed to be given approximately six months after graduation. In nearly all cases, the service provider failed to provide this data.<sup>3</sup>

In several cases graduates were involved in multiple episodes—some due to prior InterChange failure others for “booster sessions.”<sup>4</sup> Each episode may include a pre- and post-test for each of the instruments. The analyses

---

<sup>1</sup> Wanberg, Kenneth W. and Harvey B. Milkman. 1998. *Criminal Conduct and Substance Abuse Treatment: Strategies for Self-Improvement and Change*. Thousand Oaks, CA: Sage Publications.

<sup>2</sup> At the time of this report there were 104 InterChange graduates (from Discharge Summary 10/01). While a majority completed pre-tests failure to perform post-test was not uncommon.

<sup>3</sup> As of November 2001, a new service provider was contracted for aftercare services. Curriculum and training are expected to be the same as the previous provider, thus retaining similarity and continuity of services. At the time of this report, the new contractor was providing required data.

<sup>4</sup> 15% of graduates received two InterChange episodes.

contained herein only examined the pre-test/ post-test results for the 1<sup>st</sup> episode.

### ***The Pride in Delinquency Scale***

The Pride in Delinquency Scale (PID) asked the respondent to imagine that they have just committed a series of ten criminal acts and rate how proud (+10) or how ashamed (-10) they would be to have committed each act. One hundred points are added to the total score, in order to avoid negative scale scores. (Appendix A includes a copy of the Pride in Delinquency Scale).

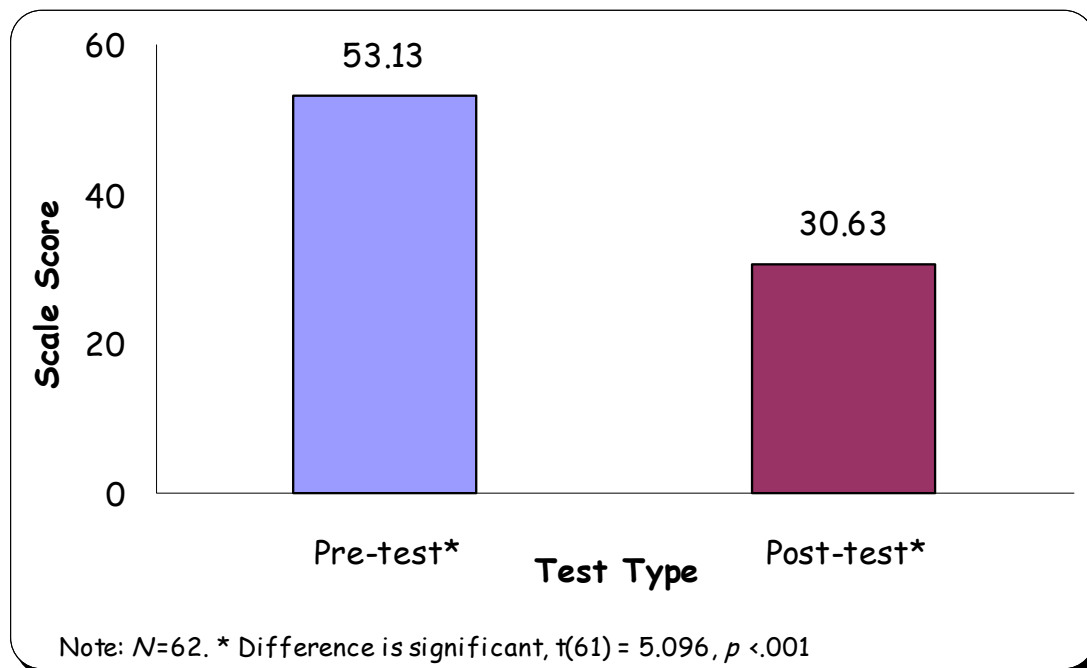


Figure 1. Differences in PID pre-post test scores for graduates

Figure 1 shows that InterChange graduates exhibited a statistically significant decrease in pro-criminal attitudes, as measured by the Pride in Delinquency scale ( $p < .001$ ;  $N = 62$  pairs of scores).<sup>5</sup> An average pre-post decrease of 42% in pro-criminal attitudes, as measured by the Pride in Delinquency was found. Moreover, the InterChange graduates did not significantly differ from InterChange non-graduates for whom Pride in Delinquency pre-test scores were available. This means that the men who dropped out of the InterChange program were just as inclined to hold pro-

