

TOPUCU PILOT DATA ANALYSIS

This report summarizes the results of an evaluation of the TOPUCU pilot program in which 60 participants were assigned to receive the intervention, the treatment group, and 48 participants formed a control group that did not receive the intervention. Assignment of subjects to the control and treatment groups was randomized, and presentation of the intervention conducted by the same facilitator in order to provide equivalent programming conditions.

Personal Achievement Score (PAS ®) criminal thinking, resilience, and self-esteem variable elements used to measure program impact were chosen as criterion measures by using research indicated evidence-based outcomes linked to successful offender rehabilitation and reduced recidivism. Analyses included t-tests assessing the difference between pretest and posttest scores, statistical significance tests were conducted, and effect sizes computed.

PAS ® data elements were obtained both prior to the intervention (pretest) and after the intervention (posttest). Data were collected from both groups on the same day, and location, for each assessment session. And it should be noted in passing, that following the two referenced data collection sessions, the control group also was given the opportunity to receive the measured intervention.

The analyses focus on two features of the collected data. First, they address the direction and the extent to which scores on the criterion measures

changed from the pretest to the posttest in the treatment condition. Second, they compare changes in the treatment condition to changes in the control condition. To the extent to which the intervention can be considered successful, changes in the treatment condition will be ample and in the direction indicative of success. Moreover, to the extent the intervention is considered successful the treatment group will change more in the direction indicative of success than will the control group.

Summary statistics addressing these two issues for the criminal thinking data are presented in Table 1. Because participants responded to 17 of the 19 thinking constructs on four-point response scales, the maximum observable change for these constructs was three units. The two exceptions are the proactive and reactive criminal thinking measures which are composite indices. Maximum observable change on these two measures is 13.5 units.

Table 1 indicates that, for treatment group participants, statistically significant change ($p < .05$) was observed for each of the 19 measured constructs. Moreover, all statistically significant changes were negative, and negative change is indicative of intervention success because it marks a measured decrease in criminal thinking. When comparing change in the treatment group with change in the control group, statistically significant differences were obtained for 18 of the 19 of the designated thinking measures (94.7%), and in each case the direction of the difference was indicative of the success of the intervention. More importantly, the mean Cohen's d across the

19 measures was approximately -.55, an effect size of sufficient magnitude to make a substantial difference in this set of variables.

Table 1

	Mean Control (SD)	Mean Treatment (SD)	Difference	P (Two- tailed)	Cohen's d
Thinking Sub-Scales					
Cognitive Anxiety	-.01 (.44)	-.21 (.46)	-.20	.022**	-.45
Defensiveness	-.03 (.43)	-.18 (.43)	-.15	.074*	-.35
Projection	-.07 (.35)	-.23 (.42)	-.16	.038**	-.41
Impulsivity	-.03 (.48)	-.38 (.53)	-.41	.001***	-.68
Entitlement	-.02 (.36)	-.15 (.36)	-.13	.057*	-.37
Dominance	-.06 (.45)	-.28 (.40)	-.22	.008**	-.53
Rationalization	-.07 (.36)	-.18 (.35)	-.11	.094*	-.33
Grandiosity	-.01 (.49)	-.18 (.40)	-.17	.048**	-.39
Cognitive Indolence	-.04 (.51)	-.34 (.51)	-.30	.003***	-.59
Distractibility	-.02 (.39)	-.29 (.46)	-.27	.001***	-.64
Current Criminal Thinking	-.04 (.41)	-.41 (.56)	-.37	<.001** **	-.75
Historical Criminal Thinking	-.01 (.40)	-.30 (.43)	-.29	.001***	-.69
Problem Avoidance	-.08 (.33)	-.39 (.51)	-.31	<.001** **	-.71
Interpersonal Hostility	-.03 (.31)	-.10 (.36)	-.07	ns	-.23
Anti-Social Attitudes	.04 (.39)	-.29 (.42)	-.33	<.001** **	-.80
Denial of Doing Harm	-.04 (.33)	-.18 (.38)	-.14	.040**	-.40
Proactive Criminal Thinking	.01 (1.43)	-1.04 (1.59)	-1.05	.001***	-.69
Reactive Criminal Thinking	-.22 (1.69)	-1.75 (2.28)	-1.53	<.001** **	-.75
Fear of Change	.02 (.40)	-.30 (.59)	-.32	.002***	-.63

ns denotes “no significance”

*p≤.10

**p≤.05

***p≤.01

****p<.001

Gathering the criterion elements into groups based on the strength of the P values listed in Table 1 four distinct data clusters are produced. The first cluster (showing the strongest change at a $p \leq .001$ level) are: Current Criminal Thinking, Problem Avoidance, Anti-Social Attitudes and Reactive Criminal Thinking. The next cluster (showing strong change at a $p \leq .01$ level) contains: Impulsivity, Cognitive Indolence, Distractibility, Historical Criminal Thinking, Proactive Criminal Thinking and Fear of Change. The third cluster (showing change at a standard $p \leq .05$ level) includes: Cognitive Anxiety, Projection, Dominance, Grandiosity and Denial of Doing Harm. The last group of significant changes (showing change at a $p \leq .10$ level) includes: Defensiveness, Entitlement and Rationalization. These four groups are shown in Table 2 as a percentage of sub-scales that meet or exceed the given criteria.

Table 2

p value group	Number of Qualifying Thinking Elements	Percentage of all 19 Thinking Elements	Percentage at the Stated Strength or Better
p < .001	4	21.1%	21.1%
.001 < p ≤ .01	6	31.6%	52.6%
.01 < p ≤ .05	5	26.3%	78.9%
.05 < p ≤ .10	3	15.8%	94.7%

The final table, Table 3, presents the results for the resilience and self-esteem scales. For the self-esteem scale, there was evidence that the treatment group changed in a positive direction (the direction expected given a successful

intervention) and changed significantly more than the control. Once again, Cohen's d was computed at an ample .52.

The resilience measure shows no evidence of change in the treatment group. Moreover, there was no evidence that the treatment and control groups differed in their measured resilience.

Table 3

	Mean Control (SD)	Mean Treatment (SD)	Difference	P (Two- tailed)	Cohen's d
Other Scales					
Resilience	.01 (.21)	-.01 (.20)	-.02	ns	-.10
Self-Esteem	.08 (.33)	.27 (.40)	.19	.009	.52

ns denotes "no significance"