

TECHNICAL NOTE

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Criminal-Thinking Styles and Illegal Behavior Among College Students: Validation of the PICTS*

ABSTRACT: The present study examined the relation of self-reported criminal-thinking styles and self-reported illegal behavior among college students. Participants were 177 male and 216 female ($N = 393$) undergraduate students. Participants were divided by gender and further classified into four groups of self-reported illegal behavior: control-status offenses, drug crimes, property crimes, and violent crimes against people. The psychological inventory of criminal-thinking styles (PICTS) (1) measured criminal-thinking patterns on eight scales. Results indicated that males who committed violent crimes against people endorsed significantly higher levels of distorted criminal-thinking patterns on all scales than the control-status offenses, and drug crimes groups. Interestingly, female participants who committed property crimes displayed six significantly elevated PICTS scales whereas females with violent crimes against people had significant elevations on only four of the criminal-thinking style scales. These results extend Walter's initial validation of the PICTS with incarcerated respondents to a nonincarcerated population and show potential use of the PICTS with other populations.

KEYWORDS: forensic science, criminal-thinking styles, psychological inventory of criminal-thinking styles, illegal behavior

Personality and social psychology perspectives consider criminal attitude one of the four most crucial risk factors that contribute to the "psychological moment" of crime (2). The assessment of attitude is an emerging approach to identifying the factors that facilitate illegal behavior. Despite its importance to offender-oriented research and practice, the assessment of potential cognitive factors and crime has been little studied. One recently developed, empirically verified measure of criminal thinking is the psychological inventory of criminal-thinking styles (PICTS) (1).

The PICTS is an 80-item self-report measure that assesses eight thinking styles thought to facilitate and maintain a criminal lifestyle (1). Those thinking styles are: mollification—attributing the cause of behaviors to external factors (e.g., *I find myself blaming society and external circumstances for the problems I have had in my life*), cutoff—the rapid elimination of common psychological deterrents to crime (e.g., *When pressured with life's problems I have said "the hell with it" and followed this up by using drugs or engaging in crime*), entitlement—attitude of ownership and misidentification of wants as needs (e.g., *I will allow nothing to get in the way of me getting what I want*), power orientation—the sacrifice of internal control to exercise maximum control over the environment (e.g., *One of the first things I consider in sizing up*

another person is whether they look strong or weak), sentimentality—compensating for past behaviors with good deeds (e.g., *I have helped out friends and family with money acquired illegally*), superoptimism—overestimating ability to evade the consequences typically associated with a criminal lifestyle (e.g., *The more I got away with crime, the more I thought there was no way police or authorities would ever catch up with me*), cognitive indolence—lazy thinking and short-cut problem solving (e.g., *I am uncritical of my thoughts and ideas to the point that I ignore the problems and difficulties associated with these plans until it is too late*), and discontinuity—disruption of thought and inability to follow through (e.g., *I will frequently start an activity, project, or job, but then never finish it*). Each item is scored on a 4-point likert scale. The PICTS also includes two validity scales: confusion and defensiveness.

Although the PICTS was developed and normed for male inmates, Walters later demonstrated that the PICTS is also a valid assessment of criminal-thinking styles in female offenders (3). A 2002 study by Walters indicated that the PICTS can detect psychotherapeutic assisted change in male inmates who participated in a 10-week program intended to alter offender thinking (4). The inmates scored significantly lower on the current criminal-thinking subscale of the PICTS after the program. In addition, Palmer and Hollin (5) reported that the PICTS discriminated among English male prisoners by age of first offense and number of previous convictions. Palmer and Hollin (6) also examined the reliability and validity of the PICTS among English male offenders age 18–22 serving custodial sentences, found that the PICTS scales did not significantly correlate with the participant's previous number of custodial sentences. Results from this study suggest that the

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PICTS may not be as useful with young prisoners as compared to adult prisoners. In a 2005 study, Walters demonstrated that the PICTS significantly predicted dichotomously and continuously defined recidivism with U.S. federal prisoners (7). In addition, Walters found that the PICTS was successful at accurately predicting disciplinary infractions and program completion of maximum-security inmates (8,9).

