

MODELING ASOCIALITY AND EXAMINING ENGAGEMENT IN ADULT  
OFFENDERS IN SUBSTANCE ABUSE TREATMENT

by

JENNIFER K. PANKOW

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Northern Illinois University  
DeKalb, Illinois

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By

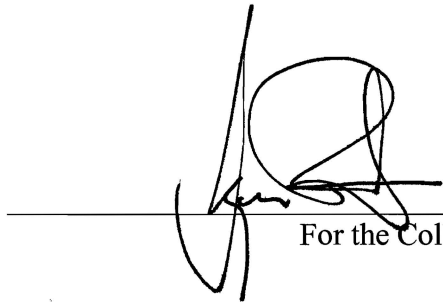
Jennifer Pankow

Thesis Approved:

  
Major Professor





  
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## Modeling Asociality and Examining Engagement in Adult Offenders in Substance Abuse Treatment

In therapeutic community (TC) programs for drug treatment, individual recovery is structured principally around group meetings and positive peer influences. Yet within correctional settings, assigning clients to treatment groups often occurs with limited consideration of how the group process might be impacted by admitting *asocial* individuals who have mental health issues, including psychopathy or related personality disorders (i.e., narcissistic, borderline, histrionic, and antisocial; Blackburn, 2007; Murphy & Vess, 2003). Asocial clients have been shown to present an array of resistant traits evidenced by less effort to change problem behaviors, higher attrition rates, participation in more disruptive institutional behavior, and lower levels of clinical improvement (Ogloff, Wong, & Greenwood, 1990). They are likely to put little effort into following the TC rules, adopting essential tenets (such as open sharing in a safe environment), and healing through pro-social interaction with other group members. Asocial clients, particularly those with psychopathy, demonstrate an inability to identify and acknowledge emotion in others. They also appear to exhibit cognitive and behavioral traits that are incongruent with optimal group functioning.

Archival Texas Christian University (TCU) data systems offer a unique opportunity to gain a better understanding of individual-level asocial functioning in prison-based drug treatment, particularly as a foundation for further group-level research. Thus, the focus of this study is (1) to model and confirm a 2-factor solution of asociality consistent with the literature using TCU client assessment items, and (2) to examine the relationship between asociality and treatment engagement to establish the predictive validity of the asocial scales.

### *Asocial Offender*

In this study, the primary source of evidence on asocial functioning and model development is derived from psychopathy research. These studies have identified similarities between psychopathy and related personality disorders previously noted. Therefore, to avoid confusion from repeated references to several different personality types, the term “asocial” is used as a broad reference to the characteristics of psychopathy and related personality disorders (e.g., narcissistic and borderline) as defined in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition Text Revision (American Psychiatric Association, 2000).

Hare and Neumann (2005) state that “psychopathy is a coalescence of extremes on numerous dimensional traits” (p. 62). Traditionally, psychopathy has been conceptualized as a 2-dimensional construct with affective/interpersonal and behavioral/unstable lifestyle features (Douglas, Guy, Edens, Boer, & Hamilton, 2007; Hare, 1985; Hare et al., 1990; Hare, Hart, & Harpur, 1991; Levenson, Kiehl, & Fitzpatrick, 1995; Lynam, Whiteside, & Jones, 1999). More recently, researchers have investigated 3- and 4-factor models with different analytic methods (Hare & Neumann, 2005; Neumann, Malterer, & Newman, 2008). In the 2005 study by Hare and Neumann, four factors were identified with item response theory analysis and Psychopathic Checklist-Revised (PCL-R; Hare, 2003) items. The factors reflected interpersonal, affective, lifestyle, and antisocial composites. While this alternate conceptualization illustrates the multi-dimensional nature of the asocial construct, the 2-factor solution is well-established in the literature.

In general, asocial individuals have an inflated sense of self, lack empathy for others, and demonstrate behavior problems. Asocial attributes also have been linked to negative treatment outcomes in several studies. For example, Fals-Stewart and Lucente (1994) found

asocial functioning was associated with poorer treatment participation based on counselor ratings of the client's relationship to peers and staff, participation, general attitude, and work assignment. These clients also spent less time in TC residential treatment and were removed more frequently from treatment for rule violations compared to others in the program.

Further evidence comes from a study that examined treatment outcomes for methadone clients which found that "extreme" difficulties in forming meaningful relationships between client and therapist resulted in poor treatment response (Woody, McLellan, Luborsky, & O'Brien, 1985). Additional support for this finding is provided by Richards, Casey, and Lucente (2003) who suggest that interpersonal communication and the ability to accept personal shortcomings are "critical to patient success" (p. 271). This conclusion was based on higher levels of negative group participation by asocial female offenders.

The behavioral dimension of asociality is commonly recognized as problematic for clinicians and corrections staff, and has been the focus of research on offender functioning. Hobson, Shine, and Roberts (2000) suggest that, when compared to behavioral characteristics (e.g., impulsivity), affective traits are more highly correlated with negative behavior in TC group treatment. In ratings by group facilitators (staff) on the most difficult client attributes to work within the TC setting, affective traits (such as glibness, grandiose, and failure to take responsibility) were considered the most difficult to address. It is suggested that asocial affective traits are related dynamically to antisocial behavior, and as such, should not be overlooked in assessing risk factors and determining treatment needs. Moreover, research indicates that client attributes (including psychosocial functioning) influence engagement and retention. This relationship is a key component in a model developed by Simpson (2004) which provides a framework for conceptualization of the treatment process.

### *TCU Treatment Model*

The TCU Treatment Model (Figure 1) represents the drug treatment process as a series of stages reflecting individual cognitions and behaviors. In these sequential phases of recovery, therapeutic interventions are grounded in evidence-based practices linking motivation and other client attributes to engagement, early change, retention, support networks, and follow-up outcomes across time. Motivation is a significant predictor of treatment participation and has been shown to influence treatment outcomes (Simpson & Joe, 1993). However, for asocial individuals, low motivation may be more than simply not wanting treatment (Ogloff et al., 1990). Rather, it might be an actual trait of asocial personality. Ogloff and associates (1990) note that strongly asocial offenders are likely to demonstrate motivation at intake for reasons other than recovery (e.g., desire to create a positive image for parole review boards). However, for the asocial client who does not accept responsibility for personal drug-related problems, the continuous process of self-examination becomes pointless, resulting in decreased interest and commitment to treatment over time.

