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During-treatment Outcomes among Female Methamphetamine-Using Offenders in Prison-based Treatments

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Abstract

An increasingly important treatment group is the expanding population of methamphetamine-using female offenders. This study focused on women methamphetamine-using offenders ($n = 359$) who were treated either in a modified TC program (CLIFF-TC: $n = 234$) designed for non-violent offenders with significant impairment from methamphetamine use or the standard “outpatient” treatment (OTP: $n = 125$). All participants were assessed on motivation, psychological and social functioning, and treatment engagement before and during treatment. A multilevel repeated measures analysis examined changes between intake and end of Phase 2 treatment. Both CLIFF-TC and the traditional OTP treatments were shown to improve psychosocial functioning, with significant changes on measures of self esteem, depression, anxiety, decision making, hostility, risk taking, and criminal thinking errors. Effect size comparisons indicated treatment gains were larger in the CLIFF-TC than in the OTP group. Both groups rated treatment engagement measures of participation, satisfaction, and counselor rapport to be very high. These results have positive implications for managing and improving treatment of methamphetamine-using women offenders because psychological improvements during treatment have been linked to better post release outcomes.

Keywords

Methamphetamine; female; offenders; treatment; therapeutic community; psychosocial functioning

Introduction

The escalating incarceration rate of women has increased attention to female offenders and more specifically to those with substance abuse problems. The number of women in prisons and jails has more than doubled during the 1990's, outpacing the rise in the number of incarcerated men (Bureau of Justice Statistics, 2000). This trend has continued, and as of 2006, females made up 7.2% of the population under State or Federal jurisdiction, up from 6.7% in 2000 (Bureau of Justice Statistics, 2007). As arrest rates have risen, so has the number of women mandated by courts to drug treatment (Kassebaum, 1999; Messina & Prendergast, 2001). This is related in part to the rise of methamphetamine use among both state and federal prisoners, increasing from 7% in 1997 to 11% in 2004 (Bureau of Justice Statistics, 2006). In 2005, law enforcement officials named methamphetamine the number one drug problem in the United

States (more problematic than cocaine, marijuana, or heroin) with women arrestees (17%) more likely than men (10%) to report using methamphetamines in the month before their offense (Center for Substance Abuse Treatment, 2005).

Research specifically examining the needs of drug-dependent female offenders has identified psychological problems, relationship issues (with partner and family), medical problems, sexual and physical abuse history, low employment, poor parenting, and drug use severity as high-priority issues (Henderson, 1998; Kassebaum, 1999; Langan & Pelissier, 2001; Messina & Prendergast, 2001; Peters, Strozier, Murrin, & Kearns, 1997). However, mental health problems of women in prisons tend to be distinctive. Compared with incarcerated men, women inmates are more likely to have co-existing psychiatric disorders, higher levels of emotional disturbance, more psychological problems (including higher rates of depression and anxiety), lower self esteem, more severe substance abuse histories, and be taking prescribed medications for psychological problems (Bureau of Justice Statistics, 1999; Henderson, 1998; Langan & Pelissier, 2001; Messina & Prendergast, 2001; Peters et al., 1997). Depression symptoms are common in methamphetamine users but vary by gender, with female users having significantly higher rates compared to male counterparts (Semple, Zians, Strathdee, & Patterson, 2008). Correspondingly, lower levels of self esteem are strongly associated with depression among females (MacInnes, 2006). Emphasis on addressing psychological functioning stems from it being associated with relapse to drug use (Grella, Scott, Foss, Joshi, & Hser, 2003). Despite these mental health issues, females in nonprison settings are more likely to perceive a need for treatment and acknowledge dependence on methamphetamine (Cretzmeyer, Sarrazin, Huber, Block, & Hall, 2003).

Corrections-based therapeutic communities have been found to reduce criminal recidivism and relapse to drug use, especially when followed by aftercare in the community (Hiller, Knight, & Simpson, 1999; Knight, Simpson, Chatham, & Camacho, 1997; Simpson, Wexler, & Inciardi, 1999). However, there has been controversy over effectiveness of the TC model for women offenders (see Eliason, 2006), particularly involving the idea that confrontation and close supervision of TC programs may trigger PTSD symptoms and worsened feelings of depression, helplessness, and low self esteem. Recent research from prison-based TC programs for women (addressing trauma issues and enhanced with gender specific programming) found that TC settings were more effective than a standard intensive outpatient programming when evaluated using mental health, criminal behavior, and HIV-risk outcome measures (Sacks et al., 2008).