The present study is the first application and validation of the PICTS with a nonincarcerated population. College students were grouped based on anonymously self-reported illegal behavior into four categories according to the severity of the illegal behavior. Those groups were: control-status offenses, crimes involving drugs, property crimes, and violent crimes against people. Participants were placed in the group that represented the highest severity of illegal behavior from status offenses as the lowest severity to violent crimes against people as the highest severity. To simplify the number of groups, if a participant did not endorse any illegal behavior, he or she was placed in the status offenses group. Nine males and 12 females did not endorse any illegal behavior. It was hypothesized that the groups with the most severe illegal behavior, violent crimes against people, would have the highest scores on the PICTS scales of criminal-thinking styles.

Method

Participants

The sample consisted of 393 undergraduate students recruited for participation from a large Eastern university. Mean age of participants was 19.23 ($SD = 2.58$). The males were 19.31 years old ($SD = 2.33$) while the females were 19.17 years old ($SD = 2.77$). The sample was 94% white, and 73% were freshmen status. The university IRB approved the study and all participants were offered extra course credit for participation.

Materials

Participants were administered the Illegal Behavior Checklist (IBC), a 22-item, yes-no, self-report measure of illegal activity developed by the authors based on the Loeber Questionnaire-Young Adult version (10) (see Appendix A). The PICTS is comprised of 80 items scored on a 4-point Likert scale, which yields eight criminal-thinking styles and two validity scale scores. Based on Walter's separate norms for incarcerated males and females, the raw scores were converted to t scores with a mean of 50 and standard deviation of 10 (1).

Procedure

In groups from 6 to 30, participants anonymously completed questionnaires and placed them in a box to assure anonymity. Next, data were divided by gender and further classified into four groups based on the illegal acts endorsed on the IBC: control-status offenses, crimes involving drugs, property crimes, and violent crimes against people. The following are examples of items for each group: *Have you ever consumed alcohol under the age of 21?* (control-status offense), *Have you ever sold hard drugs (cocaine, LSD, ecstasy) or prescription drugs?* (drug crimes), *Have you ever intentionally set fire to destroy property that did not belong to you?* (property crimes), and *Have you ever attacked someone with the intention of seriously hurting him or her?* (violent crimes against people). If more than one act was endorsed, participants were classified by the most severe act. Severity was determined by the above-listed order of acts (least to most severe). For each

TABLE 1—Percentage of participants by category of illegal behavior.

	Control-Status Offenses			Drug Crimes		Property Crimes		Violent Crimes	
	Total	N	Percent	N	Percent	N	Percent	N	Percent
Males	177	35	19.7	17	9.6	71	40.1	54	30.5
Females	213	80	37.0	53	24.5	57	26.3	26	12.0

gender, the four groups were compared to determine potential differences on the eight PICTS subscales.

Results

Table 1 presents the percentage of males and females in each category of illegal behavior. The table shows that approximately 40% of males admit having engaged in crimes against property and an additional 30% endorsed participation in violent crimes against people. In comparison, 26% of females admitted having engaged in crimes against property with only 12% of females endorsing participation in violent crimes against people.

Table 2 presents the male PICTS data by category of illegal behavior. Bonferroni post hoc analysis of a one-way ANOVA revealed that there were significant differences on each of the eight variables. The scores of males in the crimes against people group were always the highest, and significantly different than the scores of the males in the status offense group. Overall, this finding is consistent with Walter's initial incarcerated sample (1) in that the violent prisoner group had the most elevated PICTS scores.