<sup>5</sup> A two-tailed paired  $t$ -test was used to assess statistical significance between means in pre-post test scores. An independent  $t$ -test was used to assess statistical significance between differences in graduates' and non-graduates' pretest scores. Alpha ( $\alpha$ ) was set at .05.

criminal beliefs at the program onset as the men who went on to graduate from the program. These results are consistent with preliminary reports.<sup>6</sup>

### ***The Criminal Sentiments Scale - Modified***

The Criminal Sentiments Scale measures pro-criminal attitudes along three dimensions: Identification with Criminal Others (ICO), Tolerance for Law Violators (TLV), and Attitudes Toward the Law, Courts, and Police (LCP). In addition, three sub-dimensions are also being reported herein: attitudes towards Law, Courts, and Police (see Appendix B.) The instrument contained 41 questions, where higher dimension scores indicate greater criminal sentiment. Across all dimensions and sub-dimensions, significant reductions in criminal sentiments were identified between graduates' pre-post test scores (see Figure 2). While more information is presented in this report, overall results are consistent with preliminary reports.<sup>7</sup>

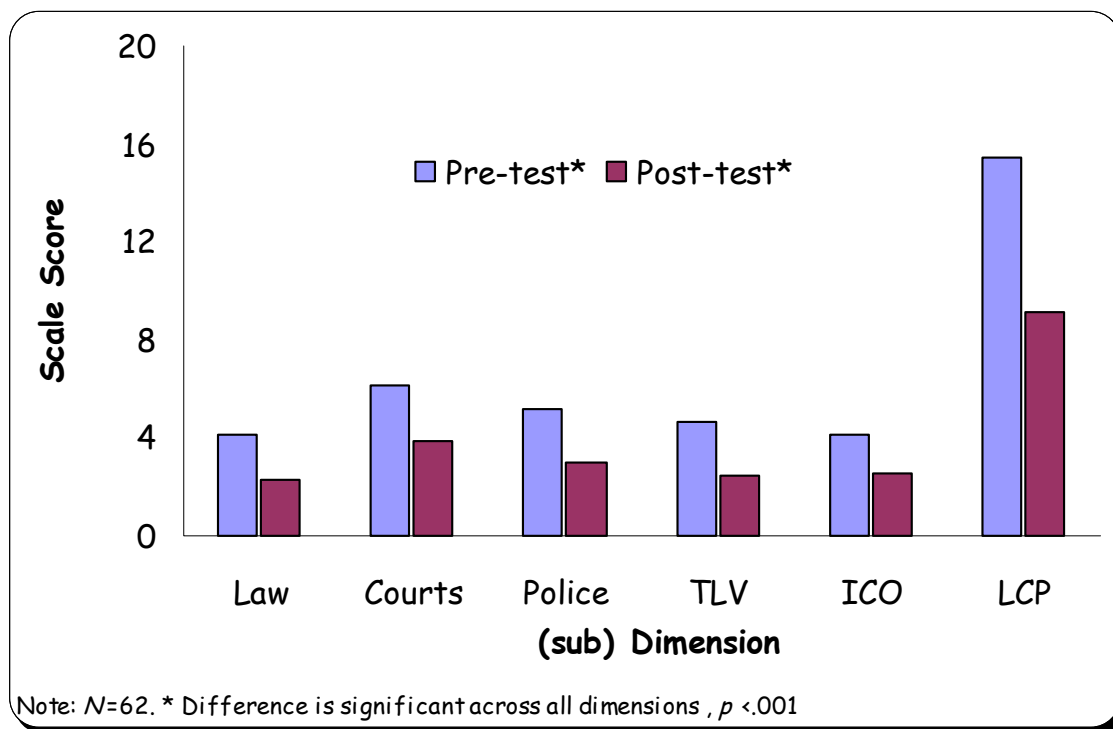


Figure 2. Differences in graduates CSSM (sub) dimensions pre-post test scores

<sup>6</sup> Reduction in Pro-Criminal Attitudes Among InterChange Graduates, Laurie Drapela, April 11, 2001.

<sup>7</sup> Reduction in Pro-Criminal Attitudes Among InterChange Graduates, Laurie Drapela, April 11, 2001. Note, due to errors associated with earlier scaling, the CSSM was rescaled. Therefore, absolute values may differ from earlier reports, but end results do not.