While post-release outcomes are useful criteria for assessing the long-term effectiveness of corrections-based treatment, they are only one element of a much more involved process. Research on understanding the issues and process that leads to effective corrections-based treatment has been the focus of the TCU corrections-based treatment process model (Simpson, Knight, & Dansereau, 2004). Indeed, there are many intermediate treatment events and changes shown to take place before the positive post-release changes occur. Among them are improvements in social functioning, including risk taking and hostility (Hiller, Knight, Saum, & Simpson, 2006) as well as criminal thinking errors (Knight, Garner, Simpson, Morey, & Flynn, 2006). Changes in psychosocial functioning can provide further evidence of progress and effectiveness (Joe, Broome, Rowan-Szal, & Simpson, 2002; Knight, Simpson, & Hiller, 1999).

In order to devise better treatments for this population, it is important to have knowledge of their characteristics (Cohen, J. B., Greenberg, Uri, Halpin, & Zweben, 2007). This study examines characteristics of female offenders with a substance abuse history of significant impairment related to methamphetamine use. The study is based on data from methamphetamine-using women offenders in a specialized intensive substance abuse treatment

Therapeutic Community program called “Clean Lifestyle is Freedom Forever” (CLIFF-TC) as well as from traditional outpatient treatment (OTP) provided in the Indiana Department of Correction. To begin relating these overall outcome findings to the therapeutic process involved, therefore, the present study aimed to evaluate during-treatment changes in psychosocial functioning, particularly in the areas of self esteem, depression, decision making, and criminal thinking errors as measured from intake to completion of their treatment phase of prison-based treatment. Comparisons of these interim changes also were made between women treated in these two treatment settings.

Method

Data and Methods

In the Indiana Department of Correction (IN DOC), women offenders evaluated as having drug-related problems were offered participation in one of two drug treatments prior to their release from prison. As incentive for participation, completion of treatment could enhance their chance of receiving a sentence time-cut. Outpatient treatment (OTP) was given to a large majority of the drug-using offenders, while the specially designed CLIFF Therapeutic Community (CLIFF-TC) used a curriculum based on the Matrix Model (Center for Substance Abuse Treatment, 2007) as an optional treatment for methamphetamine users.

Treatment Program Descriptions

Outpatient Treatment Program (OTP) was considered “regular treatment,” composed of three phases (education, primary treatment, and relapse prevention). Three facilities participating in this study used a standardized curriculum developed and approved by the IN DOC. *Phase 1 Education* was a Guided Self Study (GSS) consisting of educational material about the process of addiction and treatment. *Phase 2 Primary Treatment* was a primary treatment group that emphasized intensive work on decision making and learning to be responsible for the consequences of those decisions. It included an Individualized Treatment Plan developed for each offender which outlined homework assignments/tasks the offender needed to complete prior to being promoted to the next phase. *Phase 3 Relapse Prevention* was devoted to relapse prevention concepts, reintegration to the community at large, individual goals for the future, and the fellowship of a 12-step support group (Indiana Department of Correction, 2008).

“Clean Lifestyle is Freedom Forever” Program (CLIFF-TC) was developed and implemented in 2005 as a specialized treatment unit that focused on offenders with significant impairment as a result of methamphetamine or amphetamine abuse. It included an approximately 6–9 month program that operated on a modified therapeutic community model. The CLIFF-TC Program provided intensive services with a strong focus on impacting criminal thinking errors and behaviors. Offenders in this program unit were housed together and segregated from general population offenders. Activities emphasized community meetings, group therapy, self help groups, and peer groups. Offenders gained designated privileges and responsibilities as they progressed through the program. Completion was competency based, and there was a strong focus on offender needs as part of planning for re-entry to the community. Graduates of this program also had the opportunity to remain on the unit to continue work on maintaining their recovery and on re-entry issues until release.

Placement of Inmates into Treatment

In this correctional system, female inmates who were evaluated as having drug-related problems were offered participation in a drug treatment prior to their release from prison. Based on selection criteria resulting from a medical review of substance abuse, assessments, and a face-to-face interview by a substance abuse counselor, recommendations were made for the

service considered most appropriate for each offender. As incentive for participation, completion of the treatment also could influence decisions about a sentence time-cut.