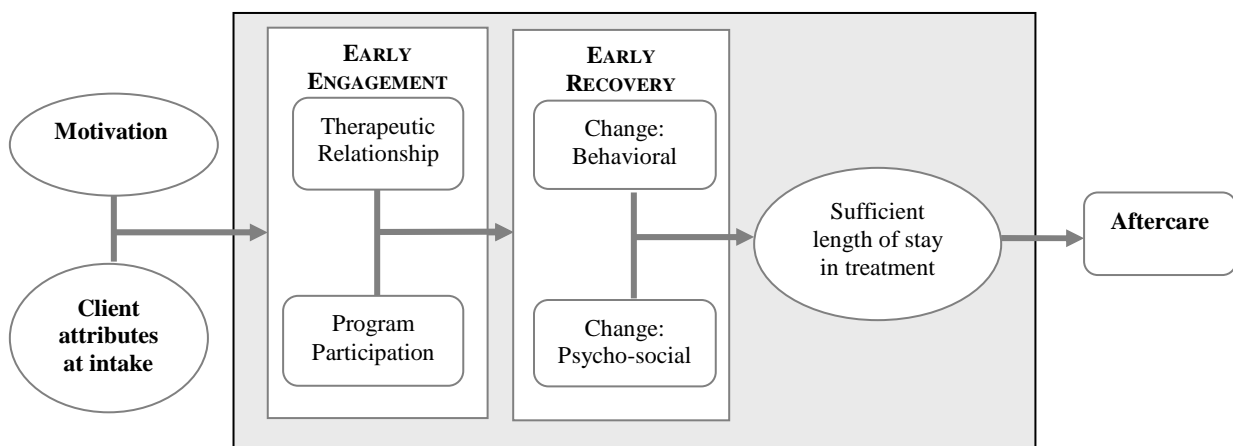


Figure 1: TCU Treatment Model

Another perspective on asocial client motivation indicates that psychopaths typically do not generate motivating attitudes in response to critique from others (Greenspan, 2003). Theoretical underpinning for this view is found in Sullivan's interpersonal theory (Sullivan, 1953), which suggests that interpersonal problems are maintained through perceptions of others. Namely, individuals tend to carry distorted views and unrealistic expectations of others into relationships (MacNair-Semands, 2000). When dysfunctional interpersonal patterns are identified and addressed, emotional well-being is achieved. Healthy interpersonal skills, according to Sullivan's theory, necessitate that the individual be responsive to the attitudes and constructive criticism from the group members. However, being responsive to feedback is a cognitive skill that is characteristically not associated with asocial individuals (Greenspan, 2003).

#### *Group-level Process Background*

In addition to motivation, an understanding of individual-level psychosocial functioning provides a foundation for exploration of larger, group-level processes (Kenny & LaVoie, 1985). Gendlin and Beebe (1968) state that a primary goal in joining a group is to have contact with others while maintaining a unique perspective on one's own truth. Group characteristics such as honesty, respect for others, and confidentiality are recognized as core elements. When an individual reveals himself to the rest of the group and is able to receive feedback, then self-examination is likely to occur. Thus, **social interaction among group members is the foundation of therapeutic group functioning** (De Leon, 2000; Yalom, 1995). Through social interaction, client perceptions are posited to contribute to a collective group identity and the development of norms that enable members to manage the emotional content of the meetings (Stone, 1990). When interpersonal communication is either not established or suffers collapse, the resulting disruption to the group process can contribute to

dominant negative group characteristics. This lack of group cohesion, according to Stone (1990), makes the re-establishment of functional norms difficult.

Many curative factors have been suggested to contribute to the beneficial effects of group treatment for the individual, and cohesion is widely considered one of the most critical (Budman et al., 1989; Burlingame, Fuhriman, & Johnson, 2001; Dion, 2000; Kivlighan & Goldfine, 1991; Marmarosh, Holtz, & Schottenbauer, 2005; Mullen & Copper, 1994; Tschuschke & Dies, 1994; Yalom, 1995; Zaccaro & Lowe, 1987). Cohesion basically describes the client's sense of belonging and willingness to accept and adhere to the group norms. Additionally, it has been found to increase clinical improvement (Tschuschke & Dies, 1994) and treatment engagement (Ogrodniczuk & Piper, 2003) in a therapeutic group (e.g., grief therapy). Theoretical support for cohesion research is found in the social identity theory developed by Tajfel and Turner in 1979 which asserts that a person projects many social identities dependent on social context. These social identities are formed through an internalized sense of what is necessary for membership to the group. For example, being a member of a sports team provides a social identity in terms of the defining characteristics of the group (e.g., conference champions, skilled players, and commitment to practice) which then becomes a part of one's self concept.

#### *Asocial Client Impact on Group*

Research has demonstrated that group therapy can lead to desirable outcomes (Burlingame, Fuhriman, & Mosier, 2003) and that individual functioning has a direct influence on group efficacy (Zaccaro, 1987). Besides having an impact on their own treatment experience, asocial clients also impact the group experience for other members in areas such as:

- disruption of group cohesion,
- excessive time spent by the clinician with the uncooperative inmate,
- loss of group structure,
- frustration or resentment among group members, and
- creation of a hostile environment.

While it is clear that asocial offenders have the potential to adversely impact the TC group process, particularly with respect to group cohesion, more work is needed to identify these individuals and how to gain a better understanding of their role within the larger treatment process framework.

### *Hypotheses*

There were two primary goals for this study; (1) to model and confirm a 2-factor solution of asociality consistent with the literature using TCU client assessment items, and (2) to examine the relationship between asocial clients and the well-established TCU treatment engagement measures for validation of the 2-factor model.

For the first aim, TCU assessment items were selected to similarly reflect a 2-factor model of psychopathy suggested by the PCL-R and Levenson's Self-Report Psychopathy Scale (LSRP; Levenson et al., 1995). It is hypothesized that a 2-factor model demonstrating Affective and Behavioral dimensions of the asocial construct will be supported.

The second aim is to examine client engagement levels following the completion of treatment orientation according to three asocial categories (i.e., low, medium, and high). The hypothesis for this aim predicts that high asocial clients, when compared with their low and medium asocial counterparts, will show significantly lower self-reported engagement levels in the early engagement stage of treatment.