*Attitudes towards law, courts, and police (including sub-dimensions)*

This section of the questionnaire asked the respondent to rate their level of agreement with statements about laws, police officers, and the judges/courts. This section contained 25 questions.

Based on pre-post test comparisons (Figure 3), graduates of InterChange experienced significant reductions in unfavorable attitudes across the LCP dimension and its sub-dimensions ( $N = 62, p < .001$ ). Overall, a 41% decrease in unfavorable attitudes about laws, police officers, and the judges/courts was observed.

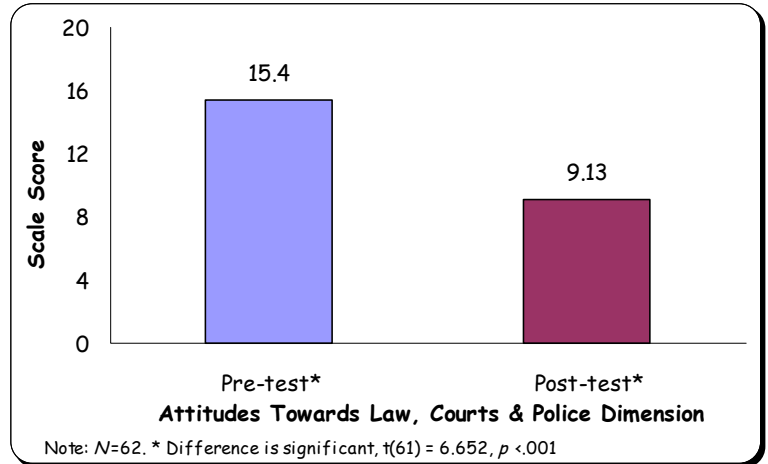


Figure 3. pre-post test differences in LCP Dimension

Figures 3a-3d (right and below) depict the differences in pre-post test sub-dimensions of graduates. An average pre-post test decrease of 44% in pro-criminal sentiments towards laws, as measured by the CSSM, was observed.

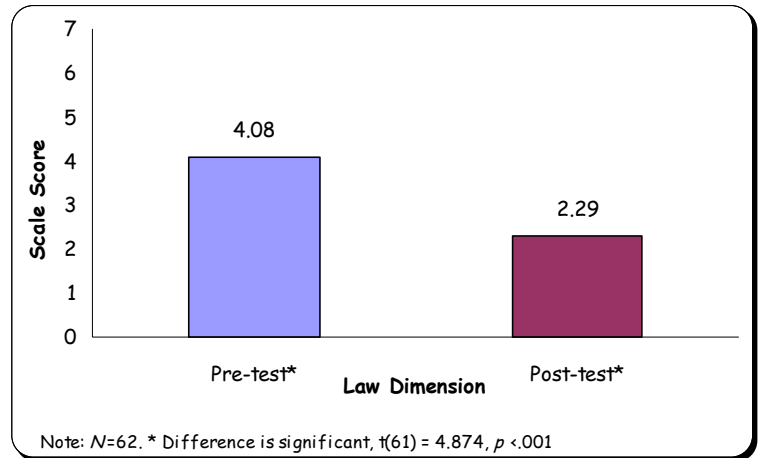


Figure 3a. pre-post test differences in Law sub-dimension

An average pre-post test decrease of 37% in pro-criminal sentiments towards courts, as measured by the CSSM, was observed.

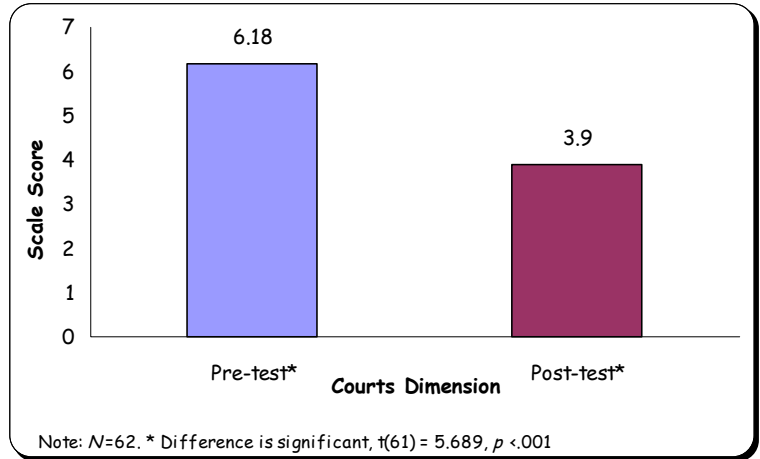


Figure 3b. pre-post test differences in Courts sub-dimension

An average pre-post test decrease of 43% in pro-criminal sentiments, as measured by the CSSM, was observed for the police sub-dimension.