Participants

The current study included 359 female methamphetamine users who entered treatment between April 2005 and October 2007 and reported methamphetamine use in the last 12 months before incarceration. All completed the Substance Abuse Intake, the Client Evaluation of Self and Criminal Thinking Scales during the treatment admission process, and they completed the Client Evaluation of Self and Treatment after the treatment phase (described below). This sample of 359 women were from two groups – CLIFF-TC (housed in a modified TC facility, n = 234) and OTP (housed in one of three women's general population facilities, n = 125).

Instruments

Substance Abuse Intake (SAI) was administered by a counselor within 24 hours of program entry. The major sections of the substance abuse intake (Joe, Simpson, Greener, & Rowan-Szal, 2004) address client background (demographics, employment, legal status, and reasons for treatment), psychosocial functioning (family relationships, peer attributes, criminality, health problems, psychological problems, and medications), drug use (recent frequency and age of initiation for alcohol and other drug groups), HIV injection and sex risks, and assessments of alcohol, cocaine, opioid, amphetamines, and cannabis abuse based on DSM-IV criteria.

Client Evaluation of Self and Treatment (CJ CEST) uses a 5-point, Likert-type client response format (ranging from 1 for *disagree strongly* to 5 for *agree strongly*) and includes scales that represent conceptually distinct and key factors delineated in the TCU Treatment Process Model (Simpson, 2004; Simpson & Knight, 2001). Their favorable psychometric properties, including reliability and validity of each of the scales used in this study, are discussed in detail by B. R. Garner et al. (2007).

The CJ CEST includes scales representing client motivation and readiness for treatment, psychological and social functioning, and treatment engagement. Client motivation scales included *Desire for Help* and *Treatment Readiness*. Six psychosocial scales were examined, including Self esteem, Depression, Anxiety, Decision Making, Risk taking, and *Hostility*. The treatment engagement scales – including (Treatment Satisfaction, Counselor Rapport, Treatment Participation, Peer Support and *Social Support*) – provided the core interim measures of treatment engagement (Simpson & Joe, 2004).

TCU Criminal Thinking Scales (TCU CTS) is a supplement to the CJ-CEST and measures “criminal thinking” (Knight et al., 2006). For each scale, higher scores indicates greater negativity in the criminal thinking represented by *Entitlement*, *Justification*, *Power Orientation*, *Cold Heartedness*, *Criminal Rationalization*, and *Personal Irresponsibility*.

Analysis

Because the data collected from offenders are nested under types of prison-based treatment, multi-level analysis (SAS PROC MIXED; Raudenbush, Bryk, & Congdon, 2005) was used to test the hypotheses. A multi-level analytic approach was required because offenders treated within the same program are likely to be more similar to one another in that they are exposed to the same environment and general treatment conditions and philosophy. The multi-level methodology simultaneously estimates equations for each level of the hierarchical data collection design.

The two major null hypotheses addressed were that (1) the two prison-based treatments were equally effective in terms of changes in psychosocial functioning and criminal thinking errors, and (2) they were equally effective in engaging women therapeutically by the end of the treatment phase.

Characteristics of the Offenders

Background information and pre-prison drug use for the 359 female methamphetamine offenders indicated that most of the sample was white (84%), with an average age of 35 years. Frequency and severity of drug use were assessed using the Client Problem Profile Index (CPP; Joe et al., 2004). It showed a majority of the women were classified as having drug problems in the areas of alcohol (64%), marijuana (50%), cocaine (71%), heroin (42%), other drug (95%), and multiple drugs (43%). Almost all women reporting “other drug problems” (95%) represented amphetamine-users, with 92% found to be amphetamine dependent. (Note. The need for having an explicitly designated “methamphetamine” category was not foreseen when the drug use assessment was originally adopted several years before this study.) Other background problems included issues in the areas of employment (52%), psychological problems (57%), criminality (91%), family issues (88%), peers (92%), HIV sex risk (55%), and self-reported medical problems (47%).

Comparisons between the treatment modalities for background characteristics indicated the samples differed mainly on race and CPP drug problems [alcohol, other drug use (uppers), and multiple drug use]. As expected, examination of amphetamine use revealed CLIFF-TC treatment sample was significantly higher on several measures, including frequency of recent upper use in the previous 6 months to incarceration, DSM-IV amphetamine dependence, and DSM-IV amphetamine abuse. With regard to psychological issues, the modalities were not significantly different on CPP psychological problems ($p < .10$), but they did differ on controlling violent behavior (CLIFF-TC higher). There were no background differences in terms of HIV risky behaviors or criminal activity. To adjust for these inmate differences across the groups, a multi-level covariate analysis model was performed in which we tested for treatment approach differences on CJ CEST and CTS means measured at the end of treatment phase, with age, race, the Client Problem Profile Index (CPP), and the corresponding intake CJ CEST measures as covariates.