## Methods

### *Participants and Sites*

Secondary data were obtained for 521 adult male offenders from six prison-based TC programs, each with a minimum 9-month required treatment stay. Inmates participated in substance abuse treatment during a period from 2007 to 2008 and completed the full set of TCU assessments. Program eligibility was based on substance use (i.e., addiction) and treatment need, length of sentence sufficient for the recommended treatment exposure, and the ability of the offender to achieve community corrections custody status.

### *Instrumentation*

The proposed model was constructed with items from TCU self-report instruments developed for assessing client psychosocial functioning during substance abuse treatment. Used with community and prison-based populations, the TCU CJ-Client Evaluation of Self and Treatment (CJ-CEST; Garner, Knight, Flynn, Morey, & Simpson, 2007) and the TCU Criminal Thinking Scales (CTS; Knight, Garner, Simpson, Morey, & Flynn, 2006) routinely are administered throughout treatment to monitor client progress and aid in developing treatment plans. In the programs, participants completed the TCU assessments at 2 points in time; (1) intake to the treatment program, and (2) the end of orientation (approximately 4 to 5 weeks after intake). Table 1 presents the CJ-CEST and CTS assessments, corresponding scales, and reliabilities based on a national sample.

Overall, the majority of the CJ-CEST and CTS scales have reliabilities exceeding .73, demonstrating good psychometric properties. Item responses are based on a 5-point scale (1 = disagree strongly, 2 = disagree, 3 = uncertain, 4 = agree, and 5 = agree strongly). Reflected items are scored so that a response of “1” (disagree strongly) is scored with a “5.”



Table 1

*TCU CJ-CEST and CTS Instruments, Scales, Number of Items, and Reliabilities*

CJ-CEST Assessments	Scales	Items	Reliability
Treatment Motivation	Desire for Help	6	.67
	Treatment Readiness	8	.80
Psychological Functioning*	Self-Esteem	6	.72
	Depression	6	.71
	Anxiety	7	.75
	Decision Making	9	.74
Social Functioning**	Hostility	8	.80
	Risk Taking	7	.71
	Social Support	9	.74
Clinical Engagement	Treatment Participation	12	.86
	Treatment Satisfaction	7	.79
	Counseling Rapport	12	.93
	Peer Support	5	.77
Recently added scales: * Expectancy; **Social Desirability. CEST reliabilities reported in Garner et al. (2007).			
Criminal Thinking	Entitlement	6	.78
	Justification	6	.75
	Power Orientation	7	.81
	Cold Heartedness	5	.68
	Criminal Rationalization	6	.71
	Personal Irresponsibility	6	.68

CTS scales reliabilities reported in Knight et al. (2006).

*Procedure*

Model development was guided by the conceptualization and content of the PCL-R and the LSRP, which have shown to be reliable and valid measures of psychopathy. As previously noted, these scales traditionally have been based on affective and behavioral characteristics associated with psychopathic, antisocial, or related subtypes. In particular, the PCL-R is considered to be the “gold standard” for assessing psychopathy. Although recent work has yielded 3- and 4-factor models (previously noted), there is ample justification for

using the 2-factor construct for this study (Douglas et al., 2007; Hare et al., 1991; Hobson et al., 2000; Levenson et al., 1995; Lynam et al., 1999).

### *Proposed 2-Factor Model*

The proposed model in Figure 2 illustrates the CJ-CEST and CTS scales that were hypothesized to measure the Affective and Behavioral dimensions. The Affective dimension is a composite of items from three CTS scales (Entitlement, Cold Heartedness, and Personal Irresponsibility). The Entitlement scale is about believing one's self to be above the law (e.g., "You have paid your dues in life and are justified in taking what you want."). Cold Heartedness items focus on concern for others (e.g., "You feel people are important to you."). Personal Irresponsibility items such as, "You are not to blame for everything you have done," gauge the client's perceptions about accountability. The Affective dimension consists of 15 items.

The Behavioral dimension is based on two TCU CJ-CEST Social Functioning scales (Hostility and Risk Taking) and one Psychological Functioning scale (Decision Making). The Hostility scale includes items related to temperament (e.g., "You get mad at other people easily."). Risk Taking items address taking chances (e.g., "You like to do things that are strange or exciting."), and Decision Making items target planning strategies (e.g., "You think about probable results of your actions."). The Behavioral dimension consists of 16 items.

### *Outcome Variables*

Treatment engagement (assessed at the end of orientation) was measured with two subscales (Treatment Participation and Peer Support) from the CJ-CEST Treatment Progress Domain. An example of a Treatment Participation item is, "You are willing to talk about your feelings during counseling." In the Peer Support scale, clients answered items including, "Other clients at this program care about you and your problems." Engagement

items are answered on a 5-point scale (1 = disagree strongly, 2 = disagree, 3 = uncertain, 4 = agree, and 5 = agree strongly) with high scores indicating client engagement in the treatment process. Treatment Participation and Peer Support scales were selected as the measure of engagement because they assess interpersonal skills in the treatment context and self-rated perceptions about participation with the counseling process.