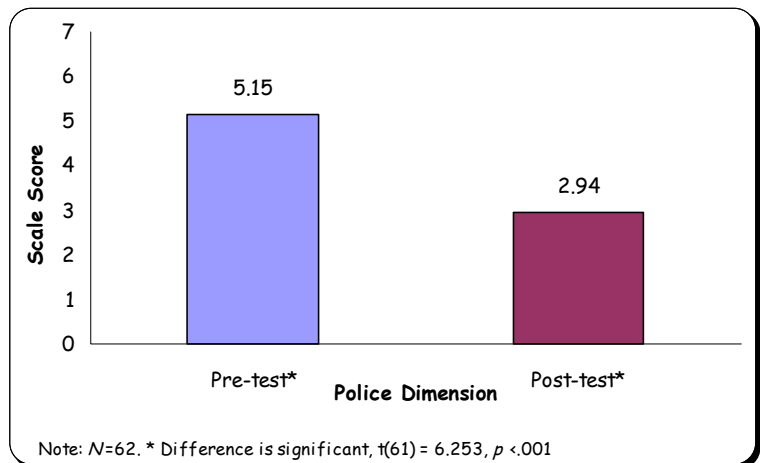


Figure 3c. pre-post test differences in Police sub-dimension

Interestingly, persons who dropped out of InterChange held greater unfavorable attitudes towards law, courts, and police initially (i.e., during pre-testing) than did persons who graduated from InterChange (Figure 4).<sup>8</sup> In other words, males who dropped out of the program viewed laws, police officers, and the judges/courts less favorably than men who completed the program ( $p < .05$ ).

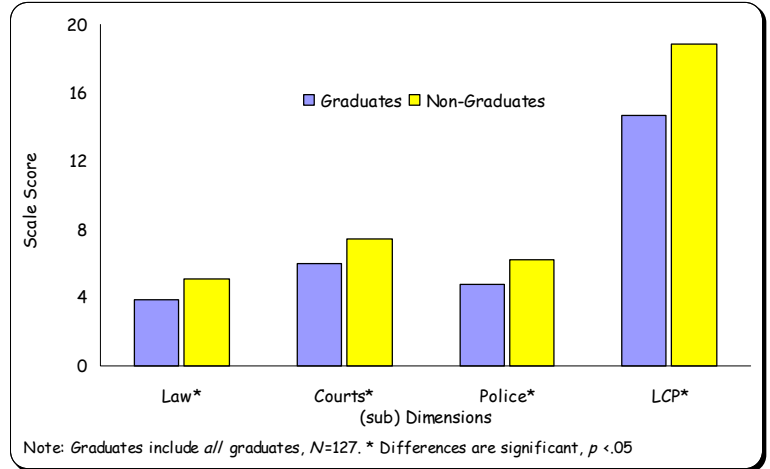


Figure 4. Differences in pre-test scores for graduates and non-graduates

#### Tolerance for Law Violators (TLV)

This dimension assesses the level of tolerance for breaking the law by asking the respondent to respond to a series of statements about breaking the law. This section contained ten questions.