Results

Client Evaluation of Self at Intake (CEST-Intake)

Based on the CEST given prior to the start of treatment, only pretreatment motivation (i.e., *desire for help* and *treatment readiness*) showed differences. The CLIFF-TC group had significantly higher scores on both scales, $F(1, 357) = 6.07$ and $F(1, 357) = 13.20$, respectively.

Overall Changes from Intake to Treatment Phase

Table 1 shows all of the overall changes on the CEST scales measured from intake to the end of the treatment phase were significant. Effect sizes were used to measure the relative magnitude of each treatment effect using Cohen's D index. The traditional interpretation of the effect sizes are as follows: “small, $d = .2$,” “medium, $d = .5$,” and “large, $d = .8$ ” (Cohen, 1988). The change in *treatment readiness* ($D = .10$) was considered to be “small” as it has a D of .20 or less, whereas the change in *desire for help* ($D = .33$) falls in the “small to medium” range with D sizes greater than .20 but less than .50. Changes for *self esteem* ($D = 1.04$), *depression* ($D = .74$), *anxiety* ($D = .68$), *decision making* ($D = .85$), *hostility* ($D = .54$), and *risk taking* ($D = .80$) all are in the “medium to large” effect size range (over .50). Thus, the changes on the motivation scales were small in effect sizes, while those for the psychosocial functioning scales were generally in the medium to large range.

On the CTS, all overall changes from intake to end of treatment phase were significant with the exception of *cold heartedness*. Effect sizes were generally smaller than those found for the CEST. The effect sizes for the CTS scales were closer to “small” than to “medium”, including *entitlement* ($D = .22$), *justification* ($D = .42$), *power orientation* ($D = .24$), *rationalization* ($D = .25$) and *personal irresponsibility* ($D = .38$).

Within-Treatment Changes

Nearly all of the changes from intake to end of treatment phase were statistically significant for the CEST and CTS measures when examined *within* each of the treatment modalities. The exception was for *treatment readiness* in the OTP group. Effect sizes for the changes on motivation were generally in the “small range” (i.e., much closer to the value of .20 than to .50 for the Cohen D index). The CLIFF-TC effect sizes were larger for *desire for help* (.41) and *treatment readiness* (.27), while in the OTP group *desire for help* (.28) and *treatment readiness* was statistically nonsignificant.

During-treatment effect size changes for psychological measures also were more substantial in the CLIFF-TC group [*self esteem* (1.15), *depression* (.88), *anxiety* (.77), and *decision making* (1.07)] than for the OTP group [*self esteem* (1.03), *depression* (.67), *anxiety* (.65), and *decision making* (.72)]. This pattern likewise held for the social functioning scales, with the CLIFF-TC group [*hostility* (.70) and *risk taking* (1.12)] having larger effect sizes than OTP group [*hostility* (.44) and *risk taking* (.56)].

When the CTS measures were examined, the largest effect size was in the CLIFF-TC group for the *justification* measure (.66). All other CTS changes were in the small to medium range (i.e., between .22 and .49, with no significant change detected in *cold heartedness*). The effect sizes representing changes in the scales for the CLIFF-TC again were larger than those in the OTP group. In addition, the multilevel analysis provides information on whether there were significant differences among inmates within sites on the dependent variable and whether the treatment effects varied significantly across sites through the variance components. Significant variation among inmates was noted for each dependent variable (DH, TR, SE, DP, AX, DM, HS, RT, EN, JU, PI, CN, CH, and PO) and for treatment effects across sites.

Treatment Engagement

There were no significant differences between the two groups on ratings of treatment satisfaction, counselor rapport, treatment participation, or *peer support*, but it is noted that these scale scores for both groups were very high (at over 41 on a 50-point scale). CLIFF-TC women reported significantly higher levels of *social support* ($F(1,354) = 8.77, p < .05$), compared to OTP women.

Discussion

Both the specialized methamphetamine intervention (CLIFF-TC) and the traditional outpatient (OTP) treatments were shown in this study to improve treatment functioning among female methamphetamine-using offenders, based on significant changes measured from intake to the end of the treatment phase. More specifically, measures of self esteem, depression, anxiety, decision making, hostility, risk taking, and criminal thinking errors (defined by scales for entitlement, justification, power orientation, rationalization, and personal irresponsibility) all showed significant changes which are viewed as “critical to improvement” in the TCU treatment process model (Simpson et al., 2004). In addition, when compared on the basis of effect sizes, treatment gains were larger in the CLIFF-TC than in the OTP group.