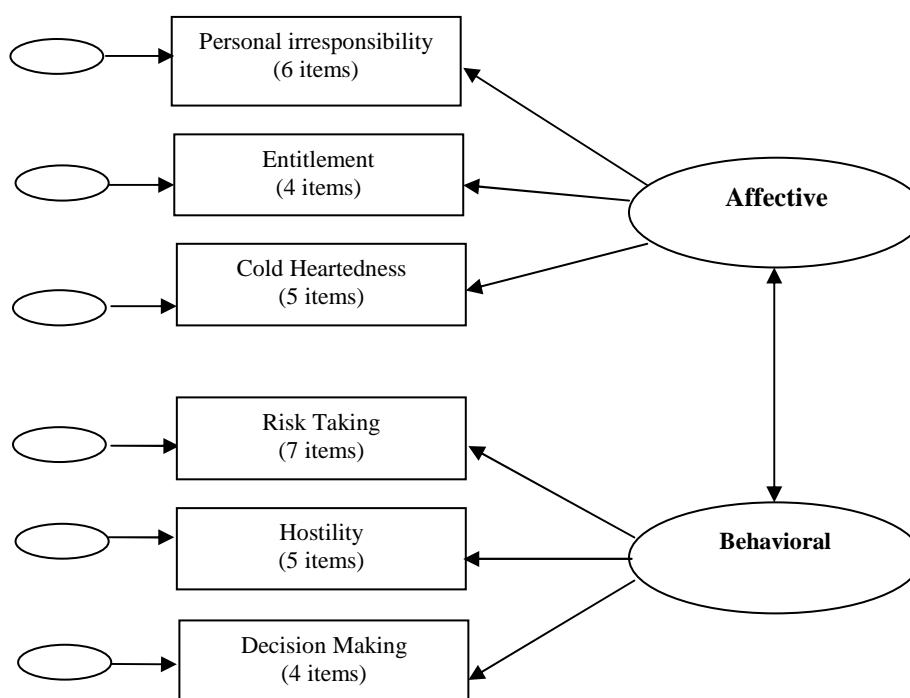


Figure 2: Proposed 2-Factor Model

### *Analytic Plan*

A three-stage analytic plan was used for evaluating the hypothesized asocial scales and testing for predictive validity. First, exploratory factor analysis (EFA) was conducted to address the underlying structure of the asociality items. Multiple criteria were utilized to

identify the number of factors underlying the items based on recommendations by Hatcher (1994); these included examination of scree plots, proportion of variance accounted for by each factor, factor loadings, and interpretability criteria (i.e., theoretically meaningful constructs).

Confirmatory factor analysis (CFA) was used to evaluate the ability of the model to reproduce the variance-covariance matrix. Browne and Cudeck (1993) suggest that assessing a close fit is best accomplished with multiple criteria rather than using a single fit index. For example, chi-square is often reported as evidence for an acceptable fit; however, chi-square is sensitive to large sample size and may produce a significant value (evidence of poor fit) even if the model is acceptable (Hatcher, 1994). Therefore, on the basis of recommendations by Browne and Cudeck (1993), several criteria were used to assess model fit; these included Comparative Fit Index (CFI; Bentler, 1990), Root-Mean-Square Error of Approximation (RMSEA), and Adjusted Goodness-of-Fit Index (AGFI). The CFI compares the existing model fit with the null model which assumes the latent variables in the model are uncorrelated. An overall good fit is indicated when CFI values are greater than .9 (Hatcher, 1994). RMSEA assesses a lack of model fit by comparing the observed model with parameter values based on a hypothetical population distribution; RMSEA values less than .08 are considered acceptable (Browne & Cudeck, 1993). An AGFI value of .95 is considered a good fit in a range of 0 (no fit) to 1 (perfect fit) for gauging the degree of model parsimony.

In the second stage of analysis, asocial scores were computed for each individual prior to testing the predictive validity of the scales in the final analytic stage. Due to the multilevel nature of the data (i.e., individuals clustered within prison programs), predictive validity was evaluated with nested analysis of variance (ANOVA) using the SAS<sup>®</sup> proc

mixed procedure. This multilevel statistical approach is well suited for investigating a nested design where samples are correlated (i.e., similarities exist between clients as a result of membership in the same program). Multilevel analysis produces unbiased estimators by modeling the group and individual levels in the same analysis so that important client variability is preserved. Another consideration in this study was the unbalanced design; to address this condition, least squares means (*LSM*) were used as the means estimators.

## Results

### *Exploratory Factor Analysis (EFA)*

The result of EFA revealed three latent factors (instead of the anticipated 2-factor solution), and 88% of the total variance was explained by this model. The first factor accounted for 47% of the variance, whereas the second and third factors accounted for more modest variance portions (25% and 16%, respectively). Utilizing varimax rotation, items with a factor loading greater than or equal to .40 were used for interpreting the factor structure. As a result, 9 out of 31 items were dropped. Correlations were re-examined and confirmed the need to reflect two additional items (for a total of five reflected items) to aid in interpretability. The factors represent (1) **Behavioral Responsivity (BR)**, (2) **Cognitive Distortion (CD)**, and (3) **Social Disassociation (SD)**, three distinct aspects of asocial personality described in the literature (Figure 3). The CD factor focuses on criminal thinking, and SD encompasses a lack of concern or caring for others; both dimensions reflect affective features. The BR factor is a composite of hostility and risk taking hypothesized in the original model. Coefficient alphas (Cronbach, 1988) are .85 for the BR factor, .79 for the CD factor, and .62 for the SD factor. Together, factor loadings, item-total correlations, and coefficient alphas support a high degree of internal consistency for the 3-factor asocial composite (Table 2).

