

The Japanese Criminal Thinking Inventory: Development, Reliability, and Initial Validation of a
New Scale for Assessing Criminal Thinking in Japanese Offender Population

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Abstract

In a sample of 116 Japanese men who had been placed under parole/probationary supervision or released from prison, the present study examined standardization, reliability, and validation of the Japanese Criminal Thinking Inventory (JCTI), which was based on the short form of the Psychological Inventory of Criminal Thinking Styles (PICTS), a self-rating instrument designed to evaluate cognitive patterns specific to criminal conduct. An exploratory factor analysis revealed that four dimensions adequately captured the structure of the JCTI, and the resultant 17-item JCTI demonstrated high internal consistency. Compared with the Japanese version of the Buss-Perry Aggression Questionnaire (BAQ), the JCTI showed a favorable pattern of criterion-related validity. Prior criminal environment and drug abuse as the most recent offense also significantly correlated with the JCTI total score. Overall, the JCTI possesses an important implication for offender rehabilitation as it identifies relevant cognitive targets and assesses offender progress.

Keywords: criminal thinking, recidivism, parole, Psychological Inventory of Criminal Thinking Styles (PICTS), Japanese version

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Japan is known as one of the safest nations, maintaining one of the lowest crime rates in the industrialized world. Compared to Western countries such as the United States, the United Kingdom, Germany, and France, the crime rate of Japan has been the lowest for the past 10 years. Japan has less than half the homicide rate of these other countries, and consistently has a far lower crime rate for theft than that of Western countries (Japanese Ministry of Justice, 2013). However, the positive international image of being “the safest country in the world” is now gradually disappearing owing to persistent offenders. The recidivism rate has been rising since 1997 and reached 43.8% in 2011. The latest reimprisonment rate of 57.4% indicates an increase over the past 9 years (Japanese Ministry of Justice, 2013). The Japanese government now considers the issue of preventing recidivism as one of the central policy challenges. Comprehensive countermeasures against repeat offenses were designed at the ministerial meeting in 2012 to achieve a 20% reduction within this decade in the rate of inmates reimprisoned within two years after release from prison (Cabinet Secretariat, 2012).

While the United States and Canada have strenuously developed risk assessment tools for reoffending, the reliability and validity of many of these tools for use in Japan have not been verified. Recent examples of the Japanese version of these tools include the Youth Level of Service/Case Management Inventory (Takahashi, Mori, & Kroner, 2013) based on the work by Hoge & Andrews (2002), and the Juvenile Sex Offender Assessment Protocol-II (Ohoie, Morita, & Nakatani, 2008) based on the study by Prentky & Righthand (2003). Other prevalent tools include the Historical-Clinical-Risk Management-20 (Webster, Douglas, Eaves, & Hart, 1997) and Psychopathy Check List-Revised (Hare, 2003) for mentally ill criminal offenders. Although

the above-mentioned instruments are capable of assessing recidivism risks comprehensively, these procedures are measured only by experts and do not fully cover thinking patterns from the offenders' perspective.

Walters (2008) pinpoints that self-report measures may also be worthwhile to predict misconduct; these are designed particularly for the offender population. To evaluate cognitive patterns specific to criminality, Walters (1995) developed the Psychological Inventory of Criminal Thinking Styles (PICTS), which was conceptually derived from Yochelson and Samenow's work on a criminal personality as well as the lifestyle model propounded by its author. The current version of the PICTS, version 4.0 (Walters, 2006a), contains 80 items in self-report format to examine eight criminal thinking patterns, including Mollification, Cutoff, Entitlement, Power Orientation, Sentimentality, Superoptimism, Cognitive Indolence, and Discontinuity. Past research employing the PICTS reported a link between criminal thinking and criminal history and successfully predicted recidivism (Walters, 1995, 2012a). Nevertheless, responses on the PICTS significantly vary by ethnicity (Palmer & Hollin, 2003; Healy & O'Donnell, 2006; Bulten, Nijman, & van der Staak, 2009).

Besides the PICTS being applied extensively to the study of criminogenic cognition, some other instruments have been developed and revised over the past decades. These include Criminal Sentiments Scale – Modified (CSS-M; Simourd, 1997) and five recent measures—the Criminogenic Cognitions Scale (CCS; Tangney, Meyer, Furukawa, & Cosby, 2002), Measure of Criminal Attitudes and Associates (MCAA; Mills, Kroner, & Forth, 2002), the Texas Christian University Criminal Thinking Scales (TCU-CTS; Knight, Garner, Simpson, Morey, & Flynn, 2006), the Measure of Offender Thinking Styles (MOTS; Mandracchia, Morgan, Garos, & Garland, 2007), and the Criminogenic Thinking Profile (CTP; Mitchell & Tafrate, 2011). Many

of them are influenced by the work of Walters (1995) to conceptualize maladaptive cognitions associated with criminal conduct and added their uniqueness to develop measures.