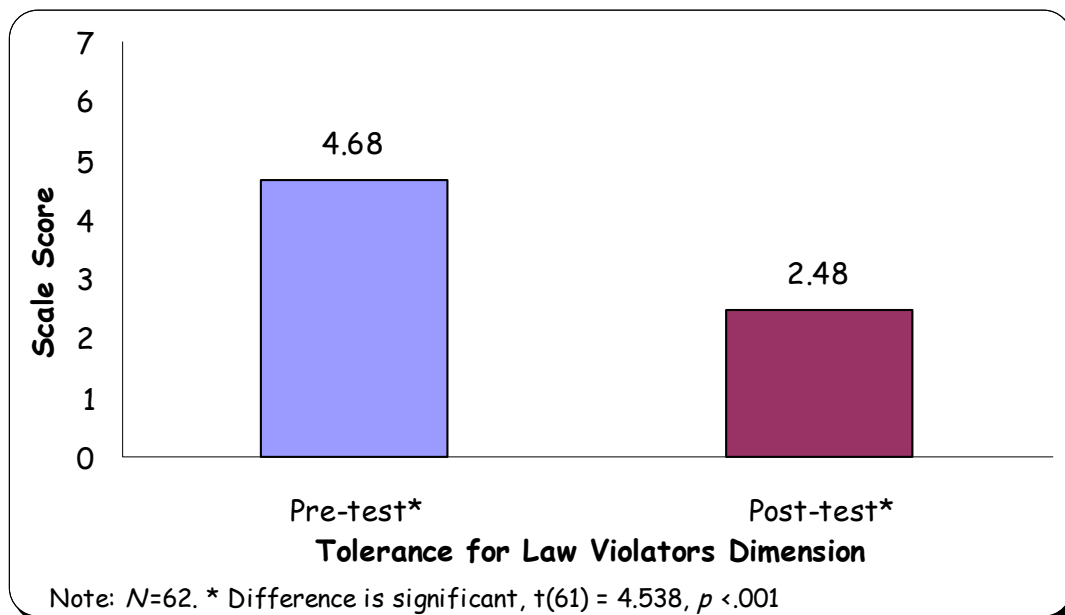


Figure 5. Pre-post test differences in Tolerance for Law Violators dimension

<sup>8</sup> In this analysis "graduates" consisted of all InterChange graduates with pre-tests ( $N = 85$ ), regardless of whether a post-test was performed. Graduates with post-tests ( $n = 62$ ) and those without post-tests ( $n = 23$ ) were compared, and no statistically significant differences in scores was found.



Figure 5 illustrates InterChange graduates' 47% average pre-post test decreases in attitudes toward violating the law, as measured by the CSSM ( $N = 62, p < .001$ ). Unlike scores of LCP and its sub-dimensions (c.f., above), InterChange graduates did not differ statistically on pre-test attitudes toward violating the law. Thus, the men who dropped out of the program were no more tolerant of law-violators than those who graduated.

#### *Identification with Criminal Others (ICO)*

There was a 38% decrease in graduates' average pre-post test scores for the Identification with Criminal Others (ICO) portion of the Criminal Sentiments Scale (Figure 6). The difference between these scores is statistically significant ( $N = 62, p < .001$ ). The section contained six questions.