These results have clinical relevance because establishing psychological improvement has positive implications for female offenders, due to the influence mental health status exerts on other aspects of behavior and functioning. For example, self esteem has been identified prospectively as a protective factor for substance use and depression (Tucker et al., 2005). In another study, better self esteem predicted less depression and fewer substance use problems (Stein, Leslie, & Nyamathi, 2002). These improvements in psychological functioning (i.e., increased self esteem, and decreased depression and anxiety) are important to recovery, and recent data supports the idea that impaired psychological functioning is linked to drug use relapse (Grella et al., 2003).

These women offenders in treatment also showed gains in the psychosocial areas of decision making, risk taking, and hostility. These scales also have been linked to better outcomes posttreatment (Hiller et al., 2006). For example, offenders with high hostility ratings measured during the first month of treatment are significantly more likely than offenders with low hostility levels to drop out or be removed from corrections-based drug treatment (Broome, Hiller, & Simpson, 2000). Women offenders in both conditions also showed improvements in the criminal thinking scales, with the CLIFF-TC group showing larger gains. Previous research shows a significant negative relationship exists between criminal thinking and counselor rapport, as measured using the CJ CEST (Knight et al., 2006). That is, offenders with higher criminal thinking scores report lower ratings of rapport with their treatment counselor. This relationship has been replicated using female offenders and extended to include ratings of treatment participation (Staton-Tindall et al., 2007). This argues that the improvements seen in the criminal thinking scales are important to both counselor rapport and overall treatment engagement.

The present study, however, found no differences between the two groups on the treatment engagement scales. This likely is related to the high scale scores (over 40 on a 10–50 scale) and the resulting ceiling effects. Similar findings were reported by Staton-Tindall et al. (2007) in a study comparing treatment engagement scales by gender (female inmates scored higher on all the scales compared to males). That study involved a sample of over 800 female offenders, and the two engagement scales (counselor rapport and treatment participation) also had scale scores over 41. Thus, the treatment engagement scales from CEST may have limitations in discriminating engagement levels in these female samples.

Another limitation was the lack of having behavioral or outcome measures available. Analyses were conducted as secondary data studies in collaboration with the Indiana Department of Correction and future studies hopefully can include other outcome criteria.

In summary, changes on psychosocial functioning and criminal thinking of female offenders demonstrate that IN DOC in-prison treatments are effective in modifying interim indicators related to positive behavioral change. The cognitive changes appear to support the success of these in-prison treatments and the next step is to demonstrate that in longitudinal post-prison follow-ups, these cognitive changes translate into positive behaviors. Notably, an independent IN DOC recidivism study recently compared data from the overall population of female IDOC releases (including non drug offenders) and found that CLIFF-TC women were significantly less likely to return to prison with a year of release from custody (A. Garner, 2008). The average 1-year recidivism rate for general population female offenders (n = 983) calculated as a baseline from 2004 release data was 15%, compared with 7.0% for the CLIFF-TC 43 graduates released in 2006 and 5.5% for 202 graduates from this program computed cumulatively (as of November 2008). Similar comparisons of these two groups using conduct violation data (i.e. trafficking, tobacco possession, assault) revealed significantly lower rates of conduct violations in the CLIFF-TC group. These figures provide encouraging support for the significant

psychosocial gains and reductions in thinking errors demonstrated by the women offenders in the CLIFF-TC.

These recidivism statistics highlight the potential value of psychosocial gains and reductions in thinking errors as demonstrated by the women offenders, particularly those in the CLIFF-TC Program. This appears to be an encouraging treatment option for the growing population of methamphetamine-using women offenders. Other studies have indicated that follow-up outcomes such as these are specifically related to measures of therapeutic progress and engagement. Future evaluations of this specialized treatment program (CLIFF-TC) will involve directly linking these during treatment changes to the recidivism data.