However, two drawbacks exist when applying these instruments to the Japanese offender population. First, except for the CCS, the above-mentioned measures contain far too many items, approximately 36 to 80 items, and may be a time-consuming challenge for both offenders and officers in the field. Although Walters (1995) formed the 35-item short version of the PICTS, its reliability and validity have not been verified. Second, all published scales to measure criminogenic thinking patterns were geared originally and exclusively to participants in North America. The vast majority of existing research employing the PICTS and other instruments ignore perspectives from East Asian countries including Japan, although many aspects of cognition and behaviors are profoundly subject to influence from cross-cultural differences (Henrich, Heine, & Norenzayan, 2010). It is imperative to examine whether assessment strategies largely and directly drawn from Western countries actually fit Japanese samples, and if not, it is necessary to develop an assessment considering cultural contexts particular to Japan. The present study explicates a novel scale for assessing criminal thinking, especially among Japanese offenders.

In light of this connection between criminogenic thinking and cultural background, as well as the lack of research on this matter, the present study aims to develop a new scale for assessing criminogenic thinking patterns from a Japanese perspective, sampling a cohort of male offenders/ex-offenders held in offender rehabilitation facilities, and to verify the reliability and the validity of the modern measure, the Japanese Criminal Thinking Inventory (JCTI). This study makes a unique contribution to the literature in forensic psychology and criminology by investigating criminogenic cognition in the Japanese offender population.

Method

Participants

Participants were 119 Japanese men, who had been placed under parole/probationary supervision or released from prison, in two metropolitan area correctional halfway houses. However, the data from three participants were deemed invalid because more than three items on their surveys had been omitted. The final sample of 116 Japanese men participated in the study. Every participant was recruited to enroll in the study on a voluntary basis.

The two halfway houses share common grounds; the admission capacity is approximately 30 (20 to 30 adults and 2 to 3 juveniles). Recently released inmates with various offenses are commonly accepted, while many offender rehabilitation facilities hesitate to accept offenders/ex-offenders with murder, arson, and sex crime convictions due to the intractableness of their treatments. Offender rehabilitation facilities or halfway houses in Japan play a critical part as bridges between penal institutionalization and social integration for offenders/ex-offenders. As of 2013, 104 offender rehabilitation facilities exist in Japan (Japanese Ministry of Justice, 2013). Receiving a commission from probation offices, the correctional halfway houses accommodate parolees, probationers, or those released from prison and provide livelihood guidance as well as vocational training to help residents make a living as quickly as possible. Because only selected offenders can move into the halfway houses (i.e., only 55.8% of probationers and 16% of those released from prison in 2011), the residents may have the inside track to reenter society.

Most of the participants were in the early stage of release from prison and would leave halfway houses within the stipulated period (about two months, ranging between days and one year) to reenter society. Selection criteria were (1) sentenced with either paying a fine or to at

least six months in prison; (2) assigned to the prison's general population (i.e., not assigned to a medical prison or a separate unit for mentally disabled inmates); and (3) sufficient language proficiency to complete the interview and questionnaire survey in Japanese.

Procedures

The JCTI was administered from August 2011 to May 2013 to the 116 residents who consented to participate in the study, representing 97% of those recruited for the present study. The anonymous questionnaires were administered after all participants provided signed written informed consent. The present study was approved by the ethics committee of the University of Tsukuba. Permission was also obtained from offender rehabilitation facilities to recruit their residents as participants in the study.

Measures

Demographics. A demographic questionnaire was given that included questions about participants' self-reported age, education, marital status, the latest offense charged, number of previous imprisonments, and their current status. In case participants had multiple offenses simultaneously, the offense with the longest prison sentence was adopted for statistical analyses.