Table 3 presents the female PICTS data by category of illegal behavior. Females in the crimes against property and crimes against people group had similar elevations of PICTS scales. Their scores were always the higher two groups relative to the scores of the females in the control-status offenses and drug crime groups. Overall there were significant differences on seven of the eight PICTS scales in the expected direction. Only the results for discontinuity did not reveal significant differences among groups. These results replicate the male prisoner sample and the Walters validation of the PICTS with female incarcerated participants (3). Surprisingly, the mean levels of PICTS scores were similar to the incarcerated normative group (e.g., the mean power orientation score for females in the violent crimes against people group = 51.88). The validity scales showed significant differences among male groups with the violent offenders scoring significantly higher on the confusion scale, while the status offenders were significantly more defensive, unwilling to admit common problems. Females in the status offenses group were more defensive than the other three groups and females in the violent crimes against people group scored higher on the confusion scale when compared with the status offenses group.

Discussion

The most significant finding of this study is that males in the violent crimes against people group scored significantly higher on all eight PICTS scales when compared with the males in the status offense group. Males in the violent crimes against people group scored higher on the mollification, cutoff, entitlement, power orientation, sentimentality, superoptimism, cognitive indolence and discontinuity scales. Elevated scores on these scales indicate a higher level of distorted thinking patterns used to justify crime than participants in groups representing less severe crime (e.g.,

TABLE 2—*PICTS scores by category of illegal behaviors for males.*

PICTS Scale	Category of Illegal Behaviors									
	Status Offenses (<i>N</i> = 35)		Drug Crimes (<i>N</i> = 17)		Property Crimes (<i>N</i> = 71)		Violent Crimes (<i>N</i> = 54)			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i> (3, 177)	<i>d</i> ²
Confusion revised	51.83 _a	11.05	54.18	11.73	57.09	10.28	61.78 _b	13.46	5.67***	.09
Defensiveness revised	57.60 _a	7.69	51.59 _{a,b,c}	9.99	50.72 _{b,c}	7.42	47.24 _{b,c}	8.61	11.64***	.17
Mollification	45.20 _a	8.03	50.41	11.03	49.49 _a	8.56	55.63 _b	10.33	9.56***	.14
Cutoff	48.00 _a	8.98	50.94 _a	9.30	53.52 _{a,b}	8.33	58.91 _{b,c}	9.11	11.76***	.17
Entitlement	46.77 _a	6.06	50.59	9.86	51.10 _a	8.23	57.39 _b	12.07	9.88***	.15
Power orientation	52.40 _{a,c}	9.16	53.94 _c	10.40	60.38 _{b,c}	9.57	63.98 _b	10.12	12.01***	.17
Sentimentality	36.29 _a	10.70	43.94	9.85	43.85 _b	11.30	51.39 _c	11.79	13.15***	.19
Superoptimism	47.71	8.03	50.18	8.28	51.08 _a	9.79	56.54 _b	11.92	6.05***	.10
Cognitive indolence	48.51	7.39	54.00	9.70	53.72	7.63	57.48 _a	7.97	9.13***	.14
Discontinuity	45.54 _a	6.79	51.88	14.22	52.17 _b	8.31	54.48 _b	9.79	9.96***	.15

Means in the same row that do not share subscripts are significantly different.

**p* < 0.05.

***p* < 0.01.

****p* < 0.001.

PICTS, psychological inventory of criminal thinking styles.