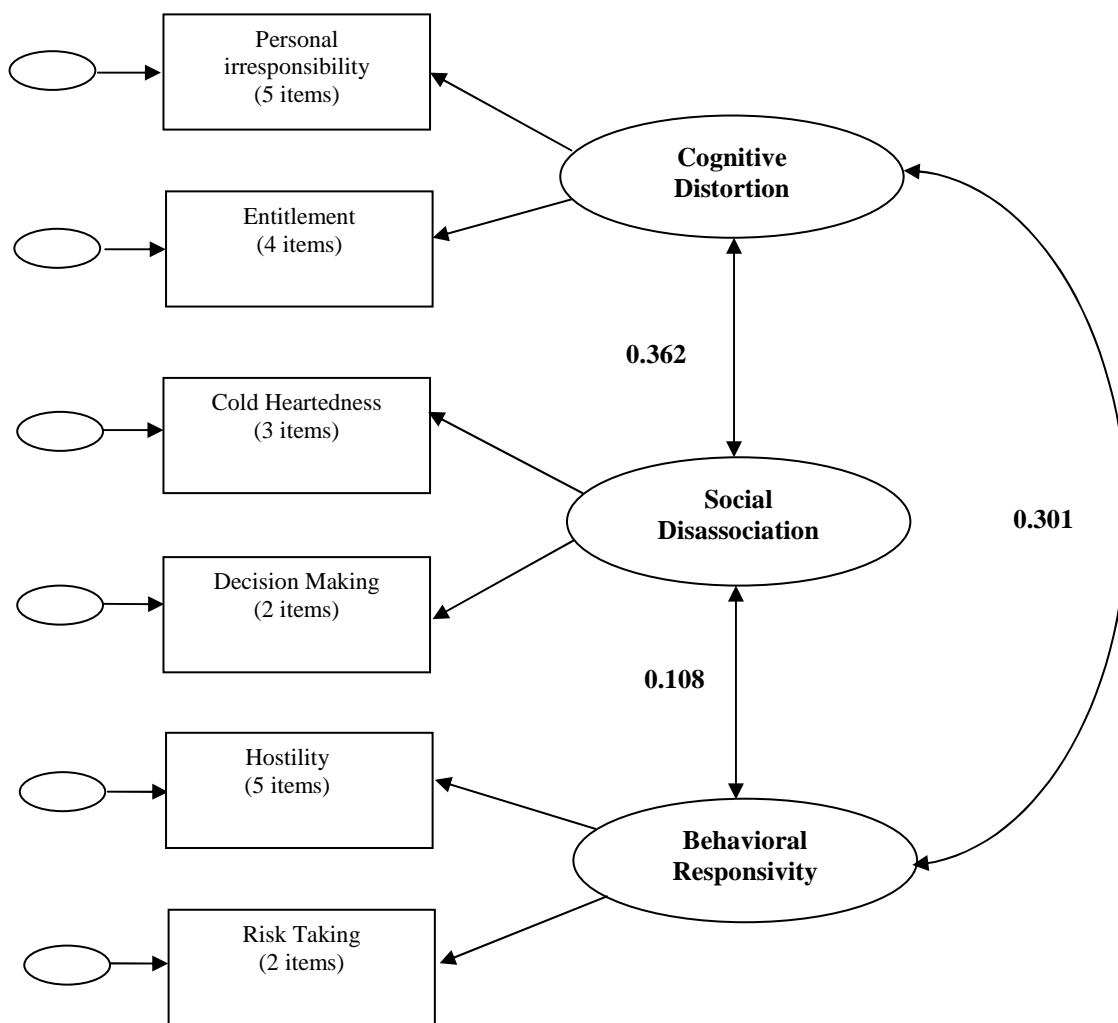


Figure 3: 3-Factor Asocial Model

Table 2

*Factor Loadings, Item-Total Correlations, Coefficient Alphas from Exploratory Analysis*

<u>Factor</u> (Coefficient Alpha) Item	Item-Total Correlations	Factor Loading
<u>Behavioral Responsivity</u> (raw alpha = .85)		
You feel a lot of anger inside you.	.63	.68
You have a hot temper.	.74	.78
You get mad at other people easily.	.69	.72
You have urges to fight or hurt others.	.57	.57
You like to take chances.	.36	.41
You like the “fast” life.	.53	.56
You like friends who are wild.	.59	.62
Your temper gets you into fights or other trouble.	.69	.74
<u>Cognitive Distortion</u> (raw alpha = .79)		
Real reason you are in prison is because of your race.	.44	.49
Nothing you do will make a difference in the way you are treated.	.34	.40
You are not to blame for everything you have done.	.43	.44
Laws are just a way to keep poor people down.	.52	.57
You may be a criminal, but your environment made you that way.	.54	.57
You paid your dues in life and are justified in taking what you want.	.58	.62
You feel you are above the law.	.49	.55
It is okay to commit crime in order to pay for the things you need.	.52	.55
Society owes you a better life.	.54	.61
<u>Social Disassociation</u> (raw alpha = .62)		
Hearing that someone has lost everything upsets you. (r)	.40	.45
Seeing someone cry makes you sad. (r)	.36	.48
You feel people are important to you. (r)	.35	.41
You consider how your actions will affect others. (r)	.39	.43
You think about probable results of your actions. (r)	.36	.48

Reflected items are indicated with “(r).”

### *Confirmatory Factor Analysis (CFA)*

CFA was conducted with SAS<sup>®</sup> computer software and repeated with LISREL 8.71 software (Jöreskog & Sörbom, 2004); both programs produced similar 3-factor structures. The following results are reported from the SAS analysis. Standardized residuals were reviewed, and it was concluded that item 23 (“You like friends who are wild.”) did not contribute well to the scale and subsequently was dropped from further analyses. The modification resulted in a total of 21 items retained in the final model; correlations for this group are shown in the Appendix. Fit indices are reported in Table 3 and demonstrate the model is an acceptable fit; CFI = .92, RMSEA = .047, and AGFI = .92. The significant chi-square (186,  $N = 521$ ) = 399.69,  $p < .0001$  was anticipated due to the large sample size.

Table 3

#### *Summary of Fit for 3-Factor Model in CFA*

Model	$\chi^2$ (df)	RMSEA	CFI	AGFI
Asocial	399.69 (186)*	.047	.92	.92

\*Significant at  $p < .0001$ .

Standardized items loadings and coefficient alphas for the final model are reported in Table 4. Coefficient alphas remained unchanged from those obtained with EFA with the exception of the behavioral factor which changed from .85 to .84 as a result of dropping item 23.



Table 4

*Standardized Loadings and Coefficient Alphas for Factors in the Final Model*

<u>Factor</u> (Coefficient Alpha) Item	Loading
<u>Behavioral Responsivity</u> (raw alpha = .84)	
You feel a lot of anger inside you.	.72
You have a hot temper.	.87
You get mad at other people easily.	.79
You have urges to fight or hurt others.	.59
You like to take chances.	.32
You like the “fast” life.	.46
You like friends who are wild. (*)	-
Your temper gets you into fights or other trouble.	.80
<u>Cognitive Distortion</u> (raw alpha = .79)	
Real reason you are in prison is because of your race.	.49
Nothing you do will make a difference in the way you are treated.	.37
You are not to blame for everything you have done.	.46
Laws are just a way to keep poor people down.	.58
You may be a criminal, but your environment made you that way.	.61
You paid your dues in life; are justified in taking what you want.	.67
You feel you are above the law.	.57
It is okay to commit crime in order to pay for the things you need.	.62
Society owes you a better life.	.62
<u>Social Disassociation</u> (raw alpha = .62)	
Hearing that someone has lost everything upsets you. (r)	.49
Seeing someone cry makes you sad. (r)	.44
You feel people are important to you. (r)	.52
You consider how your actions will affect others. (r)	.54
You think about probable results of your actions. (r)	.48

Reflected items indicated by “(r).” Dropped item: (\*).