Criminal thinking. The JCTI contains 32 items that address several potential thinking patterns associated with lifestyle patterns of criminal conduct. It is administered in a self-report format, is designed for use by offenders/ex-offenders with a minimum equivalent of a sixth-grade reading level, and is typically completed in 5 to 10 minutes. Items were rated on a five-point Likert-type scale with 1 = *strongly disagree*, 2 = *disagree*, 3 = *uncertain*, 4 = *agree*, 5 = *strongly agree*. Ratings were averaged to create each dimension as well as a total criminogenic thinking score. Pursuant to Walters (2006b), criminal or criminogenic thinking was defined in

this study as the thought content and cognitive processes conducive to the launch and continuation of persistent antisocial and criminal behavior.

The JCTI was adopted from the PICTS short form (Walters, 1995) with permission and developed using the back-translation method. The original 35-item questionnaire was first translated into Japanese by one of the authors. Following the back translation of the Japanese made by the other author, it was compared with the original version. If needed, corrections were made to the Japanese version in cooperation with both authors. To finalize the criminogenic thinking scale for only the Japanese population, three original items were deleted from the scale due to cultural differences and possible double standards in sentences.

Aggression. The Japanese version of the Buss-Perry Aggression Questionnaire (BAQ; Ando et al., 1999) is a 24-item self-report instrument shown to be valid and reliable in college samples ($\alpha = .81$) with good reliability in the current sample ($\alpha = .82$). Items are rated on a Likert scale ranging from 1 (*extremely uncharacteristic of me*) to 5 (*extremely characteristic of me*). The BAQ consists of four subscales: Physical Aggression, Verbal Aggression, Anger, and Hostility.

Analyses

Development and validation of the JCTI were implemented in three stages. In the first stage, an exploratory factor analysis using promax rotation was applied in IBM SPSS Statistics 21 in order to investigate a multidimensional factor structure, possibly with three to five factors. In the second stage, Cronbach's coefficient alpha was computed to evaluate the internal consistency reliability. In the third stage, descriptive statistics and an unpaired t-test were used to analyze demographic variables and the JCTI scores. The t-test was applied because it was predicted that the JCTI would be associated with prior incarceration, which correlates more

strongly with drug offense than any other criminal charges due to the severity of the recidivism rate for drug use in Japan. Subsequently, a Pearson product-moment correlation coefficient was calculated between the JCTI and aggression as one of the personality traits.

Results

Demographics

The mean age of participants was 47.4 years (SD = 14.5, range 20 to 88). Fifty percent of them had only a junior high school level education or had dropped out of high school, whereas 30% had completed high school, 10% had completed a vocational or community college, and 8% had graduated from university. Other demographic characteristics of the participants are presented in Table 1. Of the offenses for which the participants had recently been charged, “felonious/violent crimes” include robbery, murder, indecent assault, forcible rape, arson, and injuries including bodily injury resulting in death. “Property crimes” include theft and theft of lost or mislaid property. “Drug-related crimes” are mainly confined to stimulant use because the majority of drug offenders in Japan are apt to use stimulants rather than marijuana, cocaine, or other narcotics, and the samples are no exception. “Other crimes” include white-collar crime, such as fraud and embezzlement, and other minor offenses. Under types of current status, “completed prison terms” refers to participants who were out of prison and no longer under supervision, whereas “on parole” indicates those who were out of prison but still under supervision due to remaining prison terms.

INSERT TABLE 1 HERE.

Exploratory Factor Analysis

An exploratory factor analysis was conducted to investigate the dimensionality of the JCTI. Before conducting the factor analysis, ceiling and floor effects were observed in 7 of

the 32 items. Criteria for item selection specified that an item had to load at least .35 on its own factor and less than .35 on other factors, and that communalities had to be greater than .16. An eigenvalue greater than 1.0 resulted in a four-factor solution. The corresponding scree plot also indicated this solution. Using these criteria and removing items with ceiling/floor effects, 17 items remained. The correlation matrix of the items was subjected to principal-axis factoring and promax rotation. Four rotated factors were labeled Discontinuity (DI), Cutoff (CO), Self-Deception (SD), and Cognitive Indolence (CI), on the basis of thinking styles in the PICTS. Table 2 presents a description of each subscale, factor loadings, eigenvalues, and cumulative contribution ratio for each factor.

INSERT TABLE 2 HERE.

Reliability

The internal consistency reliability of each JCTI scale was measured using Cronbach's coefficient alpha. As Table 2 indicates, there was a high level of internal consistency for two of the subscales (DI, CI), and moderately high internal consistency for the two remaining subscales (CO, SD). The highest coefficient alpha was .83 for the DI scale. The coefficient alpha reliability for all 17 items was .88.