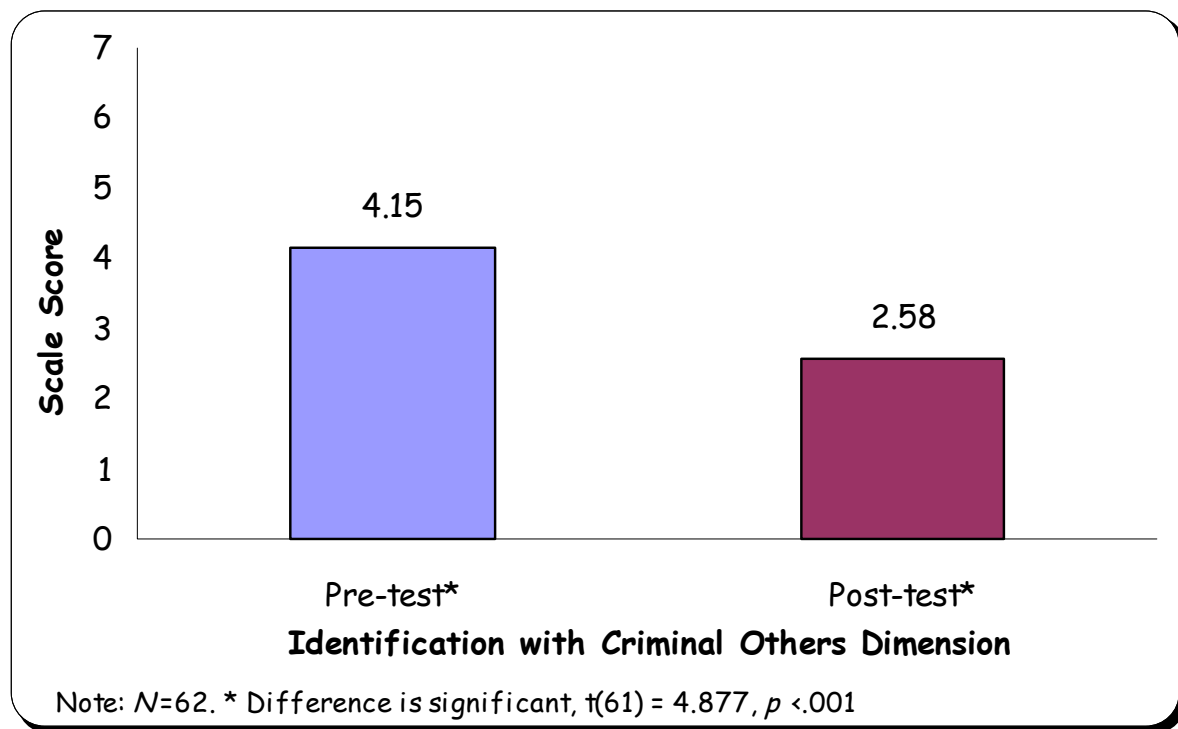


Figure 6. Differences in pre-test scores for graduates and non-graduates

Like scores of TLV InterChange graduates did not differ from InterChange non-graduates in terms of pre-test survey results on criminal identity. In this case, men who left the program before graduating weren't any more criminally oriented than men who remained and eventually graduated.

### Cohort Comparisons

The first 50 InterChange graduates are currently being followed in a longitudinal outcomes study to evaluate long-term program effectiveness. Because InterChange has gone through formative changes, a comparison of earlier and later cohorts was performed to evaluate for graduate and/or programmatic differences. The 104 graduates were split into two cohort groups for comparison on demographic, general programmatic changes, and instrument testing scores. The first 50 graduates are identified herein as Cohort1. The long-term outcomes of Cohort1 will set the stage for the program assumptions of effectiveness for later graduates. The remaining 54 graduates are identified as Cohort2. Cohorts were compared on age, lengths of stay (by episodes), number of episodes, the pre-post test CSSM (and subscales) and the PID. Results were significant ( $p = .05$ ) or near-significant ( $p < .1$ ) on several measures.

Length of stay. Because several clients have had more than one episode (and even graduation) length of stay was examined in both the first episode and a total of all treatment episodes (e.g., booster sessions, fail and return to treatment, etc.). Figure 7 illustrates the length of stay in the first treatment episode (coded Episode 1) and in a total of treatment episodes (All Episodes) was significantly longer for Cohort1 than Cohort2, an average of 15.2 and 22.2 more days, respectively ( $N = 104$ ,  $p < .01$ ). In addition, Cohort1 was more likely to engage in multiple treatment episodes than was Cohort2, nearing significance.<sup>9</sup>

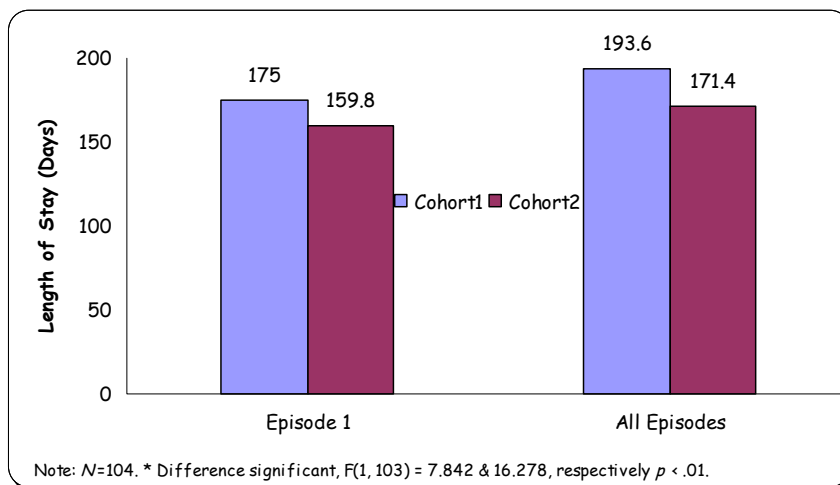


Figure 7. Differences in lengths of stay by cohorts

<sup>9</sup> Chi-square (df=2) = 5.257,  $p = .072$ . Note that two cells had expected counts under 5.