### *Asocial Scores*

The asocial total score for each individual was computed as the mean of the composites corresponding to the 3-factor solution in the final model. The average was multiplied by 10, and the values for the three factors were summed to produce a total asocial score with a range of 0 to 150, distribution (32-119.43), mean ( $M = 67.63$ ), and standard deviation ( $SD = 14.18$ ). By calculating the score in this manner, equal weight was given to the three dimensions in the total asocial score on the basis of the means instead of adding the individual items for the total asocial score. The equal weighting approach provides a way to emphasize the SD factor (characterized by lack of empathy), which has been linked to persistent problematic functioning (for asocial clients) in group therapy.

The study design posits an emphasis on identifying the extreme ranges of asociality (i.e., low and high), therefore asocial levels were constructed on the basis of 2 criteria; (1) using a standard deviation above and below the mean as a guide for determining cut points (Hare & Neumann, 2005), and (2) establishing consistency between the proposed scoring levels and the response set. Follow-up multivariate analysis was conducted with randomly split half samples to further test the reliability of the scoring levels. Table 5 shows the distribution of asocial scores, range for each group, means, and standard deviations.

Table 5

#### *Asocial Scoring Ranges*

Category	Range	<i>N</i>	%	<i>M</i>	<i>SD</i>
High	85.01 and above	60	12.0	93.45	7.47
Medium	55.01-85.00	366	70.0	68.53	7.50
Low	55.00 and below	95	18.0	47.86	5.89

$N = 521$ .

Of the total sample of 521 clients, 95 (18%) individuals were classified as low-asocial, 366 (70%) clients were scored as medium, and 60 (12%) individuals were scored as high-asocial. Based on the mean score for the high asocial individuals ( $M = 93.45$ ), the average response on assessment items would be 4.45 on the 5-point scale; for the medium group ( $M = 68.53$ ), the average response would be 3.26; and for the low asocial group ( $M = 47.86$ ), the average answer would be 2.28. The average response illustrates a theoretically consistent direction for client responses within the asocial level. Table 6 shows the distribution of clients by asocial level within program sites.

Table 6

*Clients by Asocial Level In Prison-Based Drug Treatment Programs*

Site (n)	Asocial Level		
	Low	Medium	High
1 ( $n = 125$ )	15	82	28
2 ( $n = 24$ )	3	15	6
3 ( $n = 34$ )	10	22	2
4 ( $n = 32$ )	5	20	7
5 ( $n = 145$ )	24	115	6
6 ( $n = 161$ )	38	112	11
Totals ( $N = 521$ )	95	366	60

*Nested Analysis of Variance with Low, Medium, and High Asocial Levels*

The objective for this analytic step was to test the predictive validity of the asocial scales and address the second hypothesis that clients with high asocial ratings would self-report significantly lower engagement levels compared to medium and low asocial clients. Outcome measures were obtained from TCU scales assessing Peer Support and Treatment Participation. The nested ANOVA results are summarized below by outcome measure.

### *Treatment Participation*

At the program level, no significant differences were identified between sites for Treatment Participation,  $F(5, 513) = 2.17, p > .05$ . Individual-level scores, however, (Table 7) indicate that asocial level (low, medium, and high) significantly predicted clients' self-reported engagement levels for this outcome variable. The  $t$  values for the each group *LSM* estimate were significant at  $p < .0001$ . The lower half of Table 7 reports the pair wise comparisons between *LSM* estimates for asocial levels (i.e., low vs. high, low vs. medium, and medium vs. high); these *LSM* estimate differences were significant for each comparison.

### *Peer Support*

Peer Support was entered into nested ANOVA as the second measure of engagement. For this outcome, the effect of program membership was significant,  $F(5, 513) = 2.53, p < .05$ , indicating sites differed in the impact of asociality on engagement ratings. Even when accounting for differences from one site to another, *LSM* estimates were significant for all asocial levels ( $ps < .0001$ ), and pair wise comparisons were similar to those obtained for Treatment Participation (i.e., all differences between *LSM* estimates were significant).

Table 7

#### *Least Squares Means for Dependent Variables by Asocial Level*

Asocial	Treatment Participation			Peer Support		
	LSM Estimate	$t$	$p$	LSM Estimate	$t$	$p$
(3) High	36.60	47.56	< .0001	27.67	24.39	< .0001
(2) Medium	40.47	106.57	< .0001	33.23	59.36	< .0001
(1) Low	43.05	68.27	< .0001	35.85	38.57	< .0001

<i>Pair Wise Comparisons of LSM Estimate Differences</i>						
1 and 2	2.58	3.91	.0001	2.62	2.69	.0074
1 and 3	6.45	6.64	< .0001	8.18	5.71	< .0001
2 and 3	3.86	4.72	< .0001	5.56	4.60	< .0001

$N = 521$  ( $df = 513$ ). Asocial levels: Low ( $n = 95$ ), Medium ( $n = 366$ ), High ( $n = 60$ ).

## Discussion

The current study tested a model of asociality using TCU assessment items in a 2-factor structure based on affective and behavioral characteristics related to asocial individuals; however, results demonstrated an optimal 3-factor solution representing “Behavioral Responsivity”, “Cognitive Distortion”, and “Social Disassociation” features. Together these factors accounted for 88% of the variance. The CD factor focuses on criminal thinking, and SD encompasses a lack of concern or caring for others; both constructs are well-documented in psychopathy research (Hare et al., 1990, Hobson et al., 2000; Levenson et al., 1995). More importantly, similarities exist between these two factors and the interpersonal and affective factors identified by Hare and Neumann (2005), in particular, items assessing lack of empathy (in the SD factor and Hare’s affective factor).