Criterion-Related Validity

The following three forms of concurrent validity were tested: the relation of criminal thinking to previous imprisonment, the relationship of criminal thinking to offenses charged, and correlations between criminal thinking and the BAQ. Criterion-related validity of the concurrent type was assessed using an independent samples t-test to determine whether the samples differed regarding the JCTI total scores and total numbers of previous imprisonments. The analysis compared 47 participants that had been imprisoned only once and 49 that had been

imprisoned at least twice. There was a significant difference in the JCTI total scores for participants with one previous imprisonment and those with multiple previous imprisonments; $t(94) = 2.05, p < .05$. The independent samples t-test was also conducted to compare the JCTI total scores and types of criminal charges (i.e., drugs vs. others). There was a significant difference between drug offenders and non-drug offenders; $t(114) = 2.83, p < .01$. Table 3 indicates the relationships of participants' criminal cognition to previous imprisonment and drug crime.

INSERT TABLE 3 HERE.

Another way the concurrent validity of the JCTI can be tested is by correlating it with an alternate measure of similar construct. A Pearson product-moment correlation coefficient was computed to assess the relationship between the JCTI, a newly established criminal thinking measurement, and the BAQ, an alternative measure of a related construct (aggression). There was a significant positive correlation between the two variables ($r = .37, p < .01$). Two JCTI subscales, DI and CO, also correlated moderately with the BAQ total score. Table 4 indicates the correlations between criminogenic cognition and indices of aggression.

INSERT TABLE 4 HERE.

Discussion

The primary aim of this study was to evaluate a novel criminal thinking instrument specifically for the Japanese offender population. Factor analysis of the JCTI resulted in a four-factor simple structure with 17 items that reflected the following criminogenic thinking styles: discontinuity, cutoff, self-deception, and cognitive indolence. The percentage of variance explained by the four-factor structure was 52.13%, with strong internal consistency across the subscales. The PICTS involves four factor scales (i.e., Problem Avoidance; Self-

Assertion/Deception; Interpersonal Hostility; Denial of Harm) in addition to eight criminal cognitive patterns. The SD subscale in the JCTI was analogous to one of the primary factors in the PICTS, “Self-Assertion/Deception” – justifying or giving reasons for taking part in criminal behavior and overestimating its likelihood of success. It encompasses the lower order factors of entitlement and superoptimism (Walters, 1995). The other three factors found for the JCTI were derived from three of the eight key thinking styles in the PICTS, containing: “Cut Off” – immediately devaluing thoughts that deter from crime; “Discontinuity” – hesitancy and unreliability in both behavior and thinking; and “Cognitive Indolence” – using quick and easy short-cut thinking (Walters, 1995).

Although the JCTI scores simply cannot be compared with the reported PICTS data of other nations due to structure differences, cross-cultural aspects of criminal thinking found in the present study can be discussed. Before conducting the factor analysis, 6 items were deleted in this study due to floor effects. It appears that participants disagreed with these question items concerning social connection because Japanese culture emphasizes group orientation and self-sacrifice unlike Western cultures where individualism is deep-rooted. Japan’s homogenous society appreciates its historical traditions and a sense of belonging to social groups, which provides a sense of place and self (Vaughn & Tomita, 1990). The most important cultural norms in Japan include extraordinary patience, control of emotions, and a cooperative approach to decision-making at the expense of individuality. Meanwhile, such a strong cultural emphasis on belongingness and interdependence suppresses expressions of negative emotions, particularly anger, because such expressions lead to interpersonal crisis and breakdown of the value of interdependence (Kitayama, Park, Sevincer, Karasawa, & Uskul, 2009). Hence, it seems that Japanese criminal thinking derives from excessively pent-up emotions.

There was strong evidence of concurrent validity with previous imprisonment, which indicates that four of all criminal thinking styles significantly and positively corresponded with past criminality. The number of times previously incarcerated imparts a critical measure of past criminality. The retrospective studies by Walters (1995, 2006a) indicates the positive correlation between the PICTS and prior commitments, and the recent study by Tangney, et al. (2012) also showed the reasonable correlation of criminogenic cognitions to previous criminal behavior including prior commitments.