Program management stated two reasons for the reduced time in treatment found between cohorts, both which were based on the program's initial design. Research on treatment programs of this nature suggested that a three to six-month stay was needed for successful long term outcomes. Following the release of initial data on length of stay, program managers engaged clinical staff in close scrutiny of client's progress through the program and actively encouraged moving clients to the next, less intensive level of care as soon as clients were able to successfully manage a transition. In addition, goal completion became the standard for graduation, over length of time in treatment.<sup>10</sup>

Cohort pre-test differences. Results found near significant differences in Criminal Sentiments Scale (CSSM) pre-test scores, suggesting entrance criteria and/or processes for clients may have changed over time. Figure 8 depicts Cohort1 with less initial criminal sentiment (mean 5.18) in the Courts subscale, than did Cohort2 (6.66), ( $N = 85, p = .06$ ).

Pre-test differences were opposite in the Identification with Criminal Others (ICO) subscale of the CSSM. Cohort1 clients had higher pre-test ICO criminal sentiment scores (nearing significance) than Cohort2, with an average score of 4.2 and 3.3 respectively (see Figure 9). One possible reason for the pre-test differences is a change in entrance criteria and/or processes. There were no differences in any post-treatment test scores, suggesting that the treatment program did not significantly change.

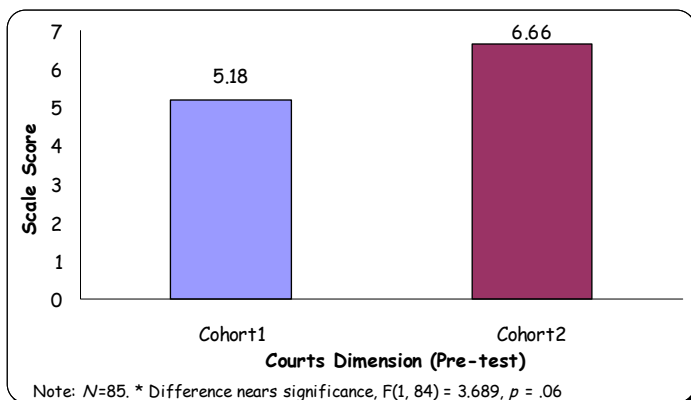


Figure 8. Differences in Court pre-test scores by cohort

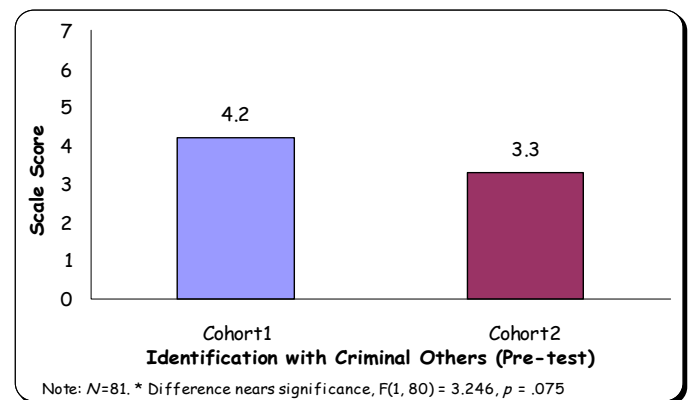


Figure 9. Differences in ICO pre-test scores by cohort

<sup>10</sup> Interviews with former and current InterChange program managers (Wayne Scott and Edie Wooldridge).

Again, program management was asked to explain why Cohort1 graduates had less negative attitudes towards Courts but a greater Identification with Criminal Others than Cohort2. Management stated that when the program was first introduced, clients were extremely motivated to enter InterChange and almost no coercion was needed. These clients were longtime criminal addicts, which may explain why Cohort1 had greater Identification with Criminal Others. After Cohort1 graduated, the word "got out" to other potential IC clients that the program was hard, and greater coercion was applied by the PO's, the Courts and IC to get them into the program. The Courts subscale measures the client's perceived honesty and fairness of the courts. Greater coercion to enter the program leveraged by the courts may explain why Cohort2 scored greater negative attitudes towards the courts than did Cohort1.