As hypothesized, core elements of the behavioral construct (risk taking and hostility) were reproduced in the BR factor. The two Decision Making items (“You consider how your actions will affect others” and “You think about probable results of your actions”) that loaded on the SD factor point to the possibility that clients interpreted the statements from a “caring about others” perspective instead of planning strategies related to behavior. Problematic behavior is a salient characteristic of asociality and is highly prevalent in criminal justice populations. In fact, Levenson et al. (1995) discuss that nearly all incarcerated psychopaths exhibit antisocial/unstable lifestyle traits (consistent with the BR factor in this study) associated with antisocial personality disorder (APD; American Psychiatric Association, 2000), but that only a moderate percentage (20%-30%) of those with an APD diagnosis meet criteria for psychopathy. The difference is related to the affective and cognitive traits in the asocial model; in other words, the majority of clients with APD have a higher capacity for empathy and other interpersonal skills compared to asocial clients. The distinction is an

important one in the context of the TC environment, where social interaction is a core component of the treatment process (Yalom, 1995). In fact, asocial characteristics (e.g., lack of concern for others, self-centeredness, and blaming others) have been shown to impede treatment in a manner that results in poor treatment response and program attrition (Hobson et al., 2000; Richards et al., 2003). Thus, providing clinicians with information about where clients score on each factor has possible clinical implications. For instance, treatment for asocial clients who are high on the BR factor might consider including an intensive focus on anger management. Likewise, treatment for asocial clients who are high on the CD and SD factors may need to be more individualized since these clients might not be good candidates for treatment based on group methods.

The second hypothesis in this study stated that high asocial clients would self-report significantly lower engagement levels when compared to clients with low and medium asocial scores. This prediction was supported and provides evidence for the predictive validity of the asocial scales. Moreover, these results add support to a growing body of evidence on the relationship between asociality and treatment engagement (Fals-Stewart & Lucente, 1994; Hobson et al., 2000; Ogloff et al., 1990; Richards et al., 2003; Woody et al., 1985). In general, asocial clients are less motivated (to participate in the treatment), have higher attrition rates, exhibit more disruptive institutional behavior, and demonstrate lower levels of clinical improvement.

Yet despite the empirical evidence, the debate surrounding the complex dimensionality of asociality continues, and questions remain regarding how the asocial model should inform treatment planning. The clinical significance of this last point is illustrated by the TCU Treatment Model, which conceptualizes the relationship between client attributes and phases of drug treatment; namely, that client attributes and psychosocial functioning

directly influence the treatment progress and outcomes. The model also identifies motivation as a key predictor of engagement. There is scant evidence, however, on how motivation impacts engagement trajectories for asocial clients, particularly for those at very high asocial levels.

### *Clinical Implications*

In the field of substance abuse treatment, research shows that tailored interventions guided by client functioning indicators are fundamental to treatment effectiveness (Simpson, 2006). This study provides evidence that supports the need for more adaptive treatment planning strategies specific to asocial clients. To this end, the use of asocial scales from the TCU psychosocial assessments would supply clinicians with a free, easily administered instrument for early identification and treatment planning. Further, the ability to pre-screen offenders would aid providers in determining the most appropriate treatment approach.

### *Future Research Directions*

One relatively unexplored area in need of investigation is the impact of asociality on group treatment processes (including counselor rapport). The findings in Hobson et al. (2000) showed that affective features were more difficult for staff (i.e., group facilitators) to deal with during group sessions compared to behavioral issues. More specifically, traits such as an inflated sense of self contributed to problems between asocial clients and others in the treatment program. This may be clinically relevant, particularly for high asocial individuals who dominant the TC group and disrupt group cohesion. In fact, research on the curative effects associated with cohesion between group members has linked reduced treatment engagement (Ogrodniczuk & Piper, 2003) and lower levels of clinical improvement (Tschuschke & Dies, 1994) with loss of cohesion.

Client motivation is another research direction with clinical implications for treatment planning. More information is needed about what motivates asocial individuals and how the different personality dimensions are related to treatment commitment. In addition, future research also should focus on methodological issues surrounding the measurement of asociality and alternate asocial scoring methods (e.g., weighting asocial features based on theoretical significance to client functioning in the treatment context).

#### *Study Limitations*

Limitations in this project relate to validity and generalizability. First, the lack of behavioral data such as institutional infractions and conduct during group restricted the opportunity for broader study of the association between self-reported behavioral items and observed client conduct. Another limitation was that the sample contained only male participants; thus, the findings may not generalize to female criminal justice populations. Yet, despite these limitations, this study sheds light on the importance of a 3-factor representation of asocial functioning in the field of substance abuse treatment. Ideally, addictions research will focus efforts on understanding the relationship between the treatment process and the asocial dimensions (collective and independent) to provide staff and clinicians with the empirical evidence to support treatment decisions.



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## Appendix

### Correlations for Observed Variables

## Appendix

### *Correlations for Observed Variables in the Final Model*

Items	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Real reason you are in prison is due to your race.	1.000						
2. Paid your dues in life/justified in taking what you want.	0.348	1.000					
3. Nothing you do here alters the way you are treated.	0.194	0.209	1.000				
4. You feel you are above the law.	0.207	0.444	0.165	1.000			
5. Okay to commit crime to pay for things you need.	0.287	0.402	0.227	0.398	1.000		
6. Society owes you better life.	0.375	0.383	0.204	0.368	0.409	1.000	
7. You're not to blame for everything you've done.	0.256	0.308	0.245	0.268	0.281	0.260	1.000
8. Laws are to keep poor people down.	0.340	0.356	0.224	0.299	0.327	0.391	0.262
9. May be a criminal/environment made you that way.	0.256	0.443	0.272	0.337	0.318	0.359	0.292
10. Hearing that someone has lost everything upsets you.	-0.011	0.071	0.105	0.071	0.159	0.089	0.056

*N* = 521. Factor (Items): Cognitive Distortion (1-9); Social Disassociation (10-14); Behavioral Responsivity (15-21). Correlations:  $\geq .085$  significant at .05 level;  $\geq .108$  significant at .01 level;  $\geq .155$  significant at .001 level;  $\geq .170$  significant at .0001 level.

(Appendix Continued)

Items	(1)	(2)	(3)	(4)	(5)	(6)	(7)
11. Seeing someone cry makes you sad.	0.033	0.061	0.099	0.006	0.126	0.070	0.030
12. You feel people are important to you.	0.198	0.249	0.132	0.201	0.328	0.141	0.088
13. You consider how your actions affect others.	0.041	0.125	0.188	0.115	0.188	0.105	0.084
14. You think about the probable results of your actions	-0.028	0.132	0.043	0.101	0.158	0.040	0.085
15. You feel anger inside you.	0.122	0.149	0.036	0.078	0.126	0.111	0.046
16. You have a hot temper.	0.050	0.147	0.062	0.071	0.141	0.100	0.071
17. You get made at other people easily.	0.122	0.157	0.092	0.152	0.192	0.094	0.108
18. You have urges to fight or hurt others.	0.129	0.185	0.087	0.125	0.212	0.143	0.126
19. You like to take chances.	0.001	0.111	0.015	0.054	0.155	0.060	0.037
20. You like the “fast” life.	0.034	0.138	-0.029	0.085	0.152	0.078	0.032
21. Your temper gets you into fights/trouble.	0.124	0.170	0.073	0.080	0.144	0.097	0.087

*N* = 521. Factor (Items): Cognitive Distortion (1-9); Social Disassociation (10-14); Behavioral Responsivity (15-21). Correlations:  $\geq .085$  significant at .05 level;  $\geq .108$  significant at .01 level;  $\geq .155$  significant at .001 level;  $\geq .170$  significant at .0001 level.