Given the prevalence of drug abuse and the high recidivism in drug crime, notably stimulant use, the prediction that the JCTI would correlate with drug offense compared with other types of crime was strongly supported by the results of the present study. As with other developed nations, drug offenses in Japan are classified as drug trafficking, drug possession, drug manufacturing, drug dealing, and drug use. Although several individuals were charged with possession, use, and/or dealing, every drug offender in this study had a drug abuse history and was mainly convicted of possession and use of stimulants (i.e., amphetamines and methamphetamines). While over 10,000 offenders are arrested for stimulant-related crime every year, one or two thousand offenders get arrested for marijuana, the second top prevalence of illegal drug in Japan (Japanese Ministry of Justice, 2013). As for the average experience rate of drugs in one's lifetime, 1.2% of Japanese experience marijuana, 0.4% stimulants, 0.1 % MDMA, and nearly 0% for cocaine and heroin. On the other hand, 41.9 % of Americans experience marijuana, 5.1% stimulants, 6.3 % MDMA, 14.7% cocaine, and 1.6% heroin (Ministry of Health, Labour and Welfare, 2012). The official statistics by the Ministry of Justice (2012) reveal that while 43% of the accused offenders have criminal records, drug offenders occupy 60% of them; drug offense accounts for 75% of inmates being reimprisoned for the same offense. Despite the

strongly-held belief that addiction is a chronic, relapsing brain disease (Leshner, 1997; McLellan, Lewis, O'Brien, and Kleber, 2000), forensic administrators in Japan, unlike other developed nations, are apt to perceive drug offense as a crime and not as a disease. Unremitting repeated drug offenses do not seem to end because of this traditional perspective. The concordance between the JCTI and a drug offense indicator potentially speaks for the recidivism rate numbers greater than 50% each year in Japan. Regarding the original PICTS measure, offenders with a drug abuse history tend to earn higher PICTS scores than offenders without a drug abuse history (Lacy, 2000). The latest research (Walters, 2012b) also found that reactive criminal thinking mediates the link between a history of prior substance abuse and subsequent recidivism, and obtained specific types of drug–criminal thinking correlation (i.e., heroin, cocaine, and amphetamine with cutoff, cognitive indolence, and discontinuity).

Lastly, reasonable support for concurrent validity was pronounced with aggression as represented by the BAQ, a significant measure of anger and aggression in predicting and assessing violence both in clinical and criminal populations. The results in the present study coincide with those of published research (Mitchell & Tafrate, 2012; Tangney et al., 2012) considering aggression, violent potential, and symptoms of antisocial personality by alternative aggression scales. It is noteworthy that although the two subscales, DI and CO, showed positive correlations with the BAQ, the other two subscales did not. This may be because both DI and CO thinking styles reflect an inability to follow rational thoughts due to short temper or hostility. The general aggression model (Anderson & Bushman, 2002), the most comprehensive and contemporary theory of aggression, suggests that individuals with a propensity for aggression are inclined to hold elaborate and readily accessible aggression-related cognitions. The stronger the linkage between situations and experiential concepts associated with aggression, the more likely

non-violent concepts are to evoke aggressive cognitions and behaviors. As for risk factors of reoffending, the risk-need-responsibility model of offender rehabilitation (Andrew & Bonta, 2010) comprises antisocial personality patterns, including restless aggression and irritation, as one of the major risk/need factors of recidivism.

Limitations and Directions for Future Research

The present study sampled residents or probationers from correctional halfway houses. Concerning limitations related to the sample, participants were obtained in a single capital region and the sample size was small. Larger sized samples would be suitable for the analysis of an instrument like the JCTI. Furthermore, this subset of offenders/ex-offenders was male only and thus does not represent criminogenic thinking patterns equally common in men and women. A related limitation is the fact that participants were limited to those likely to have been charged with less serious offenses, with an average of a two to three-year sentence, and may possess less antisocial cognitions because offender rehabilitation facilities tend to accept individuals who have medium- or high-level survival skills to reenter society, in other words, those who do not suffer from serious mental or physical disorders and are self-sufficient. It is thus unknown whether our findings could generalize to more serious offenders and those incarcerated for longer periods of time.

Several limitations also extend to criminal thinking perspectives of the study. Although all four criminogenic thinking subscales had relatively good factor structures with strong reliability, the JCTI lacks perspectives such as mollification and power orientations sharing similarities with other published instruments. A broader range of antisocial cognitions would help comprehend thinking patterns of Japanese offenders. Prior to recognizing specific criminal thinking styles, it is important to caution the construct of criminal thinking in general. As the

recent study by Mitchell and Tafrate (2012) pointed out, in the risk-need-responsibility model of offender rehabilitation (Andrew & Bonta, 2010), criminogenic cognition is merely one of the major variables to consider throughout the assessment process. Although cognitive patterns may modify the decision-making process and direct behavior, criminogenic cognition should not be the sole focus in offender assessment and rehabilitation because multidetermined factors frame criminal behavior.