#### *Personal Problem Solving Inventory (PSI) - Modified*

The PSI assesses an individual's awareness and evaluation of his problem-solving abilities and style, thus providing a global appraisal of the individual problem solver (appraisal is not synonymous with performance).<sup>11</sup> The PSI-Modified is a 28-question inventory scored on a three-point Likert scale anchored from agree to disagree (see Appendix C). The instrument was introduced after InterChange began, and available data is limited to 2001. Like other assessments, the PSI was given upon IC entrance and again after graduation.

The PSI assesses three facets: Problem-Solving Confidence—a measure of problem-solving self-efficacy—(10 questions, a higher score indicating less efficacy), Approach-Avoidance Style—a tendency to approach or avoid problems—(13 questions, a higher score indicating greater avoidance), and Personal Control—believing one is in control of one's self while problem solving—(4 questions, a higher score indicating less control). Only the overall model is reported herein. The lower the overall score the better the problem-solving skills in general. The reliability coefficient for the overall model was equal to published reports ( $\alpha = .90$ ).

At the time of this report, there were only 31 completed pre/post PSI tests. The preliminary results of pre-post tests finds a small, yet significant

---

<sup>11</sup> Heppner, P. P., & Petersen, C. H. (1982). [http://www.coe.missouri.edu/~heppnerp/about\\_psi\\_2-23-00.doc](http://www.coe.missouri.edu/~heppnerp/about_psi_2-23-00.doc)

improvement in problem-solving ability (as denoted by the decrease in score, see Figure 10) for graduates, as measured by the PSI.<sup>12</sup>

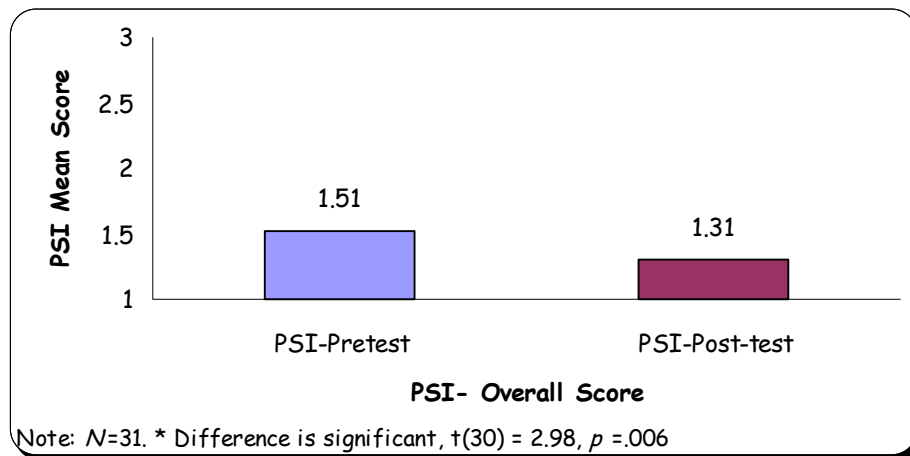


Figure 10. Preliminary results of the pre-post tests using the Problem Solving Inventory

### *Conclusions*

Results indicate that the InterChange graduates experienced significant reductions in criminal thinking and attitudes, as measured by the PID and the CSSM, from 37% to 47% respectively. The results are limited to graduates for who both pre-tests and post-tests were available (60%) and non-graduates for whom pre-test data was available.

In addition, preliminary results indicate that graduates somewhat improved their problems solving skills, as measured by the PSI. Again, the results are preliminary and limited to those graduates who also completed both pre- and post-tests.

Using a cohort analysis supported by management insight, it appears that the entrance process, and program itself have changed somewhat. Earlier clients were initially very motivated to enter the program, however this excitement appears to have worn off and now clients may be more likely to require a mandate to go into treatment. IC may be having a more difficult time getting clients into the program due to the "voluntary" nature of the program. Furthermore, total lengths of stay for program graduates have been steadily

<sup>12</sup> The effect-size is considered small ( $\eta^2 = 0.228$ ).

falling. It is unknown what impact these changes will have on future graduate's long-term success.

Finally, future analyses need to determine if these instruments are useful in predicting graduates' likelihood for future recidivism and substance abuse. Clearly to date, those that graduate from the program score better on criminal thinking assessments; the question is whether these instruments are programmatically useful in predicting who will return to criminal activities and/or substance abuse. In other words, are they useful in assessing whether graduates are meeting the InterChange goals of reduced criminal behavior and reduced substance abuse?