TABLE 3—*PICTS scores by category of illegal behaviors for females.*

PICTS Scale	Category of Illegal Behaviors									
	Status Offenses (<i>N</i> = 80)		Drug Crimes (<i>N</i> = 53)		Property Crimes (<i>N</i> = 57)		Violent Crimes (<i>N</i> = 26)			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i> (3, 177)	<i>d</i> ²
Confusion revised	46.94 _a	7.56	47.47	7.05	48.04	8.31	51.92 _b	9.45	2.70*	.04
Defensiveness revised	66.36 _a	6.99	61.21 _b	7.64	58.46 _b	9.08	58.38 _b	7.48	14.29***	.17
Mollification	42.69 _a	5.05	44.28	5.61	47.39 _b	8.86	46.42	7.01	6.25***	.08
Cutoff	38.96 _a	6.06	41.64 _c	6.67	45.49 _b	8.64	44.38 _{b,c}	9.55	9.61***	.12
Entitlement	41.36 _a	5.42	42.9	4.92	44.91 _b	8.48	44.31	6.	4.02**	.05
Power orientation	47.06 _a	7.55	47.34	7.81	49.95	8.01	51.88 _b	9.33	3.44*	.05
Sentimentality	32.05 _a	7.80	32.83 _a	7.97	40.19 _b	11.09	38.77 _b	11.09	11.12***	.14
Superoptimism	39.20 _a	5.43	39.30 _a	4.44	44.72 _b	8.33	41.46	8.52	9.41***	.12
Cognitive indolence	43.59 _a	7.18	46.38	7.81	47.40 _b	7.73	49.65 _b	8.14	5.38**	.07
Discontinuity	41.66	7.54	44.23	7.45	44.35	8.19	45.62	10.32	2.33	.03

Means in the same row that do not share subscripts are significantly different.

**p* < 0.05.

***p* < 0.01.

****p* < 0.001.

PICTS, psychological inventory of criminal thinking styles.

status offenses.) Interestingly, females in the crimes against property group and the violent crimes against people group scored significantly higher than the other two groups on most of the PICTS scales. The discontinuity scale failed to show significant differences and the power orientation scale only yielded a marginally significant result. In general, females in the crimes against property group and the crimes against people group had significantly similarly distorted thinking styles, similar to the male sample and Walter's validation of the PICTS with female prisoners (3). This study adds to the growing validation of the PICTS with adult prisoners in the U.S. and the United Kingdom and, now, nonincarcerated college students.

Because this study samples only college students, future research should examine criminal-thinking styles and illegal behaviors in noncollege populations, such as clinical and community populations. Furthermore, other sources of information on illegal behavior, such as arrest or probation records, could be utilized to further validate the PICTS. Overall, the PICTS is a very promising measure to assess criminal risk factors for possible prevention or early intervention of high-risk groups.

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APPENDIX A—*Illegal Behavior Checklist*

Have you ever:

- | | | |
|---|------------------------------|-----------------------------|
| STAT 1. Skipped school without an excuse more than ten days? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| PROP 2. Shoplifted something worth \$25 or more? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| STAT 3. Run away from home for more than 1 day? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| VIOL 4. Been in a gang fight? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| STAT 5. Consumed alcohol while under the age of 21? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| PROP 6. Deliberately used credit cards and/or checks illegally? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| VIOL 7. Stalked someone? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| PROP 8. Bought or held stolen goods worth \$25 or more? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| DRUG 9. Sold marijuana? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| DRUG 10. Used prescription drugs in any way other than those directed by the instructions? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| STAT 11. Run away from home for more than 3 days? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| VIOL 12. Attacked someone with the intention of seriously hurting him or her? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| → If yes, was it self-defense? ____Yes ____No | | |
| PROP 13. Stolen property worth \$25 or more? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| STAT 14. Lied about your age to buy cigarettes or alcohol? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| PROP 15. Intentionally set fire to destroy property that did not belong to you? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |

APPENDIX A—*Continued*

- | | | |
|--|------------------------------|-----------------------------|
| PROP 16. Been joyriding (borrowed someone's car without permission)? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| VIOL 17. Forced someone to have sex with you? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| DRUG 18. Used any illicit substance (marijuana, cocaine, LSD) more than 5 times? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| PROP 19. Vandalized property resulting in more than \$25 in damages to that property? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| VIOL 20. Attacked someone with a weapon with the intention of seriously hurting him or her? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| → If yes, was it self-defense? ____Yes ____No | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| DRUG 21. Sold hard drugs (cocaine, ecstasy, LSD) or prescription drugs? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| DRUG 22. Used any illicit substance (marijuana, cocaine, LSD) more than 20 times? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |

NOTE: Category represented by each item as follows: STAT = control group – status offenses, DRUG = crimes involving drugs, PROP = property crimes, VIOL = violent crimes against people.

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