The aforementioned limitations notwithstanding, the JCTI may be applied as part of a series of measurements to assess offender performance throughout their treatment process in the Japanese criminal justice system. To reduce offender recidivism, repeating the application of the JCTI as occasion arises can help correctional and probation staff identify caveats before or during treatment and amelioration after treatment. The present study is especially notable because this is the first study to develop a scale to measure criminogenic thinking patterns in an Asian offender population. It sheds light upon cultural differences in terms of criminal thinking and will accelerate further research into criminogenic cognition in other nations. A direction of our future research will be to determine the association between criminal thinking and other detrimental variables that may impede offender rehabilitation and be barriers against prosocial change.

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Table 1

The Demographic Characteristics and JCTI Total Score of Participants (n = 116)

Variables	n	Percentage	Mean (SD)
Age			
20–39	36	31.0	50.89 (13.82)
40–59	49	42.2	45.20 (13.55)
60 and over	31	26.7	43.35 (16.18)
Marital Status			
Single	54	46.6	49.20 (14.18)
Married	6	5.2	44.83 (17.85)
Concubinary	3	2.6	45.00 (20.30)
Divorced	48	41.4	44.40 (13.94)
Widowed	5	4.3	39.80 (18.51)
Types of Criminal Charge			
Felonious/Violent crimes	27	23.3	44.63 (18.89)
Property crimes	53	45.7	45.81 (13.27)
Drug-related crimes (stimulant use)	21	18.1	54.38 (11.66)
Others	15	12.9	41.07 (10.07)
Prior Imprisonment			
None	20	17.2	47.65 (15.04)
Once	47	40.5	43.17 (14.58)
Twice	20	17.2	47.65 (15.21)
Three times	5	4.3	45.60 (8.50)
Four times	9	7.8	53.55 (17.17)
More than 5 times	15	12.9	49.87 (12.39)
Current Status			
Completed prison term	22	19.0	47.50 (14.84)
Under probation	7	6.0	40.43 (13.10)
On parole	76	65.5	46.64 (14.86)
Others	11	9.5	47.09 (13.85)
Total	116		46.47 (14.58)

Table 2

Four-Factor Solution for the JCTI (Total alpha = .88)

Description/sample item (coefficient alpha reliability)	Item number	Factor 1	Factor 2	Factor 3	Factor 4
Factor 1: Discontinuity (.83)					
Hesitancy and unreliability in both behavior and thinking	11	.82			
“I rarely complete what I frequently begin, and easily fail in many cases.”	16	.76			
	21	.66			
	23	.58			
	2	.54			
Factor 2: Cut Off (.80)					
Immediately disvaluing thoughts that deter from crime	27		.79		
	24		.71		
	18		.67		
“When irritated, I easily abandon my rational idea.”	9		.62		
	3		.61		
Factor 3: Self-Deception (.71)					
Justifying criminal behavior and overestimating its likelihood of success	20			.77	
	5			.61	
“I’ve felt that laws have no effect on me.”	28			.57	
	17			.55	
Factor 4: Cognitive Indolence (.82)					
Quick and easy short-cut thinking	19				.91
“On the idea that it’ll be all right, I have a tendency not to take any action toward what I should care.”	31				.66
	13				.40
Eigenvalues		6.28	1.87	1.52	1.03
Cumulative contribution ratio		34.39	42.24	48.39	52.13

Table 3

Relations of Criminal Thinking to Previous Imprisonment and Offenses Charged

Measure	N	M (SD)	t	Sig. (two-tailed)
Previous Imprisonment				
Once	47	43.17 (14.58)		
Multiple times	49	49.16 (14.04)	2.05	.04*
Offenses Charged				
Drug Crime	21	54.38 (11.66)	2.83	.01**
Non-drug Crime	95	44.73 (14.63)		

Sig. = Significance
 *p < .05; **p < .01.

Table 4

Correlations Between the JCTI and BAQ total score

JCTI	BAQ	
	r	Sig. (two-tailed)
Total	.37	.00**
Discontinuity	.22	.02*
Cut Off	.53	.00**
Self-Deception	.18	.06
Cognitive Indolence	.13	.17

Note: BAQ = Buss-Perry Aggression Questionnaire;

Sig. = Significance

*p < .05; **p < .01.