(Appendix Continued)

Items	(8)	(9)	(10)	(11)	(12)	(13)	(14)
8. Laws are to keep poor people down.	1.000						
9. May be a criminal/environment made you that way.	0.409	1.000					
10. Hearing that someone has lost everything upsets you.	0.011	0.065	1.000				
11. Seeing someone cry makes you sad.	-0.036	0.099	0.368	1.000			
12. You feel people are important to you.	0.155	0.140	0.231	0.227	1.000		
13. You consider how your actions affect others.	0.043	0.095	0.231	0.179	0.266	1.000	
14. You think about the probable results of your actions	0.033	0.065	0.202	0.161	0.220	0.367	1.000
15. You feel anger inside you.	0.198	0.200	-0.013	-0.008	0.141	-0.042	0.072
16. You have a hot temper.	0.171	0.198	-0.003	0.010	0.101	-0.047	0.045
17. You get made at other people easily.	0.171	0.212	0.064	0.042	0.145	0.074	0.100

*N* = 521. Factor (Items): Cognitive Distortion (1-9); Social Disassociation (10-14); Behavioral Responsivity (15-21). Correlations:  $\geq .085$  significant at .05 level;  $\geq .108$  significant at .01 level;  $\geq .155$  significant at .001 level;  $\geq .170$  significant at .0001 level.

(Appendix Continued)

Items	(8)	(9)	(10)	(11)	(12)	(13)	(14)
18. You have urges to fight or hurt others.	0.230	0.254	0.063	0.051	0.109	0.095	0.114
19. You like to take chances.	0.064	0.082	0.043	0.015	-0.011	0.043	-0.080
20. You like the “fast” life.	0.117	0.192	0.024	0.061	0.046	-0.008	0.002
21. Your temper gets you into fights/trouble.	0.183	0.191	-0.028	-0.008	0.097	0.040	0.025

*N* = 521. Factor (Items): Cognitive Distortion (1-9); Social Disassociation (10-14); Behavioral Responsivity (15-21). Correlations:  $\geq .085$  significant at .05 level;  $\geq .108$  significant at .01 level;  $\geq .155$  significant at .001 level;  $\geq .170$  significant at .0001 level.

(Appendix Continued)

Items	(15)	(16)	(17)	(18)	(19)	(20)	(21)
15. You feel anger inside you.	1.000						
16. You have a hot temper.	0.656	1.000					
17. You get made at other people easily.	0.545	0.691	1.000				
18. You have urges to fight or hurt others.	0.418	0.479	0.463	1.000			
19. You like to take chances.	0.205	0.276	0.245	0.225	1.000		
20. You like the “fast” life.	0.357	0.353	0.350	0.342	0.375	1.000	
21. Your temper gets you into fights/trouble.	0.550	0.699	0.633	0.506	0.206	0.347	1.000

*N* = 521. Factor (Items): Cognitive Distortion (1-9); Social Disassociation (10-14); Behavioral Responsivity (15-21). Correlations:  $\geq .085$  significant at .05 level;  $\geq .108$  significant at .01 level;  $\geq .155$  significant at .001 level;  $\geq .170$  significant at .0001 level.

## VITA

Personal Background	Jennifer Kay Pankow Born December 15, 1952, Melrose Park, Illinois Mother of Jacob, Nicole, and Brandon One grandchild
Education	Diploma, Downers Grove High School, Downers Grove, Illinois, 1971 Associates in Applied Science, Criminal Justice Studies, Joliet Junior College, Joliet, 2001 Bachelor of Arts, Psychology, Aurora University, Aurora, 2004 Master of Arts, Psychology, Northern Illinois University, DeKalb, 2007 Master of Science, Psychology, Texas Christian University, Fort Worth, 2009
Experience	TASC Case Management, Sheridan Correctional Facility, Sheridan, Illinois, 2004 Substance Abuse Counselor, Gateway Foundation, Sheridan Correctional Facility, Sheridan, Illinois, 2004-2006 Teaching Assistant, Northern Illinois University, DeKalb, 2005-2006 Research Assistant, Texas Christian University, Institute of Behavioral Research, 2007-Present
Professional License	Illinois Alcohol and Other Drug Abuse Counselor, 2005-Present

## ABSTRACT

### ASOCIAL OFFENDERS AND GROUP COMPOSITION IN PRISON-BASED SUBSTANCE ABUSE TREATMENT THERAPEUTIC COMMUNITY MODELS

By Jennifer Pankow, M.S., 2009  
Department of Psychology  
Texas Christian University

Thesis Advisors: Dr. Dwayne Simpson, Saul B. Sells Professor of Psychology and Addiction Research and; Dr. Kevin Knight, Associate Director for Criminal Justice Studies, Institute of Behavioral Research

In therapeutic community models for drug treatment, individual recovery is principally structured around group meetings and positive peer influences. Research shows that asocial group members with resistant behaviors and attitudes have the potential to adversely impact the therapeutic group. To gain a better understanding of the asocial client's role in the larger treatment process, archival Texas Christian University data were used to (1) model and confirm a 2-factor solution of asociality consistent with the literature, and (2) examine the relationship between asocial clients and treatment engagement for validation of the 2-factor model. Exploratory analysis resulted in a 3-factor solution representing Behavioral Responsivity, Cognitive Distortion, and Social Disassociation dimensions. Nested ANOVA (i.e., clients nested within prison programs) demonstrated that asocial levels (low, medium, and high) predicted treatment engagement. Furthermore, comparison between asocial levels indicated that high asocial clients reported significantly lower engagement levels compared to low and medium asocial clients.