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Table 1
Methamphetamine Women - CESTI to CEST 2 Changes across Time Matched Dataset (Time 1 and Time 2 Data)

CEST Scales	OTP (N = 125)		CLIFF TC (N = 234)		Total Sample (N = 359)		F (1, 712)	
	Intake	Treatment	Intake	Treatment	Intake	Treatment	Trt X	Time
Desire for Help	45.7 (3.7)	44.4 (3.9)	47.2 (3.9)	45.3 (4.1)	46.7 (3.8)	44.9 (4.0)	11.39**	n.s.
F(1, 712) Time, ES	10.1***, .28		39.6***, .41		39.3***, .33			
Treatment Readiness	43.8 (4.2)	43.5 (4.4)	45.5 (4.1)	46.6 (3.5)	44.9 (4.2)	45.5 (4.1)	42.1***	8.66**
F(1, 712) Time, ES	n.s., .07		16.6***, .27		3.4 [†] , .10			
Self Esteem	28.9 (7.8)	37.1 (6.4)	28.1 (7.9)	37.1 (6.9)	28.4 (7.9)	37.1 (6.7)	n.s.	n.s.
F(1, 712) Time, ES	133.9***, 1.03		308.9***, 1.15		388.2***, 1.04			
Depression	30.8 (6.9)	25.7 (7.0)	31.6 (7.1)	24.9 (7.5)	31.3 (7.1)	25.2 (7.4)	n.s.	3.31 [†]
F(1, 712) Time, ES	56.3***, .67	7	179.5***, .88		194.6***, .74			
Anxiety	34.2 (8.5)	29.5 (8.4)	34.5 (7.7)	28.9 (8.0)	34.4 (8.0)	29.1 (8.1)	n.s.	n.s.
F(1, 712) Time, ES	53.4***, .65		140.3***, .77		165.8***, .68			
Decision Making	32.5 (5.9)	37.2 (4.9)	31.9 (6.6)	38.9 (4.9)	32.1 (6.3)	38.3 (5.0)	n.s.	9.83**
F(1, 712) Time, ES	64.2***, .72		266.9***, 1.07		259.0***, .85			
Hostility	26.1 (7.8)	23.2 (7.7)	24.9 (7.9)	20.3 (6.5)	25.3 (7.8)	21.3 (7.0)	11.25**	5.3*
F(1, 712) Time, ES	24.4***, .44		114.6***, .70		106.0***, .54			
Risk Taking	33.2 (7.1)	29.0 (7.3)	33.9 (7.3)	25.8 (6.7)	33.6 (7.2)	26.9 (7.1)	n.s.	24.7***
F(1, 712) Time, ES	39.9***, .56		293.2***, 1.12		230.6***, .80			
Entitlement	16.9 (4.7)	16.6 (4.8)	16.5 (5.0)	14.7 (4.0)	16.7 (4.9)	15.3 (4.4)	9.0***	7.4***
F(1, 712) Time, ES	n.s., .08		33.3***, .38		16.6***, .22			
Justification	20.0 (6.0)	18.5 (6.2)	20.9 (7.2)	16.4 (5.4)	20.6 (6.8)	17.1 (5.8)	n.s.	14.9***
F(1, 712) Time, ES	6.3***, .22		100.4***, .66		62.8***, .42			
Power Orientation	25.4 (7.6)	24.5 (7.8)	23.8 (7.8)	21.2 (6.6)	24.4 (7.8)	22.3 (7.2)	12.5***	4.6*
F(1, 712) Time, ES	n.s., .13		32.2***, .37		20.5***, .24			
Cold Heartedness	19.6 (4.7)	19.5 (5.5)	18.6 (6.2)	19.2 (5.7)	18.9 (5.7)	19.3 (5.6)	n.s.	n.s.

CEST Scales	OTP (N = 125)		CLIFF TC (N = 234)		Total Sample (N = 359)		F (1, 712)	
	Intake	Treatment	Intake	Treatment	Intake	Treatment	Trt X	Time
F(1, 712) Time, ES	n.s., .02		n.s., .10		n.s., .04			
Rationalization	29.5 (7.4)	27.8 (8.2)	28.3 (8.1)	26.2 (8.3)	28.7 (7.9)	26.8 (8.3)		n.s.
F(1, 712) Time, ES	6.9 ^{**} , .23		19.7 ^{***} , .29		22.5 ^{***} , .25			
Personal Irresponsibility	21.2 (6.8)	19.1 (6.2)	20.8 (7.5)	17.5 (5.5)	20.9 (7.2)	18.1 (5.8)		n.s.
F(1, 712) Time, ES	11.7 ^{***} , .31		55.5 ^{***} , .49		51.1 ^{***} , .38			

[†] $p < .10$

* $p < .05$

** $p < .01$

*** $p < .001$

** Significance tests were adjusted for client race, age, employment and CPP Index